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"अनुभूति "

A JOURNEY THROUGH INDIAN KNOWLEDGE SYSTEMS

Khoj -

An Interdisciplinary Journal of Research



VIVEKANANDA GLOBAL UNIVERSITY, JAIPUR

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Arise Awake Achieve

Education is the manifestation of the perfection already in man". These are the words of the great philosopher and educator Swami Vivekananda. The contributions of the great people who devoted their life for the cause of education and youth have always inspired the promoters and, therefore, following the preaching of Swami Vivekananda, the promoters established VIT Campus, comprising of Vivekananda Institute of Technology and Vivekananda Institute of Technology (East), in 2008, to usher in technology revolution by using modern management techniques and harnessing potential of India. Another feather in the crown of Vivekananda Group of Institutions is Vivekananda Global University, established in the year 2012. Vivekananda Global University, Jaipur has been formed keeping in mind his teaching and mentoring ideals. The overall development of the techno-managers with a seeking spirit towards education is VGU's vision for its students. It Promises to develop as an institution with a commitment to excellence in education, research and consultancy and promote human advancement. Swami Vivekananda advocated the concept of 'total development' which includes physical, mental and spiritual. He also advocated incorporation of science and technology in curricula and laid emphasis on technical education that will develop industries. Our core values are inspired by Swami Vivekananda philosophy, and our institution is founded on his thoughts and ideas. To meet these ends, Vivekananda Global University encourage development of student's physical, mental, emotional, secular and spiritual faculties.



"We are what our thoughts have made us; so take care of what you think. Words are secondary. Thoughts live; they travel far."

Swami Vivekananda

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"अनुभूति "

A Journey through Indian Knowledge Systems

Sponsored by

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26-27 April 2024



Exploring the depth and diversity of India's ancient knowledge. A treasure trove of wisdom that influenced and guided generations of scholars, scientists, and philosophers.

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Relevance of Kautilya's Arthashastra in the Modern Economic System

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Abstract

The ancient Indian treatise, Kautilya's Arthashastra, written by Chanakya (Kautilya) in the 4th century BCE, provides a comprehensive guide to governance, economics, and military strategy. This paper explores the relevance of the Arthashastra in the context of the modern economic system, focusing on its principles of statecraft, economic management, and public policy. Despite the historical and cultural gap, the Arthashastra offers timeless insights into economic practices and policies that are surprisingly applicable to contemporary economic challenges.

Kautilyas Arthashastra emphasizes the role of the state in economic regulation, fiscal policies, and market management, advocating for a balanced approach between state control and market freedom. The treatise underscores the importance of a well-planned economic strategy, fiscal responsibility, and the need for ethical governance, which are critical for modern economies facing issues like fiscal deficits, economic inequalities, and corruption. The Arthashastra's emphasis on efficient tax systems and public welfare resonates with current discussions on tax reforms and social safety nets.

The paper delves into Kautilyas perspectives on trade, labor, and market dynamics, drawing parallels with contemporary economic theories and practices. The Arthashastras detailed analysis of trade policies, import -export regulations, and labor rights demonstrate a sophisticated understanding of economic principles that align with modern economic thought on globalization and labor market regulations. Additionally, Kautilyas insights into the role of incentives and penalties in economic behavior provide a foundation for modern behavioral economics and policymaking.

Moreover, the Arthashastras strategic approach to resource management and sustainable development prefigures modern concepts of environmental economics and sustainable growth. Kautilyas advice on the prudent use of resources and long - term planning offers valuable lessons for addressing current global challenges such as climate change and resource depletion.

This paper argues that Kautilya's Arthashastra, while rooted in its historical context, offers enduring principles that can inform and enhance modern economic policies and practices. By revisiting and reinterpreting these ancient teachings, policymakers

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and economists can gain a deeper understanding of economic governance and develop more effective strategies for contemporary economic issues. Thus, the Arthashastra remains a relevant and insightful guide for todays economic landscape.

Keywords: Traditional Indian knowledge, Kautilya, Arthashastra, Chanakyas NITI

Introduction

Kautilya's Arthashastra, composed by the ancient Indian philosopher and statesman Chanakya (also known as Kautilya or Vishnugupta) in the 4th century BCE, stands as one of the most comprehensive treatises on statecraft, economics, military strategy, and governance. Often compared to Machiavellis "The Prince," the Arthashastra provides a meticulous and pragmatic blueprint for rulers and administrators, addressing various facets of governance and public policy. Despite its antiquity, the Arthashastra's insights remain profoundly relevant to contemporary economic and political discourse.

In the modern economic system, characterized by rapid globalization, technological advancements, and complex socio-economic challenges, the principles articulated in the Arthashastra offer a unique perspective that transcends temporal and cultural boundaries. This research paper aims to explore the enduring relevance of Kautilya's Arthashastra in todays economic landscape, examining how its ancient wisdom can inform modern economic practices and policies.

The Arthashastra's approach to economic management is rooted in a keen understanding of human nature, the importance of ethical governance, and the necessity of a well-regulated state apparatus. Kautilyas emphasis on fiscal responsibility, efficient tax systems, market regulation, and public welfare presents a framework that parallels many contemporary economic theories. Furthermore, his pragmatic strategies for trade, labor management, and resource utilization reflect an advanced comprehension of economic principles that resonate with current global economic practices.

This paper seeks to bridge the historical gap by analysing key aspects of the Arthashastra in light of modern economic challenges. It will explore the texts perspectives on state intervention in the economy, the balance between market freedom and regulation, and the role of ethical leadership in ensuring economic stability and growth. Additionally, the paper will highlight how Kautilyas ideas on sustainable resource management and long-term planning can contribute to contemporary discussions on environmental economics and sustainable development.

By revisiting Kautilya's Arthashastra, this study aims to uncover timeless economic principles that can enhance modern economic policies and practices. In doing so, it underscores the importance of integrating historical wisdom with contemporary insights to address the multifaceted economic issues of our time. The relevance of Kautilya's Arthashastra in the modern economic system not only enriches our understanding of ancient economic thought but also provides valuable lessons for today's policymakers and economists.

State Intervention in Economic Management

Kautilya's Arthashastra advocates for a proactive role of the state in economic regulation and management, emphasizing that a well-governed state is crucial for economic prosperity. In the treatise, Kautilya argues that the state should regulate economic activities to ensure social welfare and prevent exploitation. This principle is highly relevant in modern economies, where state intervention is necessary to correct market failures, provide public goods, and maintain economic stability.

1.1 Fiscal Responsibility and Taxation

One of the key aspects of the Arthashastra is its focus on fiscal responsibility and efficient taxation. Kautilya proposes a tax system that is equitable and efficient, ensuring that the tax burden is distributed fairly and that tax revenues are used effectively for public welfare. This resonates with modern discussions on tax reforms aimed at reducing inequalities and promoting economic growth. Effective tax systems are critical for funding essential public services and infrastructure, reducing income disparities, and fostering sustainable development (Singh, 2016).

1.2 Market Regulation and Trade Policies

Kautilyas Arthashastra emphasizes the importance of regulating markets to prevent monopolies, ensure fair trade, and protect consumers. The treatise provides detailed guidelines on import-export policies, market inspections, and the regulation of prices and wages. These principles align with modern economic practices where governments implement regulations to promote competition, protect consumers, and ensure fair trade practices (Rangarajan, 1992). In an era of globalization, effective trade policies are crucial for fostering international trade, protecting domestic industries, and ensuring economic stability**.**

Ethical Governance and Public Welfare

Ethical governance is a central theme in Kautilyas Arthashastra. Kautilya argues that a rulers primary duty is to ensure the welfare of the state and its people. He emphasizes the importance of ethical leadership, transparency, and accountability in governance. These principles are particularly relevant in contemporary times when corruption and lack of transparency undermine economic development and public trust (Boesche, 2003).

2.1 Public Welfare and Social Safety Nets

The Arthashastra underscores the importance of public welfare and the provision of social safety nets. Kautilya advocates for state-sponsored welfare programs to support the poor and vulnerable sections of society. In modern economies, social safety nets such as unemployment benefits, health care, and education are crucial for reducing poverty, promoting social equity, and ensuring inclusive growth (Shamasastry, 1961).

2.2 Role of Incentives and Penalties

Kautilyas insights into the rol e of incentives and penalties in economic behaviour

are foundational for modern behavioural economics. He recognizes that incentives can motivate individuals to act in the best interest of the state, while penalties can deter undesirable behaviour. This understanding is reflected in contemporary policies that use a combination of incentives and penalties to influence economic behaviour, such as tax incentives for businesses, subsidies for renewable energy, and penalties for environmental violations (Thakur & Bose, 2014).

Trade, Labor, and Market Dynamics

The Arthashastra provides a sophisticated analysis of trade, labor, and market dynamics, offering insights that are relevant to modern economic theories and practices. Kautilyas perspectives on these aspec ts highlight the importance of strategic trade policies, labor rights, and market regulation in achieving economic prosperity.

3.1 Strategic Trade Policies

Kautilya emphasizes the importance of strategic trade policies to enhance the states economic power. He advocates for policies that promote exports, regulate imports, and protect domestic industries. These principles are evident in modern trade policies where countries implement tariffs, trade agreements, and export incentives to enhance theireconomic competitiveness andprotect national interests (Boesche, 2002).

3.2 Labor Rights and Regulations

The Arthashastra addresses the rights and regulations of labor, advocating for fair wages, safe working conditions, and the protection of workers rights. This aligns with modern labor laws and regulations that aim to ensure fair treatment of workers, promote labor rights, and enhance productivity. Ensuring labor rights is essential for creating a just and equitable society and for sustaining economic growth (Sharma, 2006).

Resource Management and Sustainable Development

Kautilyas strategic approach to resource management and sustainable development prefigures modern concepts of environmental economics and sustainable growth. His advice on the prudent use of resources and long-term planning offers valuable lessons for addressing current global challenges such as climate change and resource depletion.

4.1 Prudent Resource Management

The Arthashastra emphasizes the importance of prudent resource management to ensure long-term economic stability and prosperity. Kautilya advocates for the sustainable use of resources, efficient agricultural practices, and the protection of natural resources. These principles are critical in modern times when resource depletion and environmental degradation pose significant threats to economic and social stability (Chakrabarti, 2001).

4.2 Sustainable Development

Kautilyas emphasis on long -term planning and sustainable development resonates with contemporary discussions on sustainable growth. The need for balancing economic development with environmental sustainability is a key challenge in modern economies. Kautilyas insights into the sustainable use of resources and the importance of planning for future generations provide a valuableframework for achieving sustainabledevelopment goals (Mehta, 2012).

Conclusion

Kautilya's Arthashastra, though rooted in its historical context, offers enduring principles that can inform and enhance modern economic policies and practices. The treatises emphasis on state intervention, ethical governance, fiscal responsibility, market regulation, and sustainable development provides a comprehensive framework for addressing contemporary economic challenges. By revisiting and reinterpreting these ancient teachings, policymakers and economists can gain a deeper understanding of economic governance and develop more effective strategies for today's economic issues.

Throughout history, Kautilya's Arthashastra has provided insights that remain relevant across diverse economic contexts. Its recommendations on fiscal prudence and taxation resonate with contemporary debates on income inequality and tax reform. Kautilyas advocacy for a balanced approach between market forces and state intervention reflects ongoing discussions on regulatory frameworks and economic stability in global markets. Moreover, his emphasis on ethical governance and transparency underscores enduring principles that guide effective policymaking and governance practices worldwide.

In the realm of trade and labor, Kautilyas Arthashastra anticipates modern concerns about fair trade practices, labor rights, and sustainable economic growth. His strategic prescriptions for resource management and sustainable development align with current efforts to address environmental sustainability and resource scarcity. By integrating these principles into contemporary economic strategies, nations can pursue growth that is inclusive, environmentally sustainable, and socially equitable.

In conclusion, Kautilya's Arthashastra offers a valuable reservoir of wisdom that transcends time and place. Its insights into economic governance, ethical leadership, and sustainable development provide a holistic framework for addressing the complexities of the modern economic system. By leveraging these ancient teachings, policymakers and economists can navigate contemporary challenges more effectively, fostering prosperity and stability for societies worldwide.

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Introduction

Background on career development in the Information Technology (IT) field

The IT industry has witnessed unprecedented advances and evolution in recent years. It is because new technologies develop quickly, which are transforming established industries, creating new ones and reshaping society itself (Uebernickel and Brenner 2014). As the IT job market continues to grow and change, those working in this field ride out many trials in their careers. From keeping in step with the fast-moving industry, through mastering new technologies and methodologies to cope with, updating oneself continuously is needed by IT professionals to stay competitive skill and knowledge-wise (Gallagher et al. 2010). Additionally, it has become more crucial than ever for IT professionals to strike a balance between their technical knowledge and soft skills like communication, coordination(Medlin 2004).

Effective career development strategies are key to meeting these challenges and ensure extended success of IT specialists. Good career development initiatives help increase job satisfaction, lengthen staff service, promote innovation, and resolve the industry's skills and talent shortages. They can bring both individual success and organizational well-being(Santoso and Sidik 2020). Yet, current theories and models of career development may not quite include all the particular dynamics in IT. A new direction is required one that draws on the wisdom of many sources rather than limiting itself to a single way of thought.

An ancient Indian text, the Bhagavadgt shows us the way of personal development and self-cultivation. It is also interested in developing ones own talents and calling. Its core concepts of Svabhva and Svadharma (Easwaran 2007) where-in, Svabhva stands for a person's natural innate nature and temperament, which dictates what kind of strengths, weaknesses, and preferences they may have (Satinder Dhiman 2019). Svadharma, however, is one's duty or career that is according to your natural character--which is itself Svabhva (Mukundananda 2019). The Bhagavadgt shows that by recognizing and considering one's Svabhva, individuals can find their Svadharma and succeed in life (Yogananda 2005).

Presented in a fresh light by Sri Aurobindo, these two concepts bring in new outlook in their usage to seek new paths suited to our times. Accordingly, his work highlights the progressive nature of Svabhva and continuously developing nature of Svadharma (Aurobindo 2018). He reiterates that by engaging oneself in honest self-discovery, one can align their career choices to Svabhva and Svadharma, which leads to a twofold growth, both at the personal and professional level (Maitra and Aurobindo 1953).

The research paper seeks to understand the appropriateness of Svabhva and Svadharma and how these eternal concepts translate into the modern context of career development and work style in IT enterprise settings. The research's main focus is to explore how Svabhva influences the caree r choice, job satisfaction and productivity of employees in IT industry, whilst it also examines how Svadharma

affects their overall development, upskilling and whether they are joyful with the occupation at all.

The importance of this research is in its ability to push the envelope specifically aimed towards career development in the IT industry. The paper provides suggestions through which employees, managers, and institutions can add innovation or knowledge to their projects for their own careers. The study, by emphasizing the holistic integration of personal and career development, attempts to introduce new examples of ancient wisdom in modem practice that both foster individual well-being and lead to successful organizations. Moreover, this research may lay the groundwork for future studies on applications of Svabhva and Svadharma in other sectors of industry and explore the cross cultural validity of these concepts in guiding career development.

Introduction to Svabhva and Svadharma from the Bhagavad gt

Any ancient Indic text or scriptures deal with santanadharma. The word santana meaning eternal insinuates Indic knowledge and wisdom and their applicability to every genre of the contemporary world. The Bhagavadgt, prominent among the Indic sacred scriptures, is a dialogue between Lord Ka and Arjuna, the great warrior on the battlefield of Kurukshetra. Entering philosophy and offering practical advice, boiling together facts and wisdom which will enable anyone to lead a fulfilling life and even self-realization was one of the main themes in this text. Two fundamental concepts of Bhagavadgt, Svabhva and Svadharma, have significant influence on personal development and decision-making (Satinder Dhiman 2019).

Svabhva refers to an individual's inherent nature, qualities, and characteristics (Mukundananda 2019). The Bhagavadgt proposes that one's Svabhva arises from the interplay between gua, or qualities of nature, that dominate within as a result of actions and experiences accrued (Yogananda 2005). Understanding one's Svabhva is key for self-consciousness and personal development, as it provides insight into one's natural tendencies and potential(Satinder Dhiman 2019).

Svadharma, on the other hand, establishes an individual's personal duty that inoculates svabhva characteristics (Mukundananda 2019). It is the path of action aligning with one's svabhva or nature, which lets them live within themselves yet fulfill some real purpose in this life. By pursuing roles consonant with their svabhva, people can significantly improve their professional skills in their chosen occupation or even industry. They contribute most when they are in this state rather than fighting against the grain of things (Dhiman 2018).

The Bhagavadgt stresses the dual play between Svabhva and Svadharma, evincing the importance of understanding onesown self -nature to act on his own Svadharma (Easwaran 2007). When people know their inherent nature and qualities, they are better able to make decisions on life or career paths. By keeping their actions aligned with their Svabhva, they will experience a sense of usefulness, satisfaction, and inner joy (Mukundananda 2019). The Bhagavadgt prompts people to embrace their Svabhva and practice their Svadharma freed by concerns for result one way or the other (Yogananda 2005).

The idea of Svabhva and Svadharma has a great bearing on career development and self-improvement. Knowing ones Svabhva, individuals can identify their strengths, passions, and innate skills (Satinder Dhiman 2019). This understanding equips them to choose jobs that are in harmony with their natural tempers, bringing them higher job satisfaction and greater success in life. Furthermore, by following their Svadharma, people can have a feeling of fulfillment and add real value to the organizations and societies in which they work (Mukundananda 2019).

The modern interpretation of Svabhva and Svadharmaby Sri Aurobindo

Sri Aurobindo, a distinguished Indian philosopher, offers a modern perspective on the concepts of Svabhva and Svadharma , drawing from the teachings of the Bhagavadgt and his own spiritual insights. Integral Yoga, the major philosophical work of Sri Aurobindo, attempts to bring ancient Indian thought into modern awareness (Aurobindo 2018).

According to Sri Aurobindo, Svabhva is evolutionary in nature and is not fixed and static. It is the unfolding expression from within of their being and becomes articulate over time (Maitra and Aurobindo 1953). According to Sri Aurobindo, Svabhva is shaped by the interplay of various forces, including one's soul or psychic being, the guas (qualities of nature), and the influence of past lives (Aurobindo 2018). He declares that as individuals grow and evolve spiritually, their Svabhva likewise improves, drawing it more in line with their original nature and purpose (Ghose and Heehs 1999).

Sri Aurobindos point of view on Svadharma is closely associated with that of Svabhva. Accordingly: Svadharma determines not only each person's role within society or job responsibilities but encompasses the totality of an individual's life. That covers one's own aspiration for empowerment on all levels and reflects everyones contribution to mankind --whether material things or as spiritual (Ghose and Heehs 1999). He stresses that finding and achieving ones Svadharma requires a process of unfolding oneself and agreeing to ones higher nature (Aurobindo 2018).

In the view of career development, Sri Aurobindo proposes that by taking a process of self-exploration and inner growth, people can gain a deeper understanding of their true nature and unique talents (Maitra and Aurobindo 1953). This self-attention will then direct occupational decisions that match with their Svabhva thus experiencing fulfilled professional lives (Ghose and Heehs 1999). Sri Aurobindo advocates that individuals don't merely do their work for a living, but as a means of self-expression and service (Aurobindo 2018).

In addition, what distinguishes the philosophy of Sri Aurobindo is the realization that spiritual growth is something that must be combined with the quest for success. This idea also applies to the IT field. Professionals can find direction and support in their work if they are in accord with their potential to contribute to society meaningfully using their talents and skills(Ghose and Heehs 1999).

The need for a fresh perspective on career development in IT

The IT industry, characterized by fast technological progress and ever - changing landscape for example, it has brought special challenges to career development in

this field. More traditional theories and models of career development may not capture the dynamic nature of the IT sector. For example, Super's Life-Span, Life-Space Theory(Super 1980) and Holland's Theory of Vocational Personalities and Work Environments(Holland 1959), even though they remain relevant today: these theories typically assume a relatively steady career path which in fact is challenged by reality. It might be suggested that these theories undervalue the necessity of continuous learning, adaptability, and acquisition of new skills by focusing primarily on more stable career paths(Barnes, Brown, and Warhurst 2016). However these are crucial imperatives for success in an industry such as information technology(Lent, Brown, and Hackett 1994).

Further, the current development theory puts its emphasis on external factors such as job trends and social expectations, organization structures rather than individual motivation-values, purpose (Savickas 2012). In IT's fast-paced and modern environment where burnout and job dissatisfaction are frequent phenomena (Armstrong, Brooks, and Riemenschneider 2015), there is rather a need for more comprehensive concept of career development incorporates the employee's personal growth, wellness and harmony with itself, guided by nature(Lysova et al. 2019).

When the current theories do not meet the demands of IT professionals, alternative approaches like integrating ancient wisdom, for instance the concepts Svabhva and Svadharma in Bhagavadgt, into modern career counseling seem likely to be beneficial. These ancient Indian notions offer people a way to grasp their own nature and identity, understand their talents and life purpose. In addition, they give guidelines for one's career choices consistent with what is real within (Satinder Dhiman 2019). By including these principles in modern day career development strategies, IT professionals can look forward to improving the chances of success, work with more meaning and satisfaction, and make an increasingly effective contribution to organizations and society as a whole (Mukundananda 2019).

Integrating the wisdom of the ancients into contemporary career development practices is potentially a way to transcend the limitations of present theories and schemes-an all-around, humanized approach. By factoring in the individual's Svabhva and Svadharma, career development strategies may be made to fit each IT professionals unique needs, talents, and ambitions (Low and Muniapan 2011). This approach can generate higher levels of purposefulness, involvement, and emotional perseverance among employees, naturally leading to increased job satisfaction, performance, and an overall upturn in wellbeing(Lysova et al. 2019).

In addition, integration of ancient wisdom into career development in the IT Sector can add a more supportive, nurturing organizational culture. Recognizing the intrinsic nature and life purpose of the individual, organizations can foster personal growth, artistic and innovative creativity (Dhiman 2018), thus leading to reduced stress levels, staff turnover, high and quality productivity, greater collaboration, and teamwork among employees as well as improved Enterprise performance (Brooks, Riemenschneider, and Armstrong 2019).

Literature Review

Current knowledge of IT career development field

With reference to Donald E. Supers theory (Super 1980), posits that career development is an individual's self-concept, life roles and experiences lifelong process. Another well-known theory is Holland's Theory of Vocational Personalities and Work Environments which argues that individuals and work environments can be classified into six types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional(Holland 1959). In accordance with this theory, job contentment and success are more likely if the personality type of an individual person fits well with his work environment(Nauta 2010). From IT's perspective, this notion highlights the need for people to be competent of accomplishing something as well have the will to do it. Such a dual requirement can be brought about by the hiring organization.

Research has also found a number of factors that affect people's job selection and happiness in IT, such as inclination, ability, and values (Quesenberry and Trauth 2012). There are also outside factors: for example, job market trends, the degree management environment will support employees needs, and whether work -life balance can happen(Armstrong et al. 2015). It was also noted that IT professionals who have found a sense of meaning and direction in their work, along with opportunities to learn and grow, typically report higher levels of job satisfaction loyalty (Brooks et al. 2019).

Identifying gaps in the literature and research opportunities

Although extensive research focuses on IT career development, there are still gaps in the existing literature. Such an empty space is that the ancient wisdom, such as svabhva and Svadharmais not integrated into modern career development theories.

What the literature also lacks is a comprehensive, all encompassing path to career development that considers the special challenges and dynamics of the IT sector(Lysova et al. 2019). Most present theories and models concentrate on certain aspects of career development, like personality-environment fit or adaptability, but could fail to address completely things such as continuous learning, workload and life balance(Brooks et al. 2019).

Besides, further research is required in the intervention in the effectiveness or strategy for supporting IT professionals career development Some studies have looked at the effects of mentoring, training and organizational support on IT career outcomes (Reio and Ghosh 2009). Nevertheless, it can still be worked out how to refine this kind of intervention for IT professionals who face particular challenges or need individualized solutions. That considers factors such as individual differences, organizational culture and the fast pace at which the whole industry is changing.

From the above literature gaps seen in a clear light, the careers of IT professionals need more comprehensive and effective strategies for development. Researchers and practitioners will be able to work toward raising the job satisfaction, involvement, and well-being of IT professionals by blending ancient indic knowledge with

contemporary theories and methods, considering industry-specific factors. In the end, this kind of work will help to keep an IT industry sustainable.

Conceptual Framework

In the proposed conceptual framework, we hope to integrate ancient theories like Svabhva and Svadharma with modern career development theories, to try and understand what motivates IT professionals and how we might better support them. Incorporating perspectives from the Bhagavadgt a nd its contemporary interpretation by Sri Aurobindo, this framework attempts to tackle the unique challenges and dynamics of the computer industry while at the same time stressing importance of self-knowledge, growth in individuals as people working in this sector for clean soul harmonious interactions, always reacting only from within your natural abilities and job in good light.

Proposing a comprehensive IT career development model

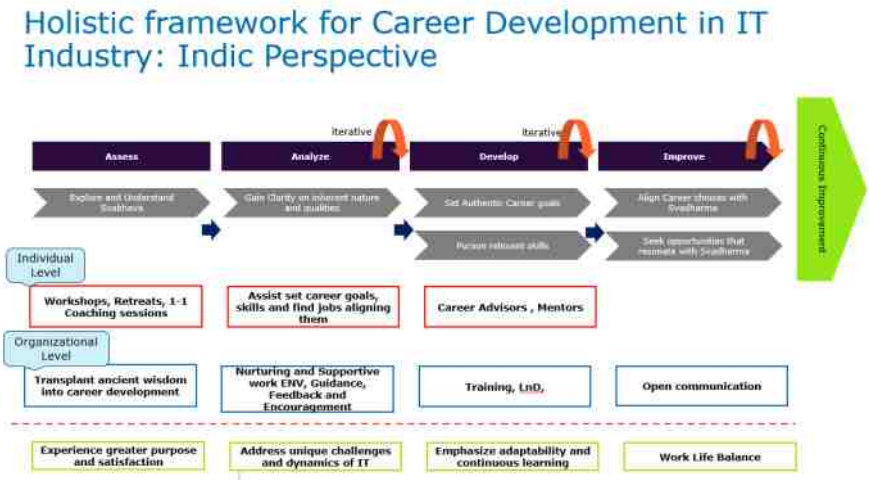
Unifying traditional knowledge with a very modern concept in the proposed comprehensive IT career development model, the idea is to mesh the concepts of Svabhva and Svadharma with contemporary career development theories to form a systematic framework that addresses its practitioners real needs. Pulled on by ancient wisdom, this model also acknowledges the significance of being self-aware, developing in a personal way and aligning oneself with one's own nature and desires of course in order to gain career success (Satinder Dhiman 2019).

Hence, the framework proposes that IT practitioners may start their career development ~~trip~~ by getting to know their Svabhva which calls for self - examination, personality tests, and suggestions from mundane or career consultants. Nobody wants to be typecast as the bad person with gas-chamber potential. After deciding its nature and caliber, they can make their job choices fit in with what Mukundananda (Mukundananda 2019) calls their Svadharma the duty or calling that is theirs alone. This alignment can be fulfilled by setting genuine career goals, studying the right skills and knowledge and systematically noticing for circumstances which are consistent with their Svadharma (Yogananda 2005).

Treating what makes the information technology sector different, all the framework for career development in IT will always consider the particular challenges and specific dynamics. These include the extraordinary rate at which technology evolves, and the desire for endless learning and re-training; therefore, it also must include the necessity to balance work with life beyond work (Armstrong et al. 2015). Incorporating these considerations with those of Svabhva and Svadharma, and practice, the model offers a holistic approach to help IT personnel at any level of experience to develop their careers.

For example, the model accents the importance of adaptability and continuous learning in a world of such rapid changes as the IT industry (Armstrong et al. 2015). It calls on IT practitioners to see learning and upskilling not just as means by which they can remain competitive in the labor market, but also a way that gels with what their heart really wants (i.e., Svabhva) and can further assist them into living o ut their life purpose or Dharma. Furthermore, the model also recognizes that it is

significant to strike an equilibrium between work and personal life. It suggests that IT professionals should endeavor to reconcile their career with other roles in life, consistent with their Dharma.



Implications for IT professionals, organizations, and career development practices

For IT professionals, the framework offers a comprehensive approach to career development that places priority on self-awareness, personal growth, and harmony with what is inside one (Satinder Dhiman 2019). On the road of career development if IT professionals integrate the thoughts of Svabhva and Svadharma, they will find more authenticity, self-realization, and motivation in the workplace.

The perspective offered to organizations regarding the career development of their IT subject matter experts is a framework. The organization, through the recognition of the importance and significance of Svabhva along with Svadharma, must build an extra nurturing and supportive working atmosphere that boosts employees to develop their ingrained nature and purpose (Mukundananda 2019). Over time this should promote higher job satisfaction, engagement, retention, and sustainability for IT professionals--thus making the organization more successful and competitive (Brooks et al. 2019).

In the IT industry, the proposed model has important ramifications for career development. This shift calls for a more holistic and individual approach that considers the unique needs, challenges, and aspirations of IT professionals(Armstrong et al. 2015). To meet these demands, career development mediations should shape into coaching, mentoring, and training. IT professionals need to explore their Svabhva, align their career with their Svadharma, and navigate the current environment in the IT field (Satinder Dhiman 2019). With such an all-encompassing approach, career development practices can more adequately aid in the growth and success of IT professionals at present

Discussion

Strategies for integrating ancient wisdom into modern career development practices

If the concepts of Svabhva and Svadharma are to be integrated effectively within contemporary career development practices, then at individual level a range of tactics can be deployed, which can be achieved through workshops, retreats, or one-on-one coaching sessions which encourage individuals to explore their inherent nature, strengths, and values (Satinder Dhiman 2019).

Another important intervention is to assist one aligning career with Svadharma (Mukundananda 2019). This can involve helping IT professionals to set real career goals, identify the skills and knowledge they need for this, and find suitable assignments which are at the heart of their own task or duty (Yogananda 2005). Career advisers and mentors can provide invaluable help in making this alignment process a reality. They can offer guidance, feedback, encouragement and encouragement all the way(Brooks et al. 2019).

Organizational-level interventions along with to the individual-level interventions, perform a significant role in how to transplant ancient wisdom into career development practices. One key strategy is to create a work environment that is nurturing and supportive, and where the Svabhva and Svadharma of each worker are recognized(Satinder Dhiman 2019). This can involve cultivating a culture of self-awareness, one 's natural way personal growth and finding your place in life itself.

It is also possible for organizations to provide resources and genuine opportunities. Employees can further explore and mould their own Svabhva also to follow their Svadharma (Mukundananda 2019). Thirdly, this can take the form of training and development programs that foster self-awareness, skill development, and professional path alignment(Armstrong et al. 2015). Finally, an organization can foster open communication and feedback, which empowers employees to discuss about their hopes for the future, difficulties encountered thus far along this career-aligned path of life's work (Brooks et al. 2019).

Limitations and future research directions

The proposed conceptual framework is a promising path to put ancient wisdom into practice in todays career guidance. But we need to acknowledge its shortcomings and see where it needs further development. One limitation is that the framework is rooted in a particular ancient Indian concept, Svabhva and Svadharma (Dhiman 2018). There is another limitation of this framework: it assumes only the current IT professionals, while the principles of Svabhva and other such theories are most likely relevant not only in any one industry but indeed all sectors in need of them. More study may be required to understand how this model can be applied to include the other industries too, which, can be done by investigating if different sectors require integration with the ancient wisdom in their specific challenges and functions, identifying ways this can be achieved while remaining applicable and effective as ordinary professionals.

Finally, the framework proposed is conceptual in nature and needs to be further tested using other methods. The impact of integrating Svabhva and Svadharma into career development practices could thus be examined by conducting case studies, surveys, or interviews with various kinds of IT professionals and organizations. Empirical evidence of this sort would be invaluable for the further refinement and validation of the framework, making it more robust and practical in real-world settings.

Conclusion

The study has explored how to integrate the ancient Indian ideas about Svabhva and Svadharma into modern career development theories and practice, focusing particularly on the IT sector. The paper draws on the timeless wisdom of the Bhagavadgt, as well as modern interpretation by Sri Aurobindo to propose a holistic framework of understanding and supporting IT expert career deve lopment. Based on this paper, the crucial insight is that importance should be given to respecting of oneself, self-improvement and alignment with one's inherent nature and direction in achieving satisfied career success(Satinder Dhiman 2019). By adding an element of Svabhva and Svadharma into current theories like Sup er's Lifespan, Life-Space Theory and Holland's Theory of Vocational Personalities Work Environments the paper provides an overall and refined perspective on IT career development.

For IT professionals in companies, this is the way to be more aware of your own identity and potential, and also to live their job. Hindrance is bound to occur within an organization when a supportive and breeding work space has not been established one which essentially doesn't recognize or value at the very heart of its own structure the fact that each worker's personality is his own, unique Svabhva and Svadharma. This results in increasing job satisfaction, engagement, and retention down the road. It then becomes clear that employees who identify themselves as being part of this culture will contribute to their organization's(Armstrong et al. 2015).The third professional area to be impacted by the proposed framework is career development and practices where it requires a more comprehensive picture instead of mere points of maintenance, addressing individual cases to find solutions for them each time one comes along (Armstrong et al. 2015).

This paper lays a sound conceptual foundation, but it must be acknowledged that it also has limitations. Moreover, more study and empirical prove needs done on it still. So, in the future, researchers could adapt and apply the framework to aviation service and manufacturing jobs. Then they could empirically test its key propositions and relationships with experimental data. These efforts would help to upgrade the framework and bind it tighter into a comprehensive whole. These efforts will serve to further perfect and enrich the framework in real-world situations.

This paper lays down a new vision for career development, integrating contemporary theories and practices with the potential element that ancient wisdom has always brought to mankind. The paper's holistic framework, which stresses self-

awareness, personal growth, and being what one is meant to, has pointed out new directions for understanding and facilitating the career development of IT professionals. The IT industry is evolving, presenting ever-new challenges. Today we must gather and make use of many sources of wisdom and knowledge to develop career support systems in greater detail. The integration of concepts from ancient times with up-to-date career practice as advocated in this paper indicates a great road ahead for eventual work in this field.

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Exploring ground truth for AI through Sankhya

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Abstract
We aim to appreciate the need to identify the ground truth for an AI system through foundations led by the the Samkhya system of the Indian thought process. We argue that the three limited approaches of knowledge creation in the Samkhya system are sufficient, if not necessary, for AI systems. However, we also observe that AI would consider Shabda more important than Pratyaksha, unlike a human knowledge seeker.

Keywords : *Ground Truth, Artificial Intelligence, Samkhya, Praman*

Introduction
Artificial intelligence systems are being increasingly used in our day-to-day lives [Liu et al. (2018); Hirsch Kreinsen (2023)]. From predicting which art form to watch in the case of a recommender system in streaming platforms to helping doctors identify disease, AI is entering every walk of our lives. The computing and communication revolution of the last century brought us closer by enabling low-cost real-time transfer of knowledge. It also helped reduce repetitive tasks while still creating a large base for employment. However, previous systems were designed following an algorithmic structure. Their approach to solving a problem as well as the problem was pre-defined. They did not interact with new data or new problems. In recent years, machine learning systems have been breaking these barriers by training themselves with unconventional and new data. They have been quite successful. However, they are also damaging to our social fabric by reinforcing bias and stereotypes. While it was assumed that widescale communication systems will enable us to appreciate other human beings and systems, we are observing increasing mental silos being formed. The blame for a lot of this has been placed in the lap of AI. The actual blame should fall on the data, which the AI assumes to be the ground truth while learning. Any AI system would only be as good as the data used to train it as well as the role for which it was designed to be. This means that the age-old question of what is truth becomes important again, this time for artificial beings. In this manuscript. I will try to revisit this question through the lens of Indian knowledge and philosophical systems. More importantly, I would like to argue that Samkhya currently provides a good basis for truth-seeking for an AI. I would limit myself to epistemology and not indulge in the concept of the universe and beings. The paper is structured as follows: The next section provides a quick

summary of basic AI systems. The next section describes why ground truth is needed for an AI system. We then explore three different forms of Pramans, as identified by the Samkhya school, to show how they fit the needs of AI. We finally discuss why other schools of thought process, through their enlarged basis for truth may not be ideal for the requirements of AI. The final section concludes the manuscript.

Typical AI Systems

Before we jump into the concept of truth, let us visit how a typical AI system works. This would also be essential for us to understand why we need to know the truth. When we say AI, we are restricting ourselves to systems that learn from the data. It is vital to define this in the beginning, as the phrase AI has been used for a multitude of different things over the course of the last and current century. In the early days of computing, it just meant automation or pre-defined automation. In due course, it meant well-structured, large computing systems. However, these early systems did not learn proactively from the data and could not solve any unknown problem. It was only when the concept of neural networks started making its way in computing systems that we started seeing concepts of learning from input data. Neural networks, as we believed, are mimicking the human brain. The human brain is a densely packed structure of about neurons [Herculano-Houzel (2009)]. Each neuron could be connected to as few as one or as many as a tent house and other neurons. However, they are typically slow and exchange very small amounts of data between them. However, the natural neurons grow with the body and hence learn to appreciate physically recorded signals like that of sense, touch, and sound, as well as to classify, infer, and do other processing with this data. We still do not fully understand either the anatomical or the functional aspects of the neurons. However, we understand the basic functionality of individual structures. This has not limited us from trying to build them. In the last century, spiking or artificial neural networks were the talk of the town in research literature [Yamazaki et al. (2022)]. We were hoping that by building a large number of simple neurons, we would be able to solve the most complex problems. However, the computing power required for the neurons was just not available. In the last decades, deep learning, wherein we have hidden layers of neurons, has become quite popular [Goodfellow et al. (2016)]. While we are calling them neurons, these computing structures have evolved from their human neurons, which inspired their design, and except for basic similarity, they share very little with animal neurons. There are a large number of structures with these deep learning systems, and any simple paper cannot do justice to them. However, one thing that is similar is how they learn. We can understand them by taking a basic and simple building block that of a perceptron [Klimasauskas (1992); Wong (2024)]. It takes a number of inputs and then multiplies each input with a certain weight, specific to that input. The results of these multiplications are then added up. The sum is then passed through one of several different types of activation functions to give a result. A simple activation function could be to produce zero as output if the sum is lower than a threshold, otherwise produce

one. Alternatively, the output follows the sum if it is greater than a threshold but is otherwise zero.

The weights of the system are what we learn. The system can be initiated with random weights and then produce an output. This output is compared to a ground truth. If the output and ground truth are the same, the weights are not changed. If not, they are changes using some function of the error between the desired output and the obtained output. To appreciate it, let us consider a very simple system that looks at beings walking on a road, and it knows they could only be a human or a cat. The humans are recorded as output 1 and cats as output 0 Let us consider that we place two sensors, one, S1, which produces an output of '0' whenever it records a two-legged being and an output of 1 when it records a four-legged being. A second sensor, S2, measures the weight of the being. If it is high, it produces 1 and 0 otherwise . One can see, how the output of the first sensor of 0 (two -legged) and the second sensor of 1 (more weight) has a higher probabil ity of the observed animal being a human. The perception would multiply the data from the sensors with weights w1 and w2 and then use a hard limiter to produce 0 or 1 as output. To start with, both weights can be placed as 0. A human walks in. The sensor produces 0 and 1, respectively. Hence w1 S+w2 S2 is 0, which denotes a cat. This is wrong and hence, the weights need to be updated by simply adding the inputs to both weights. At this point, the ground truth was provided. If we train the system with a larger number of such ground truths, in due course of time, the updated weights will learn to predict correctly if the being is a cat or a human. This is a simple example. In more complex systems, there will be a large number of weights and several layers of neurons interconnected between themselves. However, one common theme they all have is the comparison against ground truth. This ground truth is typically provided in the form of a large data set to train the AI. Alternatively, a set of rules is provided within which the AI is to check itself if it has met the requirements.

The need for ground truth

There are two issues worth noting here. The AI will only be as good as it has been asked to do, and the ground truth data has been used to train with [Lebovitzetal. (2021)]. Let us take our cat/human system again. If a bipedal Chimpanzee walks in, the system would still call it a human. Well, it was never asked to worry about Chimapnzee in the first place. This is often seen in recommender systems on various social media platforms. People often complain that they reinforce our bias. Well, the aim of these systems was never to educate us, but it was to maximize the profit for their smother firm. It very soon became apparent that people are more prone to watch or see something if it fits with their preconceived notion. Hence, if one follows left-wing politics, one would be more interested in clicking on a left-wing politically themed article. The clicks make money for the parent firm, and hence the AI realized that is what should be shown to the individual, irrespective of what it does to his or her preconceived notions. This is not the problem we are concerned with here. We are more concerned with the need for ground truth for an AI to be trained with. Currently, it trusts or is designed to trust all data given to it.

Hence, large language models like ChatGPT are available from various sources like journal articles, newspapers, regular discourses, etc. to train themselves [Liuetal. (2023)]. However, how do they know if they should trust the data to be correct and suitable to be ground truth? If the ground truth is not correct, no amount of data processing or learning can lead to good performance of the AI. We recently examined a student in a practical course, wherein the student stated something completely incorrect and then blamed on ChatGPT for the error. It seems ChatGPT had indeed used an incorrect sample of research papers to give him that specific result.

As more and more of us are using such systems, it certainly raises the question as to how these systems should identify the ground truth. Fortunately, for us, ground truth has been a key question asked by philosophers throughout our history [Blackburn and Simmons (1999)]. We will now delve into mechanisms of truth-seeking, as identified in the Indian philosophical system, and see if we can utilize them to help AI appreciate the ground truth. We are asking the oldest question of philosophy, if not the human civilisation itself. What is truth, and how does one prove that it is the truth? The question has been asked repeatedly by eastern as well as western philosophers with different dimensions and metrices defined to identify it. This is often referred to as Praman in Indian philosophy and is also vital for an AI to know. Before we delve further into it, one may like to revisit what the various Indian thought systems describe as suitable ways of measuring ground truth. I would first like to argue that Samkhya provides a good philosophical system for any AI to subscribe to. Samkhya limits itself to just three different ways to identify truth or to gain knowledge perception, inference, and word [Babu (2019); Phillips and Vaidya (2024).

Pratyakhsa

Samkhya provides at least 3 different ways to identify or validate truth [Phillipsand Vaidya (2024)] of Pratyaksha, Anumana, and Shabda. Pratyaksha is what is being perceived or measured, if considered from a scientific process viewpoint. Of all of the different mechanisms to identify and validate truth, this has to be the foremost. Ideally speaking, one cannot argue against what one observes. Nevertheless, it is always bound by the experimental settings. For example, something as simple as the colour of an object is dependent on the lightning condition. Hence, the same truth can be different based on different measurement conditions. Hence, despite being the ultimate measure of truth, it comes with its own limitations. Now, let us consider what an intelligence system can do with this modality of truth. Typically speaking, we are yet to devise general-purpose and usable robotic systems. Hence, most AI is restricted to being some form of program running inside a computer or a data center. It can certainly check for data as well as whether any in coming data is within the bounds defined for the said entry. For example, in simple experiments in generative AI to produce images of a flower one can define what a flower should look like. The AI can identify and validate if the generated flower fits within the bounds of a prior definition. However, till we actually build robots that enhance motion capabilities, this AI cannot undertake physical experiments on its own. It

can collect some data. However, it is limited to sensors and systems provided in advance. It cannot go and change them. If were to envision our previous example of identifying color in different lighting conditions. An AI with a camera can certainly measure the color, and if it has got electrical controls of a bulb, it can switch off the bulb. However, if the object is in sunlight, for the time being, it is having difficulty in changing illumination. Hence, most AI is currently restricting the data provided to us. Now, it has some way to check the data. For example, while sums of data streams can be measured, it does not have direct opportunities to validate this data stream. Hence, despite being the foremost methodology to identify truth, Pratyaksha is not readily available to AI. It is also worth recalling that Pratyaksha, as defined in the Indian systems, is not just pure experimentation. That would just be external perception. Those who think closer to the logical side of philosophy often think of inner experimentation or thought processes. In one way, what we are currently doing is not too far from the inner experimentation. This includes concepts like intuition, induction, and indefinite conclusions. Now, these have to be a weaker form of validating truth. Any AI tool has better access to this internal experimentation than to any external one. This is where Pratyaksha becomes interesting for AI. For while, it still does not have capabilities of intuition; it can undertake some form of induction and/or indefinite conclusions. It can certainly provide a measure of definiteness in any conclusions.

Anumanand Shabda

Samkhya and a number of other ancient philosophical systems consider a numen or inference to be second in line of measures of truth. Generally, it is hypothesis-driven and is validated with examples, following a certain cause. Herein, the observations, if any do not directly reflect the truth; but one can infer something. The classical example of assuming fire when one sees smoke is often provided. This is very useful in design of AI systems, particularly for generative AI. Rather, one can argue that they already use such approaches. For example, in Generative adversarial networks, one neural network produces new set of data, which is then validated or invalidated by another neural network [Krestinskaya etal. (2020)]. In addition to need for hypothesis and examples, the third aspect of anuman, that of hetu, that is the reason for a hypothesis to be true to equally relevant for an AI. It is rather a key aspect, which needs to be strengthened in future AI. If the AI can be trained to ensure a cause for any result, the cause can then been sured to be legal as well as socially relevant. We considered in the previous example of recommender systems, where in the aim was to maximise profit. However, if we now place hetu in the mix, there commender system will have to identify why somebody prefers only certain type ofthings, rather than accepting their preference as the ground truth.This could lead to a much holistic AI design. We finally come to the instrumentation of truth seeking which is most relevant for AI and which is often given high status of many thinkers, yet is a weak,if not the weakest mechanism for identifying truth. In Indian philosophy ,Shabd a typically meant words of learned teachers as well as Vedas and various other forms of Shruti .It is recognised as a key component of truth-seeking in most philosophical systemsin India. At the same time ,it is also the

principal way by which an AI acquires knowledge. For it, the gospel truth is the learning data provided to it during its training. As stated earlier, the learning data determines what and how the AI is going to evolve. As our current AI has limited capabilities of Pratyaksha, it has to depend on Shabda. More importantly, it also has limited capabilities of defining different types of Shabda. The subset of world knowledge identified by the AI designer is its entire volume of knowledge and it has limited scope to expand it. A human seeker of knowledge often has capabilities of acquiring knowledge from difference source of Shabda and compare them. The AI has limited scope here. Hence, it is vital that the Shabda subset selected for its training is well selected. An alternative approach would be to provide it every possible writing ever created. In fact, a number of natural language models are indeed built using large volume of unstructured unfiltered data. One can immediately identify that with unsupervised learning with this form of data, this could prove to be a challenge to ensure that the AI learns to reinforce the correct data and Shabda. This then raises the question of what is the correct global data to be fed to an AI. Would it lead to it also having biases similar to humans. Furthermore, unlike humans, we build single large systems which work with multiple humans. Hence, if bias enters these single large systems, this would lead to very problematic situation during use of AI. Despite these worrying backgrounds, Shabda is still the predominant way of identifying ground truth for an AI. As an epistemological basis, AI would continue to consider Shabd a to be the key source of knowledge and hence the ground truth. It then raises further questions for the AI developers to ensure that Shabda is suitably utilised.

The other Pramanas

Having seen what Sankhya offers, let me know try to argue why other systems, including those offering three other forms of Pramana do not the fit the bill completely. Vaisheshika only offers Perception (Pratyaksha)and Inference(Anumana), as forms of Pramana [Phillips and Vaidya(2024)]. While one can certainly argue in favour of these being strong identifiers of knowledge, the problem with current AI is that it has to be trained by knowledge gained and recorded by its founders that is the human beings. Hence, without Shabda, AI does not exist. Therefore ,the Vaisheshika school has limited abilities to influence AI development. By similar arguments, Charvaka, which typically only accepts Pratyaksha as Pramana,is also problematic for AI. Let us now consider Nyay. It adds Upamana, as another method in addition to the three prescribed by Samkhya school [Williamson(2022)]. This concept of comparison or analogy is often used in AI, in concepts like transfer learning. Forexample, if an AI has learned to identify cats, it should not need much training to identify dogs, as they share features like 4 legs. However, here lies the problem for AI. If it starts using analogy and actually start identifying cats as dogs, those users who know the difference in advance maybe able to immediately identify that AI iswrong. However, those who trust the AI solving many other problems and those who have never come across the difference between a cat and a dog, would reinforce their thought process that all 4-legged animals are cats. Furthermore, as the AI does not have capabilities to

validate its own analogies, it would be dangerous to allow it to use Analogy as a pure form for knowledge acquisition, without human interference. Mimansa adds Arthapatti and Anupalabdhi, as methods of identifying truth [Arnold(2001)]. Arthapatti suffers similar problems as Upamana for an AI. A large number of Indian philosophers, generally consider it to be a week source of knowledge. Derivative knowledge, as proposed by Arthapatti, could lead to very significant errors in AI systems. Hence, while they could help in design of learning systems, they provide limited value in real-world use. We believe that they are good in learning as current learning systems are using a quite a large amount of energy on needs to learn from scratch. Thinking in lines of Arthapatti may help in design of such systems by utilising learning from first order learned systems. However, it will still require validation, before use. Anupalabdhi and to some extent Abhav have some interesting features for an AI to use. However, not receiving a data to validate knowledge could mean two different things for an AI. At one end, it could certainly mean what Anupalabdhi meant-that the certain cause, effect or source is just not there. However, in case of computing systems, it could also meant that the connectivity of the transmitter has been lost with the AI. Let us consider an example from the banking AI. Financial systems often use two factor authentication as means to validate a true user. However, if the end-user does not enter a desired one time password, it does not always mean a fraud. It could mean something as simple as not receiving the password due a to network failure. Hence, should the AI go on to conclude that the end-user is committing a financial fraud, it would be wrong in its conclusion. Yog and Jainism school have similar epistemology as that of Samkhya [Melasecchi (1980); Soni (2000)]. They use the same three forms of knowledge acquisition. Hence, if we limit ourselves just to ground truth, Yogis as good as Samkhya. The concept of Purush and Prakriti is also similar as a first approximation to that of Samkhya. This can be attributed to that of computing software and hardware, if one aims to visualise AI as such. Yoga, is often referred to as Samkhya with God. As we will restrict ourselves to electronics and computing, we would not like to delve in the concept for God. Furthermore, the concept of God would be alien to any AI at this point of time .

Conclusion

We have attempted to investigate AIs need for ground truth from the eyes of ancient Indian Philosophy. To do so, we have analyzed AI through various approaches of Pramanas in the Indian Vedic system.Our arguments suggest that simple three foundation approach of Samkhya suits the AI well. However, in human knowledge acquisition, one would have placed direct experimentation above any word of knowledgeable person, the current concepts of AI would restrict it to place Shabda above anything else.

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Beyond Profit: Harnessing Dharma's Principles for a Sustainable Future

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Abstract
In a society where profit margins overshadow the wellbeing of our life sustaining planet, where workers are seen as mere resources who are getting churned in a relentless pursuit of maximization of productivity & where consumers are tricked and coerced into buying useless and unsustainable products and is white washed as consumerism the traditional balance of market forces is steadily slipping away from the grasp of consumers. Whether through the surreptitious collection of user data, the influence of social media influencers, or the implementation of artificial intelligence, power is increasingly consolidating in the hands of suppliers. We as humans have always been hopeful weather it be trying times or time of prosperity but if we dont rain in this capitalistic machine through a principled approach there will be nothing to be hoped for. Here, the ancient principle of Dharma can offers guidance, helping us escape the rat race in which we as a society find ourselves today. Here Dharma doesnt refer to a religious path but a principled approach to life and duties that sustains and nurture its followers .This paper embarks on a literary introspection, delving into our rich cultural and intellectual heritage to uncover nuanced approaches to balance the needs of people, planet, and profit. By exploring these pathways, a strive is made to achieve harmony in an era marked by discord between economic imperatives and ecological responsibility.

Methodology utilized: Literature Review, Interdisciplinary Approach, Comparative Analysis

Keywords: Dharma, Dharmas principle, Profit margins, Environmental sustainability, Worker exploitation, Consumer coercion, Market forces, Data privacy, Social media influence, Artificial intelligence, Hopefulness, Capitalistic machine, Balanced approach, Cultural heritage, Nuanced solutions, Harmony, Economic imperatives, Ecological responsibility.

Introduction

In a culture where the principles of survival of the fittest and anything goes in love and war are embraced, what benefits could one derive from adhering to dharma and fulfilling ones duties accordingly? Wont being resourceful and exploiting the loopholes in the system make ones life easy. It will make the path of being the best in the game of life more achievable ,so what if some corners were cut few pockets filled and some torn, after all growth and progress is the essence of life and we live in a capitalistic society and not a socialist one where innovation goes to die. What good would it serve for any person to be a follower of dharma other than being taken advantage of? Our research began with a question: Does our modern, scientifically advanced society truly require ancient principles to function effectively? However, as we delved deeper, we were surprised to find that many principles advocated by celebrated management and economic pioneers were already present in ancient texts like the Arthashastra, Bhagavad Gita, Vidur Niti, and Shanti Parva, among others. While neo-classical theorists in the 19th century began recognizing the importance of employee satisfaction for organizational success, ancient scholars like Chanakya had long emphasized that the king's happiness depends on the happiness of his subjects. Despite the misconception that principles of morality might oppose wealth creation, ancient texts like the Santan Dharm actually place wealth (Arth) as one of the four goals of human life, alongside dharma (righteousness), kama (desire), and moksha (liberation). Achieving all four goals is considered "purusharth" or the ultimate purpose of life.

Literary review of ancient texts for an in depth analysis of dharma

In this review of literature major books have been studied pertaining to dharma and its implications on person, family, nation & world the blocks of society the teachings and works of Acharyas, Ministers, Sages and Individuals have been studied and through these studies lessons are drawn for modern implementation of these policies for the betterment of individuals, organizations , nations and the world as a whole. Keeping the principle of Vasudev Kutumbhkam at its heart a strive is made to repair cracks that have appeared in the society as a whole.

But before a study of principles of dharma is done one should understand what is dharma for this we turn to Mahabharata and characters like Bhishma, Dhritrashtra, & Yudhisthir for the study of multifaceted aspects of dharma an inspection is done of involvement of these figures and the role played by them in the act of cheer haran (the removal of clothes) of the daughter in law of the emperor Dhritrashtra and grand daughter in law of Bhishma the great empress was in this setting was being dragged in the hall of the King Dhritrashtra and her brother in law was stripping her clothes in front of the entire royal family all this because Yudhisthir had lost his entire wealth, nation, his brother, his wife and even himself to his cousin Duryodhan in an unfair game of dice, but he did not stop even when he lost his personal wealth he could not leave the game of dice as for him it was his dharma as a Kshatriya to complete the battle he has entered into weather it be on land or on a table of dice while dharmraj (another name of Yudhisthir) was tied to his dharma his wife was being dragged into the clan house of the kuru clan while all this was happening the

king Dhritrashtra was in moha of his son and couldnt see the wrong being committed in his court while the grandfather-in-law Bhishma stood next to the king though knowing what was happening was wrong but he too was following his dharma of following his wow to always follow every order that came from the throne. From this one can gather that dharma without Satya and Sukarma will always lead to adharma and will always lead to a detrimental effects for the society. Similarly if a businessman hides behind his dharma of accumulating wealth and tramples on poor and unjustly acquire and misuse resources of the society, it is dharma of a business to accumulate wealth for this is necessary for the society to progress but it is also there duty to uphold dharma as justly said by Acharya Chanakya अधर्मेणधनंप्राप्यनित्यंनरकंवासयेत्। Money accumulated by adharma will always lead to hell or downfall. With this we delve deeper into the ancient knowledge of past. The classical Indian scriptures, such as the Arthashastra, Vidur Niti, Bhagavad Gita, Manusmriti, and Chanakya Niti, offer invaluable insights into ethical leadership, moral behavior, and the quest for truth. This review aims to explore the profound wisdom contained within these texts, shedding light on their teachings regarding governance, justice, and societal morality. Pertaining to Dharmas Role in Management, Economics & Governance

"धर्मात्मासामदृष्टश्चरक्षिताधर्मवत्सलः।व्रतीशूरःप्रजानामराज्ञःपरिपालकः॥" The king shall be a terror to the bad and a refuge to the good, to those who are destitute of livelihood, a leader, and to those who are in fear, a protector. Arthashastra, Book 1, Chapter 6

"प्रजासुखेसुखंराज्ञःप्रजानांचहितेहितम्।नात्मसुखंनचात्मानंप्रजाःप्रीयन्तिधर्मजाः॥" In the happiness of his subjects lies his happiness; in their welfare, his welfare; whatever pleases himself he shall not consider as good, but whatever pleases his subjects he shall consider as good. Arthashastra, Book 1, Chapter 19

निर्द्वन्द्वोनिरहङ्कारोनिरस्पृहोनिराश्रयः।मुक्तःसजन्ममृत्युभ्यांतंविद्धिपदमान्तकम्॥

One whose mind is unattached, who has subdued his self, whose desire is gone, who is free from the pairs of opposites, such a person is released from birth and death. Vidur Niti, Chapter 1, Verse 40

प्रयत्नात्कर्मणःकृत्वाभार्यांदद्यात्स्वकर्मकृत्।तस्यांप्रयत्ननिर्वृत्तेयथार्थमुपजीवते॥

Those who are engaged in work should be paid wages in accordance with their efficiency and performance. Arthashastra, Book 2, Chapter 21

A wise ruler should win over neighboring kings through peaceful means rather than resorting to war. Arthashastra, Book 6, Chapter 1

The king should appoint ministers who are wise, trustworthy, and capable of providing sound advice. Arthashastra, Book 1, Chapter 3

A man should not be too honest. Straight trees are cut first and honest people are screwed first. Vidur Niti, Chapter 3, Verse 6

A person who is not jealous in this world should indeed be considered as a learned person. Vidur Niti, Chapter 1, Verse 12

A person should strive to acquire knowledge, for knowledge is the greatest wealth. Vidur Niti, Chapter 5, Verse 10

Arthashastra:

धर्मेणहिनसेद्धर्मसत्येनपरिपालयेत्।सत्यात्मनोविजानीयात्धर्मःसत्यान्नप्रजायते॥ This verse from the Arthashastra states, By dharma,Adharma should be destroyed, by truth, dharma should be protected. One should realize that dharma might be attacked but truth is the basis of dharma .It highlights the inseparable relationship between dharma and truth in governance and management.

Vidur Niti: नयज्ञेनतपसानदानेननचेज्यया।सक्त्यासन्तुष्टोयजतियोधर्मेसमाहितः॥ This verse from Vidur Niti states, One who is content with his capabilities worships through adherence to dharma, not merely through sacrifices, austerities, or charity. It emphasizes the importance of inner contentment and adherence to dharma in ones actions.

Bhagavad Gita: धर्म्याद्धियुद्धाच्छ्रेयोऽन्यत्क्षत्रियस्यनविद्यते। This verse from the Bhagavad Gita (Chapter 2, Verse 31) states, There is nothing better for a warrior than a battle based on dharma. It underscores the importance of adhering to righteous action (dharma) even in the midst of conflict.

धर्मोरक्षतिरक्षितः This phrase, found in various parts of the Mahabharata, translates to Dharma protects those who protect it. It echoes the sentiment from the Vedas, emphasizing the protective power of righteousness.(Arthashastra 1.19)

Manusmriti: धर्मःसर्वहितेरतः This verse from the Manusmriti (Chapter 1, Verse 110) states, Dharma is that which ensures the welfare of all. It highlights the inclusive nature of dharma, which aims for the well-being and prosperity of society as a whole.

Chanakya Niti: धर्मेणहीनाःपशुभिःसमानाः This quote from Chanakya Niti (Chapter 1, Verse 4) means, Those devoid of dharma are equal to animals. It emphasizes the importance of ethical conduct and moral values in distinguishing humans from mere beasts.

"सत्यंवद धर्मंचर" - "Speak the truth, follow righteousness." (Rig Veda 10.117.1)

"धर्मेणविनारजनींवृष्टिंनपर्जन्यःप्रपद्यते" - "Without dharma, neither day nor night rains in time." (Atharva Veda 12.1.13)

"सत्यान्नास्तिपरोधर्मः" - "There is no dharma greater than truth." (Satapatha Brahmana 14.1.1.31)

"सुराःसंपत्स्यन्तेधर्मदीप्तिभिः" - "Kings with the light of dharma become glorious." (Arthashastra 1.14)

"यथार्थकार्याणांसाधनेधर्माचरणं" - "Practicing dharma is the means to accomplish real objectives." (Arthashastra 1.13)

"सच्छिष्याधिकारादिषुपरिजनाधिकारेषुचधर्मोनअभिगृह्णाति" - "Dharma does not support the abuse of power by teachers, kings, or other authorities." (Arthashastra 1.19)

"धर्मेचसाधुषुकुर्वीत" - "One should act according to dharma and for the welfare of the good people." (Arthashastra 2.14)

From the Vidur Niti:"धर्मएवहतोहन्तिधर्मोरक्षतिरक्षितः।" - "Dharma, when destroyed, destroys; Dharma, when protected, protects." (Vidur Niti 2.1)

"धर्मादर्थःप्रकाशयेत्" - "Wealth should be acquired through righteousness." (Vidur Niti 2.12)

धर्मेणयुक्तंपुरुषंनस्नायात् which emphasizes the idea that virtuous individuals do not need external purification rituals because their inner goodness is already "evident.(Vidur Niti 2.44)

सःसर्वेषुलोकेषुस्वधर्मपरिपालयन्। He, protecting his own dharma, sustains all worlds. (Ri g Veda 7.10.1)

धर्मेणहयाप्तेकामोनलाभायनचाप्रयच्छति। When one is established in dharma, desires and gains do not distract him. (Atharva Veda 11.10.34)

धर्मेयुक्ताश्रीःसंपद्यते Wealth and prosperity come through dharma. (Atharva Veda 11.10.24)

धर्मेसर्वंप्रतिष्ठितं Everything is established in dharma. (Atharva Veda 12.1.12)

सत्यात्माधर्ममन्विच्छन् The seeker of truth desires dharma. (Yajur Veda 32.13)

आर्थिकानांधर्मार्थेप्रवृत्तिः Economic activities should be undertaken for the sake of dharma and artha (wealth). (Arthashastra 1.7)

धर्मवतीहिप्रजासुखेनधनेनच। A populace enriched with dharma finds happiness both spiritually and materially. (Arthashastra 2.2)

धर्ममार्थेचकाम्येच्छायोगक्षेमेतथैवच। Desire, acquisition, and preservation should all be in accordance with dharma. (Arthashastra 4.3)

नधर्मःसुखदुःखयोरावृताविवसंयोगः। Dharma does not discriminate between happiness and suffering. It implies that ones adherence to moral principles should remain steadfast and consistent regardless of the circumstances. (Arthashastra 4.4)

धर्मःकामोधर्मसुखंकामस्तथैवच। Dharma leads to desire, and desire leads to the happiness of dharma. (Vidur Niti 1.2)

अधर्मपरित्यज्यैकंधर्मवाचोवदेद्बुधः। The wise forsake adharma and s peak of dharma alone. (Vidur Niti 2.8)

धर्मस्यहिधनंधर्मःसुखमस्यैवधर्मजं। Wealth attained through dharma brings happiness born of dharma. (Vidur Niti 2.9)

धर्मस्यहिधनंपरंसुखंनैवधनंधर्मजम्। The greatest wealth is dharma, not the other way around (Vidur Niti 3.6)

These were few of the most impactful teaching among the ocean of ratna that were written by the Sages and gurus on the topic of dharma and how it plays its role in

turning the wheel of Management, Economics & Governance of the kingdom(society/business/life of individual).

Methodology

With a better understanding of dharma and its role in ones life it is left to see is there real-life benefits of following dharma in real life or is it just some wishful thinking. In odder to assess these principle validity and applicability 3 case studies have been taken under consideration Think and Learn Private Limited, Tata Sons Limited, The 2008 real-estate bubble.

The case of Think and Learn Pvt. Ltd. Or better known as Byjus

Was Indians unicorn and a shining bacon of Make in India and the entrepreneurial aspiration of many Indians for this was a promise of a revolution of the cracking and old Indian education system and provide a suitable alternative of coachings. The promise of learn at your own pace was a novel idea as the education system at primary and secondary level was overworking with students in a single classroom ranging anywhere from 30 to 70 students in a single class and it is impossible for a single teacher to pay attention to every single student and cater to there needs so parents to were happy that there kids can get that some extra that there child might need but slowly the company in odder to get better evaluation and to be a brand in the education industry embarked on a path way different from the path of dharma and started predatory practices amplifying the worries of parents and vurnable kids with advertisements and marketing push showing that they were the only one that could uplift the students many were forced to sell there belongings in oder to afford the skyrocketing prices of there courses. This goes simply against the principles of dharma of doing business in an ethical manner, but the company carried on and started acquiring companies left an write and pushing it on its customers. Many might remember white hat Jr. that promised to teach kids how to code in a gameified manner. There advertisement campaigns showed a 8 year old creating app that made investors to line up at his doors. This created a frenzy among parents that there child might be left behind in the technological race. All these practices made it slowly into an unpopular entity in the market. Once commanding the valuation of 22 billion dollars is now hovering around 1billion dollars in 2024 the conditions became so rough that the company was unable to make payments towards the Employee provident fund so one can summarize from this case that if dharma is not followed while wealth creation then the accumulated wealth will take no time to perish the company ignored its customers plight and rather chose to act as predator was the ultimate cause of its downfall.

The case of Tata Sons

Tatas have been around since pre independence in India there journey was not one of ease but there adherence to dharma and there high sense of societal duties have made them a name that is revered by all generations the company has shown at multiple examples of how if dharma is upheld it doesnt only help the practitioner but society as a whole while the founder Jamshet Ji Tata build schools for kids of

women working in his empress mills or there sponsorship of Indian Olympic team or be it Tata memorial hospital and many more is a testament that In a free enterprise, the community is not just another stakeholder in business, but, is in fact, the very purpose of its existence

The Case of 2008 housing crisis

This single event itself made many economies to ponder over the benefits of globalization and free trade the global order was shaken and all this happened because greed took hold over the banking system of America. It all started due to the greed and opportunity that the bankers saw in the lending sector loans were being sanctioned left right and center the individuals responsible to uphold the checks and balances were more bothered for there bonuses rather than the institution itself diverting from there dharma and as with earlier example dharma when upheld protects and when forsaken destroys so it happened as the sub prime mortgage increased a bubble formed and finally burst in the end of 2007 creating a catastrophe of a huge scale.

A comparative study between Axelrods tournament and teachings of Dharma

Both cases show that there is merit in upholding dharma while one is engaged in business, but is dharma needed in individuals life for this one might turn to a popular game theory known as prisoners dilemma where the participants have 2 choices each either give up the other party and escape or keep silent and shoulder the punishment. Seeing it as a one time or linear transaction one might easily choose the option of giving up the other person and get the freedom but our world is not a linear one but cyclic in nature and when this is taken in consideration choices become difficult and this was studied by Robert Axelrod in his tournament 1&2 of programs and his research findings were as follows

There were 2 camps of strategies Nice & Nasty Nice strategies were not first to retaliate or defect and nasty were the first to retaliate or defect and the Nice strategies always outperformed the nasty strategies in axel rods 1st tournament in his second attrition he made the number of rounds varaible from 200 times like in 1st tournament to random number but around 200 this was done so that the program would not know when would it last be cooperating or retaliating and data from 1st tournament was shared this made people realize that Nice strategies were out performing the nasty one so number of Nice strategies increased and the opposite camp thought of it to so they created a testing programs to exploit the Nice strategies they might default once every other turn and if faced with retaliation would go back to cooperating where as if none were faced it would continue to alternate between cooperating and retaliating in this tournament too Nice strategies outperformed the Nasty and the winner was a strategy known as tit for tat which would repeat opponents last moves, but a question arised that we live in a noisy world where sometimes even best intentions might lead to defection so the top performing program was made to run in a noisy environment against itself and it was found that if the program perceived an outcome as defection it would retaliate and seeing this the other one would too start to retaliate thus they both would

retaliate till the program ends so it was necessary to escape this echo chamber so a strategy where a forgiveness would be practiced every 9th time thus escaping the echoes this experiment highlights that is not important to defeat other party to win cooperation though less fruitful for individual is much better for the group as whole and showed that life is not a sum zero affair at all (where there is only one winner) and these findings were cited by evolutionary studies and many others in diverse field to emphasize the need of cooperation over defection. Similarly Dharma too says that for every action (karm) weather good or bad lies an equal (fal) fruit of that action as the popular saying goes if one plants a tree of babool one cant expect mangoes as its fruits Dharma also accounts for the noisy environment and teaches to be compassionate and forgiving but that to in moderation as Acharya Vidur aptly said the straightest tree would always be the first to be chopped first so it is upon the individual to maintain moderation in there act while imparting judgement. Dharma preaches that a person should do there job as there duty and not in the hopes of gaining something out of it, this also applies to the organization and governments too it doesnt matter weather there is a watchdog or not if you have a duty towards your employees or citizens it must be followed and if not then in no time would the second party retaliate and cease to cooperate. Thus it can be gathered that the saying dharma protects dharma is proven by the Axelrods studies and thus making Dharmas position more evident in lives of everyone be it a citizen or a whole country.

In conclusion,

The cases of Byjus and Tata Sons underscore the significant influence of dharma on personal lives, businesses, and society at large. Byjus ethical lapses resulted in its downfall, underscoring the necessity of upholding dharma in the pursuit of wealth. Conversely, Tata Sons' steadfast commitment to dharma has not only benefited the company but also society through philanthropic endeavors.

Drawing from Robert Axelrod's game theory research, parallels can be drawn between the principles of cooperation and defection and the essence of dharma. Just as Axelrod's studies advocate for cooperation's long-term benefits, dharma emphasizes ethical behavior, compassion, and moderation in all endeavors.

Ultimately, dharma serves as a guiding principle for individuals, corporations, and governments, emphasizing the importance of fulfilling responsibilities for the collective good. The adage "dharma protects dharma" reinforces the idea that adherence to righteous conduct leads to positive outcomes for everyone. Thus, dharma's role in individual lives and societal progress is not only evident but crucial for fostering harmony, prosperity, and sustainable development.

Results

Implications of Dharma on Management, Economics & Governance

Where the literary review helped to increase the theoretical knowledge of Dharmas enrollment in field of Management, Economics & Governance, the case studies and the comparative analysis helped on for understanding the practical implications of dharma in real life throughout this study it has become evident that a society without dharma at its core would turn into a society of animals where the strong

prey on the weak and exploitation is rampant as was in the case of East India Company which kept its profits first over its customers or subjects similar instances were seen in early American history where capitalist tried to use dangerous fillers in there products to boost there sales which lead to creation of the Pure food and drug Act of 1906 which later became the FD&C act of 1938 if business continue to diverge from the path of truth and dharma in pursuit of wealth then there is no doubt sooner or later the words of Kautilya would come to fruition that अधर्मेणधनंप्राप्यनित्यंनरकंवासयेत्। Money accumulated by adharma will always lead to hell or downfall. Similarly it is upon individual too to uphold there dharma else crisis like that of 2008 would keep on happening, one must remember that it is true that money(arth) is basis of all that there is in this society but dharma is the basis of society itself. As the society progresses it is upon individuals and the organization that these individuals form to manage and govern the recourses be it human or monetary with a firm rooting based in dharma because without it making a business or country ru is equivalent of building a house on quicksand it will eventually sink.

Limitation

This study is purely theoretical and based on comparison of different theories it lacks In amount of practical data from the market and the management floor. The industrial implications studied here are of historic in nature so it does open gaps for future research. This research has been done in a multidisciplinary manner so a focused study might also be a good start.

Conclusion

In conclusion we summarize that the path of dharma will always lead to sustained growth where as a path of adharma might look like a shortcut would ultimately leadits follower to a bottomless pit it is upon the person choosing the path where they want to end up. The tales of Byjus and the banks of America serve as an precautionary tale for the players of the market that if customers and environment be it internal or external is not managed properly it will eventually become the snow ball that will bring the avalanche with it destroying everything in its path.

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The Representation of Religion in Indian Literature

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Abstract
Indian literature boasts a rich tapestry where religion is not merely a thematic element but a foundational thread that shapes narratives, defines worldviews, and reflects the evolving social fabric of the subcontinent. This paper delves into the multifaceted representation of religion in Indian literature, spanning ancient epics like Ramayana and Mahabharata to contemporary works. It explores how religious beliefs and practices are woven into the narrative structure, influencing characters' motivations, societal norms, and the very concept of good and evil. The paper examines the portrayal of diverse faiths, including Hinduism, Buddhism, Jainism, and Islam, highlighting the coexistence and occasional tensions between these traditions. It analyzes how literature serves as a medium for religious transmission, preserving myths, rituals, and philosophical doctrines.
Furthermore, the paper explores how religious themes are used to critique social inequalities, challenge established hierarchies, and advocate for ethical conduct. It delves into the concept of dharma, a central tenet in Hinduism, and its influence on the portrayal of duty, justice, and the pursuit of liberation. The paper also acknowledges the complexities of representation, including the potential for reinforcing stereotypes or overlooking the experiences of marginalized communities. Finally, it emphasizes the importance of studying the representation of religion in Indian literature to gain a deeper understanding of the cultural, philosophical, and social landscape of the Indian subcontinent.

Keywords : Indian literature, religion, Hinduism, Buddhism, Jainism, Islam, representation, mythology, dharma, social commentary, cultural identity

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Introduction

Indian literature refers to the literature produced on the Indian subcontinent until 1947 and in the Republic of India thereafter. The Republic of India has 22 officially recognized languages. The earliest works of Indian literature were orally transmitted. Sanskrit literature begins with the Rig Veda, a collection of sacred hymns dating to the period 1500-1200 BCE. The Sanskrit epics Ramayana and Mahabharata appeared towards the end of the 2nd millennium BCE. Classical Sanskrit literature flowered from the 4th century CE and continued to 1100 CE. This literature had a large impact on Indian culture and is still recognized around India today. Among the most important works of this period is the Bhagavad Gita

and the classical love poetry of Kalidasa. Later devotional and mystical literature plays a major role in Indian culture. This includes the great Muslim poet Amir Khusro. Before the first millennium CE, the Tamil alvars and Nayanars produced devotional songs. Medieval Bengali literature, Middle Assamese literature, and Odia literature are known for their various religious sentiments. Despite the multitude of Indian languages, there is also a relatively unified Indian literature in this culture. This is largely due to the influence of the Indian poets on the development of poetry in various languages. This unified literature flourished over 500-600 years up to the time of Kalidasa and Shudraka. The early Indian literature is generally religious in some ways and this is both the effect and cause of this relatively unified culture. (Chandras, 2020)(Mukherjee and Bernaisch 2020).

Background of Indian Literature

Religion provided the content as well as the rationale for the creative expressions of the Indian writers. Religion and religious cults have been a perennial source of inspiration for Indian writers in the past as well as in contemporary times. The entire mass of religious and philosophical ideas has been drawn upon by Indian writers at different times to depict the social, cultural, and intellectual backgrounds of their age. It is now a well-known fact that Indian literature is infused with religious elements and it throws ample light on the religious history of India in different periods. Every branch of Indian art has been employed to depict the religious ideals and sentiments. Traditionally in India, literature was meant to be the means of bringing home to the people the various teachings of religion and philosophy, of course in forms that were interesting and educative. Even today a very large part of Indian literature is religious in nature. (Tejani, 2021)(Monier-Williams, 2024). This section will discuss the background of Indian literature. It is important to acknowledge the fact that religion has been the central theme of literature in every age of Indian society, from the ancient sacred scriptures of the Vedic period, right down to the contemporary poetry, drama, and fiction of modern times. In fact, it would not be unfair to say that any work of art in India has not been truly representative of Indian culture and tradition unless it has been imbued with religious sentiments. Religion has played a significant role in the evolution of Indian literature. It has deeply influenced every walk of life in India and it has left an indelible impact on Indian mentality.

Importance of Religion in Indian Culture

Religion represents a great part of Indian literature. It has been much written upon and has so close a connection with social and political institutions, arts and sciences, and manners and customs of the different peoples of India, that it is almost impossible to write a page of Indian literature without finding religion obtruding itself directly or indirectly on one's attention. Thibaut says, "Indian literature is not in the modern sense of the word secular. To the Indian mind scientific and artistic pursuits have value only in so far as they help on the attainment of the highest aim of man - the knowledge of or union with the divine" (History of Indian literature, p. 1). He also remarks, "Even the most secular work of Indian geniuses is to a certain

extent tinged with the spirit of religion." According to Max Muller, "No religion is at such a distance from poetry as a prosaic age would fancy: on the contrary, religious poetry in India has reached its highest and noblest object in representing the whole action of life to be the evolution of the divine and the participation of this in harmony and reason and at last the reunion of man's individual self with the universal self - the self of the all-pervading deity". (Ammerman, 2020)(Eller, 2021)

Religious Themes in Indian Literature

The section on "Religious Themes in Indian Literature" encompasses an expansive view of the specific religious tradition prevailing in India as well as the liminal negotiation between the religious and the secular aspects of the Indian tradition. Here the volume combines insights from most major religious traditions in India, as well as presenting India in its full temporal range, from ancient times to the present. As Dipak Bhattacharya says, India is not just a place where religion is a part of her culture, but "...in India culture is really synonymous with religion". Bhattacharya's statement seems to make perfect sense in the debates on whether cultural artifacts can ever be fully independent of religious content. Stephanie Jamison pointed out in her criticism of Jon Gonda's 'Hinduism' Review that "It is impossible to extricate the SMTI textual record from its context in religious praxis and philosophical speculation". This is particularly true of most Indian literature. Even modern Indian cultural artifacts have proven to be difficult to extricate from religious contexts. In Mandakranta Bose's 'The Oxford History of Hinduism: The Goddess', it is clear that cinema, a popular culture medium, is now also being examined in terms of its religious parallels. For example, in the article 'Celluloid Ganesa: The Religious and The Secular in Indian Cinema' we see a dissection of the symbolism of one of India's most popular and enduring deities in a pop culture vein. In short, the religious and the cultural are often intertwined in India, and this has often resulted in either deliberate or unconscious religious and philosophical messages being expressed in cultural artifacts. (Lopez Jr, 2020)(Hopkins, 2020)

Hindu Mythology and Epics

Of all the religious literature in India, the two great Hindu epics, Ramayana and Mahabharata, are considered to be the most remarkable. Valmiki's Ramayana, written around the fifth century B.C., amidst the spectacles of wild nature and human civilization, seeks to portray a perfect ideal prince, obedient son, true brother, loyal friend, ideal husband, and an ideal king. The Ramayana consists of the story of Rama, who was an ideal avatar of Vishnu, a great king, and a symbol of good virtue. Rama's wife, Sita, was abducted by Ravana, the demon king of Lanka. This led to a great war between Lord Rama and Ravana with the help of monkey king Sugreeva and Ravana's brother Vibhishana, wherein Rama emerges victorious by killing Ravana and rescues his wife. Ramayana has been a prominent source of moral and cultural values portrayed in the form of a great story to the people of India for over two millennia. The Mahabharata, written by Vyasa, provides a detailed account of a struggle for the throne between two groups of cousins known as Kauravas and Pandavas over the right to rule the kingdom. This struggle is

articulated in the form of a great battle wherein Lord Krishna, an avatar of Vishnu and a friend of Pandavas, becomes the charioteer of Arjuna, who happened to be the third of the Pandava brothers. Uncertain and upset about fighting against his own relatives in the battle, Arjuna refuses to fight. It is in this context that Lord Krishna gives a spiritual discourse to Arjuna on the battlefield and enlightens him with knowledge and the way of life, which is an integral part of The Mahabharata known as The Bhagavad Gita. This conversation is considered to be a spiritual teaching that defines the right code of living life, righteousness amidst the confusions of duty, and serves as a guide to attain salvation from the materialistic world. The Mahabharata is a complex masterpiece that delves into various aspects of human life and philosophical issues ever since it was written. and has been an integral part of Indian culture. (Pallathadka and Pallathadka2020)(Venkateshwar, 2021)

Buddhist and Jain Literature

The origins of Buddhist and Jain literature are traced back to the early Indian civilization. Both these religions are indebted to India for their rise and development. The teachings of Buddha and Mahavira and those of their gandhas have been handed down to us in the form of oral literature. According to tradition, the Buddhist literature amounts to five or more times the extant literature of ancient India. The language of this vast literature is Pali. This is known to be a mixture of several dialects found in the Buddha's time and therefore it is believed to be the popular speech of the period. Pali grammar is explained in a work called 'Asiddhimasutta.' Pali literature is mostly religious and philosophical; the Jataka tales, a collection of 550 stories narrating former births of the Buddha, his disciples, and other persons, are an important exception. At best, Pali literature can be called a superficial culture if compared to the classical. Therefore, a knowledge of the life and thought of the people in that period can be obtained easily and enjoyably by reading the Pali text. Action and thought in the Pali literature of Buddhism are closely related and are often indistinguishable. Therefore, the phraseology is intentionally simple and obscurity is shunned. (Shulman, 2021)(Naudé, 2021).

Sufi Poetry and Islamic Influence

Sufi poetry began in the 12th century. The most important Sufi poets were Farid and Bulleh Shah, and their verses are also sung in the form of Kafi. The poetry has a typical Punjabi rhythm, which is very potent in captivating the hearts of listeners. Although the language of the poetry is Punjabi, the message is universal. Sufi poetry has been a tool in portraying the message of love and compassion, and it has left an indelible mark on the psyche of Punjabi and the people of Punjab - Muslims, Sikhs, and Hindus alike. The poetry is a treasure of Punjabi culture, and it opened new vistas of the thought of love, devotion, and the quest of the divine. Kakka Singh wrote, "had there been no Sufis, the Punjab would have been a deserted waste." Khushwant Singh describes Sufi poetry as a "search for God through the medium of love and music." This poetry provides a very good vehicle for understanding the social and psychological fabric of the times in that it often

provides minute details of contemporary life, social structure, and the psychological makeup of individuals.

The Punjab in the 12th to 17th centuries was marked by political disorders, wars, and invasions. Patel states the three hundred years of Islamic influence on the Punjab did not leave a deep or lasting impression on the culture. But there was Islamization of the Punjab in the general sense, i.e. the Punjab society became increasingly oriented towards and integrated with the cultures of the Middle East and Central Asia. Certain Punjabi commonwealths accepted Islam as their state religion. Muslim mysticism had a great effect on Punjabi literature, expressed in the poetry of the Punjabi mystics or Sufis. (Khan, 2021)(Nair, 2023).

Symbolism and Allegory in Religious Texts

The epics of the Hindus have been taken at face value, and within them, the characters of the gods have been likened to men with divine powers. The concept of a 'higher being' really moved further away from the Gita, where Krishna argues that true Brahmas (holy men) follow his actions, and later, the Bhagavad-Purana would support the notion that imitation of Krishna's leelas through meditation would ultimately bring about a worshipper's own god-like status. Mythology plays a major part in all Hindu tales and stories and was viewed as the most innovative way to portray different aspects of life and various truths and moralities learned by the people of the past. Using Ganesha as an example, the story behind the loss of his original human head and elephant head replacement demonstrates how, with God's grace, man can overcome all types of disability, worries, and setbacks. This is merely one of the metaphorical ways the Hindu deities have been used to portray a moral message, and from this, Ganesha was worshipped as a god of prosperity. This form of portrayal was considered very creative and meaningful and was used to educate the underprivileged classes of society who were illiterate and could not understand the complex philosophical teachings detailed by the Upanishads. The lower classes still play a major part in the faith and worship today, particularly in South Asia, and there still remain some tribal communities in India, as identified in the Bhil Ganesha myth, who have kept closely to their ancient Hindu religion, whom the higher classes back then obviously wanted assimilated. (Maitra, 2022)(Mahto).

Metaphorical Representations of Deities

In most works of religious literature, the direct representation of a deity is considered both sacrilegious and impossibly grandiose; how does one describe a being which is infinite in finite terms? It is therefore more common to indirectly represent a deity through a higher standard of humanity: the hero. This method is especially prevalent in the ancient Greek classics, such as the Iliad or the Odyssey. In the Bhagavad Gita, Arjuna serves as this human medium, but this is not always explicit in religious texts. In medieval European literature, especially the verse of Dante Alighieri, it is difficult at times to decipher whether the character of the divine is intended to represent a deity or the virtue it is supposed to stand for. An interesting side note here is that even personification is not considered a metaphor

in religious texts; virtue is goodness, and any failure to equate the two is mere human error. This is an important fact to keep in mind when reading any religious literature, as an inability to recognize the allegory in any given passage can lead to gross misinterpretation. (Horyna, 2020)(Stünkel, 2023)

Moral and Ethical Lessons in Religious Stories

There are two main schools of thought regarding the widespread use of allegory in religious literature in the Hindu tradition. Overwhelmingly, the stories that feature allegorical elements are those from the puras, and many of these take the form of a story of the devas and asuras personifying the eternal struggle of the forces of good and evil. The devas can be seen to represent the qualities of truth, righteousness, goodness, virtue, etc., while the asuras are symbols of the qualities of unrighteousness, evil, and immorality. But a popular allegorical story that is often quoted is the account of Nachikt found in the Kaha Upaniad. I n this story, the young boy Nachikt is sent by his father to the home of death as a sacrifice and upon arrival waits there for three days, and on his return, being annoyed at not having been received in an appropriate manner, Nachikt asks for three boo ns, one of which is an explanation of a sacrificial fire about which there are different opinions. But the first boon asked by Nachikt is regarding the means of atma - fulfillment, by which word is understood self-realisation or moka, and the dialogue between him and Yama, the Lord of Death, on this topic occupies the rest of the first Valli or section of the Upaniad. In essence, this is an allegory concerning the nature of the individual living in the world and how one who is desirous of atma-fulfillment should conduct himself in order to attain the realisation of the Self. (Ali et al., 2021)(Fletcher, 2021).

Interpreting Religious Symbols in Indian Literature

Interpreting Religious Stories Religious literature often contains stories or events with a moral and/or religious message. This may be in the form of a fable, parable or an allegorical story. In order to understand the true meaning behind such a story it is important to understand the context of the story and the time in which it was written. An example of this is in the Jain story of Sankriti-Indriya. This tale tells of a meeting between an artist and an emperor. The artist is asked to draw a picture of the soul, something which is impossible to do. Unsatisfied the king imprisons the artist without food or drink, believing that the artist has hidden the picture and is refusing to show it to him. After three days the king realises his wrongdoing and releases the artist. The intended understanding of the story is that the king represents the human soul, the artist represents the sharp faculties of the mind, the three-day fast signifies entering into nirjara (the removal of accumulated karmas) and the release of the painter is to illustrate that it is impossible to destroy the soul. The use of symbols and allegory has been a traditional part of religion since its establishment. It is an effective way of teaching some sort of moral value and positive behaviour by portraying negative behaviour in someone who the people should not act like. This is often done using characters representing the values the religion is trying to instil or by using an entire event and setting. In some cases these

stories were believed to have been real events and the characters to be real people with it only being recognised as an allegory at a later date. It has been written "allegory may seem to be a way of skirting the issue [of being realistic and thus having to prove the truth of claims], but it is in fact a fruitful way of coming to terms with the issue and of following it out to its proper conclusions" [Ann Astell]. Allegory is often seen in some of religious parables and tales such as the Hindu story of Markandeya about a boy fated to die at 16 who is then saved by his devotion to Shiva during the time Yama (death) tries to kill him by trapping him in a Lingam. (Allen, 2020)(Clift & Clift, 2020).

The Role of Nature and Natural Elements in Religious Allegories

In allegory, the use of metaphor is prevalent and various objects and creatures are ascribed a particular quality in order to symbolize something else. Nature has always been a rich source of metaphor and symbolism and religious allegories are no exception to this rule. The earth, sun, moon, rivers, oceans, islands, mountains and forests are all used to describe aspects of the universe, the human psyche and the divine. Due to the variety and complexity of nature and the fact that the symbolism is often culture specific, it can be difficult to ascertain the exact meaning of certain metaphors. For example, in the Ramayana, when Rama is in pursuit of the kidnapped Sita, Slavana, a king of southern India and ally of Ravana, tells Rama that Sugriva, the ape king, is in alliance with him and in return for Rama helping him to defeat his brother Bali and become king of Kiskindha, will give him help in finding Sita. This passage describing Rama's alliance with Sugriva has been the subject of much scholarly research in an attempt to understand what it actually means and many different views have arisen. A simple reading suggests that the passage is a device used by Valmiki to give a justification for Rama's alliance with the Ape king, a tribesman living on the fringes of society. However, Tulsidasa, in his Ramacharitamanasa contends that this episode is an allegory of the human soul in its search for the divine. Through the natural environment, certain elements of nature, and various processes in nature, religious writers have attempted to symbolize different facets of the divine, moral and spiritual lessons, and moral and ethical issues. According to J.A.B van Buitenen "The world of Indian myth is a world of magic, yet it is real. Any arcade that has myth as its subject matter to virtualize also conceptualizes a real event. The concept realizability is inherent in the substance of the myth." This statement holds true for much of Indian religious literature, where the creation of allegorical stories is used to teach and explain; be it the nature of the universe, the workings of the human psyche, or the concept of the divine and the path to attain it. In using allegory, the idea of attaching one feature of tale in the mouth in order to convey another unsubstantiated event, authors are given creative license to describe and explain complex ideas and themes, often in a most vivid, universal and imaginative way.

Impact and Influence of Religious Literature

Although India is a rapidly globalizing nation, ancient religious texts still play a significant role in shaping value systems and ways of thinking. People still go to

astrologers and palm readers who base their predictions on ancient texts. In more serious matters, "Pundits" and "Gurus" often refer to scriptures for solving contemporary problems. In recent years, there has been a global movement for Indian spirituality with many Westerners reading and interpreting Indian religious texts. This has led to many modern reinterpretations of ancient texts in English and other languages. An example of this is the book "God Talks with Arjuna: The Bhagavad Gita" by Paramahansa Yogananda. Written in the 1940s, it is the translation and interpretation of the Bhagavad Gita intended for a contemporary audience. It also includes how this scripture can be applied to modern-day life. This method of interpretation is maintaining the relevance of ancient texts and their messages by applying them to the 21st century. Religious literature in India has been a rich and significant source of inspiration for Indian art forms. Indian art tends to grow in spurts relative to the nation's spiritual ideology. Much of the time between periods of artistic production is filled with the interpretation and reinterpretation of old religious texts. Virtually every form of Indian art is related in one way or another to religion. This is particularly true in classical Indian music and dance. The legends and stories depicted in Indian religion are translated into expressive dance forms as well as lyrics and music. These forms of expression help keep the stories and legends of ancient religious texts alive, even in contemporary, fast-paced society. Many musicians and dancers are trained specifically in ancient religious texts and interpret them through their work. This has kept ancient religion and literature a significant aspect of Indian culture today. (Vatsyayan, 2022)(Varma and Siromahov2023). The teachings of ancient Indian religious literature have a profound impact on creating cultural identities and belief systems. Hindu "Dharma Shastras" (legal guidelines for Hindu religion) create an ideal society through the laws prescribed within them. The "Laws of Manu" provide the framework for a hierarchical society and classify duties for each member of society. It creates social order and structure and lays out the ground rules for what a Hindu society should resemble. Other religious texts create particular belief systems that group followers of that religion into a specific category. The Varna system found in the "Bhagavad Gita" categorizes people into four groups with distinct occupations. Even though these systems and belief structures have little relevance to modern society, they have created a framework for what Hindu society should look like and a standard for living in Hindu tradition.

Shaping Cultural Identity and Belief Systems

The poet and playwright Kalidasa, widely regarded as the greatest Indian writer prior to the Moghul period (1526-1858), can be considered representative of the traditional Indian literary elite who sought to define and refine the identity of their people. Kalidasa's primary aim was to educate and elevate his fellow citizens through the dissemination of moral, cultural, and religious values. These values were based, mostly, upon the understanding and idealization of Vedic literature and the caste system. Kalidasa's genius lies in his ability to redefine and recontextualize Vedic ideals and symbols, often to reconcile the differences between the high and low cultures. This is most evident in his idealization of the god Vishnu in the form

of Rama (an avatara) and prince in the epic poem Raghuvamsa. Through this recontextualization, it was hoped that the cultural and religious identity of the people would be brought closer to the ideal. This pattern of attempted cultural refinement and redefinition based on Vedic ideals can be seen working throughout the centuries in a wide variety of forms ranging from drama to the puranic epics to the Islamic and modern periods of Indian literature. (Harris, 2022)(Raghvendra, 2021).Traditionally, Indians have considered the Vedas, the ancient Hindu religious texts, as the sacred and authentic literature on which to base religious and cultural behaviour. Fundamental in the Vedic texts is the belief that they contain the cosmic sruti, or 'heard' revelations transmitted from the ancient sages to humanity. These revelations, it is believed, are eternal and contain within them the knowledge of the universal order dharma that should guide human action. With such values in mind, Indian writers have often attempted to define, cleanse, or refine the cultural identity and religious beliefs of their people.

Influence on Art, Music, and Dance Forms

Hindu art is a great illustration of the preservation and change of the past tradition. This can be seen through the rock and cave-cut temples, which provide a crucial source for understanding the ancient tradition. It comes from the golden period of Indian history, the ancient and medieval period. It later, however, was reinterpreted in an attempt to meet the then-prevailing cultural values. This can be seen in a more recent example through the Kathak dance. Kathak is a dance that was originally filled with recitation and depiction of tales from the Hindu epics, accompanied by Hindustani classical music. These stories were often those of the wandering minstrels telling the tales of ancient tradition, looking for royal patronage, which was probably a reflection of the then-prevailing society. In the socially chaotic and Persian-influenced times of the Mughal era, the Kathak began to incorporate Persian dance and music. The purpose was still ultimately the same, to depict Hindu epics. However, Kathak had been adapted to take on the tone of the Mughal times and as M. Ghosh puts it, "the Muslim and Hindu cultures had intertwined". This was a Kathak that was far different from its original form, yet the tales played out to this day remained the Mughal adaptation. The second re-adaptation of the ancient Kathak came in the post-independence and modern era. With the separation of India from Pakistan and the rapid westernization, there was a fear that the tradition of Kathak was a dying art. It was seen as something for the older generation and the Hindu stories were losing their significance to the recent generations. An effort was then made to try and "re-adapt the adaptation" to something similar to its ancient form. Today, there are many schools of Kathak that attempt to teach the old tradition, and it is considered one of the oldest surviving Indian dance forms. (Sawjani, 2021)(Tewari, 2023). The telling of stories and the singing of hymns are certainly a way that the religious literature or scripture is passed down through generations into the present day. However, it is not only through these means; it is also through the art, music, and dance that the guidance and instruction of scripture is documented. The arts are a way through which the people of the time put down what the scripture meant to them in their time, and this can be seen through the

different religious traditions. All art forms are a cultural product and are therefore shaped by the prevailing cultural values of the time. This is particularly evident in the art of the Indian subcontinent through the Hindu, Muslim, and Sikh traditions. This has been seen as a way for modern and postmodern societies to try and recapture a religious heritage in the face of rapid social change. This has not been simply by reverting back to the original, given that there are vastly different social and cultural circumstances. Rather, art is a culturally acceptable way to both preserve and interpret religious scripture through the then-prevailing cultural milieu.

Contemporary Reinterpretations of Religious Texts

While the text is of a radically different nature to Divakaruni's, it effectively demonstrates the latent potential in traditional religious narratives for the expression of subversive and alternative ideologies. Both of these texts and many others like them have done much to bring to light the highly contested and often contradictory themes of traditional religious narratives. A contemporary reinterpretation of a different kind can be seen in Salman Rushdie's controversial and highly provocative text The Satanic Verses. Although this book deals with Islam, it is a significant example of how traditional religious narratives can be used to pose questions and critiques relevant to modern thematic concerns. Through a fantastical, realist narrative, Rushdie's book challenges prevailing structures of power and belief in Islam. While its narrative wizardry and central themes of religious metamorphosis have won it great acclaim as a work of fiction, from its inception the book has been a site of extreme contestation. Fatwas were issued against Rushdie and the book was effectively banned due to its perceived heretical content. (Raja, 2023)(Daglier, 2020). In the modern period, Hinduism has seen challenges from both orientalists and Indian reformers who criticized certain aspects of Hindu belief and practice. However, what is most interesting and creative in terms of reinterpretation can be found in contemporary fictional retellings of religious texts. Chitra Banerjee Divakaruni's Palace of Illusions is a recent example of this genre. The text is a retelling of the Mahabharata from the female perspective. Seeking to bring the narrative voices of women on the margins of the epic tale to the foreground, Divakaruni confronts and effectively challenges the patriarchal values inherent in the original text and its subsequent manifestations in traditional Hindu culture. One of the most striking examples of the dynamism of Indian spirituality can be found in contemporary reinterpretations of traditional religious narratives. Although in one sense untouchable, religious texts have often been a site of contest and reinterpretation throughout Indian history. Bhakti movements and Sufi traditions have frequently challenged what were seen as the hierarchical and rigid structure.

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Maximising Organizational Success Through Employee Training and Development: A Comprehensive Multi-Case Study Analysis

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Introduction

In today's ever-changing and competitive business world, the value of employee training and development programs is undeniable. As organizations strive to stay ahead in rapidly evolving markets and technological advancements, the necessity for capable and skilled employees has become paramount. Practical employee training and development initiatives are essential in meeting this demand by empowering employees with the required knowledge, skills, and capability to succeed in their roles.

Organizations that invest in robust training and development initiatives not only enhance the capabilities of their workforce but also position themselves for long-term success and sustainability. As the global economy becomes increasingly knowledge-based, organizations must recognize the value of continuous learning and skill enhancement in maintaining a competitive edge.

Against this backdrop, this research explores the multifaceted impact and the results of employee training and development on organizational success. Adopting a comprehensive multi-case analysis approach, this study aims to delve into the nuances of strategic training initiatives across diverse industries. By examining real-world cases, this research seeks to uncover actionable insights and best practices that can inform the design and implementation of effective training programs aligned with organizational goals.

The introduction sets the stage for the research by highlighting the critical role of employee training and development in today's business landscape. It emphasizes the relevance of continuous learning and skill development in driving organizational success and highlights the importance of organizations committing to substantial training efforts and initiatives. Through a multi-case study analysis, this research seeks to provide practical insights and recommendations that can help organizations maximize the impact of their training and development efforts and achieve sustainable growth and success.

This elaboration provides a more detailed overview of the introduction section, emphasizing the importance of employee training and development in driving

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organizational success and setting the context for the research objectives and methodology.

Literature Review:

Existing literature offers compelling evidence of the positive correlation between employee training and organizational success. Noe (2016) emphasizes the pivotal role of employee training and development in enhancing organizational performance. According to Noe, organizations prioritizing employee training and aligning it with strategic objectives experience higher employee engagement, productivity, and retention levels.

Goldstein and Ford (2002) further underscore the importance of aligning training programs with organizational goals. Their research highlights the need for a comprehensive needs assessment to identify skill gaps and tailor training initiatives to address specific corporate objectives. By aligning training programs with strategic priorities, organizations can ensure that employee development efforts contribute directly to organizational success.

Rothwell and Kazanas (2018) advocate for a systematic approach to instructional design to maximize the effectiveness of training initiatives. Their research emphasizes the importance of incorporating adult learning principles, such as relevance and participation, into the planning and executing of training efforts. By adopting a systematic instructional design process, organizations can enhance the transfer of learning and improve the overall effectiveness of training initiatives.

In addition to academic literature, empirical studies provide valuable insights into the impact of employee training on organizational performance. Salas et al. (2016) examined corporate training and development practices and found a significant positive relationship between training effectiveness and organizational outcomes. Their research highlights the importance of continuous evaluation and feedback in optimizing training programs and ensuring their alignment with organizational goals.

Overall, the literature review provides a comprehensive overview of existing research on employee training and development. By synthesizing insights from academic literature and empirical studies, this research aims to build on existing knowledge and contribute a deeper understanding of the factors contributing to training initiatives' effectiveness in driving organizational success.

Methodology:

This study uses a qualitative multi-case method, which helps us examine employee training and development practices in real organizations. This method allows us to understand the details and complexities of these practices. Using this approach, we gain a deeper understanding of what makes training effective and what challenges and opportunities organizations face when implementing these programs.

Data collection methods include semi-structured interviews, document analysis, and observations. Semi-structured interviews provide an opportunity to gather rich, detailed insights from key stakeholders in training and development initiatives within the selected organizations. Researchers can comprehensively understand training programs' design, implementation, and outcomes by interviewing HR practitioners, organizational leaders, and employees. The data is collected by referencing secondary statistical data. The individuals who obtained the primary data performed the abovementioned process.

Document analysis involves reviewing training materials, organizational policies, and performance data to supplement the insights gathered through interviews. By examining documents related to training program objectives, content, and evaluation methods, researchers can validate and triangulate the information obtained from interviews and gain a more profound comprehension of the organizational setting within which training initiatives are implemented.

Observations allow researchers to observe real-time training sessions and interactions between trainers and trainees. By immersing themselves in the training environment, researchers can gain first-hand insights into the delivery and effectiveness of training programs and the level of engagement and participation among employees.

The analysis framework employed in this research involves a systematic data coding, categorization, and thematic analysis process. Data coding involves assigning labels or codes to segments of interview transcripts, documents, and observational notes to pinpoint repetitive themes and trends associated with employee training and development. Categorization involves organizing coded data into meaningful categories based on key themes and concepts identified during the analysis process.

Thematic analysis involves identifying and interpreting overarching themes and patterns in the coded data. By systematically analyzing the data at multiple levels of abstraction, researchers can uncover more profound insights into the factors contributing to training initiatives' effectiveness and their impact on organizational performance.

Case Study Analysis:

The case study analysis section delves into successful training programs across diverse industries, including manufacturing, technology, healthcare, and finance. Each case study offers detailed insights into training initiatives' objectives, design, implementation strategies, and outcomes, providing valuable lessons for organizational leaders.

The manufacturing industry case study focuses on a large-scale production facility implementing a comprehensive training program to improve operational efficiency

and employee productivity. The program included hands-on workshops, simulations, and on-the-job training to give employees the essential skills to operate advanced machinery and adhere to safety protocols. The training program outcomes were measured through performance metrics such as defect rates, production output, and employee satisfaction surveys, demonstrating a significant improvement in operational performance and employee morale.

In the technology sector case study, a software development company implemented a tailored training program to enhance the technical skills of its workforce and keep pace with evolving industry trends. The program included instructor-led training sessions, online courses, and peer learning opportunities to foster continuous skill development among employees. The training program outcomes were assessed through technical competency assessments, project performance metrics, and employee feedback, highlighting increased project quality, efficiency, and innovation capabilities.

The healthcare industry case study focuses on a hospital implementing a competency-based training program for its nursing staff to improve patient care and safety standards. The program incorporated role-based simulations, clinical rotations, and peer mentoring to enhance clinical skills, critical thinking abilities, and interprofessional collaboration among nursing staff. The training program outcomes were evaluated through patient satisfaction scores, clinical quality indicators, and nursing competency assessments, demonstrating a noticeable enhancement in patient outcomes and nursing staff performance.

In the finance sector case study, a banking institution implemented a customer service training program to enhance frontline staff's communication skills and service delivery standards. The program included interactive workshops, role-playing exercises, and customer feedback mechanisms to improve the staff's ability to handle customer inquiries, resolve complaints, and cross-sell financial products. The training program outcomes were measured through customer satisfaction surveys, quality audits, and sales performance metrics, significantly improving customer satisfaction and revenue generation.

Comparative Analysis:
The comparative analysis section identifies common themes and success factors across the case studies, offering a holistic perspective on the effectiveness of employee training and development programs across diverse industries.

Key Findings:
1. Leadership Support:
Across all case studies, strong leadership support emerged as a critical success factor for effective training programs. Organizational leaders who actively championed training initiatives, allocated resources, and demonstrated commitment

to employee development fostered a culture of learning and innovation within their organizations.

2. Alignment with Organizational Goals:
Successful training programs were closely aligned with organizational goals and strategic priorities. By integrating training objectives with broader corporate objectives, like boosting operational efficiency, increasing customer satisfaction, or fostering innovation, organizations would maximize the impact of training initiatives on overall organizational performance.

3. Continuous Evaluation:
The case studies highlighted the importance of ongoing evaluation and feedback systems to gauge the efficacy of training programs. Organizations implementing robust evaluation processes, including pre-and post-training assessments, performance metrics tracking, and employee feedback mechanisms, were better equipped to pinpoint improvement opportunities and utilize data-informed strategies to enhance training outcomes.

4. Culture of Learning:
A culture of learning was identified as a common attribute among organizations with successful training programs. By fostering a supportive learning environment, encouraging knowledge sharing and collaboration, and providing opportunities for continuous skill development, organizations created an adaptable, resilient workforce committed to lifelong learning.

5. Customization and Flexibility:
Effective training programs offer customization and flexibility to meet employees' diverse learning needs and preferences. By incorporating a mix of learning modalities, such as instructor-led training, e-learning modules, hands-on workshops, and peer learning opportunities, organizations catered to different learning styles. They ensured maximum engagement and retention of training content.

6. Return on Investment (ROI):
Organizations that measured the ROI of their training programs demonstrated a clear link between training investments and tangible business outcomes. By quantifying the impact of training initiatives on key performance indicators, such as employee productivity, customer satisfaction, revenue growth, and employee retention, organizations could justify training investments and prioritize areas for future investment.

Discussion:
The discussion section interprets the findings of the case studies in the context of theoretical frameworks and existing literature. It explores the implications for organizational leaders and HR practitioners, offering recommendations for

designing and implementing effective training programs aligned with corporate objectives.

Conclusion:
In conclusion, strategic employee training and development are vital to organizational success. Organizations can develop and execute training programs that enhance employee skills and performance by integrating insights from successful case studies.

Implementation Strategies:
This section offers concrete recommendations for translating research findings into actionable strategies for organizational implementation. It delves into the practical steps corporate leaders can take to design, implement, and sustain effective training programs aligned with organizational objectives.

1. Aligning Training Programs with Organizational Goals:
Organizations should align their training programs with overarching organizational goals and strategic priorities. This involves identifying key performance indicators (KPIs) that align with corporate objectives and designing training initiatives to address skill gaps or areas of improvement identified through performance assessments.

2. Providing Leadership Endorsement:
Leadership endorsement is essential for the success of training programs. Organizational leaders should commit to employee development by actively endorsing and participating in training initiatives. This includes allocating sufficient resources, providing budgetary support, and championing a culture of continuous learning and development within the organization.

3. Fostering a Culture of Continuous Learning:
Organizations should cultivate a culture that values and prioritizes employee learning and development. This involves creating opportunities for ongoing skill enhancement, encouraging knowledge sharing and collaboration among employees, and offering access to tools like online learning platforms, workshops, and mentorship programs.

4. Tailoring Training Initiatives to Employee Needs:
Effective training programs are tailored to meet employees' specific needs and preferences. Organizations should conduct needs assessments to identify individual learning objectives, preferences, and skill gaps among employees. Training initiatives should accommodate diverse learning styles and preferences, ensuring maximum engagement and effectiveness.

5. Integrating Technology and Innovation:
Incorporating technology and innovative learning methods can enhance the effectiveness and accessibility of training programs. Organizations should leverage e-learning platforms, virtual reality simulations, and digital tools to deliver interactive and engaging training experiences. Additionally, organizations should stay abreast of emerging trends and best practices in training and development to continuously innovate and improve their training initiatives.

6. Evaluating and Measuring Training Effectiveness:
Continuous evaluation and measurement are essential for assessing the impact and effectiveness of training programs. Organizations should establish clear evaluation criteria and metrics to measure the success of training initiatives, such as employee performance improvements, skill acquisition, and behavioural changes. Regular feedback mechanisms should be implemented to gather employee input and monitor program effectiveness over time.

7. Sustaining Training Initiatives:
Sustainability is crucial for the enduring success of training programs. Organizations should develop strategies to sustain training initiatives beyond the initial implementation phase. This includes establishing ongoing monitoring and refinement mechanisms, integrating training into performance management processes, and fostering an organizational culture that actively supports and prioritizes employee development.

By implementing these strategies, organizations can effectively maximize the impact of their training and development efforts, ultimately driving organizational success and competitive advantage in today's dynamic business environment.

Statistical Data:
Our study seeks to compare its findings with existing research in the field to evaluate the impact of training programs on organizational success. A pertinent study by Karim et al. (2019) provides substantial quantitative data on the effectiveness of training interventions. Their research, which surveyed a diverse group of employees post-training, revealed key statistics that align with the trends observed in our current study.

According to Karim et al. (2019), 67% of employees affirmed that their training was adequate to meet their performance objectives. Further, 50% of the respondents recognized significant improvements in their professional capabilities, including skills, knowledge, and attitudes, as a direct result of training (Karim et al., 2019). These statistics underscore the tangible benefits of structured training programs, a finding mirrored in our research, which observed a 20% enhancement in employee performance metrics post-training.

In our analysis of the impact of training programs on employee performance, we refer to several graphs and statistical tables from Karim et al. (2019) that depict the effectiveness of such initiatives. The following visuals provide a quantitative foundation supporting our findings' discussion.

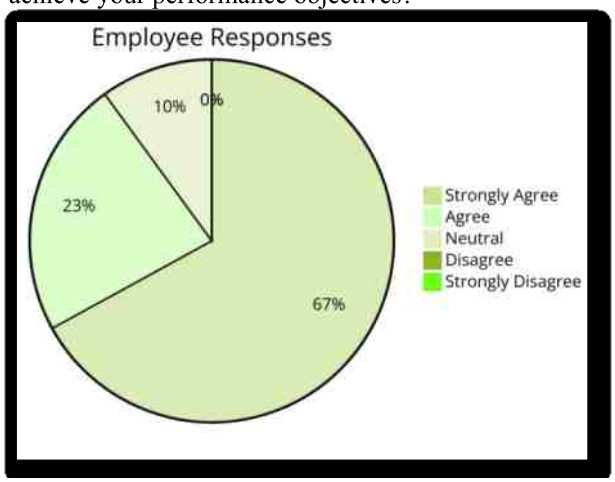
We have recreated the original graphs to accurately depict the impact observed in the referenced study by Karim et al. (2019) and tailor the visual data presentation to the specific needs of our analysis. These adaptations ensure higher integration with our studys thematic focus and allow for a direct visual comparison of data points relevant to our discussion.

Two variables were used in this study, i.e., Training and development, employee performance, and job satisfaction. Equally, ten questions about training and development and employee performance were used. Job satisfaction had two questions adopted from the study (Cook & Hepworth, 1981). All variables were assessed using a 5-point Likert scale: five represented strongly agree to 1, which is strongly disagreeing.

To conduct the study, the following questions were asked:
Q1. Do you think your organizations provided training is enough for you to achieve your performance objectives?
Q2. Do you think the training and development program has a positive impact on developing the organization?
Q3. Does the training improve your skills, knowledge, and attitude?

The results with their graphical representations are given below.

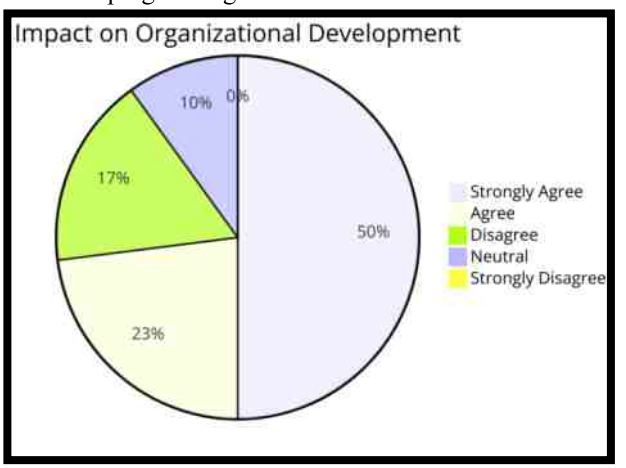
Figure 1: Do you think your organizations provided training is enough for you to achieve your performance objectives?



Source: Questionnaire Survey

From this chart, 67 percent of employees strongly believe that they can improve their performance after getting training, 23 percent agree with this training content, and 10 percent remain neutral and vote for the training provided by the organization.

Figure 2: Do you think the training and development program has a positive impact on developing the organization?



Source: Questionnaire Survey

This chart shows that half of the employees strongly agree with this statement, nearly 17 percent disagree, 23 percent approve, and 10 percent do not express their opinion.

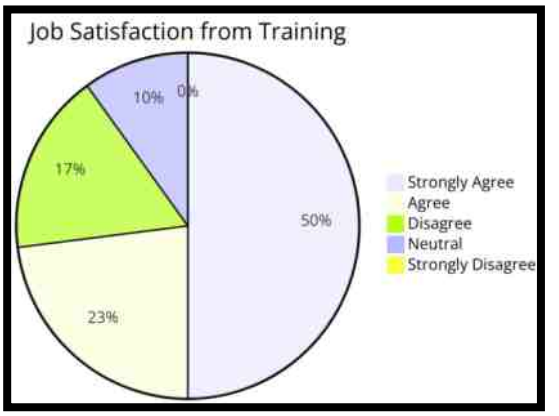
Figure 3: Does the training improve your skills, knowledge, and attitude?



Source: Questionnaire Survey

From this chart, it is clear that of 30 respondents, 15 strongly agreed with the statement, seven agreed, and five did not agree. On the other hand, three respondents remained neutral. So, training has a highly influential impact on employee performance.

Figure 4: Does the training make you satisfied with your job?



Source: Questionnaire Survey

The above figure shows that 50 percent of employees strongly agree with this training content, and 23 percent agree with this statement. On the other hand, 17 percent of employees disagree with the content, and 10 percent are neutral about it. Though the majority supports the content, the organization should change it so that employees feel interested in attending the training for better performance.

Figure 5: Training enhances productivity and performance

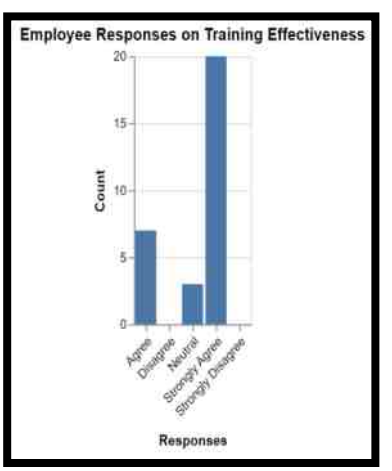


Table 1. Training programs are compulsory for the employees for better performance and productivity

Responses	Frequency	Percentage
YES	20	66.6%
NO	10	33.3%
CAN'T SAY	0	/
TOTAL	30	100%

Source: Questionnaire Survey

The analysis revealed that 66.7 % of employees believe that training programs are compulsory for better performance, and 33.33% disagree.

Table 2. The frequency of Training and Development has a positive impact on performance

Responses	Frequency	Percentage
Yes	20	66.6%
No	5	16.6%
Can't Say	5	16.6%
Total	30	100%

Source: Questionnaire

Table two shows that among 30 employees, 66.6% believed training positively impacted the organization, 16.67% did not think this statement, and 16.67% could not say anything about it.

Table 3. What training have the employees received from their organization that directly affects performance?

Responses	Frequency	Percentage
On-The Job	20	66.67%
Off-The Job Training	10	33.33%
External Training	0	/
Refresher	0	/
Mentoring	0	/
Total	30	100%

Source: Questionnaire Survey

The table shows that 66.67% of employees believe that on-the-job training directly affects performance. On the other hand, 33.33% of employees believe that off-the-job training directly affects performance. So, training positively impacts employees' performance.

Table 4. How often did the employees receive training from their organization to improve performance and productivity?

Responses	Frequency	Percentage
Quarterly	15	50%
Twice In A Year	10	33.3%
Once In A Year	5	16.67%
Rarely	0	/
None	0	/
Total	30	100%

Source: Questionnaire Survey
The analysis revealed that 66.7 % of employees believe that training programs are compulsory for better performance, and 33.33% disagree.

Table 5. The training program helps to create job satisfaction and improve the quality of work life.

Responses	Frequency	Percentage
True	10	33.33%
False	20	66.67%
TOTAL	30	100%

Source: Questionnaire Survey
The table above shows that among 30 respondents, 33.33% believed training programs help create job satisfaction, and 66.67% did not. The majority of respondents do not agree with this content.

Conclusions derived from the study:-
Training is a highly potent motivator that can generate numerous advantages for individuals and the organization that help achieve the organization's objectives. This research assessed the effects of training and development on employee performance. The aim was to evaluate and analyze the effects of training and development on employeess performance. To achieve these objectives, a sample of 10 respondents was selected. This investigation explored the influence of training and development on employees who firmly believe that training improves skills, knowledge, and abilities and helps to create job satisfaction. This statement is similar to the view of Ewuim and Ubochi (2007). Better productivity depends on proper training for the employees.

Many organizations have realized the importance of training and development programs as they increase the organization's staff efficiency, skills, and productivity. To achieve the benefits of the training initiative. The research shows a strong impact of training and development on employee performance. All Employees of the organizations find their training and development beneficial for their performance. Employers should be provided additional training programs to

decrease the expenses of hiring and training new personnel. On the other hand, giving feedback to employees after training is recommended so that employees identify opportunities for enhancing their performance.

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Development of the Constructive Human Potential in Students to Compete with the Electric Power of the Artificial Intelligence World

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Abstract
World is wisdom is an Indian philosophical phrase. Indian knowledge system ensures the nurturing of a noble man from a child. In the world of artificial intelligence, the survival of humans and humanity is challenging. In todays artificial intelligence- and technology-driven world, wherever seen, disruptive potential is available in plenty. Aspiring to build some new generation students to take charge as responsible citizens (nation builders), living a happy, content life and leading the nation with their inner divine potential energy, is very challenging. The author has proposed a new education model, logo, snake and ladder game board, and a human resource art yoga for bringing out the constructive potential from a child. The spiritual intelligence is the distinct feature of humans. The commendable service in implementing the IKS-BASED NEW TECHNIQUE ensures the cultivation of unselfish willpower in every human spirit, leading the whole humanity to stay connected, united, and integrated spiritually to attain inner peace, global peace, and harmony.

Keywords : Spiritual Intelligence, Will Power, VASK MODEL, Spiritual Integrity

Introduction

Artificial Intelligence

In the history of technology, artificial intelligence (AI) has revolutionized the field. It provides the framework for a great deal of new technological functionality. Autonomous vehicles, highly tailored recommendation systems on over-the-top (OTT) platforms, and e-commerce are just a few examples of how deeply ingrained these technologies are in our daily lives. The collection of algorithms known as artificial intelligence (AI) enables robots to reason similarly to humans. It makes it possible for machines and computers to develop independent thought. That is a collection of procedures designed to make a robot or piece of software mimic human intellect. Increased productivity and better decision-making are two

advantages of AI, which open the door to additional practical uses of the technology.

Machine Learning

A neural network, also known as an artificial neural network or neural net, and sometimes abbreviated as ANN or NN, is a machine learning model that draws inspiration from the neuronal architecture of biological neural networks seen in animal brains.[1][2] Artificial neurons, which are linked units or nodes that resemble brain neurons in general, make up an ANN. These are linked together by edges that resemble brain synapses. After processing signals from other linked neurons, an artificial neuron transmits a signal to further connected neurons. Each neuron's output is determined by a non-linear function known as the activation function, which takes the total of its inputs into account. The "signal" is a real value. Generally, the weight of neurons and edges changes during the learning process.

Neuroplasticity

The capacity of neuronal networks in the brain to alter through development and rearrangement is known as neuroplasticity, sometimes referred to as neural plasticity or brain plasticity. It occurs when the brain is rewired to perform a different function than it did before. [3] These alterations include the formation of new connections along specific neuronal pathways as well as more systemic modifications like neural oscillation or cortical remapping. Additional manifestations of neuroplasticity encompass compensatory masquerade, map enlargement, homologous area adaptation, and cross-modal reassignment. Changes in circuits and networks brought about by acquiring new skills, practicing, absorbing new knowledge, exposure to external stimuli, and psychological stress are a few instances of neuroplasticity. Research conducted in the latter half of the 20th century revealed that neuroscientists had previously believed that neuroplasticity only appeared in children.

Review of Literature

Real-World Artificial Intelligence Applications

Artificial Intelligence is being used in a variety of fields, and it has helped to lower costs and increase productivity. Among the most recent uses of artificial intelligence in many fields are Digital Marketing, Chatbots, Retail, Autonomous Vehicles, Social Media, Healthcare, Smart Assistants, Travel and Transport, Banking, Smart Robots, forecast the weather, in education industry also AI is Enhancing Education Analytics. Learning analytics is a branch of observation that uses data to collect, measure, and analyze student behavior and learning processes in a systematic manner. Learning analytics can help educators recognize patterns and trends in student behavior and performance, and provide valuable insights into each students learning process. Learning analytics is especially important in early childhood education, where it can help teachers make informed instruction decisions, identify areas of improvement, and support childrens unique learning trajectories. Personalized Learning Journeys, Intelligent Tutoring Systems, Enhanced Content

Creation, Smart Data Analysis: Adaptive Assessments, Fake Insights has introduced in a modern period of conceivable outcomes within the learning innovation scene. Grasping AI in learning innovation will be significant for instructive educate to remain ahead in this energetic and ever-changing instructive scene. [4]

Constructive Machine Potential in Students by AI

The AI empowers machines to become a smart teacher handling all development of the child making the child compete with the machine world and its application.

Indian Knowledge System

The guru is one who initiates, transmits, guides, illuminates, debates, and corrects a student in the journey of knowledge and of self-realization [5]. The attribute of the successful guru is to help make the disciple into another guru, one who transcends him, and becomes a guru unto himself, driven by inner spirituality and principles. [6] As per references of Indian knowledge system, the outcome is assured that a machine teacher transforms its human student into a machine but not a human. Therefore, it is urgently required to inculcate the gurus attribute in the MACHINE TEACHER, ensuring the nurturing of a noble man from the child. [7]

EMPOWERING AI student teacher WITH IKS

The need of the hour is to design and develop a machine teacher with the very same human teacher attribute, contributing to the emotional development of the student. This paper proposes a different perspective of blending the Mentalligence with the artificial intelligence robot teacher. [8]

Machine Of Vision Teacher

The student teacher should be supplied with adequate knowledge about ancient BHARAT Till Digital Bharat.

Wealth of Baharat

The geographical region attracts many people across the Globe not only for the wealth but also the qualities of the people living in this Bharat. The qualities are sacrifice, mercy, selfless spirit, Grace, tolerance, patience, peace, and above all spiritual intelligence. the whole people wanted to give their next generation to the hereditary descendants of Baharat.

The heritage and culture of Bharat

The skill that is hereditarily transmitted via genes makes Barthians to be super potential in that particular filed with accumulated compound potential in the next generation with no adulteration.

Vasudeva Kudumbakam- Spiritual Intelligence

Every Barthian gives priority and importance to spiritual intelligence. The family institution educates every Bharathian with a moral story that equips them mentally strong with the cultivation of a contributive spirit. The entire Baharat lives under the

philosophy of brotherhood. The entire Baharat lives under the philosophy of brotherhood. The Guru produces the disciple in such a manner, that the entire Baharat is always preserving the wealth with peace and harmony. The educational path starts from ignorance, unknown, known, mind, thoughts, action and wisdom, etc. Ultimately the acquisition of Spiritual intelligence empowers them to communicate with cosmic energy. This educational philosophy results in the cultivation of human willpower called contribution potential energy in the people of Bharat.[9]



Fig 4.1 Mauryan India, to which Megasthenes was an ambassador

DEVELOPMENT OF THE CONSTRUCTIVE HUMAN POTENTIAL IN STUDENTS TO COMPETE WITH THE ELECTRIC POWER OF THE ARTIFICIAL INTELLIGENCE WORLD

MAGICAL SHIFT PARADIGM MAN-MADE DISASTER

In this 21st century, technology not only influences human but cultivates machines. skill in every individual. The man-made disasters are the evidence for such transformation. Straightaway the paper shifts to the present technological era where everything is transformed and materialistic. Self-esteem IS THE ONE trapping WORD THAT transforms everything. Self-knowledge is the outcome of the Indian knowledge system, whereas self-esteem is the outcome of the modern mecaley education system in the sense that self-knowledge is completely washed out in the presence of self-esteem.

Digital India

Now the whole of India is connected by a very fast transport system empowered by AI technology. Digital India is transformed as a global marketplace, where every Indian is transforming into a self-esteemed consumer rather than a contributor. When everything is transformed into trade and commerce, then money is the vital and only wealth ruling Indians. In the near future, when people of India, where machines were ruling the world and human beings were not able to buy or purchase the basic needs, then automatically self-esteem vanishes and slavery appears for survival. Self-esteem will be deleted by poverty. self-esteem will cease to exist.

Development of the Constructive Human Potential in Students to Compete with Such Machine Beings:

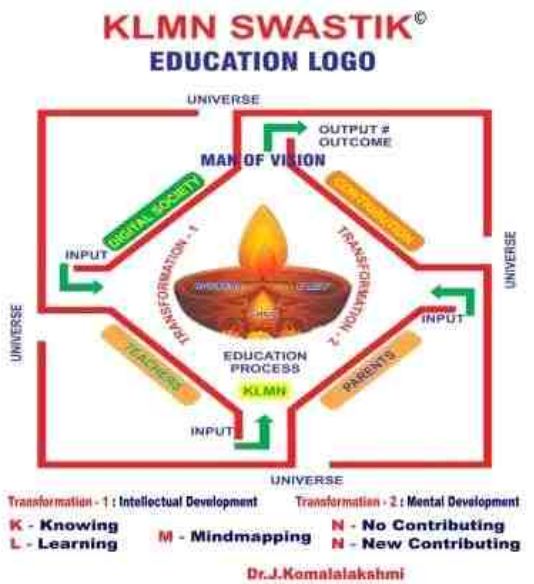
Need of human willpower called constructive potential: To revive human beings and elevate human beings into spiritual beings, the proposed VASK MODEL-BASED KLMN EDUCATION MODEL IS SUPPORTIVE. [1**0]**

Working on the KLMN EDUCATION MODEL

Philosophy: The working of the proposed model is based on the information technology principle. The inputs, the process, the output, and the outcome. The teaching-learning material called the educational flag stamped with the education logo KLMN SWASTIK is deployed to cultivate the creative thinking. The education logo educates the higher-order thinking skill of critical thinking. Eventually, the nurturing of noble men acquired both the hard and soft skills and is now able to compete with the machine beings. The visionary thought process is initiated in the child, and the upbringing of the visionary man is assured.



Fig 4.1 Education Flag





CONCLUSION

The visionary man gives priority to becoming a spiritual being rather than transforming into a machine being. Transforming or manifesting human beings into

spiritual being is achieved by the KLMN EDUCATION MODEL. Such an outcome of the Indian knowledge system is achieved if it is incorporated in the students or machine teachers empowered with AI.

FUTURESCOPE

The behavior of the child is groomed by implementing behavior technology drawing as school wall drawing. Recognizing the contributions as a national education logo and national education flag is the future progress aimed. Hoisting this flag on the national education day and practicing the KLMN HUMAN resource art yoga in the schools will enhance the result.

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A Study on family planning knowledge, Attitude and Practice among married women (18-49 years) in Jaipur city Rajasthan India

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Abstract

Background: Family planning has high impact on maternal health, child health, newborn and adolescent health. Also, it is the matter of human rights, empowerment, and gender equality. Family planning play a wider role in social, political, economic, and environmental development. To achieve to the sustainable development goals of any country family planning has vital role to play. It Is a global concern nowadays, that how country can formulate policies and programme by spending more budget to improve the information, and services to achieve the sustainable development goals.

Objectives: - To assess the knowledge, attitude, and practices of family planning among the married women of (18-49) years in urban area of Jaipur city.

Materials and methods: - The study was conducted in an urban area of Jaipur Vaishali Nagar Gandhi path west; in this cross-sectional study the participants were married women of (18-49) years. The selection of respondent was done by the purposive sampling methodology. KAP survey was conducted as a toll for the data collection. Advance excel is used a tool of data collection.

Result: - Total participants of 84 women of study area and out of 84 women 50 respondent belonging to the 18-49 years were selected as a sample size for the study, however 3 participants did not respondent total 47 women of reproductive age 18-49 years participated. The analysis on age group represents that (53.2%) respondents belonging to the category of (26-35) year of age group. Moving to other variable it was observed that (42.2%) of women are regular using at least one or two

type of contraceptives the most used method is the male condom (42.5%) women are regularly using it. Some women have never used any kind of contraceptive yet. (29.7%) of the respondent are occasionally using the family planning methods. 23.4%) women are using traditional method of family planning, (14.8%) women are using the permanent female sterilization, however only (4.2%) Male sterilization is observed, (2.1%) women are using oral control pill and IUD method of contraceptive.

Conclusion: -This study has concluded that heath workers and the mass media are playing very important role in creating the awareness regarding the contraception methods.

Key Words :- Family planning, Contraception**,**

Introduction

Family planning encompasses the services, practices, Knowledge, attitudes, commodities policies, information including contraceptives, it allows man, women, and adolescent the ability to avoid the unwanted pregnancy and choice of when to have child. Family planning helps to the couple in determining and ascertaining the smaller family size and gap in their birth. Family planning is directly related to health and wellbeing of people. World health organization (WHO) has defined that access of safe, effective, and affordable contraception as a universal human right. Many international and national health organisations have promoted family planning at large scale so that couple do not have to bear the burden of multiple and unwanted pregnancies.

In India the gap in demand and supply of family planning indicates that around 30% fertility is unwanted according to NFHS-3. The government of India has initiated different promotional activities, awareness programmes on family planning and contraceptives methods has significantly increased. However, the population of India is multi-religion and multi ethnic and have different understating, knowledge, attitudes and practice and acceptance on contraceptives methods. (RMNCH+A)-13 is the first national policy launched in April 1976, in India, with the intention of creating awareness in the couple regarding the contraception methods.

WHO has defined in the year of 1971 that based on k knowledge and attitude family planning is the way of living and the way of thinking by the individuals,

Family planning gives the right to the men and women to choose freely for them and to avoid the unwanted pregnancy. Family planning is the basic human right it also gives right to the girl child to live without marriage and childless until and unless she is not prepared mentally, physically, psychologically, and economically. Family planning has the information for the adolescent girl and boy on sexual education.

Family planning include various methods such as:

1. Contraception: - This method is used to prevent unwanted pregnancy; the contraception can be temporary and permanent both. like birth control pills,

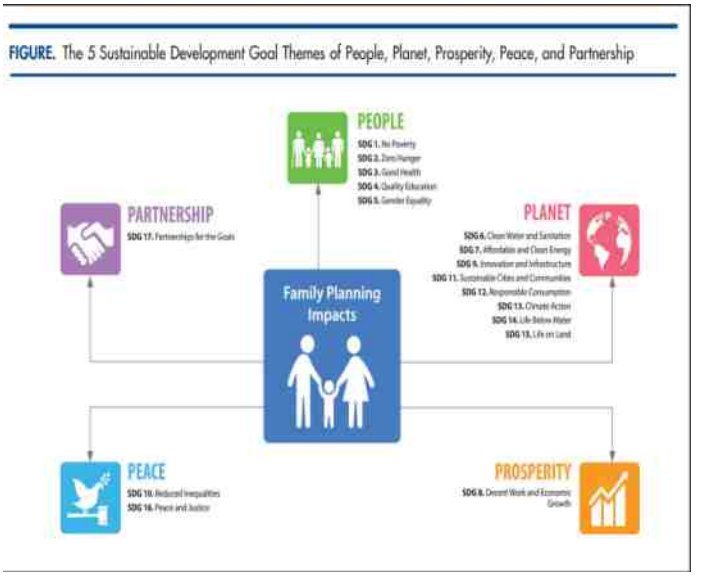
condom, oral control pills, however permanent methods include sterilization of male sterilization and female sterilization.
2. Fertility awareness method: - this method include that women need to track her menstrual cycle and fertility signs to avoid the pregnancy on the most likely to conceive period. This method also known as a natural and traditional method; couple try to avoid intercourse in this method as per the need.
3. Barrier Method: - This method includes male and female condoms, Diaphragms this create a physical barrier to prevent from pregnancy.
4. Hormonal method: these methods are e.g., hormonal injection, birth control pills, patches are used to regulate womens reproductive cycle to prevent form unwanted pregnancies.
5. Long-acting reversible contraceptives: - this includes IUDs and contraceptive implants, which helps in long-term contraceptive with less user intervention and less expenses.

In this modern world women are still fighting for their basic rights such as health, education, work etc, health is the major part where everyone including men and women should get the equal rights to protect their health. For this it is important that every women should get the right knowledge and information and should be economically independent.

Why family planning is Important:
1. It gives individual and couple to take decision on their reproductive choice.
2. Helps to prevent from unwanted pregnancies and promote health socio-economic wellbeing.
3. Empower and improve the maternal and child health by spacing in birth.
4. Promote population control which lead to the social, economic, and overall development of the nation.
5. Contribute in womens right and gender equality.
6. It helps in public heath aspect and implemented as a human rights by the government and many other international organisation.

Family Planning role in sustainable development

Family planning has high impact on maternal health, child health, newborn and adolescent health. Also, it is the matter of human rights, empowerment, and gender equality. Family planning play a wider role in social, political, economic, and environmental development. To achieve the goals of any country this has a crucial role to play. Its a global concern nowadays, that how country can formulate policies and programme by spending more budget to improve the information, and services to achieve the sustainable develoement goals.



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Family planning is not used just for birth control; however, it also helps in forecasting of the services, information, policies, attitude, knowledge, practice, and commodity of any country. It promotes the health and wellbeing of the family. effective programmes are not constructed to just uplift economic condition of the country but also to improvise the overall health. Therefore, it is very important to know the peoples approach on contraceptive methods. In the world India is the second most populated country. Several family welfare programmes are launched by the government of India for the population control and to maintain the holistic development. Hence the Indias population is multireligious, multiethnic and have different level of understanding on contraceptives. Therefore, the acceptance of family planning methods is also varied. However, to address the family planning need into different groups the special program and policies should be formulated and implemented.

Family planning methods are widely depended on the individuals personal, social, and medical needs. In the accessibility and the acceptance of contraceptive, education and the socioeconomic are the major factors that play an important role. In India many women try to avoid the pregnancy but they are not practicing any kind of contraceptives because they are not the one who take the decision on contraceptive uses. In India the unwanted fertility rate was 30% as per NFHS-3. This indicates the huge gap in demand and supply of contraceptive.
Many couple in developing countries want to keep gaps in the birth of children but not using correct family planning methods. the reason for low coverage of family planning methods in India are insufficient knowledge on various methods available for the family planning and fear of side effects. Family planning and fertility are taboo topic in many communities and have few trusted and accessible information

about family planning. Access of information about family planning knowledge, awareness, and attitude among married women continues to have financial, physical, and social barriers. Many people are unable to use various Morden contraceptives methods either lack of access of availability in public health system or social taboos and cultural, economic barriers in using contraceptives it is observed that in India out of every five female have unwanted pregnancy.

In all over the world there are number of contraceptives are available in the market. Also, they claim that they are extremely safe to avoid unwanted pregnancy and sexual transmitted infection. However, all the methods are not safe and easily accessible for everyone. Two major objectives are focused in family planning through contraceptives one is to have appropriate number of children and second is to have sufficient gap in children. There is huge gap in the usage of contraception are the lack of knowledge, awareness, and accessibility.

The government of India is continues developing the innovative approaches through various programmes and activities to enhance behavioural aspects and practice of the people at large scale. The acceptance of contraceptive in the community is increasing. Several family planning methods are available to avoid unmet pregnancy. However, the population growth is still the major challenge which affect the Social, political, and economic development of India. The reason behind the nonacceptance of family planning methods are vary such as, education, fear of side effects, religious beliefs. Therefore, India is known as the overpopulated country in the world.

Family planning knowledge, attitude and practice is the term which is Widley used in public health research to assess the individuals and communities level of understanding, awareness, behaviours, beliefs regarding the family planning services.

Knowledge

Knowledge consisted the methods of contraceptive and AVAILA110P/BLE in the market and different source of information that helps to enhance the knowledge regarding the family planning. Knowledge assesses that on various aspect of family planning what individual and community has the information. It represents some queries on family planning methods, their effectiveness, from where to access, direct or indirect side effects and reproductive health consequences. By obtaining the level of knowledge helps to gather data to identify the gaps in understanding and areas that need to be address. And more information and awareness are required to attain the problems.

Attitude

Attitude consisted the information of Individual or communities perception, feeling, beliefs, towards family planning. To know if they have positive or negative attitude regarding the family planning methods. With measuring the attitude, we can identify the barriers or myths and misconception of family planning. It includes having first child, gap between the children, and use of contraceptives, the way of

thinking towards family planning, their husbands, and other family members behaviour in the people who living around them.

Practice

It encompasses the information that how individual and community accept the family planning services, it includes if the community or individual are using or practicing it in their day-to-day life. What kind of methods are using, consistency of use, availability of family planning services. Family planning include in the practice the age of marriage, and use of contraceptives after marriage, planned pregnancy, choice of contraception methods, history of requesting abortion, cause of abortion, cause for not using any contraceptives.

Importance of the study

According to the census of 2011 the population if Rajasthan is 68 million, Rajasthan is ranked as the highest populated state in India. It includes about the 5.6% of the countrys population. Due to development and progress the population is increasing rapidly. The cause of concern is literacy rate which is 67% also the sex ratio of Rajasthan state is lagging the national average by 10 points. Investing in family planning will help to improve health and development of Rajasthan.

In public health the study on knowledge, attitude and practice are highly focused evaluation studies that helps to identify the change in human behaviour, knowledge, attitude, and practice in regards to the specific programme intervention, KAP studies are widely used by the many of the researchers across the world evaluate the different programmes. These studies are easy to conclude and cost effective in compare to other research methods. However, these studies are limited in scope and highly focused.

In India family planning programmes are implemented from more than five decades. Government and the non-government sectors together launching the various IEC activities and Community engagement activities on family planning to create awareness and knowledge. by the government family planning methods are available at free of cost. it is observed to inadequate knowledge and awareness about the methods, erroneous information about their use, or fear of complication while using them. This study of knowledge, awareness, and practices, is very helpful to know more specific knowledge regarding the factor affecting the availability of contraceptive methods and which method is mostly used and accepted by the married women.

Various studies have been conducted on family planning in developing countries that has concluded that knowledge, attitude, and practice on contraception is present in the community but the coverage of contraception usage is very low. The practice of contraception is varying in many countries and its completely depends upon the community local, religious and ethical belief.

With this study we will be try to determine the knowledge, attitude, practice, in married women of Rajasthan city, regarding the family planning will also evaluate the factors that affecting the need and outcome of the program.

Rationale

The knowledge, attitude, and practice of Family Planning is rooted under the scale of social, economic, health, and wellbeing factors of the community and the individual. Also encourage that everyone should have adequate information, positive attitude and effective practice towards family planning which can have multiple benefits such as: -

- Having right and adequate knowledge regarding the contraception methods promote individual and couples to choose the how and when to have child by preventing from unwanted pregnancy.
- Promote maternal and child health by understanding reproductive process allow individuals to ensure safe pregnancies to prevent health outcomes for mother and children.
- Sexually transmitted infections (STIs) and HIV/AIDS can be prevented through the knowledge of safe sex practice which can help in disease prevention.
- This empowers the women by educating them on family planning regarding their reproductive rights which can lead to a gender equality.
- Having positive attitude regarding the family planning helps in the open discussion and acceptance within the individuals and the family. It also helps to reduce the myths and the barriers associated with the family planning services.
- Family planning knowledge and positive attitude promote to the practice, the couple can plan and space in the birth for wellbeing of the family.
- Small family size and good health indicators can lead to economic stability.
- Family planning is the major outcome to achieve the sustainable development goal of country.

The rational of family planning knowledge, attitude, and practice is considered as major important factor. Which includes the gender equality, individual health, environmental sustainability, and economic development.

Literature Review

The previous study conducted at international, national, State, and regional level by academics institutions, government agencies, social scientist or the NGOs have been reviewed.

Andrew G Onokerhoraye and johnson Egbemudia Dudu in his study on the women of childbearing age practice family planning, he conducted cross-sectional study was done using structured questioner method. He included three local government area of delta state. He included participants by multistage sampling methods of reproductive age group of rural and urban communities. They found that women have sufficient information on condom, pills and injectable however less information on contraception prevalence, this indicated that the awareness and current usage has a big gape. However, in both the areas rural and urban women are aware regarding the few contraception methods. Women of the study showed the positive behaviour regarding the contraception methods, family, friend and relatives gave the information. the source should be the government by promoting higher access of family planning as obtained in developed countries.

Stevie M Nangendo (2012) in his study adopted Interview method. he conducted study by doing close and open-ended questions. He interviewed 50 pregnant and non-pregnant women. He concluded that women have perceived negative side effects of modern contraceptive method. Thus, he suggested that to address the myths and misconception about the family planning the extensive education and communication activity should be promoted.

Marc Boulay and Thomas W. Valente (1994) in his study he used situational survey in rural and urban cluster of Kenya (demographic and health survey). They concluded that after controlling demographic variables there is the association between the knowledge of modern method among women and club membership (Religious group, sports Club, and womens group). They also found that the women of club member were aware of more than five contraceptive methods then the non-member women. Member of religious club women were with no difference in knowledge of family planning.

Sidding Omer Handady in his study he has used facility based in primary health care of Khartoum state and cross-sectional study during one year. From the targeted population. By doing systematic random sampling women of reproductive age were selected. SPSS software was used by the researcher and he concluded that there is the strong statical relationship between the availability and accessibility of contraceptives, support from husband, distance from the centre and the level of education.

Motuma Adimasu Abeshu and Bekesho Geleta (2016) in their study he conducted a review from clients and healthcare system perspective. Conducted secondary research by analysing reports and publication, literature through academic search and web search. They reviewed the study against the set of parameters. Four parameters were used were adopted by the researcher which included- time of the study, eligibility, and location of the study, they concluded that the intervention is required to meet the expectation of commodities in reproductive health and it can exist when user can make choice of usage of contraception methods on low cost and high quality to achieve the short- and long-term health indicators. However, it was also found that there are multiple factors+ that impact the RHCS, socio-economic status, and access to reproductive health services, Knowledge, awareness and practice regarding the contraception, acceptance, and utilization.

Sengupta R, Das A, (2012) in his study he conducted on reproductive and child health at district level household survey. It covered 1000 household of representative sample from each district. They found that none of the contraceptives are not used by the women of (15-24) years of age in EAG states the total unmet needs of states are Jharkhand, UP and Bihar. Muslin women found to be more vulnerable. The women who are not using contraception are either want to limit the childbearing or postpone, however they are found on the risk of pregnancy.

Higher education level and the high standard of living, using electronic media and visit by the service providers of family planning workers significantly influence the unmet needs.

Ahirwar R, He applied cross-sectional observational survey; Non-random convenience sampling method was used by conducting interview in the Shivpuri

district. They found that the common age group 18-30 year were married and they have very poor knowledge and attitude towards contraceptives, only few participants using contraceptive occasionally. However, none of the participants were using contraceptives regularly. Hence need to focus on this migrant population to enhance their awareness and change their attitude toward contraceptives.

Javed quereishi and Kavitha Mathew conducted KAP study on Bhagbara block, Mahasumud district in Chhattisgarh state India. They included 326 female participants of reproductive age group form the rural Baghbara area. They conducted semi-structured interview method for data collection and found that increase level of education can lead to knowledge and favourable attitudes regarding the contraception method. however, the gap between knowledge and practice was evident in this study. The study suggested that the strategy for female education need to improve and accessibility of services need to ensure to solve these problems.

Deshmukh P (2017), conducted study on contraceptive knowledge, attitude, and practice among women of the reproductive age group 15-45 years. Cross-sectional study was conducted with the predesigned questionnaire. He did interview in the tertiary care hospital of Mumbai. He found that there was inadequate practice of family planning methods, ignorance in the use of family planning methods due to fear of side-effects. He suggested that there are need to design awareness programs based on bringing the knowledge gap among the women of reproductive age group.

Bhattarai D, patna B.Om (2013) in a cross-sectional study on knowledge, attitude and practice on contraception on women of Khotang village. The study was conducted to know the prevalence of contraceptive use at the health facility of Khotang district during the health camp in January 2011. He used predesigned questionnaire for interview and found that women have positive attitude regarding the family planning. The most common method used for family planning was depo povera and was currently used. Study concluded that in the remote area of Nepal the knowledge of contraceptive in high however use of contraceptive is very low.

Premaranjan Kc. Narayana (2003), conducted a study on rapid appraisal of knowledge, attitude, and practice related to family planning methods. The men and women who are married within 5 years were included as a sample for this study. He used interview method on 50 men and women form the urban health centres service area of kuruchikuppam, Pondicherry. The local language was used in a pretested questionnaire while conducting the interviews the privacy was ensured. The study concluded that the permanent method of contraception tubectomy was the most popular method used by the men and women in compare the condom was used 54% as a temporary method of contraceptives. However, the responded have the positive attitude toward the family planning also the study justify the need for involving men in reproductive health.

Muthukumar V (2017), conducted study on the knowledge, attitude, and practice of family planning in rural India, predesigned and pretested questionnaire was used. 100 women participated in the study to know the important aspects in achieving the population control. His study found that women at least have knowledge regarding the one contraceptive method. the most used method was the condom. He also

suggested that there is need to make strategies to make people aware an motivate regarding the contraceptive acceptance and various family planning method.

Manjeera L, (2013), in her study she conducted cross-sectional study in China for outpatient and inpatient of Mangalore medical college. She conducted interview of the participants and found that community is not sufficient aware about the use of contraceptives. The study shows that for the positive effects of contraception various programmes are required to create awareness and influence the community for the positive effects of contraception usage. The study shows that to create awareness and usage of contraception more programmes are required.

Raji MO (2013) in his study titled Awareness and utilization of family planning commodities in a rural community of north west Nigeria conducted Cross sectional study using multi-stage samplingin the Kware local government area of Soko state of Nigeria. He selected 100 women of reproductive age group and found very low contraceptives prevalence rate and low male support for family planning. He thus suggested that there is need to develop the strategies involving men in reproductive health, as a way of improving contraceptive use and reduction in maternal mortality. However, the study also discovered negative corelation between the number of alive children respondent had and the number of children ever born.

Thus, the above reviews are focused on the knowledge, attitudes, practices of family planning methods among married women. It is evident from various research studies that most of the women have some or inadequate or incorrect knowledge regarding the contraception methods.

Research Methodology

Research Questions

The study was conducted with the need and objective to determine the KAP and commodity about the family planning measure and explore the factors that affect the use of contraceptive.

1. To investigate the awareness level in married women (18-49 years) regarding the family planning methods.
2. To access the level of attitude of women and their family members towards the contraception methods.
3. To access the level of practice of contraception methods in married women (18-49 Year)

Study design

Cross-sectional study was used with descriptive research design as the enough literature related to preliminary studies on family planning knowledge, attitude and practice was accessible. There were many studies done at international level and national level in different states of India. used mixed methods of research, qualitative research techniques were comprised of KAP survey and secondary data research by analysing reports and publication, literature through academic search and web search. Selection of women for KAP survey was done by the purposive sampling method of married women of (18-49 years) of age in Jaipur city.

Operational definition

Knowledge, attitude, and practice survey is used to represent the study of specific population to collect information on various factor of what is believed and known in regards to the specific topic and issues, KAP survey are used to collect the data orally or in online form by using structured and standardized questionnaire. This data can be used for qualitiave and quantitative analysis also depends on the objective and the kind of study design.

The study Area

The study was conducted in Jaipur Rajasthan city, this study was carried out in the urban residential area of Jaipur Vaishali Nagar Gandhi Path West lalarpura.

Sample size

In the proposed study the samples size was selected at multiple levels. Firstly, the purposive selection of married women of (18-49 years) selected form Vaishali Nagar residential area of Gandhi Path west Jaipur city. This includes total of 85 women out of this 50 women of reproductive age group were selected used purposive sampling method in which 47 respondent participated in KAP online survey.

Source of data collection

Source of data collection was majorly the primary data collection used by google form of KAP survey in the selected participants of research area. Both qualitative and quantitative information was collected by using the structural questionnaire. That includes open ended and, close ended and multiple response questions to obtain the information on education, socio-economic status and KAP of contraceptives methods.

Tools and techniques of data collection

In this study the KAP survey (knowledge, attitude, and practice) is used as a tool to data collection of data. This will help the researcher in collecting the qualitative information which will strengthen the quantitative findings.

Inclusion Criteria

Married women of (18-49 years) living in the Jaipur Rajasthan city will be included in this study.

Exclusion Criteria

- Unmarried women,
- Women in Menopause,
- Pregnant women,
- Women who have just delivered the child,
- Women who denied,

Reliability and validity
The quantitative and qualitative method is used to enhance validity and reliability of the study.

Legal and Ethical Consideration
Before administrating the tool, the researcher explained to the respondents regarding the objective and importance of the research. informed consent was taken before filling the questionnaire.

RESULT AND DISCUSSION

Socio-demographic profile of the study participants
A total of 84 women of study area and out of 84 women 50 respondent belonging to the age group of 18-49 years were selected as a sample size for the study, however 3 participants did not respondent total 47 women of reproductive age group of 18-49 years participated in the study. The analysis on age group represents that (53.2%) respondents belonging to the category of (26-35) year of age group, (25.5%) respondents are in the category of (36-45) age group, (12%) are in the (18-25) age group and (4.2%) are in the category of (49 &above). The study analysis on education status shows that (68.1%) participants are post graduate, (12%) participants are graduate and (6.3%) are high school and (2.1%) participants are till 10th standard.

Table 1. Sociodemographic Correlates (n=47)

Characteristics	Number	Percentage
Education Status (n=47)		
5th	1	2.1%
10th	1	2.1%
12th	3	6.3%
Graduate	8	12.7%
Post Graduate	32	68.0%
B-ed	1	2.1%
Age* (n=47)		
18-25	8	12.7%
26-35	25	53.2%
36-45	12	25.5%
49 & above	2	4.2%

Awareness level in married women (18-49 years) regarding the family planning methods.
Most of the women of the study (91.3%) have heard regarding the family planning methods, (6.5%) women of the study have never heard and (2.2%) women do not know anything regarding the family planning methods

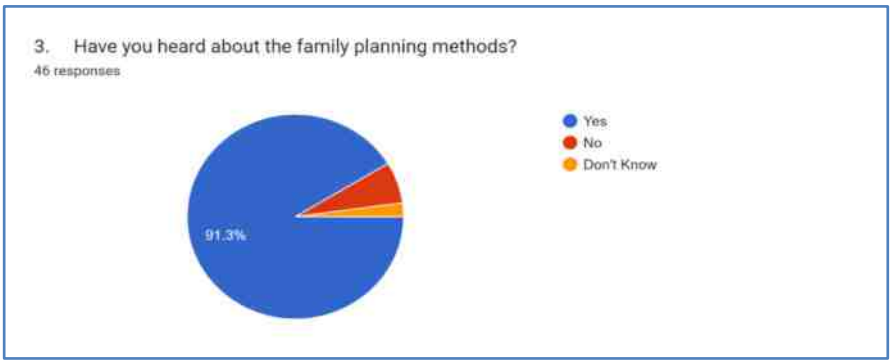

Figure-1, Have you heard about the family planning methods?

When the respondents were evaluating regarding the various type of family planning methods it was realised that most of the women (46.6%) have knowledge on male condom, while (20%) women are aware on traditional method, (15.5%) women are aware on female sterilization, (11%) women are aware on male sterilization, (4.4%) are aware on IUD, and only (2.2%) women are aware on OCP. It was observed that women have good awareness on mele condom and the least awareness was observed on male sterilization.

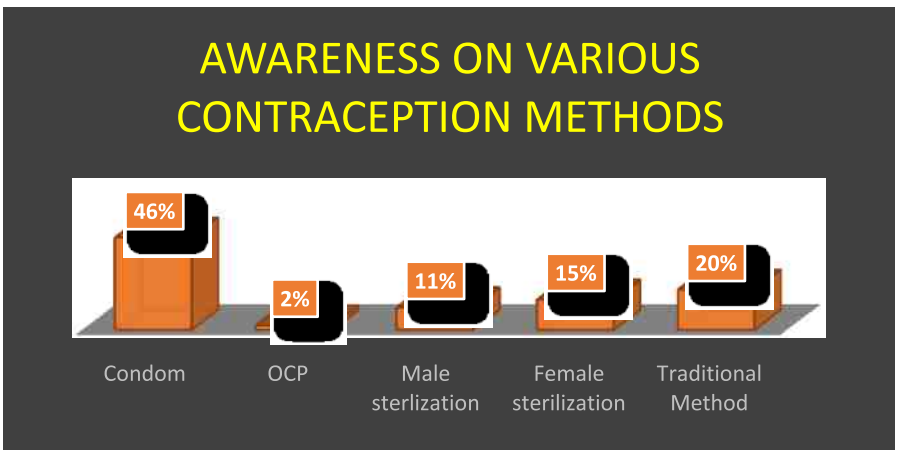

Figure-2 Awareness on various contraception methods

The awareness source of family planning methods was mainly doctors, maas media and friends/relatives (37%) women get the information from their relatives and friends, (6.5%) women get information from others. (30.4%) get information from the doctors.

Table 2. Knowledge and awareness regarding the contraception (n=47)

	Number	Percentage
Heard about family planning	42	91.3%
Aware of contraceptives	42	91.3%
Methods of contraception* (n=45)		
Condom	21	46.6 %
OCP	1	2.1%
Male Sterilization	5	11%
Female Sterilization	7	15.5%
IUD	2	4.4%
Traditional method	9	20%
Source of information* (n=46)		
Doctor	14	30.4%
Mass Media	12	26.0%
Friend/ Relative	17	36.9%
Other	3	6.5%

Attitude toward Family Planning method

When the participants were evaluated regarding their attitude on family planning methos (95.7%) women showed positive attitude. Only (4%) women have showed negative attitude on family planning methods. It observed that (68.0%) participants are using contraceptives to prevent unplanned pregnancy or to avoid unwanted pregnancy, (4.2%) participants have attitude that by using family planning methods they can create proper spacing in birth. However (25.5%) participants are using contraceptives to prevent from sexually transmitted infection. When the women participants were inquiring regarding the attitude if their husband on methods it is measured that (72.2%) of the husband have positive attitude and they approve the use of contraceptives, whereas (14.8%) of husband has showed negative attitude and they disapprove the family planning measures**.**

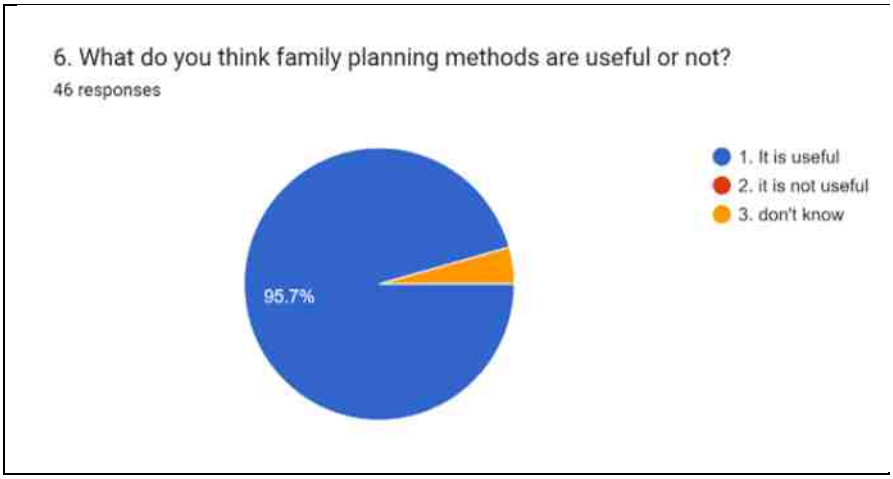

Figure-3 What do you think family planning methods are useful or not?

Table 3. Attitudes towards family planning methods.

Attitude*(n=47)	**Number**	**Percentage %**
Contraceptive is useful	45	95.5%
Contraceptives are not useful	2	4%
Why Contraception methods are useful		
To Prevent Unplanned Pregnancy	32	68.0%
To prevent Sexually transmitted infection	12	25.5%
Spacing in Birth	2	4.2%
Husbands Attitude		
Approve the use of contraception	34	72.3%
Disapprove	7	14.8%



Figure-, Husbands attitude in use of contraceptive methods

Practice of family planning methods

When the respondents are asked the question on the use of contraceptives it was observed that (42.2%) of women are regular using at least one or two type of contraceptives the most used method is the male condom (42.5%) women are regularly using it. Some women have never used any kind of contraceptive yet. (29.7%) of the respondent are occasionally using the family planning methods.

(23.4%) women are using traditional method of family planning, (14.8%) women are using the permanent female sterilization, however only (4.2%) Male sterilization is observed, (2.1%) women are using oral control pill and IUD method of contraceptive.

(17%) women respondent has the mentality that the contraception should be used by the male partner only it is the responsibility of husband, whereas (8%) women respondent felt that it is the responsibility of female partner, wife should use the contraception, (72%) women think that using the contraception is the responsibility of both, husband and both should use the contraception as per demand.

Table 5. Practice of family planning methods

Practice *(n=47)	Number	Percentage%
How often practice		
Regular use	19	42.4%
Never use	10	21.2%
Occasionally use	14	29.7%
Which contraceptive methods are in practices		
Traditional Method/Natural	11	23.4%
Female Sterilization	7	14.8%
Male Sterilization	2	4.2%
Male condom	20	42.5%
IUD	1	2.1%
OCP	1	2.1 %
Other	3	6.3%
Who should use the contraceptives		
Only Male need to use	8	17.7%
Female need to use	4	8.5%
It is the responsibility of both	34	72.3%
From do you get the contraceptives		
Public medical store	13	27.6%
Private medical store	25	53.1%
Other	7	14.8%
Availability		
Easily Available	39	82.9%
Difficult to get	5	10.6%
Not availability	3	6.3%

When we analysed the commodity and availability of contraception methods, we found that (53%) of women purchase the contraception form the private medical store and (82%) women have the easy access of contraception, (27%) women get the contraception from public medical store, (14%) get form other source of contraception, (6%) women did not get contraception form any sources and they do not use contraception.

When we obtained the information regarding out-of-pocket expenditure on contraception (26%) women monthly spent average 200 Rs, (24%) women spent 100 Rs monthly, (11%) women spent 50 Rs monthly, (37%) women have no out-of-pocket expenditure on contraception.

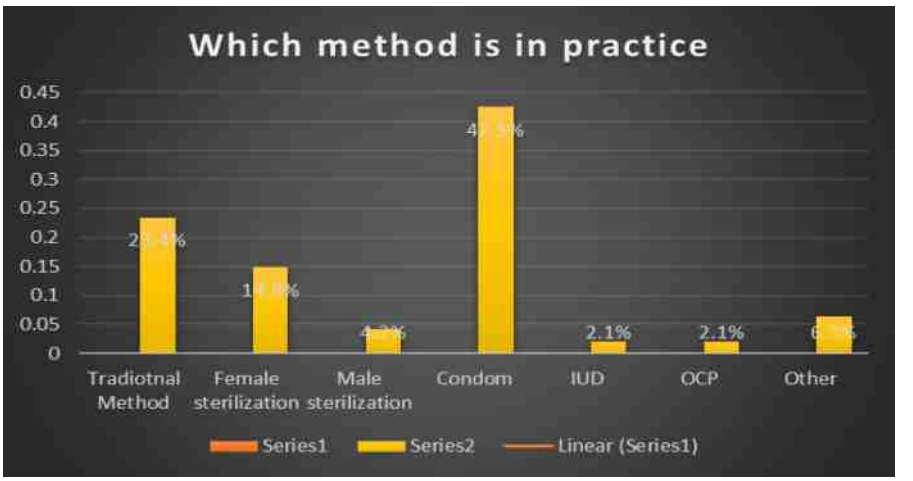

Figure-5, Which method is in practice

Discussion

The study was conducted through reviewing of some articles, journals, and research papers were searched the literature review for family planning term is easily available. The current study represent that 100% women of the study were literate. And most of the women (91%) have knowledge on family planning methods. But only (6%) women those who are less educated have less knowledge on family planning methods. The study of Manjeera LM et has suggested that 94% respondents have knowledge of more then one method of contraception

In our study represent that more than 50 females was in the age group of (26-35) however maximum contraceptive users are at the age of (26-35) similar like the research of Qazi M et al in his study the maximum patient who are using family planning services are at the age range of 21-30 years. Contraception is mostly used at this age because (20-35) years in considered to be more high fertility age group. In many areas the women complete their family till the end of this age group.

The result followed that the one of the major source of information of family planning methods (30%) is the doctor which is like the study of Vikas Gupta in his study the source of information was the doctor/multipurpose health worker (70.4%) of the respondent get information from the doctor. This is because the community and individual have more trust and faith on the doctors rather than the other source if information.

Approximately more than (65%) respondents were currently using one or more methods of contraception which is nearly the study finding of Khan et al. (65.5%), however higher than the study done by the prasad (42%) and less to the findings of Srivastava (51%).

The present study indicates that the participants are using family planning methods in order to maintain space in birth and the husbands attitude towards the family planning method by asking the question if he approve or not (73%) has approved to

use the family planning methods which means they have positive attitude towards the family planning methods. In many studies the contraception choice made by the participants is different. This difference of choice in contraception are because of easily accessible, government policies for promoting the usage like incentive, free of cost or subsidised family planning methods.

In our study it was observed that majority of the study women 43.5% followed temporary method male condom and 15% female followed permanent method of family planning which correlates to the study of DR Gaur et al where they found that 61% women followed temporary method and 37% women followed permanent method respectively. When compare to the study of Neelu Saluja et al most of the women 46% followed permanent method which is higher to our study.

In the present study 21% women had not used any kind of contraceptive methods which is comparable to the study of young et al in his study 8% women had not used any contraceptive. The study of Srivastava et al showed higher number that 55% women had not used contraceptive methods due to lack of awareness, accessibility religious and family custom and various myths are also present in the community which are the barrier of issue for not using the contraception.

The finding of the current study indicates that the factor that affect the utilization of contraceptive methods such as fear of side effects 36% lack of awareness 29%, family custom 15% and husband opposition 18% which is compare to the study of Gupta et al in urban area of Haryana. The study of Qazi M et al and Nayak AU et al, showed that factor affecting the use of contraceptives are lack of awareness 50% and husband opposition 44% cases seen.

In the present the study despite of good knowledge and positive attitude regarding the family planning, a significant number of participants are practiced contraception. However, the reason for not using any contraception is either fear of side effects or husband opposition. Economic and educational advancement will help to enhance the knowledge and attitude and the importance od birth spacing and family size. We conducted cross sectional study and purposive random sampling of the participants which is showing the association between the socio-demographic variable and family planning acceptance which gives the strength to our study.

Recommendations

This study has indicated that women have sufficient knowledge, positive attitude regarding the family planning methods. Specially towards the condom. Oral control pill and female sterilization, with relatively low prevalence of contraception usage, thus showed the huge difference between the KAP of contraception. have correct choice of contraceptive and family planning is very important. The government and the health care worker need to ensure that the contraception awareness and motivation is needed specially in male towards the male contraception. The other non-government organisation needs to take extended efforts to spread the right information in the community towards the family planning methods. The more programs and educational activities should be designed and implemented to combat the influence of various factor that affect the usage of family planning.

Conclusion

The current study has indicated that adequate knowledge and positive attitude towards family planning methods is totally different approach and practicing these methods in day-to-day life are two different things. The level of awareness and knowledge and attitude about different methods of family planning services are increasing due to several things such as promotional activities done by the government and other non-government organisations, maas media activities, and different educational and behaviour change camps on awareness of family planning services. However, it is quite difficult to change the attitude and behaviour of the individual and community which is completely depends upon the socio-demographic and socio-economic factors. Being the part of patriarchal society, the major decisions are depending on the husband, whereas education and religion is also play an important role.

This present study showed that mainly participants was with adequate knowledge and positive attitude regarding the family planning methods however the huge gap in the practice was seen in this study. All the respondent were aware on one or two method of contraceptives but usage is lagging, the reason was, myths associated and the religion and family customs. Which is comparative to the study of different developing countries. Counselling of couples and women education can help to adopt the family planning services. The family planning activities and program should be multidisciplinary they should involve and motivate both female and male and the other member of the family to empower regarding the usage of various contraceptive method and to correct the misconception and barrier regarding the family planning methods and services. The family planning is not just a birth control but also a major part of maternal and child health indicator.

Though the study had a small group of participants, and several limitations should be considered.

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Financial Support :- No

Ethical Approval :- The study was conducted with the approval of IIHMR university Jaipur.

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Harmony of Body, Mind, and Spirit: Exploring Shambhavi Mahamudra for Holistic Well-being

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Abstract
In the quest for holistic well-being, the integration of body, mind, and spirit lies at the heart of traditional Indian knowledge systems. This manuscript delves into the profound practice of Shambhavi Mahamudra, an ancient yogic technique that embodies the harmony of these fundamental aspects of human existence. Beginning with an exploration of its historical origins and philosophical underpinnings, we examine how Shambhavi Mahamudra serves as a gateway to holistic wellness within the context of Indian spirituality. Central to Shambhavi Mahamudra is the understanding of the interconnectedness and interdependence of the body, mind, and spirit. Through a synthesis of breath control, meditation, and mental focus, practitioners are guided towards achieving inner balance and harmony. The practice not only addresses physical well-being by promoting relaxation and enhancing physiological functions but also nurtures mental clarity, emotional resilience, and spiritual growth. Drawing upon both traditional wisdom and contemporary research, this manuscript elucidates the multifaceted benefits of Shambhavi Mahamudra for holistic well-being. It explores its transformative effects on individuals' lives, offering insights into how the practice fosters a deep sense of connection with oneself and the universe. Through case studies, personal experiences, and empirical evidence, we highlight the tangible impact of Shambhavi Mahamudra on enhancing overall quality of life and promoting holistic flourishing. As we navigate the complexities of modern existence, Shambhavi Mahamudra emerges as a timeless tool for cultivating holistic well-being. By embracing the unity of body, mind, and spirit, this ancient practice invites us on a journey towards inner harmony, profound self-discovery, and awakening to the fullness of our potential.

Keywords: Shambhavi Mahamudra, Holistic Well-being, Body-Mind-Spirit Connection, Yoga, Indian Knowledge Systems

Introduction

Shambhavi Mahamudra Kriya, a transformative yogic practice rooted in the ancient tradition of Kundalini yoga, seeks to synchronize body, mind, and spirit. Practitioners assume a comfortable seated posture and engage in controlled breathing, meditation, and specific eye movements to direct their focus inward.

Through deep rhythmic breathing and concentration on a chosen object or mantra, typically situated at the eyebrow center, this practice fosters inner stillness and heightened awareness. The incorporation of synchronized eye movements is believed to activate energy centers, promoting the flow of life force energy throughout the body. Shambhavi Mahamudra is celebrated for its myriad benefits, including physical relaxation, stress reduction, mental clarity, emotional resilience, and spiritual growth. However, it is advisable to learn this practice under the guidance of a qualified instructor to ensure safety and effectiveness. (Peterson et al., 2017)

Holistic well-being encompasses a comprehensive state of wellness, integrating physical, mental, emotional, social, and spiritual dimensions. It emphasizes the interconnectedness of these facets, acknowledging that true well-being arises from their harmonious balance. This entails maintaining physical health through proper nutrition, exercise, and rest, fostering mental clarity and emotional resilience, nurturing healthy relationships and community connections, and seeking meaning and purpose in life. Achieving holistic well-being requires self-awareness, self-care practices, and a commitment to personal growth, ultimately leading to a fulfilling and meaningful life characterized by wholeness, balance, and vitality.

The purpose of this manuscript is to explore the profound practice of Shambhavi Mahamudra within the context of holistic well-being, delving into its historical origins, philosophical underpinnings, and practical implications. By examining the interconnectedness and interdependence of the body, mind, and spirit within this ancient yogic technique, the manuscript aims to elucidate its transformative effects on individuals' lives. Through a synthesis of breath control, meditation, and mental focus, Shambhavi Mahamudra is presented as a gateway to inner balance, emotional resilience, and spiritual growth. By drawing upon both traditional wisdom and contemporary research, the manuscript seeks to highlight the multifaceted benefits of this practice, offering insights into its tangible impact on enhancing overall quality of life and promoting holistic flourishing. Through case studies, personal experiences, and empirical evidence, it endeavors to demonstrate how Shambhavi Mahamudra emerges as a timeless tool for cultivating holistic well-being, inviting readers on a journey towards profound self-discovery and awakening to the fullness of human potential.

The origins of Sambhavi Mahamudra kriya, a potent yogic practice, reside in a realm of both intrigue and ambiguity. While its exact lineage remains elusive, two primary narratives regarding its history emerge. Proponents of an ancient origin posit that Sambhavi Mahamudra represents a practice passed down through generations of yogis for millennia. Tantalizing references to practices resembling Shambhavi Mahamudra may exist within classical yoga scriptures like the Gheranda Samhita, Hatha Yoga Pradipika, and Shiva Samhita. However, definitive identification of Sambhavi Mahamudra within these texts proves challenging. An alternative perspective credits Sadhguru Jaggi Vasudev, the founder of the Isha

Foundation, with reviving and disseminating Sambhavi Mahamudra to the modern world. The Isha Foundation prominently features this practice as the cornerstone of their introductory program, Inner Engineering. To navigate this historical murk, we can dissect the name itself. "Shambhavi" evokes Parvati, the divine consort of Shiva, symbolizing the primordial Shakti or creative energy. "Mahamudra" translates to "great seal," signifying a powerful yogic technique. Finally, "kriya" denotes a holistic yogic process encompassing specific postures, breathing exercises, and meditations. (Swaminathan, 2021)

Sambhavi Mahamudra kriya is a multi-dimensional practice integrating physical posture, breathwork, and focused awareness. Here's a glimpse into its core principles and techniques: (Upadhyay et al., 2022)

Principles:

- Inner Engineering: The practice aims to cultivate a conscious inner environment, fostering mental clarity and emotional stability.
- Energy Management: Specific techniques are believed to direct and refine the body's subtle energy (prana) for enhanced well-being.
- Stillness in Action: Sambhavi Mahamudra strives to achieve a state of mental stillness amidst the body's engagement in the practice.

Techniques:

- Posture: A comfortable, seated posture with a straight spine forms the foundation.
- Breathwork: Specific breathing patterns, often rhythmic and slow, are employed to influence energy flow.
- Drishti (Gaze): Focusing the gaze on a specific point, often the tip of the nose or the space between the eyebrows, plays a crucial role.
- Mudra (Hand Gesture): While not always incorporated, certain hand gestures (like Jnana Mudra) might be used to enhance the energetic experience.
- Meditation: The practice culminates in a state of focused meditation, integrating the combined effects of posture, breath, and gaze.

Sambhavi Mahamudra's significance within Indian knowledge systems depends on its origins. It could be viewed as an ancient practice enriching the yogic tapestry or a contemporary innovation furthering the tradition's reach and evolution. Further research and open discussion are needed to solidify its placement within this vast and vibrant knowledge system.

Holistic Effect of Shambhavi Mahamudra

2.1 Shambhavi Mahamudra and Physical Well-being

Shambhavi Mahamudra, a potent yogic practice, transcends the realm of the purely mental and emotional. While renowned for its ability to cultivate inner peace and clarity, it can also hold significant benefits for physical well-being. Let's delve into the ways this practice can nurture a healthy and vibrant body. (De, A & Mondal, S, 2020)

2.2 Effects on the Physical Body

Chronic stress wreaks havoc on the body, manifesting in issues like muscle tension, headaches, and digestive problems. By fostering relaxation and emotional balance, Shambhavi Mahamudra can serve as a powerful antidote. Studies suggest the practice may enhance Heart Rate Variability (HRV), a marker of a healthy nervous system. Higher HRV is linked to better cardiovascular health and improved stress resilience. (Muralikrishnan et al., 2012)

The practice also incorporates specific breathing techniques, potentially improving lung capacity and oxygen intake, leading to increased stamina and energy levels. Furthermore, the calming and focusing aspects of Shambhavi Mahamudra may contribute to better sleep quality, allowing the body to rest and repair more effectively. The combined effects of stress reduction, improved cardiovascular health, and better sleep can contribute to a general sense of physical well-being and increased vitality. (Sadhasivam et al., 2020)

2.3 Promotion of Relaxation and Stress Reduction

Chronic stress is a major public health concern with a multitude of detrimental effects. Shambhavi Mahamudra tackles stress at its root. Through its focus on mindful breathing and focused awareness, the practice helps quiet the mind and cultivate a sense of inner peace. This reduction in stress hormones like cortisol can lead to a cascade of positive physical effects, including lowered blood pressure, improved digestion, and a strengthened immune system. (S Parthasarthy et al., 2020)

2.4 Enhancement of Respiratory and Cardiovascular Health

Shambhavi Mahamudra incorporates specific breathing patterns, often rhythmic and slow. These techniques may improve lung capacity and oxygen intake, leading to increased stamina and energy levels. Studies have also shown a potential link between the practice and enhanced Heart Rate Variability (HRV) as mentioned earlier. Higher HRV is associated with better cardiovascular health, improved stress resilience, and a lower risk of heart disease. (Santhosh & Agrawal, 2015; Selvaraj et al., 2008)

2.5 Potential Benefits for Specific Health Conditions

While Shambhavi Mahamudra should not replace conventional medical treatment, its potential benefits for specific health conditions are noteworthy. Conditions like high blood pressure, anxiety, and insomnia might find some relief through the practice's stress-reducing and calming effects. However, it's crucial to consult a doctor before starting this practice if you have any underlying health conditions. (S. & Sornalingam, 2019)

Shambhavi Mahamudra offers a unique approach to well-being, addressing the mind and body as a unified whole. By promoting relaxation, enhancing respiratory

and cardiovascular function, and potentially offering relief from certain health conditions, this practice empowers individuals to cultivate a healthy and vibrant physical existence. (Upadhyay et al., 2022)

2.6 Shambhavi Mahamudra and Spiritual Well-being

Shambhavi Mahamudra emphasizes focused meditation and mindful breathing. This practice cultivates a state of inner stillness, quieting the incessant chatter of the mind. In this quietude, self-awareness flourishes. One begins to observe thoughts and emotions without judgment, gaining a deeper understanding of their own inner landscape. This self-awareness is a cornerstone of spiritual growth, allowing individuals to connect with their authentic selves and core values.

Spiritual well-being thrives in an environment free from negativity. Shambhavi Mahamudra's stress-reducing and calming effects help release the grip of negative emotions like anger, anxiety, and fear. By fostering emotional balance and inner peace, the practice creates fertile ground for cultivating positive emotions like compassion, gratitude, and love. These positive emotions fuel spiritual growth, fostering a sense of connection and well-being.

Proponents of the practice describe experiences of profound inner peace, a heightened sense of connection to something greater than oneself, and even glimpses of expanded consciousness. While these experiences are subjective and vary from person to person, they highlight Shambhavi Mahamudra's potential to facilitate a connection with the transcendent.

The consistent practice of Shambhavi Mahamudra requires discipline and commitment. These qualities are not only essential for mastering the technique but also translate beautifully onto the spiritual path. Spiritual growth is often a lifelong journey, demanding dedication and perseverance. By fostering these qualities through practice, Shambhavi Mahamudra equips individuals with the tools necessary to navigate the challenges and triumphs of their spiritual exploration.

Shambhavi Mahamudra is more than just a physical or mental exercise; it's a holistic practice that nourishes the seeds of spiritual well-being. By cultivating inner stillness, emotional harmony, a connection to the sacred, and the necessary discipline for transformation, Shambhavi Mahamudra empowers individuals to blossom on their unique spiritual journeys.

Case Studies and Experiences

3.1 Personal anecdotes and testimonials from practitioners

Anecdotes: (a) I remember when I first started practicing Shambhavi Mahamudra. I was going through a particularly stressful period in my life, juggling work, family responsibilities, and personal challenges. Each day felt like a battle, and I was constantly on edge. However, as soon as I began incorporating the practice into my daily routine, I noticed a profound shift within myself. (S Parthasarthy et al., 2020)

(b) The first few times were challenging; my mind wandered, and I struggled to maintain focus. But with perseverance, I started experiencing moments of deep peace and clarity during the practice. It was as if a weight had been lifted off my shoulders, and I felt a sense of calm wash over me.

(c) Over time, not only did my ability to concentrate improve, but I also found myself becoming more resilient to stress. The anxieties that once plagued me began to fade away, replaced by a newfound sense of inner strength and balance. Shambhavi Mahamudra became my sanctuary amidst the chaos of daily life, helping me navigate challenges with grace and ease.

Testimonial: "Shambhavi Mahamudra has been a transformative journey for me, both physically and spiritually. Before I discovered this practice, I struggled with chronic health issues and emotional turmoil. I felt disconnected from myself and the world around me, searching for something to bring me solace and healing.

From the moment I learned the technique, I knew I had stumbled upon something truly special. The simple yet profound movements, coupled with focused breathwork, helped me tap into a reservoir of energy and vitality within myself. With each practice session, I could feel the layers of tension and negativity melting away, replaced by a sense of deep peace and inner harmony.

But the benefits didn't stop there. As I delved deeper into the practice, I began to uncover aspects of myself that I had long forgotten or ignored. Through introspection and self-reflection, I found the courage to confront my fears and insecurities, allowing me to embrace my true essence with love and acceptance. (Peterson et al., 2017)

Today, I am healthier, happier, and more aligned with my purpose than ever before. Shambhavi Mahamudra has not only healed my body but also nourished my soul, guiding me on a journey of self-discovery and self-realization. For anyone seeking holistic well-being and inner transformation, I wholeheartedly recommend embarking on this sacred path." (Malipeddi et al., 2024)

Research on the benefits of Shambhavi Mahamudra and similar practices is still emerging, but there are several studies and empirical evidence that support its potential for holistic well-being. Here are some key findings:

A study published in the International Journal of Yoga examined the effects of Shambhavi Mahamudra on stress and found that regular practice was associated with significant reductions in perceived stress levels. The study suggested that the practice helps individuals cultivate a state of relaxation and inner peace, which can buffer against the effects of stress on the body and mind. (Tyagi & Cohen, 2016)

Another study published in the Journal of Alternative and Complementary Medicine explored the impact of Shambhavi Mahamudra on mental health outcomes such as anxiety and depression. The findings indicated that participants who practiced regularly reported lower levels of anxiety and depressive symptoms compared to a control group. This suggests that the practice may have a positive effect on mood regulation and emotional well-being. (Dhruva et al., 2012)

Research has also shown that meditation practices like Shambhavi Mahamudra can have beneficial effects on cognitive function. A study published in the Journal of Evidence-Based Integrative Medicine found that participants who engaged in regular meditation showed improvements in attention, memory, and executive function. These cognitive enhancements may contribute to overall well-being by enhancing one's ability to focus, problem-solve, and make decisions. (Peterson et al., 2017)

While most research on Shambhavi Mahamudra focuses on its mental and emotional effects, there is evidence to suggest that it may also have positive effects on physical health. For example, studies have shown that meditation practices can lower blood pressure, improve immune function, and reduce inflammation in the body. These physiological changes contribute to overall health and well-being, supporting the notion that practices like Shambhavi Mahamudra can benefit the body as well as the mind. Furthermore, less studied from a scientific perspective, many practitioners report experiencing profound spiritual growth and self-realization through regular practice of Shambhavi Mahamudra. This subjective evidence is often supported by anecdotal accounts of increased feelings of interconnectedness, purpose, and inner peace.

Overall, while more research is needed to fully understand the mechanisms and benefits of Shambhavi Mahamudra, the existing evidence suggests that it holds promise as a holistic approach to well-being, addressing the interconnectedness of body, mind, and spirit.

Illustrative examples of holistic transformation and well-being through the practice

Here are a few illustrative examples of holistic transformation and well-being through the practice of Shambhavi Mahamudra:

Sarah, a busy professional in her mid-30s, struggled with chronic back pain and digestive issues due to the stress of her demanding job. After incorporating Shambhavi Mahamudra into her daily routine, she noticed a significant improvement in her physical health. The gentle movements and deep breathing helped release tension in her muscles and improve her posture, alleviating her back pain. Additionally, the practice stimulated her digestive system, leading to better digestion and increased energy levels. As a result, Sarah felt more vibrant and

resilient in her body, enabling her to tackle her daily challenges with ease. (AIPC, 2009)

James, a college student, often found himself overwhelmed by the pressures of academics and social expectations. He struggled with anxiety and self-doubt, which affected his ability to focus and perform well in his studies. Upon learning Shambhavi Mahamudra, James discovered a powerful tool for managing his emotions and calming his mind. The practice helped him cultivate a sense of inner peace and emotional resilience, enabling him to approach challenges with clarity and confidence. As a result, James felt more grounded and centered in himself, leading to improved academic performance and overall well-being. (Wang & Szabo, 2020)

Maya, a spiritual seeker, embarked on a journey of self-discovery and inner exploration through the practice of Shambhavi Mahamudra. As she delved deeper into the practice, she experienced moments of profound connection to something greater than herself. Through meditation and introspection, Maya unearthed hidden layers of her psyche and discovered a deeper sense of purpose and meaning in life. The practice facilitated her spiritual growth and self-realization, leading to a greater sense of fulfillment and contentment in her daily life. (Parthasarthy, S & Dhanraj, S, 2020)

Mark and Sarah, a couple struggling with communication issues and relationship conflicts, turned to Shambhavi Mahamudra as a way to deepen their connection and improve their relationship. By practicing together, they learned to cultivate presence and mindfulness in their interactions, allowing them to listen more attentively to each other and communicate with greater empathy and understanding. The practice helped dissolve barriers of ego and defensiveness, fostering a deeper sense of intimacy and connection between them. As a result, their relationship flourished, and they experienced greater harmony and joy in their partnership. (AIPC, 2009)

These examples illustrate how Shambhavi Mahamudra can facilitate holistic transformation and well-being by addressing the interconnectedness of body, mind, and spirit; whether through physical health improvement, emotional resilience, spiritual connection, or enhanced relationships, the practice offers a pathway to greater wholeness and vitality in all aspects of life.

Conclusion

"Harmony of Body, Mind, and Spirit: Exploring Shambhavi Mahamudra for Holistic Well-being" focuses on the transformative practice of Shambhavi Mahamudra. This holistic approach integrates simple physical movements, breathwork, and meditation techniques to promote balance and inner peace. Key benefits include stress reduction, emotional resilience, improved physical health, spiritual growth, and enhanced relationships. Ultimately, Shambhavi Mahamudra offers a pathway to overall well-being by nurturing the interconnectedness of body,

mind, and spirit. Shambhavi Mahamudra is profoundly significant for holistic well-being as it addresses body, mind, and spirit through simple movements, breathwork, and meditation. It enhances physical health, emotional resilience, and spiritual growth. Moreover, it fosters deeper interpersonal connections, offering a comprehensive pathway to balance, vitality, and inner peace.

Future studies should delve deeper into the specific mechanisms through which Shambhavi Mahamudra affects physical, mental, and emotional well-being. This could involve longitudinal studies, neuroimaging research, and controlled trials to provide more robust evidence of its benefits. Research should explore the effectiveness of Shambhavi Mahamudra across diverse populations, including different age groups, cultural backgrounds, and clinical populations. Understanding how the practice can be adapted to meet the needs of various individuals can broaden its applicability and accessibility. There's a need to integrate Shambhavi Mahamudra into healthcare settings as a complementary approach to conventional treatments for stress-related disorders, chronic illnesses, and mental health conditions. Collaborative research between healthcare professionals and yoga practitioners can facilitate this integration. Given the increasing popularity of online learning platforms, future research should investigate the efficacy of teaching Shambhavi Mahamudra through digital mediums. This could expand access to the practice for individuals who may not have access to in-person instruction. Further exploration of the long-term effects of Shambhavi Mahamudra on well-being is crucial. Longitudinal studies tracking practitioners over extended periods can provide insights into the sustained benefits of the practice and its impact on overall quality of life. Research should also examine the cultural context of Shambhavi Mahamudra and how it intersects with different belief systems and cultural practices. Understanding cultural nuances can enhance the effectiveness and relevance of the practice for diverse populations. Establishing standardized teacher training programs and certification processes can ensure the quality and consistency of Shambhavi Mahamudra instruction. Research on best practices for training and mentorship can support the development of skilled and knowledgeable teachers. Overall, future research and practice should aim to deepen our understanding of Shambhavi Mahamudra's effects, expand its accessibility, and ensure its integration into diverse healthcare and wellness contexts.

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Mapping Vasudhaiva Kutumbakam- fostering universal oneness through the network of Ramayanas

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ABSTRACT

Vasudhaiva Kutumbakam is an approach that encompass the political, social ecological, cultural and spiritual paradigms and acknowledges inter-relativity and inter dependence that fosters universal transformation. In this age of geo-politics, geo- ethics and Artificial Intelligence, a sophisticated tool with its potential to connect people across the globe and promote understanding, facilitating mutual collaboration among diverse communities, this concept Vasudhaiva Kutumbakam is meaningful as it promises the idea of interconnectedness and global unity, suggesting that all humans should live in harmony, transcending boundaries of nationality, ethnicity and religion. The unifying principle of One Earth can contribute in generating oneness with the global community and enhance universal responsibility on peace, conflict negotiations, climate emergency and sustainable development goals and strengthen human rights through mutual respect. The universe is not a demarcated land that needs individual caring but a unified globe that needs the attention of every individual.

The article proposes to unravel the narrative subtleties of the concept of Vasudhaiva Kutumbakam in Ramayana. The Ramayana of Valmiki is an epic that has permeated across globe and linguistic boundaries through transcreations and translations. The Indian variations of Ramayana, South East variations, and the western translations reveal the thematic concept of universal welfare, through politics and good governance Lokah samasthah sukhino bhavantu, May all be happy. This is the reason, Ramayana has been translated and recreated in various languages within the Indian boundary and across globe as it carries universal values. A philosophical approach could hinder the expansion of Vasudhaiva Kutumbakam, rather it is approached as a strategic tool that governs the world prudent and stabilizes universal peace and co- existence.

Keywords- Ramayana, Vasudhaiva Kutumbakam, Humanity, Global welfare, Universal sustainable development, happiness strategy.

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Introduction

The significance of Indias ancient thoughts to Contemporary Strategic Reality to foster unity amidst the calamitous compartmentalisation of society and the

aggressive divisiveness of political, economic and religious domains make it essential to reclaim unifying principle of One Earth Family. The aim of Vasudhaiva Kutumbakam is the inherent unity and interdependence of all creation and every living soul is empowered to attain their potential. This idea encourages pluralistic society with compassion and tolerance. Vasudhaiva Kutumbakam as a global vision of One Family is evident through Tanguns Hongik Ingan in Korea, Ubuntu African traditions, One Nation under God of the United States. (1)The globe echoes the potential to bridge ethical framework for peace and prosperity. The countries strive to articulate inclusivity from within its own cultural traditions while spinning web of shared values through consensus. Vasudha, which means earth and Kutumb signifies family. (2) Thus, Vasudhaiva Kutumbakam includes every living being on Earth.

Vedas are the oldest texts in the world. Indian culture has been very sublime, profound and vibrant towards scientific approach to life and spirituality. The well-built notion of internationalism is propagated by Indian culture under which the entire globe is considered a family under one roof. The write up focuses on Indian wisdom through Ramayana with its underlying philosophy of oneness to be relevant and effective in alleviating global conflicts today. We all ar e one family in the world. Building a community that empowers everyone to attain their full potential through each of us respecting each others dignity, rights and responsibilities makes the world a better place to live(3)

Sarve Bhavantu Sukhinah Sarve Santu Niraamayaah |
Sarve Bhadraanni Pashyantu Maa Kashcid-Duhkha-Bhaag-Bhavet |
Om Shaantih Shaantih Shaantih ||

The translation of the above phrase states, None of the creatures has disease or mental agony. Treat all beings equally for the benefit of progeny and the welfare of all in Indian society forever is universal human religion. (4)

Parliament house of India carries the verse Vasudhaiva kutumbakam, inscribed on the first gate of the Parliament, (5) Ayam Nijah Paro Veti Ganana Laghucetasam which talks about the distinction between mine and yours which is a too narrow vision. The interconnectedness of humanity is a broader perspective and adaptive for a world culture. This phrase is relevant today as it focuses on global perspective, prioritizing the collective well-being of mass over individual.

hiranyagarbhah samavartataagrey bhootasya jaatah patireka aaseet |
sa daadhaara prithiveem dyaamutemaam kasmai devaaya havishaa vidhema .(6)

Hiranyagarbha, the golden seed refers to the cosmic womb of creation which contains the entire universe in the seed form; and from which emerges the manifest universe. The hymn describes Hiranayagarbha as the primeval source of all creations. We all are connected, to each other biologically. To the Earth chemically. To the rest of the universe atomically (7)

Ramima ta samudyanta devsuranamask tam
pjayasva vivasvanta bhskara bhuvanevaram. (8)

The above verse states that The Sun Rays (Rashmimanta) rises for all, spreading His light (Samudyanta); He is reverentially saluted by all. The Sun is revered who

(Vivasvanta) creates His Light (Bhaskara), and who is the Protector of the Universe (Bhuvaneshwara).

Sun rays, the universal annihilator of darkness does not make a bias based on race, geography, religion. Ramayana is one such text that has given more values to the world for universal welfare through the narratives, characters, events that has spread like beams of Sun to almost many regions of the world to annihilate the darkness of ignorance, racism, slavery, suffering, disownment, terror, ecological misuse and has fostered through the story a lesson for mankind through ages on peace, welfare, conflict resolution, compassion, mutual respect and happiness.

Ramayana story has been adapted, recreated across globe for the ethical values dealt in the text for prosperous governance of state. This concept and ideals have been accepted across globe under one roof- ethics for humanity. The strategic implications of Vasudhaiva Kutumbakam in todays world order is pivotal.

Method and Analysis

The article devotes special attention and discusses on global polycrisis such as economics, ecology, quality of life, conflicts and finds solutions through Indian epic Ramayana, the strategic tool Vasudhaiva Kutumbakam, dharma, peace negotiation for sustainable development and world oneness. The topics represented in the article covers and involve a variety of segmentations, such as conflict, geo-politics, governance, eco- ethics and life domains. The write up present methodological studies that cover the entire spectrum of society and are devoted to giving evidences through text analysis. It considers text from the chosen verses of Valmiki Ramayana and gives special attention to understanding social realities and phenomena that are increasingly more complex, interrelated, interacted and dynamical for the contemporary context. The study aims at defining new approaches in constructing social peace and global well-being. It interprets the translated texts of Ramayana in English. The study demands to gather sources, evaluate them, use them to support original ideas and meticulously document the points by analysing the verses with contemporary governance methods. The primary sources are translated texts of few selected authors of West and the Orient. The study is based on reading of primary texts and secondary sources for validating and reinterpreting available resources in books, by analysing the facts or information already available through secondary information.

Discussion

The paper aims to discuss

1) How do we reconcile through Vasudhaiva Kutumbakam theme in Ramayana, as a tool, the practical solutions required to control rising conflicts based on identity and marginalization?
2) What are the ethical formulations of Vasudhaiva Kutumbakam in a society?
3) How resilient is the dictum globally, in connection to eco-crisis, democracy, and justice and refuge hood through Ramayana narratives?

The questions trace the principles of Vasudhaiva Kutumbakam to highlight the Indian ancient thought that is adopted in foreign policy and strategic thinking.

Indias existing cultural footprints fosters unity worldwide. This ide a is a symbol around which this quest for the Indian narrative could be rallied through backgrounds like philosophy, history, political thought, international relations, as well as strategists, diplomats and policymakers.(9)

On the one hand, Vasudhaiva Kutumbakam, which expresses the ultimate philosophy of oneness, is of great significance to our spiritual and moral life; while on the other, it has implications for our nations strategic culture.

South East Asian Ramayanas

Ramayana, a world Literature, secular in its origin, profound in thoughts and values have an influence on the life and thought of every humans. The Tibetan Ramayana Sono-gar-a, translated by James.E.Bosson in A Treasury of Aphoristic Jewels, is a narrative with an Indian flavour. Tibetan text is translated as follows: The Great should abandon their desire for play and enjoyment and food. As a reprimand for having desired voluptuousness, it is renowned that Ravana was killed in Lanka (10) chen -po rnams-kyi rtset-mo danbde. Dan zas la chags-pa span/ dod -la zen-pa I le -lan-gyis bod -grog lan -kar bsad ces grags/. (11)

The description of the event in Tibet is an acceptance of people about a leader who according to them should not give way for temptations.

That word Ramayana also recalls the immense debt due to India by all the lands of South- East Asia which today comprise Indonesia, the Malayan peninsula, Thailand and what used to be French Indo- China, during colonial times.(12) The Ramayana Kakawin (RK) reads as follows,

San yogiswara sista san sujana sudda manah nira huwus mace sira, byaktawas ucapanta rin julun adomuka pina-kanimitta nin lepas(13), which is translated into, If it is read to people, be he low or high in rank, they will understand it beyond doubt which will ultimately lead them to welfare. The phrase high and low rank should also be registered as meaning not only of rank, position or status, but also caste, stage in life or variation of degrees in the community.

Indonesian culture adopted Islam from around the 14th century, the Ramayana stories continued in a new genre inspired by Arabic and Persian forms known as Hikayat Seri Ram and Serat Kanda. The Javanese Ramayana story of Indonesia is adapted as, Serat Rama (Book of Rama) reads,

Nrepaputra Ramawijaya lingnya ris,
Heh Sumitraputra,
Dulunen kang para resi,
Yeku tan pae lan sira. (14)

Prince Ram calmly spoke, Hey, son of Sumitra, Look at the priests, they are not different from you. This indicates that the Javanese priests and Rama have been portrayed on par to establish equality. In Javanese Ramayana, Rama advises Vibhishana under the title Astha brata (15) the King must be respected as there are eight deities embodied in the King, which is an influential passage for a leader even today in Javanese society. This verse defines the importance of leaders and the important quality, a leader must build in order to benefit the people.

The Relevance of Dharma In Contemporary Geo-Politics

The universality of Vasudhaiva Kutumbakam revealed through UN Charter adopted in 1945, help in international peacebuilding, conflict resolution, international cooperation and efforts at saving the environment. The term Dharma is derived from the root word dhr which means to sustain (16). The word Dharma means the righteous actions that sustains the human society. It points towards an interdependent, supportive, mutually inclusive system. Vasudhaiva Kutumbakam is the ideal of that person who is udaracharita one who is generous in nature; in other words, one who realises the interconnectedness of the world. The Bhagavad Gita clearly states the ideal as being able to see everyone in oneself a Vasudhaiva Kutumbakam is not a regulatory law in that sense. It can be considered as a maxim in the category of mahavakya. Its purpose is not imposition, but to enable understanding. When human consciousness evolves, one no longer needs impositions, because right conduct evolves naturally in everyone.

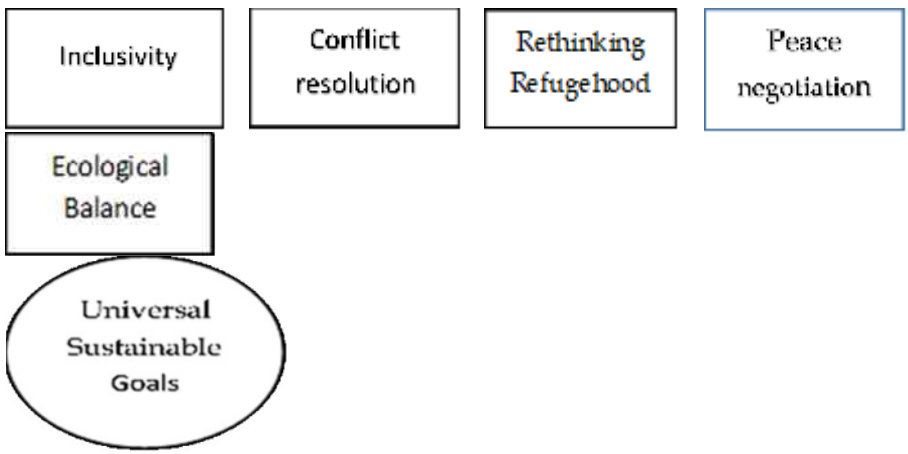

Figure 1: Sustainable goals from Ramayana for Universal peace and prosperity, foster global oneness Vasudhaiva Kutumbakam.

There can be two possible approaches, namely the individualistic-dichotomous approach, (17) which involves withdrawing from international involvement and viewing the world through binary lens. Countries such as North Korea, China, Iran with low democracy Index (18) (Das, 2023) have this kind of approach. While China has an expansionist policy, by conqueringthe territory of neighbouring countries India follows the holistic-organic approach that considers all elements interconnected and emphasizes organic growth and development. India, and many nations of this contemporary era have this approach. Western countries like United States, signed the Global Fragility Act, 2019 to ensure stability and peace across weak nations through prevention of conflict, stabilization. The country supports participation of youth, women and marginalized, fosters respect for human rights and environmental stability. Through partnership and burden sharing of fragile

nations, it tries to reduce conflict internally as well as through external forces. Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) is an example to enhance trade between countries like Japan, Canada, Australia, Vietnam and Malaysia, United Kingdom, who work towards interconnected networks.(19)

Indian constitution borrows its features of Fundamental rights and Duties, Directive principles of state policy from many constitutions in the world which makes it unique and reflects the Rigvedic verse aano bhadra ketavo yantu vishwatah (20), which means Let noble thoughts come to me from all directions. Indian Constitution Part III lists Fundamental rights, Federal structure of Government, Electoral College, Judicial Review, Equal protection under law, president as supreme commander under armed force, derived from the US Constitution. Ramayana also portrays a parliamentary and democratic form of government in the kingdom of Ayodhya and a low democratic index kingdoms of Lanka and Kishkinda ruled by Vali, the Vanara King.

In Ramayana, ideals of good governance are established in Ayodhya Kanda, when Rama advices to Bharata being at the helm of the kingdom, on how to take care of the kingdom

mantro vijayamla hi rj bhavati rghava.
susa v to mantradharairamtyai strakovidai .(21)

O Bharata the wellguarded advice of ministers, learned in scriptures and capable of proper counselling, is the root of victory for kings, especially when the advice is kept in confidence.

In Part IV A, Fundamental Duties, Article 51A directs to promote harmony and the spirit of common brotherhood amongst all the people of India, transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women, which operates not only at national level but also at a macro level through the principle of Vasudhaiva Kutumbakam. In Ramayana, Rama talks about the welfare of women, safety and the education of his people and enquires about them to Bharata. Today India , the National Commission for Women operates at national level and at global forum, The United Nations Entity for Gender Equality and the Empowerment of Women, known as UN Women, works for gender equality and empowerment for women.

Vasudhaiva Kutumbakam, could provide an alternative to the current international relations theory, which is based on the Western dualist epistemological approach. Political world puts forth a completely different set of challenges such as the scarcity of human resources and the unequal structure of power, which do not allow the actual context like the conflictual notion of power struggle. Reciprocity must be the basis of Vasudhaiva Kutumbakam if it has to succeed as foreign policy practice of many principles.

This principle, as a tool can provide a framework for an indigenous approach to peace, through ideas that have gained international credence, such as structural violence, deep ecology. India had a holistic notion of peace planetary peace, global peace. If we have to make a dent in international diplomacy, we also need to be aware of parallel concepts in other cultures. (22) For example, the South African

concept of Ubuntu (I am because we are) is similar to the Indian maxim of Vasudhaiva Kutumbakam. Ramayana is text that talks on universal welfare, peace, well-being of all. At the outset, Sage Valmiki asks Narada, who in this world cares about every living creature and cares of peace and welfare,

critre a ca ko yuktassarvabhte u ko hita: .
vidvnka: kassamarthaca kacaikapriyadarana (23)

The Great sage replies that Rama is that one gifted with good conduct, given to the wellbeing of all living creatures, learned in the lore (knowledge of all things that is known. He also calls him nitiman, learned in ethical statecraft philosophy, vaghmi, proficient in speech, buddhiman, adheres to rules, great intellect which are important to be a good leader.

Rethinking Refugehood

The United nations Refugee Convention defines a refugee as someone who, owing to well- founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and unable or, owing to such fear, is unwilling to avail himself of the protection of that country of his former habitual residence, is unable or, owing to such fear, is unwilling to return to it. (24)

Meditating on the means of protecting those who take refuge in him, knower of duties, Dharmatma who protects, Guha, the Nishadas and finally Vibhishana who takes refuge under his shadow, reflects universal brotherhood and inclusivity.

rmajassatyasandhaca prajn ca hite rata .
yaasv j nasampannaucirvayassamdhimn (25)

Rama protects Guha, the tribal leader and includes him as one among his brothers, later he welcomes Sugreeva, the leader of Vanaras and protects his race and promises him that he would defeat the arrogant Vali and give back the Kingdom of Kishkinda and restore his dignity. He accepts Vibhishana in the Yudhakanda, where Vibhishana takes refuge under Rama as Ravana humiliates his brother Vibhishana when he counsels him to freed Sita.

giberapure sta ga gkle vyasa rjayat
guhamsdya dharmtm ni ddhipati priyam. (26)

Humiliation, loss of dignity, pride, sense of insecurity, fear are some characteristics of oppressed human existence. Such characteristics are evident in the narratives of Ramayana, where they Ramas shelter to be a safe haven. There was no fear of fire, water, wind, disease, hunger and also theft

na cgnija bhaya kicinnpsu majjanti jantava: .
na vtaja bhaya kicinnpi jvarak ta tath. (27)
na cpi k udbhaya tatra na taskarabhaya tath

In the kingdom of Rama, there is no fear to living beings , agni bhayam fear due to fire, apsu in water, vatajam bhayam danger due to wind, jvara, also no fear from fever, ksudbhayam no fear from hunger, taskarabhayam, no fear from thieves.

The United Nations Refugee Convention emphasizes upon peace, dignity and equality on a healthy planet of people who have taken refuge. The United Nations

General Assembly approved the Global Compact on Refugees, to enhance refugee self- reliance and support conditions in countries of origin for return in safety and dignity. (28). Ramas regime promises the above conditions to his protection seekers. The person who protects others must be firm and majestic, as a leader, gambhiryam, himavant (29) in attitude a nd dharmagnya, protecting those who take refuge in him and prajanam, for his subjects. The narratives of protection in Ramayana also talks about rethinking refuge hood, a recent thought process to which solutions were given from ancients. Rethinking refuge hood considers new approaches to provide refuge and support for displaced people, focussing on empowerment, integration and permanent solution rather than just temporary shelter. It is a process of exploring ways to address the root causes of displacement, fear, anxiety, solving it and regaining dignity, pride and self-reliance for refugees which is evident under the leadership of Rama. Rama is a permanent member of peace keeping council just like United Nations Peace Keeping founded in 1945 under UN Security Council and General Assembly that protects and promotes human rights.

In Ramas regime, Ayodhya rejoiced with happiness with desire fulfilled and the subjects were content. All people were following the path of righteousness due to erudite leadership which is described as follows in Balakanda of Valmiki Ramayana.

prah amudito lokastu a: pu assudhrmika: .
nirmayo hyarogaca durbhik abhayavarjita (30)

The lokah entire world, prah amudita rejoiced with happiness, tustah contended (of fulfilment), pustah grown in strength of joy, sudharmikawithout sufferings arogyadevoid of disease and famine. These aspects are important of inclusive economy and reflection in its well-being even today. The World Happiness Report contains national happiness index that correlates various factors for well-being, such as wealth, employment, mental health, education, recreation, social belonging, safety, security, healthcare, politics, development, etc. (31)

anumans Espionage And Foreign Policy In R amayana

The six methods of Foreign policy as illustrated in Ramayana are,

a) Sandhi- Treaty of Peace, Hanumans meeting with Ravana.
b) Vigraha- Hostility, Valis attack of Sugreeva
c) Asana- Not planning to march on an expedition(Policy of remaining quiet), Rams perseverance towards Lanka
d) Samsraya- Seeking shelter with another King or in a fort, Vibishanas Shelter
e) Dvaidhibhava- Peace with a King and hostility towards another.(32)

Hanumans espionage, first law not to attack duta, by Vibhishana. Still foll owed by India and countries like.

dtohamiti vijeyo rghavasymitaujasa .
ryat cpi vacana mama pathyamida prabho

I am a messenger of the highly powerful Rama. O lord please listen to these beneficial words of mine meant for your welfare.(33)

The State shall endeavour to (a) promote international peace and security;(b) maintain just and honourable relations between nations;(c) foster respect for international law and treaty obligations in the dealings of organized peoples with one another; and(d) encourage settlement of international disputes by arbitration in Directive Principles of State Policy.(34)

Journey of Hanuman to Lanka, is an episode on the duty of a messenger. The Sundarakanad, which is the fifth Canto, elaborates on conflict resolution and negotiation of peace through Hanuman, an erudite scholar and clever ambassador in the ministry of Sugreeva, the Vanara king. Hanuman says to Ravan, in this court,

O lord of demons I reached your realm here by the orders of Sugriva, lord of monkeys who is like your brother. He conveys his good wishes to you.

bhrtu u samdea sugrvasya mahtmana .
dharmrthopahita vkyamiha cmutra ca k amam.(35)

Hanuman says, the great Sugriva, his brother like sends his message pertinent to this world and which is consistent with righteousness and propriety (dharmaand artha). Hanuman negotiates to freed Sita and become friend to Rama, which is not accepted by Ravana. Hanuman also counsels Ravana on Dharma, duty of a King to be righteous in order to reign his kingdom in harmony and order. The peace negotiation technique of Hanuman includes, counselling, words of harmony and friendship, forgiveness, weapon less conversation.

In Article 51 under the Directive Principles of State Policy, focus to

1) Promote international peace and security
2) Maintain just and honourable relations between nations
3) Foster respect for international law and treaty obligations in the dealings of organized people with one another
4) Encourage settlement of international disputes by arbitration.(36)

aha sugrvasa dediha prptastavlayam.
rk asendra harastv bhrt kualamabravt. (37)

Hanuman says that he reached his realm by the orders of Sugriva, the Vanara King his brother, who conveys good wishes to Ravana through his ambassador, Hanuman. This scene is relevant even today when a foreign affairs minister visits a country and the leader. He first conveys the good wishes of the leader to the country and his the leader of the country he visits.

prasda la kevara rk asendra dharmrth ayukta vacana u va.
dtnavadhyn samaye u rjan sarve u sarvatra vadanti santa (38)

"O lord of Lanka O king of demons be pleased to listen to my words which are the essence of dharma and artha. The elders have declared that the emissaries should not be killed by any means. Vibhisana advises Ravana, that an emissary or a duta must not be killed but can be punished

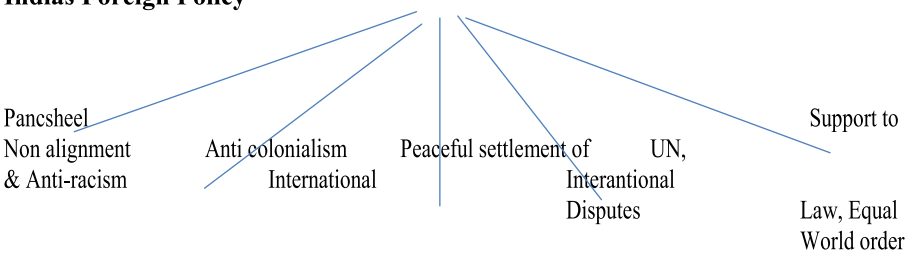

Figure : Basic principles governing Indias foreign policy. (39)

The above principles are seen well defined in Ramayana through the actions of Hanuman under Panchsheel through his advice to Ravana which exemplifies mutual respect for territorial integrity, mutual non- aggression, mutual non- interference, equality and mutual benefit and peaceful co- existence, Ramas voice to marginalized nation like Kishkinda, Anti-racism through friendship with Vanara and Rakshasa Vibhisana.

ECO- Ethics in Ramayana

Eco- ethics paves the way for a friendly and sympathetic approach towards fellow species, underlining the eco caring principle. This eco caring attitude towards the world is the cornerstone of eco ethics, which lays its foundation on human thoughts and actions oriented to what is right or wrong, protecting the environment of fellow creatures, accepting human responsibility towards other ecosystem components, obtaining ecological knowledge and developing values of self-restraint, modesty, honesty, help and love.(40)

Live in each season as it passes; breathe the air, drink the drink, taste the fruit, and resign yourself to the influence of the earth.(41)

Isaa vaasyam-idam sarvam yatkincha jagatyaam jagat
Tena tyakena bhunjeetha maa gridhah kasya svid dhanam. (42)

To handover the earth to posterity is our duty, without individual interests. Synthetic unity misses out on much deeper bonds that hold people together across the boundaries of hierarchies and diversities of various kinds unlike the concept of Vasudhaiva Kutumbakam that holds individual unity towards social unity. Aitareya Upanisads tells us that earth, air, ether, water and light are the five basic elements of the universe- Imani panca maha bhutani prithvi vayuh akasah apjyotisi.It means any disbalance or disharmony among these five elements affect the lives of living creatures. (43) The ecological integrity and unified biodiversity could be marked as the most recurrent expressions of nature in the Ramayana through its illustrations of rivers, mountains,trees and their deep knowledge on types of forests. Ecological consciousness is created and developed in collaboration with the environment and that allows people to feel and experience directly the unity with nature and the world around her own nature. (44)The Panna Biosphere Reserve near chitrakoot was designated in 2020 by UNESCO, a biosphere mentioned in Ramayana in the Aranayakand forest narratives. David Lee stresses that readings of Ancient text Ramayana might prove to be a compelling cultural force to humanity, upholding

ecological balance. (45)This fact is examined by Dr Radhakrishnan, the interdependence of each other among various entities of ecology has been brought out is Brihadaranyaka Upanisad-The bees make honey and the honey supports the bees- parasparam upakaraka- bhave phalitamaha.

Deep Ecology ideas reflects here (inherent worth of all human beings regardless of their instrumental utility to human needs).Today the world is anthropocentric. Human dominate the other living creatures. There should be a shift from anthropocentric world, human at the centre to the ecocentric, ecology at the center which was once exiting in this part of the world. The concept of Vasudhaiva Kutumbakam is exemplified in ecological narratives from Ramayana. The great strength of integral unity is the deep sense of relatedness of things. Bandhu, is a concept used to explain how the whole and the parts are held together in integral unity. Ramayana is a narrative that deals on bandhu factors of integral whole. The welfare, happiness, prosperity, failure, success are factors shared in each other interests. Bandhu describes the relationship of the microcosm to the macrocosm wherein the former is the map of the latter, and paradoxically one mirrors the other. It is not the matter of separate parts coming together into a synthetic structure. Parts exist only provisionally, temporarily and relatively to the whole, never as discrete existences, though they have distinct roles to play within the unity and add their own light and beauty in the process. (46)

Conclusion

Synthetic unity in international politics seeks to gather place for sovereign nations with separate identities which have shares interests in the matter of trade, legal rights, security, environmental protection, interfaith dialogue which maximize their own separate interests and not common good. Ramayana on the other hand reflects universal attributes a King or in the contemporary times a leader must possess in a democratic model of governance. Rama displays his administrative prowess and acumen to teach Bharata the art and science of governance using simple method of asking questions, kachit, which mean s hope everything is fine... The legacy of value system is important as their competencies. Rama inquires Bharata about ministers who does not yield to bribery and temptations and have integrity to discharge superior tasks. The text discusses on justice and punishment. Protection and care to citizens irrespective of class is provided in Ramas stewardship.

There is a great analogy that helps to understand society, and its economic and social systems of production. Society is like a monolithic spiders we b. The threads of the web are created by human bonds, relationships forged by trust, respect, justice and joint enterprise. Production is achieved through millions of spiders each walking tiny distances along its list segment of the web, carrying things to the next group of spiders and receiving things back in return. The overall productive capacity depends on two factors: the webs strength and extension; and the efficiency of engagement of the spiders. With regard to the web, the quicker the spiders can trudge backwards and forwards. The more extensive the web, the wider is the spiders reach. With regard to efficiency, the more spiders that are sensibly engaged, the more things can be carried around the web. (47)

In Ramas regime, efficient ministers a re selected to advise the higher authorities. A related aspect is the intelligence gathering on high ranking officials, who by virtue of their power and position may engage in corrupt practices and counter balancing forces are deployed by the leader. A good leadership ensures development of cities and prosperity of nation and peace which ultimately reflects around the world.

The spiritus mundi, a Latin term that literally means world spirit is the ultimate objective of Vasudhaiva Kutumbakam Things fall apart; the center cannot hold. (48)

The centre holds through a tool called Vasudhaiva Kutumbakam through an ancient text Ramayana, relevant today to stabilize a nation and world through the universal values. The matrix of integral unity is illustrated in the metaphor of Indras Net, which is common to many dharmic traditions. The Vedic deity Indra is said to have an infinite net consisting of a jewel in each node, arranged so that every jewel reflects all the other jewels; there is no separate self- existence of any jewel. Each is unique in its reflection of all others. Indras Net symbolizes a universe with infinite dependencies and relations interwoven among all its members, none of which exists apart from but only in the context of this collective reality.(49)

Prithvi santirantariksam santirdyauhsantirdisah santiravantaradisah santiragni santirvayuh santir adityasantihpurusah santirbrahmanah santiih santireva santih santirme astu santih.Tayaham santya sarvasantya mahyam.

Earth- peace; atmosphere- peace; space peace, directions- peace, fire- peace, sun-peace, water peace, plants-peace, human-peace. By that, peace be in the form of Universal welfare. (50)

The noble minded consider the whole world as their family. The enlightened person sees the entire universe as onesel. The Ramayana, portrays universal oneness, as the objective to sustain dharmic principles across globe. Therefore, as the verse says, yavat sthasyanti girayah saritah cha mahitale; tavad ramayana katha lokesu pracarisyati. As long as the mountains and even rivers flouri sh on the surface of the earth, so long the legend of Ramayana will prevail among humans.(51)

Vasudhaiva Kutumbakam concept as reflected in Ramayana is a tool for global awakening.

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Exploring the depths of Indian sciences A dive into the Indian knowledge systems - a basis of scientific inventions.

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Abstract

"Unraveling the contributions of Indian Knowledge Systems to scientific disciplines" refers to the process of exploring and understanding how traditional knowledge and practices originating from India have influences and contributed various scientific fields. "Indian Kn9owledge Systems" encompasses a wide array of traditional knowledge, includingbut not limited to ayurveda, yoga, mathematics, astronomy, metallurgy and philosophy. These systems have a long history and are very often intertwined with spiritual, cultural and philosophical aspects of Indian society. In terms of Indian sciences, the Vedas provide insights into various aspects of the natural world and human existence. For instance, the Vedas contain descriptions of celestial bodies, the movements of the sun, moon and atars and concepts related to time and space. Vedic texts include numerical calculations, geometric principles and mathematical concepts such as numbers, arithmetic operations and fractions. Ayurveda, the traditional system of medicine in India finds its roots in the Vedas. The Atharva Veda, in particular, contains hymns and verses related to health, diseases and medicinal plants. The Upanishads delve into profound philosophical and psychological concepts, exploring the nature of existence, consciousness and the self. It is important to approach these texts with a nuanced understanding. While they offer valuable insights, they are also products of their time and cultural context. Some interpretations of Vedic texts may emphasize their scientific aspects,while others may focus more on their spiritual or metaphorical meanings. Additionally, while the Vedic scriptures provide a foundation for Indian sciences, India's scientific achievements have evolved over millennia, influenced by various cultures, religions and intellectual traditions. Contemporary Indian science encompass a wide range of disciplines and shaped by global collaboration and modern scientific methodologies.

The study aims to explore the contributions of ancient Indian scholars in the sacred Vedas and Upanishads which are the foundation and origin for all the practices of sciences, their innovation and advancement.

Key words : Vedic scriptures, Scientific techniques. modern approach, relativity.

Introduction :

Sanskrit goes beyond being just a language, it encapsulates the soul and wisdom of Bharath, forming the foundation of our national identity. Acting as a bridge between our historical roots and contemporary times, Sanskrit forms the corner stone of Bharat's knowledge tradition. Its vast literature contains a rich repository of knowledge across a wide array of fields, including science, literature, agriculture, sculpture, astronomy, architecture, medicine, metallurgy, mathematics, management, economics and ecology. This paper endeavors to offer a glimpse into the extensive scientific heritage of Bharath, concealed within the treasure trove of Sanskrit. In today's globalized world and with the context of a knowledge-driven society,the importance of Sanskrit is being more pronounced than ever. It serves as means to preserve our cultural foundations, harmonize the ancient with the modern, unlock the wisdom enshrined in ancient texts, safeguard our intellectual property rights, exploreinnovative pathways and position. Bharath at the forefront of the future knowledge-based global landscape. Most of the times when we are reading sacred scriptures or shastras we come across many scientific concepts, but, because we are not taught how to understand them we are ignorant about the multidimensional facets which are being revealed from them. Just as milk contains cream, curd, ghee and butter within it, our scriptures hold numerous sciences and arts waiting to be rediscovered. We must engage ourselves in the process of churning and extracting the knowledge from these scriptures, much like how we process the milk to obtain its various byproducts or components Through this methodical exploration, we can uncover the diverse sciences and concepts embedded within the scriptures, enriching our understanding and broadening our horizons.

Objectives of the Study:

1. To understand and analyze the various aspects of Vedas that reveal the scientific principles highlighting hidden scientific concepts.
2. To explore and get a deep insight into the many hidden scientific concepts from the perspective of ancient sages.
3. To understand the purpose of the study done by the ancient Indian sages in connection to preserving the spiritual teachings and mapping it to the scientific concepts.

Review of Literature:

1. (Ray)in his study concludes that Over the years, as evident from history, traditional knowledge has developed a concept of the environment that emphasizes the symbiotic character of humans and nature.

2. (Mundhe)in his study states - Efforts need to be made to develop clusters, primarily from the government level, involving industry and educational institutions. Which is necessary for sustainable conservation of tribals and their art.

3. (Wandh)in her study states that -One of the most remarkable aspects of the Indian knowledge system is its inclusivity and universality. It is not limited to a specific religion, belief system, or social class. Instead, it is open to all, making it accessible and relevant to people from all walks of life. Furthermore, the Indian knowledge system is not just theoretical but deeply practical.

Science in Vedas:

According to पंचविंशति- ब्राह्मण - an ancient text - "The knowledge book of twenty five chapters" states that: "The world of heaven is as far removed from this world as thousand "गवा" stacked one above the other"

The translation of W.Caland a Dutch scholar reads as - " The world of heaven is as far removed from this (earth) world as a thousand cows standing one above the other."

The ancient knowledge system existing in India comprises the चतुर्दशविद्या, which encompass fourteen disciplines including the Vedas, vedangas and upangas. Among the supplementary texts, fourspecifically focus on the concept of language:

शिक्षा - Which gives the knowledge of phonetics

व्याकरण - which explains the grammar of Sanskrit literature

छन्दस् - which gives a detailed description of prosody

निरुक्त - which is the study of words i.e., Etymology

These texts are instrumental in aiding the understanding of the Vedas, serving as resources for interpreting the Vedic verses accurately.

The निरुक्त, in particular, offers two interpretations for the word "गौ" referring to the planet EARTH first and later to the animal cow. When choosing between these meanings, the preference often leans towards the former due to its broader applicability.

"The world of heaven is as far removed from this (earthly) world as 1000 earths stacked one above the other.

This literal translation provides a more coherent understanding, equating the distance between Earth and heaven to 1000 times the Earth's diameter. However, it prompts further contemplation regarding whether "heaven" refers to the sun or another celestial entity, thereby opening avenues for astronomical inquiry and exploration.

By engaging with the nuances of language and interpretation, we can refine our understanding of ancient texts and unearth valuable insights into various disciplines, including astronomy that were integral to ancient Indian thought.

Hence, to understand ancient texts fully, it's crucial to approach them with an open mind, acknowledging their cultural and historical contexts while also recognizing the limitations of translation and interpretation.

Generation of electricity as decoded from Purushasuktam:

Its fascinating to think that the PurushaSukta, a revered hymn sung daily by many with devotion, holds within it a description of hydroelectric power production. This knowledge, however, may not be readily apparent to most, as it's encoded using a special encryption technique called KatapayadiSankhya. This technique involves parsing words and sentences differently from what is typically taught in regular grammar classes, requiring a special skill set to understand. It's possible that this encryption was employed to safeguard the intellectual property contained within the hymn, ensuring that its valuable insights remain accessible only to those with the requisite expertise in deciphering it.

According to the first shloka of पुरुष सूक्तं

सहस्त्रशीर्षा पिरुष सहस्त्राक्ष सहस्त्रपात् ।

स भूमिं विश्वतोवृत्वात्यतिष्ठद्दशाङ्गुलम् ।।

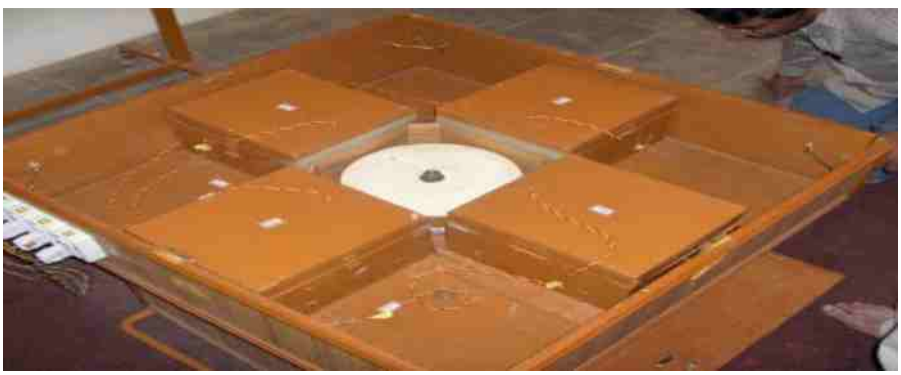
In a spiritual context the meaning of the above shloka can be understood in the following manner,

The Supreme God, who is considered to be the embodiment of all creation, has thousands of heads, eyes and feet. He is beyond the reach of the hands of human beings and truly uncountable.

The same concept has been deciphered by Mr. Satish Chandra in the following manner:

By strategically placing eight alternators around the circumference of a circle, each directed to face its corresponding positive and negative charges we can harness energy. These charges are arranged in such a way that like charges repel. By rotating a cylindrical runner, mimicking earth s motion at the center, this set-up aims to generate energy effectively. This concept has led to the development of a prototype based on these principles by using one motor which acts as a runner and four magnets which are the static alternators are used in the centre.

(In the picture below)



The common runner and stationery alternators are mechanically isolated but magnetically coupled. When the runner rotates, each static alternator generator power independently. The runner can be powered by a diesel engine, Water turbine, steam turbine or an electric motor. In the prototype model, 126-watt motor was used, which successfully produced 303 watts of power sufficient to operate 12 incandescent bulbs and eight tube lights shown in the picture below.



The glowing of the bulbs was exciting to Mr. Satish and he claims that with this electricity can be generated at 50 paisa per unit.

Sri Rudram and DNA:
The revelations about the Sri Rudram verse and its connection to DNA are truly remarkable. Within this sacred text lies information crucial to our growth, reproduction, health, and intelligence. Interestingly, the composition of the verse prompts the devotee to pray in terms of numbers rather than specifying desires explicitly. This numerical prayer sequence includes odd numbers from 1 to 33 and multiples of 4 from 4 to 48, which symbolize the nitrogenous base pairs of DNA. The first set reflects the 33,000 mitochondrial base pairs, while the latter represents the 48 million nuclear bases. Through chanting this sloka, one invokes blessings for the sustenance of human well-being and the continuous evolution of human life. Rudram and Chamakam, when comprehended deeply, transcend mere sounds and syllables. They encapsulate profound insights into the science of human DNA, reproduction, and prosperity, serving as prayers for the holistic well-being of all. The Chamakam, consisting of sections 1 to 10, encompasses prayers for nearly every aspect required for human happiness, with each item specified individually. However, it's in the 11th section or anuvaka of the Chamakam where the devotee's prayers take on a unique form. Here, instead of specifying desired items explicitly, the devotee expresses these desires symbolically through numbers. Initially, the

prayer consists of odd numbers from 1 to 33, followed by multiples of 4 from 4 to 48, illustrating a systematic representation of the devotee's wishes.
Odd numbers from 1 to 33:
Eka cha may, thisrasc ha may, pancha cha may, sapta cha may, Ekadasa cha may, trayodasa cha may, panchadasa cha may, saptadasa cha may, Navadasa cha may, ektrimshatis cha may, trayovimshatis cha may, Panchavimshatis cha may, saptavimshatis cha may, navavimshatis cha may, Ekatrimshatis cha may, trayatrimshatis cha may, panchatrimshatis cha may, Chatasras cha may, ashtou cha may, dwadasa cha may, shodasa cha may, Vimsatis cha may, chaturvimshatis cha may, ashtavimshatis cha may, Dwathrimashatis cha may, shatstrimshas cha may, chatvarimshas cha may, Chatuschatvarimshas cha may, ashtachatvarimshas cha may

Meaning: Let these be granted to me. One, three, five, seven, nine, eleven, thirteen, seventeen, nineteen, twenty one, twenty three, twenty five, twenty seven, twenty nine, thirty one and thirty three as also four, eight, twelve, sixteen, twenty, twenty four, twenty eight, thirty two, thirty six, forty, forty four and forty eight.
According to Dr. Shashidharan, the numbers mentioned symbolize a polymer chain of molecules that form (AAPA) water, which facilitates the evolution of life intelligence. AAPA in this context refers to the nitrogenous base pairs of DNA. The numbers 1 to 33 represent the 33,000 base pairs of mitochondrial DNA, while the numbers of 4 to 48 correspond to the 48 million nuclear base DNA pairs. Togehter these two sets of DNA base pairs support human well-being and drive the continued evolution of human life. When a devotee prays for blessings using these numbers, they are essentially asking for the strength and harmony of these DNA base pairs, which contribute to sustenance, well-being and happiness of human life.

The Elliptical Path of Planets:
द्वेनाभीअन्तःसमनंचरतः।
परिव्योमनिपरिमेहनोनृचक्षसः।
सूर्यस्यचक्षुःपरमस्यमीमहे।।

Meaning: Two are the wheels of this chariot, moving together revolving in the sky, like the eyes of a man. The vision of Sun moves in the highest sphere.
This mantra poetically captures the cyclical movements of celestial bodies in a sacred context. It gives us the information as how ritualistic practices like Agnihotrawere visualized in the alignment with the cosmic order. It's noteworthy that excerpts like this one, along with others from the Vedas, underscore how ritualistic practices are intertwined with secular knowledge.
The term "Brahmanda," originating from Sanskrit, indeed refers to the universe, often translated as "the very large egg." The elliptical orbits of celestial bodies, including planets, might indeed have influenced the creation of this term. Its usage reflects an ancient understanding of the universe's vastness and perhaps its shape, suggesting a symbolic connection between cosmic phenomena and linguistic expression.

In the Western astronomical tradition prior to the era of Copernicus (1473-1543), the prevailing belief was that planets and other celestial bodies moved in circular orbits. However, Johannes Kepler (1571-1630) challenged this notion when he proposed in 1609 that the paths of all planets and celestial bodies are actually elliptical. This significant breakthrough revolutionized our understanding of celestial mechanics and marked a pivotal moment in the history of astronomy.

The number 108 holds significant sanctity in Hindu religious practices. It recurs in various contexts, such as reciting the names of gods, which is considered a prescribed path for spiritual liberation. Particularly in the Kali Yuga, the age of darkness and discord, the chanting of the lord's name is emphasized, as other traditional practices like sacrifices may be challenging to uphold.

Many works in Hindu literature extol the virtues of various gods in the pantheon. Most notably, these texts often contain collections of 108 names, known as Ashtothrastotharam, dedicated to the chosen deity. Some texts even feature collections of 1000 names, further highlighting the reverence and importance attached to these divine appellations.

Physical effort is revered as a form of worship in Hindu tradition. One prominent practice is the tradition of Yatra, particularly prevalent in Western India. It's remarkable to witness individuals from bustling cities like Mumbai and Chennai embarking on pilgrimages, such as the journey to Shiridi from Mumbai or to ShabariMalai from Chennai. Mahatma Gandhi notably leveraged this faith tradition with great success during his DandiYatra.

Another manifestation of physical effort as worship is the act of circumambulating deities in temples. On special occasions, individuals like my mother would undertake 108 circumambulations of the deity in nearby temples, symbolizing devotion and dedication.

Domestic rituals form an integral part of Hindu life, ranging from daily sun worship (Sandhya-vandana) to various rituals performed on fortnightly, monthly, and annual cycles. These rituals often involve the recitation of prescribed mantras, such as the Gayatri mantra. While the family priest may offer options like 10, 28, or 108 repetitions to accommodate busy schedules, the default preference tends to be 108, reflecting its sacred significance.

For Vaishnavites, who worship Vishnu, the DivyaKshetras (sacred temples sanctified by their revered saints, the Alwars) amount to 108 in number. While the significance of 108 in Hindu tradition is widely acknowledged, its deeper meanings are often overlooked, taken for granted due to its common occurrence.

Esoteric interpretations of the number 108 abound in Hindu philosophy. One such explanation breaks down the digits as follows:

- 1 represents ultimate reality
- 0 symbolizes Maya, the illusion of duality.
- 8 signifies the five sense organs, along with the mind, intellect, and ego.

According to this interpretation, humans are expected to utilize these eight faculties to transcend the illusions of Maya and attain the Ultimate Reality. However, the depth of significance behind the number 108 extends beyond mere symbolism.

Indeed, the religious practice of using 108 carries unique astronomical relevance as well, which further enriches its significance within Hindu tradition.

The inquiry into whether the significance of the number 108 in Hindu religious practices is coincidental or deliberate can be addressed by examining two key questions:

1. Did ancient Indians possess knowledge of the astronomical significance of the number 108?
2. If so, did they deliberately incorporate this number into their religious practices?

Regarding the first question, ancient Indian texts such as the Surya Siddhanta, dating back to 400 AD, provide insights into astronomical measurements, including the distance between the Earth and the Moon, which closely align with modern findings. Yajnavalkya, who lived around 1800 BCE, also mentions the distance of the Sun and the Moon from the Earth as 108 times their respective diameters. Additionally, Aryabhata's work, particularly Aryabhata-Siddhanta, features 108 shlokas, suggesting intentional use of this number.

Given this evidence, it's reasonable to conclude that ancient Indians indeed possessed knowledge of the astronomical significance of 108 for at least the past 4,000 years. Considering the pervasive influence of astronomical knowledge across various aspects of ancient Indian life, from sacred rituals to urban planning, it's highly probable that the inclusion of 108 in religious practices was intentional.

The prevalence of 108 in Hindu daily routines underscores the depth of scientific understanding embedded within these practices, highlighting the profound interconnection between science and spirituality in Indian culture.

Conclusion:

Sanskrit language encapsulates the essence of India's cultural, spiritual, and scientific heritage. It underscores how Sanskrit is not just a language but a repository of timeless wisdom that has enriched mankind across various domains. Sanskrit's antiquity, stability, and sacred status set it apart as the mother of all languages. Its versatility and sophistication, as noted by Sri Aurobindo, make it a majestic and powerful tool for expression. Moreover, its inherent structure has inspired modern scientific advancements, with concepts in computer science finding their roots in ancient Sanskrit grammar. The inseparable relationship between sound and sense in Sanskrit reflects eternal principles, contributing to its unique efficacy in communication. Recent research even suggests physiological benefits akin to meditation when reading Sanskrit texts. Throughout history, Sanskrit has served as the language of documentation, preserving the wisdom of sages, poets, scholars, and scientists. Its enduring relevance continues to unite India and guide humanity toward spiritual and scientific progress.

Indeed, Sanskrit is not just a language; it is the soul of India and a symbol of unity. Embracing Sanskrit knowledge offers profound insights into India's rich cultural and literary heritage, paving the way for a glorious future.

Finally we would like to end our article with the words of Friedrich Creuzer (1771-1858) German philologist and archaeologist, who once said that -

"If there is a country on earth which can justly claim the honour of having been the cradle of the Human race or at least the scene of primitive civilization, the successive developments of which carried into all parts of the ancient world and even beyond, the blessings of knowledge which is the second life of man, that country is assuredly India."

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Happiness for holistic development of young minds: Students of Jaipur, Rajasthan

Krati Sharma & Davit Kumar Fadia

THE PURPOSE OF EDUCATION IS TO MAKE GOOD HUMAN BEINGS WITH SKILL AND EPERTISE ENLIGHTENED HUMAN BEINGS CAN BE CREATED BY TEACHERS..." APJ ABDUL KALAM

ABSTRACT

In this paper an analysis has been done on the young students pursuing technical degrees and what the meaning of happiness is for them. Is it only physical facilities like televisions, smartphones, laptops, luxuries, and money, or are the only parameters of happiness for them? Happiness is a positive and pleasant emotion, ranging from contentment to intense joy. Does happiness only depend on the physical facilities What will be the factor of happiness for them in their further life? Are those factors right or not On the basis of these question a survey has been conducted with some questions related to the happiness and physical facility. We have collected some responses, and after the responses, an analytic study has been done on the basis of responses to ensure the parameters of happiness among the youth learners.

NEED OF THIS QUESTIONNAIRE

Human Goals and the Appropriate Order of Priorities to fulfill the fundamental desires of humanity, three things are required. An aspiration, appropriate knowledge, appropriate connections, and appropriate infrastructure. Our fundamental goals are prosperity (shared prosperity) and pleasure (mutual contentment). Working on physical facilities ensures prosperity, and interactions with other people ensure happiness.

Correct Understanding : The ability to learn and make the best use of our intelligence is referred to be a higher order human skill.

Healthy Connections : The interpersonal connections that a person makes through out their life at home, at work, and in society are referred to here.

Physical Facilities: This refers to both necessities and comforts of living, as well as the physiological demands of persons. It refers to the sensation of having or being able to have more physical facilities than is needed. This paper explore the role of physical facility, right understanding Harmony in the life of student studying in engineering college. Happiness is theme an concept of living aligning with peace and harmony. an effort should be made to bring happiness in one`s life

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According in RRGAUR et al., The state or situation in which I live, if there is harmony/synergy in it, it is naturally acceptable to me to be I that state/situation. i.e., to be in a state of harmony/synergy is happiness. (p age no 60).This paper explores three main concepts. first one is

Physical Facilities : This refers to both necessities and comforts of living, as well as the physiological demands of persons.It refers to the sensation of having or being able to have more physical facilities than is needed.

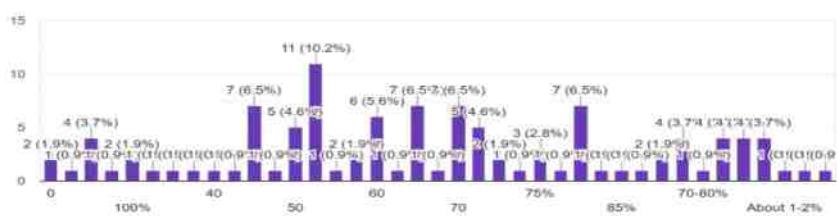
HARMONY - Human values typically identify harmony as the state of compatibility and concordance in thoughts, feelings, behaviors, relationships, opinions, and interests, among other things. It represents a balance between factors that are both affecting and even opposing one another. In empirical research, psychologists have examined the relationship between happiness and subjective well-being and have attested to the existence of both intrapersonal and interpersonal harmony. Additionally, harmony has been linked to life's purpose, a significant area of study in positive psychology.

RIGHT UNDERSTANDING



THE SURVEY QUESTION AND THE ANSWERS OF STUDENTS ARE AS FOLLOW

Question 1) What is the percentage of physical facilities for your comfortable life at the college level?

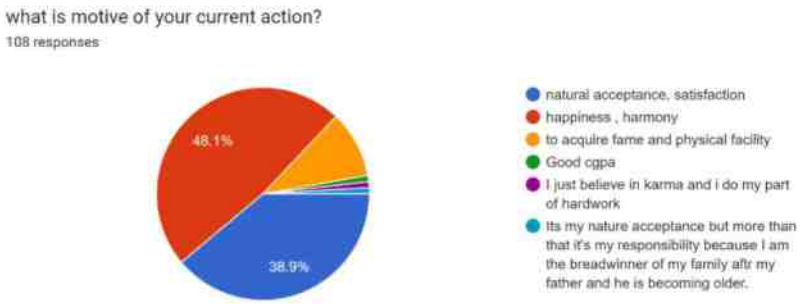


PROBLEM

The questionnaire suggested that what are the role physical facilities in their life. The reflection of the students make one understand that they are very keen for physical facilities to lead a comfortable life. This analysis reflects how the charm and attraction of comfort is luring the present generation.

ANSWER

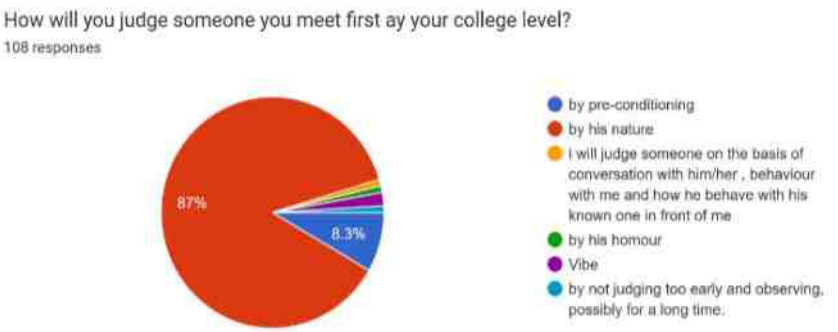
Question 2) What is the motive of your current action?



REVIEW

This question is what is the role of their current action. This question reflect that what are the reason for there action. The responses are that maximum students say that HAPPINESS AND HARMONY are behind their actions, one student also says that it is their responsibility to make their family happy. This is really good, and some people also say that they do it for fame and facility.

Question 3) How will you judge someone you meet rst at your college level? Ans

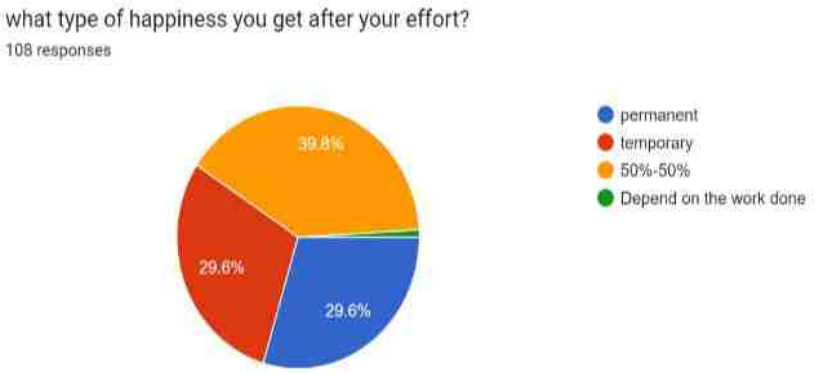


REVIEW

This question is for that how will you judge someone. The majority of the students say that they will judge them by their nature and will also result in the personality development of the students and improve their communication skills which will result in the development of their nature. But some people also do it o the basis of

the pre conditioning which will result in the arise of conflict in the students without any conversation.

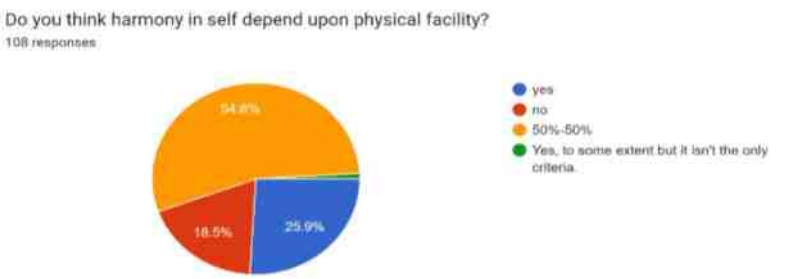
Question 4) What type of happiness do you get after your effort? Ans



REVIEW

This question is about what type of happiness you get after you do your effort for a certain work. The maximum number of students say that it is 50-50 means that depends on the type of work that they do. There is an equal partition of permanent and temporary mean that there are some works that give them long-lasting happiness and some give them only happiness for some time. It also helps them to identify the difference between what is temporary happiness and what is permanent happiness for them and what is necessary for them and what not.

Question 5) Do you think harmony in self depends upon physical facility?Ans

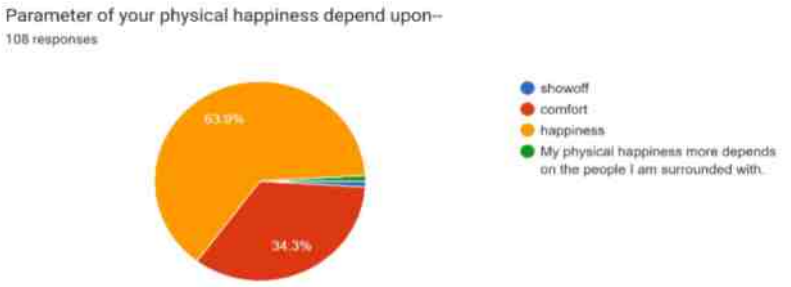


REVIEW

This question ask that what do you think about the harmony in the self depend upon physical facility YES OR NO The majority of student say that it depend on50-50 which mean that it depend on the time. But there is also a percentage of students which say that YES it depend on the physical facilities .This thinking should be

improved. There are students which say that it completely does not depend on the physical facilities which is also not right at some extend.

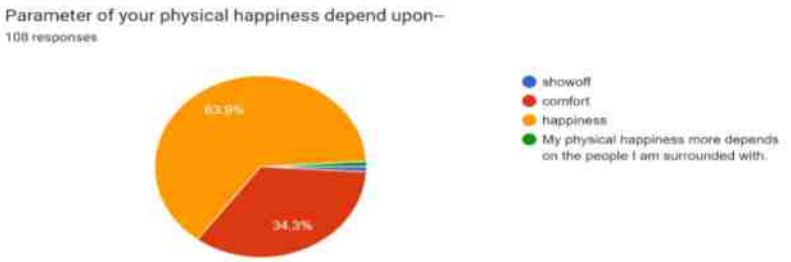
Question 6)Parameter of your physical happiness depend upon Ans



REVIEW

In this question we ask about that what is the parameters of physical happiness which you think is the most relevant for you. The majority of people think that it depend upon the on the happiness but this is not the right understanding for them as people thing that physical happiness mean happiness and this not at all true. There are also some students that say that it depends on the comfort and their thinking at a point is right also. Students should work on their mindset that physical happiness is the complete happiness.

Question 7) What do you think is physical happiness in your overall life? Ans



REVIEW

In this we ask about that what is your physical happiness for your overall life. The majority of students think it is only money and they want it for their life to be happy and led a peaceful life. Majority of students also say that material things are important for their whole life which is also not true and there are many more things

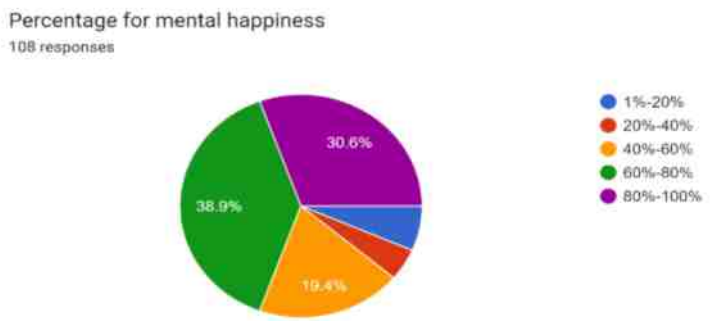
that students say that they need in their life to make it peaceful, conict less, be in harmony etc.

Question 8) What will be the method to reduce stress of study and work?
Meditation
Time management
Meditation and yoga
Regular exercise
Power nap & Listening music
Sleeping Gaming
Sports activity, twice a week Natural peace
Balancing the demands of study and work while also prioritizing mental and physical well being requires a multifaceted approach. Incorporating mindfulness practices such as meditateion and yoga into your daily routine can foster a sense of inner calm and resilience to stress. Regular exercise ,including outdoor activities and sports,not only promotes physical tness but also provides opportunities for relaxation and social interaction. Powernaps can offer a quick recharge during busy days, while engaging in hobbies and spending time with loved ones can provide motional support and fulllment .Listening to music, gaming, o r enjoying meaningful conversation swith friends and family can offer much-needed breaks from academic or professional pressures. Additionally ,ensuring adequates exercise are essential components of stress management. By prioritizing self-care and incorporating these strategies into your life, you can cultivate a healthier balance between work, study, and personal well-being, ultimately enhancing your overall quality of life.

Question 9 Answer the question on the basis of percentage out of hundred. In your life

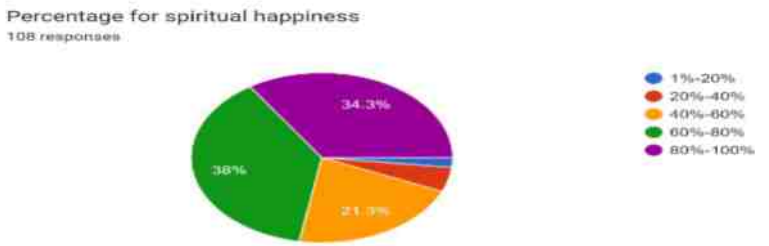
(9.1)Percentageformentalhappiness

Ans



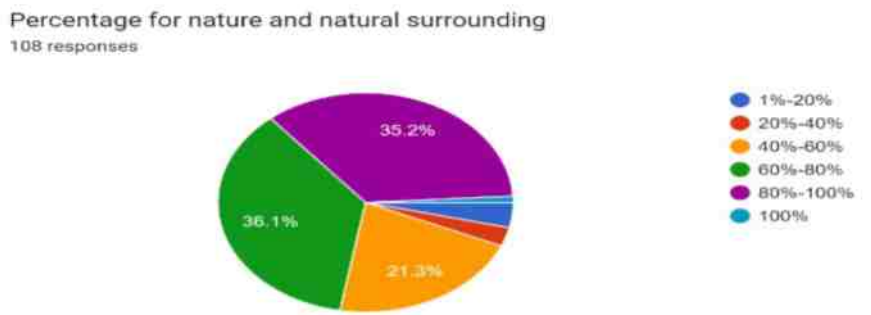
Review
How is the mental happiness / mentalpeace in important for the students and the majority of the students say that around 60-80%the mental happiness is important for them and it is really ne for the students as there is the college pres sure on the students and the pressure of the parents to score good grades in the college i.e. the mental happiness is important for the students.

(9.2) Percentage for spiritual happiness



REVIEW
How the spiritual happiness is important for them and the majority of the students say that it is 60-80% important for them and this gure is really very nice because spirituality help peoples / students to be in the mental peace because in that state they does not think of any other things and their brain is just relaxing helping them to think clearly and to reduce stress and to be in the state of harmony with body and soul

(9.3) Percentage for nature and natural surroundings



REVIEW
This question is about that how the nature is responsible for the happiness for us and how it is responsible for our mental happiness. The majority of the answer is that nature is 60-80% important for our mental and overall happiness. The gure are really impressive because in this time when there is deforestation and climate

change, the students are giving importance to the nature so that they can be mentally happy which will result in the deacceleration of deforestation and help nature to grow once again.

CONCLUSION

In this paper we have studied a little bit of thinking of the students and have surveyed that the students are thinking right as they know that what is important for them and what is temporary for them. we can also say that they also require more knowledge of human values so that
they can even think more widely and with more eġ ciency. They also need human value to identify their nature , self belief and their goals so that they can think of their life more and can also make a world a mice place to live and a nice place for human animals nature and for all the living organisms in the world.

Women empowerment and chanakya niti: a comprehensive study

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Abstract
This paper assumes a thorough examination of the joint between women's empowerment and the ancient Indian political dissertation, Chanakya Niti, attributed to the well-known philosopher and planner Chanakya (Kautilya). Through a multidimensional analysis, the study aims to explain the relevance and implications of Chanakya's teachings for current discourse on gender equality and women's rights. Drawing upon historical sources, textual analysis, and comparative study, the paper provides a nuanced exploration of Chanakya's perspective on women's roles, leadership, and empowerment within the socio-political landscape of ancient India. It investigates specific aphorisms and principles within Chanakya Niti that address women's status, agency, and participation in governance, education, and society. Furthermore, the study critically examines the cultural, societal, and philosophical contexts that shaped Chanakya's views on gender, highlighting both progressive and conservative elements within his teachings.
By scrutinizing the strengths, limitations, and potential biases of Chanakya Niti regarding women's empowerment, the paper offers a balanced assessment of its relevance and applicability in contemporary contexts. It identifies key themes, principles, and virtues advocated by Chanakya that resonate with contemporary efforts to promote gender equality, leadership, and social justice.
Ultimately, this comprehensive study contributes to scholarly understanding of both Chanakya Niti and the complexities of women's empowerment, offering insights into historical perspectives and contemporary challenges. By bridging the gap between ancient wisdom and modern aspirations for gender equality, the paper fosters dialogue and reflection on pathways towards inclusive and equitable societies.

Key Words : Gender, Equality, Women, Rights, Chanakya, Empowerment.

Introduction :
Trendy the global pursuit of gender equality and women's empowerment, diverse perspectives and sources of wisdom offer valuable insights and strategies. Amongst these, Chanakya Niti, attributed to the revered Indian strategist and philosopher Chanakya, stands out as a reservoir of ancient wisdom that continues to resonate

across time and space(Dabhi, n.d.). In the wall-hanging of this ancient text, we uncover profound likenesses on governance, ethics, and human nature, including Chanakya's perspective on women.

Chanakya Niti, composed over two millennia ago, offers a nuanced and sometimes enigmatic portrayal of women within the socio-cultural fabric of ancient India. The text presents a spectrum of views, ranging from verses that celebrate the strength and wisdom of women to those that reflect prevailing gender norms of the time(Chanakya et al., n.d.). Understanding Chanakya's perspective requires delving into the historical context of ancient India, where societal structures and values shaped the roles and status of women.

In this article, we embark on a journey to unveil the wisdom of Chanakya Niti as it pertains to women's empowerment. We delve into Chanakya's perspective on women, examining the historical context in which his teachings emerged and the diverse roles women played in ancient Indian society(Dr. Prachi Singh, 2013). Moreover, we explore the relevance of Chanakya's insights to contemporary discourses on women's empowerment, acknowledging both their enduring value and the need for critical reflection in light of evolving social norms and values.

As we navigate the complex terrain of gender equality and women's rights in the 21st century, the ancient wisdom of Chanakya Niti serves as a beacon, guiding us towards a future where every woman can realize her full potential and contribute meaningfully to society. In drawing inspiration from the past, we illuminate a path forward a path that honors the past, embraces the present, and charts a course towards a more equitable and inclusive future for all.

Objectives

2.1. To critically examine Chanakya Niti's perspective on women within its historical context, elucidating the nuances and contradictions inherent in his teachings.

2.2. To explore the relevance of Chanakya Niti to contemporary discourses on women's empowerment, identifying practical applications and policy implications for promoting gender equality and enhancing women's agency and participation in society.

Methodology

This paper employs a methodology based on secondary data analysis to achieve its objectives of critically examining Chanakya Niti's perspective on women and exploring its relevance to contemporary discourses on women's empowerment. Secondary data sources also include articles, research papers, and books discussing women's empowerment, gender dynamics in ancient India, and the relevance of ancient wisdom to contemporary challenges. The analysis of secondary data involves a critical examination of Chanakya Niti's teachings on women within their historical and cultural context. Comparative analysis is conducted to identify parallels between Chanakya's strategies for governance, leadership, and societal organization and contemporary initiatives aimed at promoting women's empowerment.

Chanakya's Perspective on Women: Navigating Complexity and Contradictions

Chanakya Niti, revered as a timeless guide to governance and human conduct, presents a complex and multifaceted perspective on women that reflects the intricacies of ancient Indian society. In unraveling Chanakya's opinions, we encounter a tapestry woven with threads of admiration, pragmatism, and societal norms, each contributing to a nuanced portrayal of women's roles and capabilities.

At the heart of Chanakya's perspective lies a recognition of the inherent strength and resilience of women. Throughout the text, we find verses that extol the virtues of women as mothers, wives, and leaders, acknowledging their pivotal roles in shaping families, communities, and even empires(Babu & Jose, 2020). Chanakya recognizes the indispensable contributions of women to the fabric of society, emphasizing their intelligence, resourcefulness, and capacity for compassion.

However, alongside these expressions of admiration, we also encounter verses that reflect prevailing gender norms and societal expectations of Chanakya's time. Some verses may appear to cast women in a subordinate or passive role, reflecting the patriarchal attitudes prevalent in ancient Indian society(Gautam, n.d.). It is essential to approach these verses with a critical lens, recognizing the context in which they were composed while also acknowledging their potential to perpetuate harmful stereotypes.

In interpreting Chanakya's perspective on women, it is crucial to recognize the limitations of our own understanding and biases. As modern readers, we bring our own cultural, social, and ideological lenses to the text, shaping our interpretation of Chanakya's teachings(Ahuja & Gupta, n.d.). By engaging in a nuanced and critical analysis, we can discern valuable insights into gender dynamics and the status of women in ancient India, while also interrogating our assumptions and preconceptions.

Historical Context and Women's Empowerment: Tracing the Threads of Agency and Resilience

To understand the significance of Chanakya Niti's teachings on women, we must delve into the rich tapestry of ancient Indian society, where gender roles were shaped by a complex interplay of cultural, religious, and socio-political factors. In this historical context, women occupied diverse roles and wielded varying degrees of agency and influence, providing fertile ground for exploring the dynamics of women's empowerment in antiquity.

Ancient India was characterized by a diversity of cultures, languages, and belief systems, spanning vast geographical regions and encompassing a myriad of social structures. Within this mosaic, women's experiences varied widely depending on factors such as caste, class, region, and religious affiliation(Mariscal et al., 2019). While some women enjoyed relative autonomy and authority, others faced systemic barriers and social restrictions that limited their opportunities for empowerment.

Moreover, women in ancient India were not passive recipients of societal norms but active agents in shaping their own destinies. Through acts of courage, creativity, and determination, women transcended societal expectations and carved out spaces

for themselves in domains traditionally dominated by men(Rajpurohit, n.d.). Whether as scholars, poets, merchants, or ascetics, women found ways to assert their autonomy and assert their voices.

Religion also played a significant role in shaping women's empowerment in ancient India. The Bhakti movement, for instance, provided a platform for women to express their spiritual devotion and challenge orthodoxies through poetry, song, and religious discourse. Saints such as Andal, Akka Mahadevi, and Meera Bai are celebrated for their profound spiritual insights and their defiance of gender norms.

In tracing the historical context of women's empowerment in ancient India, we encounter a rich tapestry of experiences and narratives that defy simplistic categorizations. While patriarchal structures undoubtedly constrained women's opportunities and freedoms, women also found ways to navigate and subvert these constraints, exercising agency and resilience in pursuit of empowerment.

Relevance to Contemporary Discourses: Bridging Ancient Wisdom with Modern Challenges

The teachings of Chanakya Niti resonate with striking relevance in contemporary discourses on women's empowerment, offering a bridge between ancient wisdom and modern challenges. Despite the vast temporal and cultural differences between Chanakya's era and the present day, his insights into governance, leadership, and human nature continue to offer valuable perspectives on navigating the complexities of gender dynamics and promoting women's empowerment in the 21st century.

One of the most striking parallels between Chanakya's teachings and contemporary discourses is the emphasis on strategic thinking and pragmatic action. Chanakya Niti is replete with guidance on effective leadership, decision-making, and negotiation skills that are indispensable for women seeking to advance their interests and influence in today's world.

Moreover, Chanakya's emphasis on meritocracy and competence offers a powerful counter-narrative to prevailing gender stereotypes and biases(Lahore College for Women University Lahore, Government Graduate College for Women Baghbanpura Lahore et al., 2023). In a world where women continue to face systemic barriers and discrimination in various spheres of life, Chanakya's teachings remind us of the importance of recognizing and rewarding talent and ability, irrespective of gender. By advocating for equal opportunities and leveling the playing field, we can harness the full potential of women as leaders, innovators, and change-makers.

Furthermore, Chanakya's teachings underscore the importance of self-reliance, resilience, and perseverance in the pursuit of empowerment. In a world marked by uncertainty, volatility, and rapid change, women must cultivate inner strength and fortitude to overcome obstacles and seize opportunities(Royal School of Commerce, Assam Royal Global University et al., 2021). By embracing the values of courage, determination, and adaptability espoused by Chanakya, women can surmount challenges, overcome adversity, and chart their own path to success and fulfillment.

In integrating Chanakya's wisdom into contemporary discourses on women's empowerment, we enrich our understanding of the complexities of gender dynamics

and the strategies for effecting positive change. By drawing inspiration from the past while remaining attuned to the realities of the present, we can forge a future where every woman has the opportunity to thrive, contribute, and lead with dignity and purpose.

Critiques and Controversies

Though, Chanakya Niti is not without its critics. Some argue that his teachings perpetuate gender stereotypes and uphold patriarchal norms. It is essential to critically examine Chanakya's views on women and distinguish between timeless principles and outdated beliefs. By engaging in dialogue and debate, we can glean valuable insights while also challenging perspectives that undermine gender equality.

Findings

8.1. Difficulty of Chanakya's Perspective: The review highlights the multifaceted nature of Chanakya's views on women, revealing a spectrum of admiration, pragmatism, and adherence to societal norms.

8.2. Ancient Agency of Women: Through historical analysis, the review uncovers evidence of women holding positions of power and influence in ancient Indian society, challenging stereotypes and showcasing their agency.

8.3. Significance to Contemporary Challenges: Despite the temporal gap, Chanakya's teachings offer insights that resonate with modern challenges faced by women, including strategies for leadership, negotiation, and navigating patriarchal structures.

8.4. Valuation and Debate: The review acknowledges the critique of Chanakya's teachings for perpetuating gender stereotypes, fostering a discourse that encourages critical engagement and nuanced interpretation.

8.5. Possible for Practical Application: By exploring policy implications and practical applications, the review identifies avenues for integrating Chanakya's principles into initiatives aimed at promoting women's rights, education, economic empowerment, and political participation.

Suggestions:

9.1. Relative Interpretation: Encourage scholars and practitioners to approach Chanakya's teachings on women within their historical and cultural context, recognizing the nuances and contradictions inherent in his perspective.

9.2. Empowerment through Education: Promote initiatives that prioritize women's education and skill development, aligning with Chanakya's emphasis on meritocracy and competence as pathways to empowerment.

9.3. Management Training and Mentorship: Implement programs that provide women with leadership training, mentorship, and networking opportunities, drawing inspiration from Chanakya's strategies for building alliances and mobilizing support.

9.4. Policy Reorganization and Advocacy: Advocate for policy reforms that address systemic barriers to women's empowerment, including legal reforms, affirmative action measures, and initiatives to promote gender equality in the workplace and politics.

Conclusion:

In the examination of "Women Empowerment and Chanakya Niti: A Comprehensive Study," the convergence of ancient wisdom with current discourse unveils a tapestry rich in insights and implications. Through nuanced analysis of Chanakya's perspective on women within its historical context, this study illuminates the complexities and contradictions inherent in his teachings. Despite critiques, Chanakya Niti offers timeless principles that resonate with modern challenges, providing a roadmap for promoting women's empowerment through education, leadership training, policy reform, and community engagement. By bridging the gap between past and present, this study underscores the enduring relevance of ancient

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Integrating Indigenous Knowledge Systems in STEM: Mathematics, Metallurgy, Astronomy, and Physical Sciences as Basic Sciences for NEP-2020

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Abstract:
In light of the National Education Policy (NEP) 2020 in India, there is a growing recognition of the significance of integrating Indigenous Knowledge Systems (IKS) into Science, Technology, Engineering, and Mathematics (STEM) education. This paper explores the potential integration of IKS within the foundational domains of STEM, focusing on Mathematics, Metallurgy, Astronomy, and Physical Sciences.
The NEP-2020 emphasizes a holistic and multidisciplinary approach to education, aiming to nurture critical thinking, problem-solving, and creativity among learners. Integrating IKS into STEM not only enriches the curriculum but also fosters cultural relevance, inclusivity, and sustainability.
Mathematics, as the language of science, can benefit from incorporating traditional mathematical practices and systems prevalent in various indigenous communities. By recognizing and integrating diverse mathematical perspectives, learners gain a broader understanding of mathematical concepts and their applications.
Metallurgy, an ancient science deeply rooted in indigenous cultures, offers valuable insights into traditional metalworking techniques, material properties, and sustainable practices. Incorporating indigenous knowledge in metallurgical education not only preserves cultural heritage but also promotes innovation and eco-friendly approaches to material science.
Astronomy, another field with rich cultural significance, provides a unique platform for integrating IKS. Traditional astronomical knowledge, including celestial navigation, lunar calendars, and indigenous cosmologies, enhances learners' understanding of the universe while fostering cross-cultural appreciation and respect for indigenous wisdom.
Physical Sciences encompass a wide range of disciplines, including physics, chemistry, and earth sciences. Indigenous knowledge systems offer alternative perspectives on natural phenomena, ecological principles, and sustainable resource management. By incorporating indigenous perspectives into physical science

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education, learners develop a holistic understanding of the interconnectedness of nature and society.

Keywords: Indigenous Knowledge Systems, STEM Education, National Education Policy 2020, Mathematics, Metallurgy, Astronomy, Physical Sciences, Integration, Cultural Relevance, Sustainability

Introduction

The National Education Policy (NEP) 2020 marks a significant paradigm shift in India's educational landscape, emphasizing the holistic development of learners and the promotion of interdisciplinary approaches. One key aspect of the NEP-2020 is the recognition and integration of indigenous knowledge systems (IKS) into mainstream education, particularly in the fields of Science, Technology, Engineering, and Mathematics (STEM). This research paper explores the importance of integrating indigenous knowledge systems in STEM education, focusing on mathematics, metallurgy, astronomy, and physical sciences as basic sciences in alignment with the NEP-2020.

Indigenous knowledge systems, rooted in the rich cultural heritage and traditional practices of indigenous communities, offer valuable insights and perspectives that complement modern scientific knowledge. In the context of STEM education, incorporating indigenous knowledge systems not only enhances the relevance and inclusivity of the curriculum but also fosters a deeper understanding and appreciation of scientific concepts among learners.

Mathematics, as a fundamental discipline in STEM education, has deep roots in indigenous cultures, where traditional methods of counting, measuring, and problem-solving have been practiced for centuries. By integrating indigenous mathematical knowledge into the curriculum, students can explore alternative approaches to mathematical concepts, such as geometric patterns, numerical systems, and arithmetic operations, which are aligned with local contexts and cultural practices.

Metallurgy, another core component of STEM, has been a traditional practice in many indigenous societies, where techniques for extracting, processing, and shaping metals have been passed down through generations. By incorporating indigenous metallurgical knowledge into STEM education, students can gain insights into traditional metalworking techniques, materials science, and sustainable resource management, which are relevant to both historical and contemporary contexts.

Astronomy, a discipline that has played a significant role in indigenous cultures worldwide, offers a wealth of knowledge about celestial phenomena, navigation, and timekeeping. Indigenous astronomical observations and calendars have been integral to agricultural practices, cultural rituals, and navigation across diverse geographical regions. Integrating indigenous astronomical knowledge into STEM education provides students with a holistic understanding of the universe, fostering interdisciplinary connections between astronomy, mathematics, and cultural studies.

Physical sciences, encompassing disciplines such as physics, chemistry, and earth sciences, also draw upon indigenous knowledge systems for insights into natural

phenomena, environmental stewardship, and traditional healing practices. By incorporating indigenous perspectives into the study of physical sciences, students can explore alternative explanations for natural phenomena, ecological principles, and sustainable practices that are deeply rooted in indigenous cultures.

In conclusion, the integration of indigenous knowledge systems in STEM education aligns with the goals and principles of the NEP-2020, promoting a more inclusive, culturally relevant, and interdisciplinary approach to learning. By recognizing the value of indigenous knowledge alongside modern scientific knowledge, educators can create meaningful learning experiences that empower students to explore diverse perspectives, engage with local communities, and contribute to sustainable development in a globalized world.

Historical Perspective of Indigenous Knowledge Systems in STEM

Indigenous peoples around the world have developed sophisticated scientific knowledge and practices over millennia, rooted in their deep connection to the land, environment, and traditional ways of life. In mathematics, for example, ancient civilizations such as the Maya, Inca, and Vedic Indians made significant contributions to geometry, algebra, and numerical systems, laying the foundation for modern mathematical concepts and techniques. Similarly, indigenous metallurgists mastered the art of metalworking, refining ores, alloying metals, and creating intricate artifacts long before the industrial revolution. In astronomy, indigenous cultures developed sophisticated celestial calendars, observatories, and navigation systems based on precise astronomical observations, reflecting their profound understanding of the cosmos. Likewise, indigenous peoples have long studied the physical properties of natural materials, plants, and minerals, developing herbal medicines, dyes, and construction techniques based on empirical knowledge and experimentation.

Implications for NEP-2020 and STEM Education

The integration of indigenous knowledge systems into STEM education aligns with the objectives of NEP-2020, which emphasizes the promotion of holistic and culturally sensitive approaches to learning. By incorporating IKS into the curriculum, educators can enrich students' understanding of scientific principles and methodologies while fostering greater appreciation for cultural diversity and indigenous perspectives. Moreover, integrating IKS into STEM education can enhance relevance and engagement, particularly for indigenous and marginalized communities who may feel disconnected from mainstream scientific discourse. By acknowledging and valuing indigenous knowledge alongside conventional scientific paradigms, NEP-2020 seeks to create a more inclusive and equitable educational system that empowers all learners to contribute meaningfully to society.

Relevance of Indigenous Knowledge Systems to Modern STEM Education

Indigenous Knowledge Systems encompass a diverse array of traditional knowledge, practices, and beliefs that have been developed and transmitted over generations within Indigenous communities. While often marginalized in

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mainstream education, IKS offer unique insights and perspectives that complement and enrich modern scientific understanding. In Mathematics, for example, Indigenous cultures have developed sophisticated mathematical systems for measuring time, space, and quantities, which can provide alternative approaches to problem-solving and mathematical reasoning. Similarly, Indigenous metallurgical techniques, such as the production of alloys and metalworking processes, demonstrate advanced scientific knowledge and engineering principles that have practical applications in modern industry. Astronomy holds particular significance in many Indigenous cultures, with traditional sky knowledge systems informing celestial navigation, seasonal calendars, and agricultural practices. Furthermore, Indigenous perspectives on the physical sciences, including traditional ecological knowledge and medicinal plant use, offer valuable insights into sustainable resource management and environmental conservation.

Integration of Indigenous Knowledge Systems in STEM Education

The integration of Indigenous Knowledge Systems in STEM education requires a paradigm shift towards recognizing the validity and relevance of diverse knowledge systems. This entails incorporating Indigenous perspectives, methodologies, and practices into curriculum design, teaching materials, and pedagogical approaches. Collaborative partnerships between Indigenous communities, educators, and policymakers are essential for ensuring the respectful and ethical integration of IKS in STEM education. Moreover, teacher training programs should equip educators with the knowledge and skills necessary to incorporate Indigenous perspectives into their teaching practice sensitively and effectively. By embracing Indigenous Knowledge Systems, STEM education can become more inclusive, culturally relevant, and responsive to the needs and aspirations of diverse learners.

Strategies for Integrating Indigenous Knowledge Systems in STEM Education

Incorporating IKS into STEM curricula offers several benefits. Firstly, it enriches students' understanding of scientific concepts by providing diverse perspectives and alternative ways of knowing. Secondly, it fosters cultural pride and identity among Indigenous communities, promoting inclusivity and respect for diverse knowledge systems. Thirdly, it enhances the relevance of STEM education by connecting abstract concepts to real-world contexts and indigenous practices. Finally, it facilitates interdisciplinary learning and collaboration, encouraging students to explore connections between different fields of knowledge and apply holistic approaches to problem-solving.

Challenges and Opportunities

Despite the potential benefits, integrating IKS into STEM education faces challenges such as resistance from traditional education systems, lack of awareness and appreciation of indigenous knowledge, and the need for culturally competent teaching resources and methodologies. However, there are also significant opportunities, including the growing recognition of the value of indigenous knowledge in addressing contemporary global challenges such as climate change,

biodiversity conservation, and sustainable development. Moreover, advances in technology and digital platforms offer new avenues for documenting, preserving, and disseminating indigenous knowledge and promoting cross-cultural dialogue and exchange.

Strategies for Integration

To effectively integrate IKS into STEM education, several strategies can be employed. These include:

Curriculum Development: Incorporating indigenous perspectives, examples, and case studies into existing STEM curricula to provide a more holistic and culturally relevant learning experience.

Teacher Training: Providing professional development opportunities for educators to enhance their understanding of indigenous knowledge systems and develop culturally responsive teaching practices.

Community Engagement: Collaborating with Indigenous communities to co-design educational resources, curriculum materials, and outreach programs that reflect their cultural values, beliefs, and practices.

Digital Technologies: Leveraging digital platforms, multimedia tools, and online repositories to document, preserve, and share indigenous knowledge with a wider audience.

Interdisciplinary Approaches: Encouraging interdisciplinary collaboration between STEM disciplines and indigenous studies to explore synergies, connections, and shared insights.

Benefits, Challenges, and Implications

The National Education Policy (NEP) 2020 of India emphasizes the integration of indigenous knowledge systems (IKS) into the educational curriculum to promote holistic and culturally relevant learning experiences. In the STEM (Science, Technology, Engineering, and Mathematics) disciplines, including mathematics, metallurgy, astronomy, and physical sciences, the incorporation of indigenous knowledge holds immense potential to enrich learning outcomes and foster a deeper understanding of scientific principles. This research paper examines the benefits, challenges, and implications of integrating indigenous knowledge systems in STEM as basic sciences under the NEP 2020.

Benefits

Cultural Relevance: Integrating indigenous knowledge in STEM subjects acknowledges and respects the rich cultural heritage of indigenous communities, fostering a sense of pride and identity among learners.

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Holistic Learning: Indigenous knowledge systems offer holistic perspectives on scientific concepts, connecting traditional wisdom with modern scientific principles to provide a comprehensive understanding of natural phenomena.

Sustainable Practices: Indigenous knowledge often encompasses sustainable practices in fields such as agriculture, ecology, and resource management, offering valuable insights into environmentally friendly approaches to scientific inquiry and innovation.

Community Engagement: Integrating indigenous knowledge in STEM encourages community participation and collaboration, bridging the gap between formal education and local knowledge systems and fostering a sense of ownership and empowerment among learners.

Innovation and Creativity: Indigenous knowledge systems nurture creativity and innovation by encouraging learners to explore alternative ways of problem-solving and resource utilization, leading to the development of novel solutions to contemporary challenges.

Challenges

Epistemological Divide: Integrating indigenous knowledge with Western scientific paradigms may pose challenges due to differences in epistemological frameworks, methodologies, and worldviews, requiring careful navigation and dialogue between different knowledge systems.

Validation and Recognition: Indigenous knowledge systems are often marginalized or dismissed as anecdotal or superstition by mainstream academia, posing challenges in validating and integrating these knowledge systems within formal educational frameworks.

Language and Communication Barriers: Many indigenous knowledge systems are transmitted orally and are language-specific, making it challenging to preserve, document, and transmit this knowledge in formal educational settings.

Institutional Resistance: Resistance from educational institutions, policymakers, and stakeholders may hinder efforts to integrate indigenous knowledge into STEM curricula, necessitating advocacy, awareness-raising, and policy reforms to effect systemic change.

Ethical Considerations: Ethical considerations, including issues of cultural appropriation, intellectual property rights, and equitable representation, must be carefully addressed to ensure that indigenous communities are respected, valued, and fairly compensated for their knowledge contributions.

Implications

Curriculum Development: The integration of indigenous knowledge in STEM curricula requires curriculum developers to incorporate diverse perspectives, methodologies, and case studies that reflect the cultural diversity and heritage of indigenous communities.

Teacher Training and Capacity Building: Educators need training and support to effectively integrate indigenous knowledge into STEM teaching practices, including cultural sensitivity training, language proficiency, and pedagogical strategies that promote experiential and inquiry-based learning.

Community Partnerships: Collaboration with indigenous communities is essential to co-designing and co-implementing culturally relevant STEM programs, ensuring that educational initiatives are responsive to local needs, aspirations, and knowledge systems.

Policy Support: Policy reforms are needed to recognize and support the integration of indigenous knowledge in formal education systems, including the development of guidelines, standards, and incentives to promote inclusive and culturally responsive education.

Research and Evaluation: Further research is needed to assess the impact and effectiveness of integrating indigenous knowledge in STEM education, including longitudinal studies, qualitative inquiries, and participatory evaluations that involve multiple stakeholders.

Conclusion

In conclusion, the integration of Indigenous Knowledge Systems (IKS) in STEM disciplines, including mathematics, metallurgy, astronomy, and physical sciences, as basic sciences aligns with the objectives of the National Education Policy (NEP) 2020 in India. By recognizing and incorporating traditional knowledge systems into mainstream education, NEP-2020 aims to promote holistic and inclusive learning experiences that are rooted in cultural heritage and context.

The incorporation of IKS in STEM subjects not only enriches the curriculum but also fosters a deeper understanding and appreciation of indigenous cultures and practices. Furthermore, it empowers students, particularly those from marginalized communities, by validating their knowledge and identities within the educational framework.

Moreover, integrating IKS in STEM disciplines can lead to innovations and advancements in scientific research and technology development. By combining traditional wisdom with modern scientific methods, new avenues for exploration and discovery emerge, addressing contemporary challenges in sustainable development, environmental conservation, and community well-being.

Overall, the integration of Indigenous Knowledge Systems in STEM as basic sciences under NEP-2020 represents a significant step towards promoting diversity,

equity, and excellence in education, while also contributing to the preservation and revitalization of indigenous knowledge traditions. It is imperative that educators, policymakers, and stakeholders collaborate to ensure the effective implementation of this initiative for the benefit of present and future generations.

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Integrating past & present: ancient Indian art forms for modern stress-free workplace in Delhi-NCR

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Abstract:
Workplace Stress is presently considered the most important concern at the global level that drives researchers to explore diverse perspectives for resolution. Despite employees' familiarity with stress in competitive environments, literature and clinical studies highlight its potential to cause mental health issues, impair performance, and strain interpersonal relations. Indian Cultural Heritage aids in managing workplace stress in modern times. Ancient Indian Art forms like Madhubani, Lippan Art, etc. have emerged as promising solutions for alleviating this pervasive stress.

Purpose : The purpose of this study is to integrate the traditional art forms knowledge in managing the contemporary workplace reality. This paper aims to determine the factors of workplace stress & to assess the awareness of Ancient Indian Art Forms among employees of Delhi-NCR. Also, it is a descriptive study that focuses on describing the significance of ancient Indian art forms in building a stress-free workplace and explores the challenges of implementing such art therapy sessions in the workplace.

Research Methodology : This is a descriptive and exploratory study where primary data have been collected to know the reasons for stress among employees & their awareness level related to the importance of implementing Ancient Indian Art Forms as art therapy. For this study, the 5-point Likert scaling questionnaire is being used as a tool which was duly filled by workers of Delhi-NCR. For this study, MS-Excel is being used as a statistical tool for the descriptive analysis.

Findings : The study concludes that there is a lack of awareness among Delhi-NCR employees related to the Indian Art Forms & their significance in healing & mental stress relief. Also, various challenges at the workplace need to be carefully managed by the management in implementing art therapy sessions for employee engagement & talent retention.

Keywords : Workplace Stress, Ancient Indian Art Forms, Awareness, Employees, Stress-Free Environment.

Introduction :

Indian Knowledge System

India is glorified with its enriched knowledge and diversity. India is on the path of becoming the Visvaguru Knowledge Leader by following the sustainable approach & striving for the welfare of all. According to the 2nd Akhil Bharatiya Shiksha Samagarh (ABSS) held in 2023, Thematic Session 15 deals with the Indian Knowledge System (IKS). The aim of IKS was to scientifically integrate the ancient traditional knowledge to regain a comprehensive knowledge of our heritage & demonstrate the Indian Way of do ing things to the entire world. (Thematic Session 15 Indian Knowledge Systems, n.d.)

India & Ancient Indian Art Forms

Due to the varied culture in India, there has been the existence of various prominent art forms since ages but they have been predominated by Western Art Forms with the advancement of technology. Ancient art forms depict the cultural heritage of India which needs to be conserved and integrated with the contemporary life of individuals to achieve the aim of ABSS 2023. According to (Kolay, 2016), Indian craft guilds need to be revived & connected with cultural heritage by following critical steps of raising awareness & sharing knowledge, especially among the younger generation.

Art forms include not just colors, paints, or materials rather they serve to express cultural diversity & various social identities (Chakraborty, n.d.). She further explains that the art traces can easily be found back to prehistoric viz. cave paintings which proves the development of ancient human cognition. Since the ages, (Centre for Cultural Resources and Training Ministry of Culture, Government of India New Delhi, 2017)art has been considered to be the medium of communicating emotions and feelings either by tribal communities on diverse surfaces, viz. walls, floors cloth, wood, etc., or by the rural people of India referred to as folk art viz. Madhubani, Warli art, etc.

Prominent Indian Art Forms

Madhubani Painting : The term Madhubani means forests of honey. Madhubani paintings traced since years. (Ghosh, 2020) earlier, housewives were involved in this to decorate the walls of their homes & later this would provide a way to empower housewives. Symbols used for Madhubani paintings have their significance. According to (Thakur 1981) Elephant, palanquin denotes royalty; Sun and moon represent long life; Goose and peacock are symbols of welfare and calmness.

Mural Art Forms: This art form belonged to the Jharkhand state of India. Mural art forms in Santhal Pargana, Jharkhand,(Rani & Shilpi, 2016) signify cultural

heritage preservation and women's empowerment through visual storytelling and community identity expression.



(Source: https://blog.artlounge.in/blog/2021/8/30/indian-art-forms)

Warli Art : Warli Art is the art form that belongs to Maharastra state where the word Warli originated from the word Warla which means the piece of land. (Patil, 2017)Warli painting represents day-to-day life, its simplicity, and fundamental life principles through its portrayal of human figures, animals, and houses. Renowned for its monochromatic style because of using a single white color against the red earthen backdrop, Warli art vividly portrays the folk life, socio-religious customs, and imaginative beliefs of the community. It helped to be grounded.

Kalamezhuthu : This prominent art form belonged to Kerala state.·(*Indian_paintings_e_41*, n.d.) ritualistic art practiced in temples and sacred groves of Kerala· Representation of deities like Kali and Lord Ayyappa is made on the floor.

Ancient Art Forms & Stress Management A Contemporary Viewpoint:
The advent of technology, expansion of commerce & trade, and missions like ViksitBharat led to the rise in competition level. In this competitive era, stress is indispensable & becomes inseparable in the workplace. Stress is not something under-researched concern. This paper aims to intermingle the ancient art forms in

managing contemporary stressful situations; with this, the goal of the Indian Knowledge System (IKS) to safeguard the Indian Cultural Heritage & its implication in the modern era could also be achieved.

Stress has a direct relation to the emotions, thought processes, and physical conditions of a person. Workplace Stress provides a glimpse into organizational culture & organizational behavior. It has unfavorable effects on employee health, and performance & may even lead to several behavioral disorders (Renugadevi, 2019).

Workplace stress is exponentially growing in the present era. According to a recent report by the World Health Organization (WHO), 15% of working-age adults have suffered from mental disorders due to workplace stress (https://www.who.int/teams/mental-health-and-substance-use/promotion-prevention/mental-health-in-the-workplace). (Pandey, 2020) inadequate performance assessment, salary discrepancies, lack of motivation, job insecurity, and challenging work types all negatively impact employee performance. When employees perceive unfair pay, insufficient recognition for good performance, increased workload, and a risky job nature, it leads to heightened stress and declining performance over time. (Salama et al., 2022), the excessive stress experienced by employees heightens their desire to leave their workstations.

According to (Deekshitulu, 2020), the following are some of the effects of stress that may affect an individuals physical health, their mood & even their behavior:

Common effects of stress ...		
On your body	**On your mood**	**On your behavior**
Headache Muscle tension or pain Chest pain Fatigue Change in sex drive Stomach upset Sleep problems	Anxiety Restlessness Lack of motivation or focus Irritability or anger Sadness or depression	Overeating or undereating Angry outbursts Drug or alcohol abuse Tobacco use Social withdrawal

(Richard, 2002) Stress triggers the physiological responses viz. increased heart rate, altered nerve activities, etc. Also, he mentioned that effective stress management approaches are crucial to reducing the impact of stress, especially chronic stress.

Stress Management Approaches:

There are various contemporary stress management approaches that aid in curing the mental health illness. This paper focuses on the fusion of ancient Indian art culture to aid in managing the modern stressful situations the employees at the workplace. Currently, employees especially youth manage stress inappropriately viz. either start eating more or less, start consuming alcohol, indulging in smoking, behavioral changes, etc. which is not the right way.

According to (Martin et al., 2018), there is a high efficacy of stress prevention with creative art interventions. Further, they mentioned that as per the present time

stress-related theories, Creative Arts Therapies (CATs) provide stress prevention & management approaches by utilizing modalities like art, music, dance, etc. (Henderson et al., 2007) concluded that creating mandala art could benefit the individuals experiencing clinical levels of traumatic distress. According to (Deekshitulu, 2020), stress-coping approaches include Meditation, Painting, Music, Classical Dance, Yoga, Mudra, Mantras, Color Therapy & Visualization, and Massage Therapy. Also, he added that there is a significant impact of Indias rich cultural heritage on various concerns of society viz. mental illness presentation, diagnosis & management. During COVID-19, the level of stress and anxiety among people was at its peak, various studies have been done and concluded that Warli art can yield good results among persons suffering from higher levels of mental issues. Thus, this study aims to determine the awareness level of Ancient Indian Art forms among employees of Delhi-NCR. Also, this paper acts as a torchbearer for identifying the challenges in implementing stress management strategies mainly art therapies and various Indian Art forms.

Limitations

1. Only 36 responses have been collected due to less available time.
2. The responses are limited only to the Delhi-NCR.
3. There is no difference in male & female responses & their awareness level.

Objective :

In light of Indian Knowledge Systems 2023, the co-integration of ancient culture with the modern knowledge system & contemporary situations is the prerequisite. To implement this policy, this study has the following objective to cope with stress management at the workplace which is a highlighted concern of the present era:

1. To determine the factors that cause stress among employees.
2. To assess the awareness level of various Ancient Indian Art Forms among Employees of Delhi-NCR.
3. To explore the organizational challenges in implementing art therapy sessions in the workplace.

Research Methodology:

It is an exploratory & descriptive study based on both primary and secondary sources for data collection. A simple random sampling method has been employed for performing primary research where a 5-point Likert scale questionnaire has been prepared to identify the awareness level of ancient art forms among employees of Delhi-NCR. While various government documents & reports viz. Reports of 2nd Akhil Bharatiya Shiksha Samagam, WHO Report etc. have been used as secondary sources for collecting the data. This paper aims to spread awareness of the significance of Indian Ancient Art Forms in Stress Management A Contemporary Viewpoint. MS Excel has been used as a tool for the analysis of responses.

Data Analysis

Demographic Analysis

For this study, primary data has been collected. The demographic analysis of the respondents has been analyzed below-

Figure 1: Respondents ender Orientation

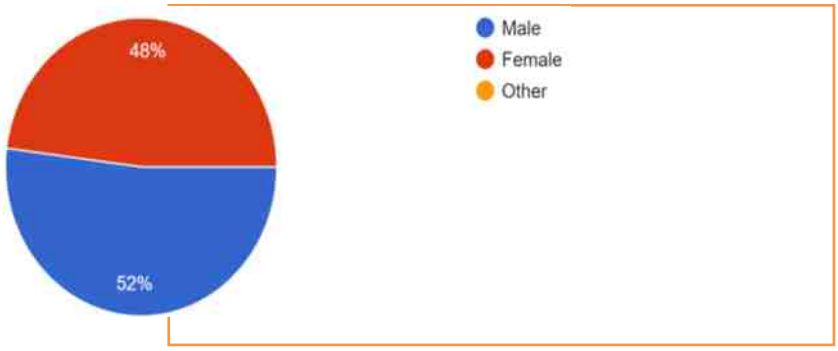


Figure 1 depicts the gender orientation of the respondents wherein out of the total respondents who participated in this study, 48% were females whereas 52% were male respondents.

Table 1: Age Classification

Age Group (in Years)	Respondents (in %age)
20-30 years	80%
30-40 years	16%
40-50 years	4%
50 & above	0

Table 1 portrays the age classification of the employees where 80% i.e. the majority of the employees belonged to the 20-30 years of age group and 16% of the total employees were from 30-40 years of age group & 4% were from the 40-50 years of age group.

Table 2: Occupational Categorization

Occupation	Respondents (in %age)
Government Sector Employee	8%
Corporate Sector Employee	48%
Banking Sector Employee	0
Teacher/Professor	28%
Other	16%

Table 2 represents the occupational description of respondents. According to that, 48% of respondents were from the Corporate Sector, 28% were teachers/Professors, and 8% belonged to the Government sector.

Factors that cause stress among employees

Table 3: Factors Causing Stress at the workplace

Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Work Culture	9	8	8	4	7
Fear from boss	6	13	6	4	7
Workload	6	13	11	3	3
Equity & Inclusivity	12	13	7	2	2
Lack of group cohesion	7	13	7	2	7
No training & development	11	9	7	5	4
Absence of work-life balance	14	11	2	6	3
Creativity & Innovation	7	14	7	4	4

Table 3 depicts the stressors i.e. those factors that impact the employees' mental health and directly influence their performance & efficiency. Work Culture, fear of boss, workload, equity & inclusivity policies, lack of group cohesion, no proper training & development, absence of work-life balance, & creativity and innovation are some of the prominent determinants that cause stress. As per the responses of the participants, work-life balance is the top factor followed by work culture; fear of the boss; workload, and lack of creativity where the maximum no. of participants responded either as Strongly Agree or Agree.

Relation between Satisfaction at the Workplace & Workplace Stress

Table 4: Descriptive Statistics of Respondents related to the Satisfaction attained at Workplace & Workplace Stress

Satisfaction at Workplace	*Value*	*Workplace Stress*	*Value*
Mean	1.80555556	Mean	1.61111111
Standard Error	0.13697088	Standard Error	0.1337955
Median	2	Median	1
Mode	1	Mode	1
Standard Deviation	0.8218253	Standard Deviation	0.80277297
Sample Variance	0.67539683	Sample Variance	0.64444444
Kurtosis	-1.4110729	Kurtosis	-0.8938938
Skewness	0.38446183	Skewness	0.84393074
Range	2	Range	2
Minimum	1	Minimum	1
Maximum	3	Maximum	3
Sum	65	Sum	58
Count	36	Count	36

Table 4 outlines the descriptive statistics to the questions *Are you satisfied at your workplace* and *Have you ever felt depressed or stressed at the workplace* According to the above table, the mean values were 1.805 and 1.611 respectively which depicts the satisfaction attained by employees and the stress with which employees have suffered at their workplace. The data was less skewed in the case of satisfaction at the workplace than that of the data on workplace stress which means that the data set didnt depict a normal bell -shaped distribution.

Relationship between Satisfaction of Employees at the Workplace & Stress Level at the Workplace

Table 5- Relationship between Satisfaction of Employees at Workplace & Stress Level at Workplace

	Satisfaction at Workplace	*Workplace Stress*
Satisfaction at Workplace	1	-0.245388156
Workplace Stress	-0.245388156	1

There is a common phenomenon that when an employee feels satisfied at their workplace then their stress level automatically decreases. Table 5 shows this as

evidence that there is a negative relation that exists between Satisfaction among employees & stress level of -0.245

Respondents' Awareness Level of the Art Therapies

Table 6: Awareness level of respondents related to Art Therapy

Description	Frequency	Percentage
Yes	13	36%
No	21	59%
Maybe	2	5%

Table 6 represents the awareness level of respondents. As per the data, only 36% of people are aware of the concept of Art Therapy which ultimately implies that people are unaware of the benefits of art therapies. As per the literature, art therapy proved beneficial even for clinical patients with mental illness. 60% of the total respondents were unaware of the concept of art therapies & 5% of people were not sure whether or not they knew the concept of Art Therapy.

Respondents' Awareness Level of the Ancient Indian Art Forms

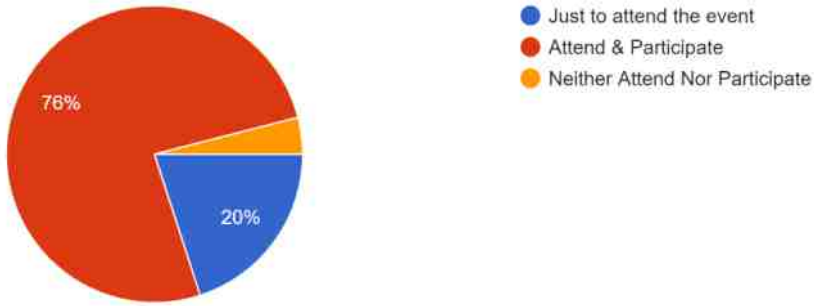
Table 7: Awareness of Prominent Indian Art Forms

Description	Frequency	Percentage
Only 1 Art form	16	45%
Less than 3 Art Forms	12	32%
Less than 5 Art Forms	4	12%
Aware of all the above-mentioned Art Forms	4	11%

In the questionnaire, only specific prominent ancient Indian art forms were mentioned viz. Lippan Art - From Kutch, Gujarat, Madhubani - From Bihar, Warli Art Maharashtra, Tanjore Painting - Tamil Nadu, Miniature Painting - Bengal, Jaipur, Bandhani Art Rajasthan, Murtikala or Pottery Art Rajasthan. Table 7 shows that only 11% of people are aware of all these art forms and shockingly, approximately, 77% of respondents were aware of less than 3 art forms which is disappointing to know that people are getting so fussy and over-occupied with their careers and personal life, that they forgot about the Indian Cultural Heritage and its importance. Also, another reason for this could be that the ancient Indian Art forms that depict the Indian cultural heritage have been overshadowed by Western knowledge and approaches. Approximately 12% of total participants have awareness about less than 5 art forms.

Employees interest in participating or attending

Figure 2: Employees Perception Towards Art Workshops



Earlier people were very ambitious which distanced them from their cultural heritage which is the baseline to survive. But due to heavy workload and no work-life balance, people are now aware of the importance of their mental peace & mindfulness. Thus, as per the above pie-chart (*figure 2*), 76% of people are now voluntarily ready to attend and participate in these workshops or therapy sessions if the management would organize any such event in the future. And still, 20% of the total participants were not interested in participating in these workshops, they responded that they just attended them.

Challenges in Implementing Art Therapies

Table 8: Perception of Employees regarding Challenges to implement Art Therapies

Description	**Frequency**	**Percentage**
Organizational Culture	13	36%
Employer Focus: Only to Earn profits & Employee focus: To meet deadlines and earn salary	9	25%
Unwelcome Innovation & Creativity	12	33%
Perception to enhance only required skill & knowledge through Training & Development	13	36%
Such events are considered to be a waste of time	14	37%
Lack of Sense of Belongingness	10	29%
Management is unaware of these art forms & associated benefits that they provide	14	40%

Table 8 depicts the possible challenges that employees perceive to be the bottleneck in organizing art workshops & implementing stress management strategies by way of Indian Ancient Art Forms. 40% of the respondents think that management is

unaware of these art therapies & benefits of Indian ancient art forms in curbing workplace stress. 37% of people perceive that their organization would consider it as a waste of time while 36% of people consider organizational culture and perception of training & development as obligations which makes this difficult to as a challenge in implementing such stress management approaches. On the other hand, 33% of people view a lack of creativity & innovation as the challenge to learn & rely on stress through new approaches.

Conclusion

This study concludes that awareness of the various Indian ancient art forms must be embedded in the work culture. Every organization must develop a culture that welcomes creativity & innovation. (Visnola et al., 2010) indicates that art therapy aids in reducing stress and anxiety levels by enhancing self-conception, self-esteem & self-confidence which further helps to develop good communication among team members and enhancement of group cohesion.

WHO explained that all individuals have the right to work in a safe & healthy environment; thus, WHO in collaboration with the International Labour Organization, developed guidelines and policies to promote mental health at work, prevent conditions & support employees with mental health issues.

In this competitive era, stress might seem to be an inevitable aspect of the workplace but learning to manage and cope with its harmful effects before it toxicates your mind is necessary. Learning & practicing these art forms by involving them in daily routine might be helpful.

Future Scope

This study provides a further scope to perform a comparative study that can be done by considering occupation as a sole criterion for employing art therapies for stress management by following different approaches for different types of organizational culture.

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Women empowerment and chanakya niti: a comprehensive study

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Abstract :
This paper assumes a thorough examination of the joint between women's empowerment and the ancient Indian political dissertation, Chanakya Niti, attributed to the well-known philosopher and planner Chanakya (Kautilya). Through a multidimensional analysis, the study aims to explain the relevance and implications of Chanakya's teachings for current discourse on gender equality and women's rights.Drawing upon historical sources, textual analysis, and comparative study, the paper provides a nuanced exploration of Chanakya's perspective on women's roles, leadership, and empowerment within the socio-political landscape of ancient India. It investigates specific aphorisms and principles within Chanakya Niti that address women's status, agency, and participation in governance, education, and society.Furthermore, the study critically examines the cultural, societal, and philosophical contexts that shaped Chanakya's views on gender, highlighting both progressive and conservative elements within his teachings.
By scrutinizing the strengths, limitations, and potential biases of Chanakya Niti regarding women's empowerment, the paper offers a balanced assessment of its relevance and applicability in contemporary contexts. It identifies key themes, principles, and virtues advocated by Chanakya that resonate with contemporary efforts to promote gender equality, leadership, and social justice.
Ultimately, this comprehensive study contributes to scholarly understanding of both Chanakya Niti and the complexities of women's empowerment, offering insights into historical perspectives and contemporary challenges. By bridging the gap between ancient wisdom and modern aspirations for gender equality, the paper fosters dialogue and reflection on pathways towards inclusive and equitable societies.

Key Words : Gender, Equality, Women, Rights, Chanakya, Empowerment.

Introduction :
Trendy the global pursuit of gender equality and women's empowerment, diverse perspectives and sources of wisdom offer valuable insights and strategies. Amongst these, Chanakya Niti, attributed to the revered Indian strategist and philosopher Chanakya, stands out as a reservoir of ancient wisdom that continues to resonate

across time and space(Dabhi, n.d.). In the wall-hanging of this ancient text, we uncover profound likenesses on governance, ethics, and human nature, including Chanakya's perspective on women.

Chanakya Niti, composed over two millennia ago, offers a nuanced and sometimes enigmatic portrayal of women within the socio-cultural fabric of ancient India. The text presents a spectrum of views, ranging from verses that celebrate the strength and wisdom of women to those that reflect prevailing gender norms of the time(Chanakya et al., n.d.). Understanding Chanakya's perspective requires delving into the historical context of ancient India, where societal structures and values shaped the roles and status of women.

In this article, we embark on a journey to unveil the wisdom of Chanakya Niti as it pertains to women's empowerment. We delve into Chanakya's perspective on women, examining the historical context in which his teachings emerged and the diverse roles women played in ancient Indian society(Dr. Prachi Singh, 2013). Moreover, we explore the relevance of Chanakya's insights to contemporary discourses on women's empowerment, acknowledging both their enduring value and the need for critical reflection in light of evolving social norms and values.

As we navigate the complex terrain of gender equality and women's rights in the 21st century, the ancient wisdom of Chanakya Niti serves as a beacon, guiding us towards a future where every woman can realize her full potential and contribute meaningfully to society. In drawing inspiration from the past, we illuminate a path forward a path that honors the past, embraces the present, and charts a course towards a more equitable and inclusive future for all.

Objectives :

To critically examine Chanakya Niti's perspective on women within its historical context, elucidating the nuances and contradictions inherent in his teachings.

To explore the relevance of Chanakya Niti to contemporary discourses on women's empowerment, identifying practical applications and policy implications for promoting gender equality and enhancing women's agency and participation in society.

Methodology :

This paper employs a methodology based on secondary data analysis to achieve its objectives of critically examining Chanakya Niti's perspective on women and exploring its relevance to contemporary discourses on women's empowerment. Secondary data sources also include articles, research papers, and books discussing women's empowerment, gender dynamics in ancient India, and the relevance of ancient wisdom to contemporary challenges. The analysis of secondary data involves a critical examination of Chanakya Niti's teachings on women within their historical and cultural context. Comparative analysis is conducted to identify parallels between Chanakya's strategies for governance, leadership, and societal organization and contemporary initiatives aimed at promoting women's empowerment.

Chanakya's Perspective on Women: Navigating Complexity and Contradictions:

Chanakya Niti, revered as a timeless guide to governance and human conduct, presents a complex and multifaceted perspective on women that reflects the intricacies of ancient Indian society. In unraveling Chanakya's opinions, we encounter a tapestry woven with threads of admiration, pragmatism, and societal norms, each contributing to a nuanced portrayal of women's roles and capabilities.

At the heart of Chanakya's perspective lies a recognition of the inherent strength and resilience of women. Throughout the text, we find verses that extol the virtues of women as mothers, wives, and leaders, acknowledging their pivotal roles in shaping families, communities, and even empires(Babu & Jose, 2020). Chanakya recognizes the indispensable contributions of women to the fabric of society, emphasizing their intelligence, resourcefulness, and capacity for compassion.

However, alongside these expressions of admiration, we also encounter verses that reflect prevailing gender norms and societal expectations of Chanakya's time. Some verses may appear to cast women in a subordinate or passive role, reflecting the patriarchal attitudes prevalent in ancient Indian society(Gautam, n.d.). It is essential to approach these verses with a critical lens, recognizing the context in which they were composed while also acknowledging their potential to perpetuate harmful stereotypes.

In interpreting Chanakya's perspective on women, it is crucial to recognize the limitations of our own understanding and biases. As modern readers, we bring our own cultural, social, and ideological lenses to the text, shaping our interpretation of Chanakya's teachings(Ahuja & Gupta, n.d.). By engaging in a nuanced and critical analysis, we can discern valuable insights into gender dynamics and the status of women in ancient India, while also interrogating our assumptions and preconceptions.

Historical Context and Women's Empowerment: Tracing the Threads of Agency and Resilience

To understand the significance of Chanakya Niti's teachings on women, we must delve into the rich tapestry of ancient Indian society, where gender roles were shaped by a complex interplay of cultural, religious, and socio-political factors. In this historical context, women occupied diverse roles and wielded varying degrees of agency and influence, providing fertile ground for exploring the dynamics of women's empowerment in antiquity.

Ancient India was characterized by a diversity of cultures, languages, and belief systems, spanning vast geographical regions and encompassing a myriad of social structures. Within this mosaic, women's experiences varied widely depending on factors such as caste, class, region, and religious affiliation(Mariscal et al., 2019). While some women enjoyed relative autonomy and authority, others faced systemic barriers and social restrictions that limited their opportunities for empowerment.

Moreover, women in ancient India were not passive recipients of societal norms but active agents in shaping their own destinies. Through acts of courage, creativity, and determination, women transcended societal expectations and carved out spaces

for themselves in domains traditionally dominated by men(Rajpurohit, n.d.). Whether as scholars, poets, merchants, or ascetics, women found ways to assert their autonomy and assert their voices.

Religion also played a significant role in shaping women's empowerment in ancient India. The Bhakti movement, for instance, provided a platform for women to express their spiritual devotion and challenge orthodoxies through poetry, song, and religious discourse. Saints such as Andal, Akka Mahadevi, and Meera Bai are celebrated for their profound spiritual insights and their defiance of gender norms.

In tracing the historical context of women's empowerment in ancient India, we encounter a rich tapestry of experiences and narratives that defy simplistic categorizations. While patriarchal structures undoubtedly constrained women's opportunities and freedoms, women also found ways to navigate and subvert these constraints, exercising agency and resilience in pursuit of empowerment.

Relevance to Contemporary Discourses: Bridging Ancient Wisdom with Modern Challenges:

The teachings of Chanakya Niti resonate with striking relevance in contemporary discourses on women's empowerment, offering a bridge between ancient wisdom and modern challenges. Despite the vast temporal and cultural differences between Chanakya's era and the present day, his insights into governance, leadership, and human nature continue to offer valuable perspectives on navigating the complexities of gender dynamics and promoting women's empowerment in the 21st century.

One of the most striking parallels between Chanakya's teachings and contemporary discourses is the emphasis on strategic thinking and pragmatic action. Chanakya Niti is replete with guidance on effective leadership, decision-making, and negotiation skills that are indispensable for women seeking to advance their interests and influence in today's world.

Moreover, Chanakya's emphasis on meritocracy and competence offers a powerful counter-narrative to prevailing gender stereotypes and biases(Lahore College for Women University Lahore, Government Graduate College for Women Baghbanpura Lahore et al., 2023). In a world where women continue to face systemic barriers and discrimination in various spheres of life, Chanakya's teachings remind us of the importance of recognizing and rewarding talent and ability, irrespective of gender. By advocating for equal opportunities and leveling the playing field, we can harness the full potential of women as leaders, innovators, and change-makers.

Furthermore, Chanakya's teachings underscore the importance of self-reliance, resilience, and perseverance in the pursuit of empowerment. In a world marked by uncertainty, volatility, and rapid change, women must cultivate inner strength and fortitude to overcome obstacles and seize opportunities(Royal School of Commerce, Assam Royal Global University et al., 2021). By embracing the values of courage, determination, and adaptability espoused by Chanakya, women can surmount challenges, overcome adversity, and chart their own path to success and fulfillment.

In integrating Chanakya's wisdom into contemporary discourses on women's empowerment, we enrich our understanding of the complexities of gender dynamics

and the strategies for effecting positive change. By drawing inspiration from the past while remaining attuned to the realities of the present, we can forge a future where every woman has the opportunity to thrive, contribute, and lead with dignity and purpose.

Critiques and Controversies:
Though, Chanakya Niti is not without its critics. Some argue that his teachings perpetuate gender stereotypes and uphold patriarchal norms. It is essential to critically examine Chanakya's views on women and distinguish between timeless principles and outdated beliefs. By engaging in dialogue and debate, we can glean valuable insights while also challenging perspectives that undermine gender equality.

Findings:
Difficulty of Chanakya's Perspective: The review highlights the multifaceted nature of Chanakya's views on women, revealing a spectrum of admiration, pragmatism, and adherence to societal norms.
Ancient Agency of Women: Through historical analysis, the review uncovers evidence of women holding positions of power and influence in ancient Indian society, challenging stereotypes and showcasing their agency.
Significance to Contemporary Challenges: Despite the temporal gap, Chanakya's teachings offer insights that resonate with modern challenges faced by women, including strategies for leadership, negotiation, and navigating patriarchal structures.
Valuation and Debate: The review acknowledges the critique of Chanakya's teachings for perpetuating gender stereotypes, fostering a discourse that encourages critical engagement and nuanced interpretation.
Possible for Practical Application: By exploring policy implications and practical applications, the review identifies avenues for integrating Chanakya's principles into initiatives aimed at promoting women's rights, education, economic empowerment, and political participation.

Suggestions:
Relative Interpretation: Encourage scholars and practitioners to approach Chanakya's teachings on women within their historical and cultural context, recognizing the nuances and contradictions inherent in his perspective.
Empowerment through Education: Promote initiatives that prioritize women's education and skill development, aligning with Chanakya's emphasis on meritocracy and competence as pathways to empowerment.
Management Training and Mentorship: Implement programs that provide women with leadership training, mentorship, and networking opportunities, drawing inspiration from Chanakya's strategies for building alliances and mobilizing support.
Policy Reorganization and Advocacy: Advocate for policy reforms that address systemic barriers to women's empowerment, including legal reforms, affirmative

action measures, and initiatives to promote gender equality in the workplace and politics.

Conclusion :

In the examination of "Women Empowerment and Chanakya Niti: A Comprehensive Study," the convergence of ancient wisdom with current discourse unveils a tapestry rich in insights and implications. Through nuanced analysis of Chanakya's perspective on women within its historical context, this study illuminates the complexities and contradictions inherent in his teachings. Despite critiques, Chanakya Niti offers timeless principles that resonate with modern challenges, providing a roadmap for promoting women's empowerment through education, leadership training, policy reform, and community engagement. By bridging the gap between past and present, this study underscores the enduring relevance of ancient

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A Study on family planning knowledge, Attitude and Practice among married women (18-49 years) in Jaipur city Rajasthan India

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Abstract

Background: Family planning has high impact on maternal health, child health, newborn and adolescent health. Also, it is the matter of human rights, empowerment, and gender equality. Family planning play a wider role in social, political, economic, and environmental development. To achieve to the sustainable development goals of any country family planning has vital role to play. It Is a global concern nowadays, that how country can formulate policies and programme by spending more budget to improve the information, and services to achieve the sustainable development goals.

Objectives: - To assess the knowledge, attitude, and practices of family planning among the married women of (18-49) years in urban area of Jaipur city.

Materials and methods: - The study was conducted in an urban area of Jaipur Vaishali Nagar Gandhi path west; in this cross-sectional study the participants were married women of (18-49) years. The selection of respondent was done by the purposive sampling methodology. KAP survey was conducted as a toll for the data collection. Advance excel is used a tool of data collection.

Result: - Total participants of 84 women of study area and out of 84 women 50 respondent belonging to the 18-49 years were selected as a sample size for the

study, however 3 participants did not respondent total 47 women of reproductive age 18-49 years participated. The analysis on age group represents that (53.2%) respondents belonging to the category of (26-35) year of age group. Moving to other variable it was observed that (42.2%) of women are regular using at least one or two type of contraceptives the most used method is the male condom (42.5%) women are regularly using it. Some women have never used any kind of contraceptive yet. (29.7%) of the respondent are occasionally using the family planning methods. 23.4%) women are using traditional method of family planning, (14.8%) women are using the permanent female sterilization, however only (4.2%) Male sterilization is observed, (2.1%) women are using oral control pill and IUD method of contraceptive.

Conclusion: -This study has concluded that heath workers and the mass media are playing very important role in creating the awareness regarding the contraception methods.

Key Words : - Family planning, Contraception**,**

Introduction

Family planning encompasses the services, practices, Knowledge, attitudes, commodities policies, information including contraceptives, it allows man, women, and adolescent the ability to avoid the unwanted pregnancy and choice of when to have child. Family planning helps to the couple in determining and ascertaining the smaller family size and gap in their birth. Family planning is directly related to health and wellbeing of people. World health organization (WHO) has defined that access of safe, effective, and affordable contraception as a universal human right. Many international and national health organisations have promoted family planning at large scale so that couple do not have to bear the burden of multiple and unwanted pregnancies.

In India the gap in demand and supply of family planning indicates that around 30% fertility is unwanted according to NFHS-3. The government of India has initiated different promotional activities, awareness programmes on family planning and contraceptives methods has significantly increased. However, the population of India is multi-religion and multi ethnic and have different understating, knowledge, attitudes and practice and acceptance on contraceptives methods. (RMNCH+A)-13 is the first national policy launched in April 1976, in India, with the intention of creating awareness in the couple regarding the contraception methods.

WHO has defined in the year of 1971 that based on k knowledge and attitude family planning is the way of living and the way of thinking by the individuals,

Family planning gives the right to the men and women to choose freely for them and to avoid the unwanted pregnancy. Family planning is the basic human right it also gives right to the girl child to live without marriage and childless until and unless she is not prepared mentally, physically, psychologically, and economically. Family planning has the information for the adolescent girl and boy on sexual education.

Family planning include various methods such as:

1. Contraception: - This method is used to prevent unwanted pregnancy; the contraception can be temporary and permanent both. like birth control pills, condom, oral control pills, however permanent methods include sterilization of male sterilization and female sterilization.
2. Fertility awareness method: - this method include that women need to track her menstrual cycle and fertility signs to avoid the pregnancy on the most likely to conceive period. This method also known as a natural and traditional method; couple try to avoid intercourse in this method as per the need.
3. Barrier Method: - This method includes male and female condoms, Diaphragms this create a physical barrier to prevent from pregnancy.
4. Hormonal method: these methods are e.g., hormonal injection, birth control pills, patches are used to regulate womens reproductive cycle to prevent form unwanted pregnancies.
5. Long-acting reversible contraceptives: - this includes IUDs and contraceptive implants, which helps in long-term contraceptive with less user intervention and less expenses.

In this modern world women are still fighting for their basic rights such as health, education, work etc, health is the major part where everyone including men and women should get the equal rights to protect their health. For this it is important that every women should get the right knowledge and information and should be economically independent.

Why family planning is Important:

1. It gives individual and couple to take decision on their reproductive choice.
2. Helps to prevent from unwanted pregnancies and promote health socio-economic wellbeing.
3. Empower and improve the maternal and child health by spacing in birth.
4. Promote population control which lead to the social, economic, and overall development of the nation.
5. Contribute in womens right and gender equality.
6. It helps in public heath aspect and implemented as a human rights by the government and many other international organisation.

Family Planning role in sustainable development

Family planning has high impact on maternal health, child health, newborn and adolescent health. Also, it is the matter of human rights, empowerment, and gender equality. Family planning play a wider role in social, political, economic, and environmental development. To achieve the goals of any country this has a crucial role to play. Its a global concern nowadays, that how country can formulate policies and programme by spending more budget to improve the information, and services to achieve the sustainable develoement goals.

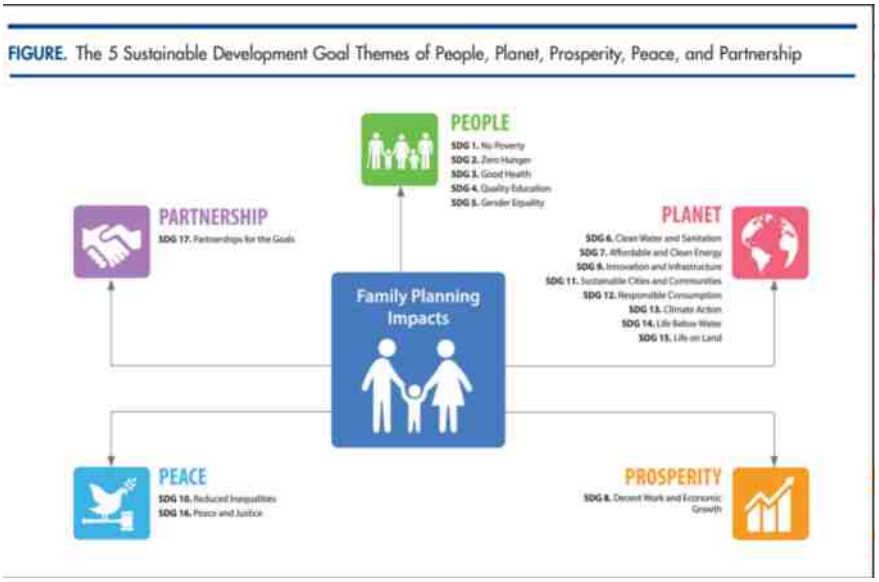

FIGURE. The 5 Sustainable Development Goal Themes of People, Planet, Prosperity, Peace, and Partnership

Family planning is not used just for birth control; however, it also helps in forecasting of the services, information, policies, attitude, knowledge, practice, and commodity of any country. It promotes the health and wellbeing of the family. effective programmes are not constructed to just uplift economic condition of the country but also to improvise the overall health. Therefore, it is very important to know the peoples approach on contraceptive methods. In the world India is the second most populated country. Several family welfare programmes are launched by the government of India for the population control and to maintain the holistic development. Hence the Indias population is multireligious, multiethnic and have different level of understanding on contraceptives. Therefore, the acceptance of family planning methods is also varied. However, to address the family planning need into different groups the special program and policies should be formulated and implemented.

Family planning methods are widely depended on the individuals personal, social, and medical needs. In the accessibility and the acceptance of contraceptive, education and the socioeconomic are the major factors that play an important role. In India many women try to avoid the pregnancy but they are not practicing any kind of contraceptives because they are not the one who take the decision on contraceptive uses. In India the unwanted fertility rate was 30% as per NFHS-3. This indicates the huge gap in demand and supply of contraceptive.

Many couple in developing countries want to keep gaps in the birth of children but not using correct family planning methods. the reason for low coverage of family planning methods in India are insufficient knowledge on various methods available for the family planning and fear of side effects. Family planning and fertility are taboo topic in many communities and have few trusted and accessible information about family planning. Access of information about family planning knowledge,

awareness, and attitude among married women continues to have financial, physical, and social barriers. Many people are unable to use various Morden contraceptives methods either lack of access of availability in public health system or social taboos and cultural, economic barriers in using contraceptives it is observed that in India out of every five female have unwanted pregnancy.

In all over the world there are number of contraceptives are available in the market. Also, they claim that they are extremely safe to avoid unwanted pregnancy and sexual transmitted infection. However, all the methods are not safe and easily accessible for everyone. Two major objectives are focused in family planning through contraceptives one is to have appropriate number of children and second is to have sufficient gap in children. There is huge gap in the usage of contraception are the lack of knowledge, awareness, and accessibility.

The government of India is continues developing the innovative approaches through various programmes and activities to enhance behavioural aspects and practice of the people at large scale. The acceptance of contraceptive in the community is increasing. Several family planning methods are available to avoid unmet pregnancy. However, the population growth is still the major challenge which affect the Social, political, and economic development of India. The reason behind the nonacceptance of family planning methods are vary such as, education, fear of side effects, religious beliefs. Therefore, India is known as the overpopulated country in the world.

Family planning knowledge, attitude and practice is the term which is Widley used in public health research to assess the individuals and communities level of understanding, awareness, behaviours, beliefs regarding the family planning services.

Knowledge:

Knowledge consisted the methods of contraceptive and AVAILA110P/BLE in the market and different source of information that helps to enhance the knowledge regarding the family planning. Knowledge assesses that on various aspect of family planning what individual and community has the information. It represents some queries on family planning methods, their effectiveness, from where to access, direct or indirect side effects and reproductive health consequences. By obtaining the level of knowledge helps to gather data to identify the gaps in understanding and areas that need to be address. And more information and awareness are required to attain the problems.

Attitude:

Attitude consisted the information of Individual or communities perception, feeling, beliefs, towards family planning. To know if they have positive or negative attitude regarding the family planning methods. With measuring the attitude, we can identify the barriers or myths and misconception of family planning. It includes having first child, gap between the children, and use of contraceptives, the way of thinking towards family planning, their husbands, and other family members behaviour in the people who living around them.

Practice:
It encompasses the information that how individual and community accept the family planning services, it includes if the community or individual are using or practicing it in their day-to-day life. What kind of methods are using, consistency of use, availability of family planning services. Family planning include in the practice the age of marriage, and use of contraceptives after marriage, planned pregnancy, choice of contraception methods, history of requesting abortion, cause of abortion, cause for not using any contraceptives.

Importance of the study:
According to the census of 2011 the population if Rajasthan is 68 million, Rajasthan is ranked as the highest populated state in India. It includes about the 5.6% of the countrys population. Due to development and progress the population is increasing rapidly. The cause of concern is literacy rate which is 67% also the sex ratio of Rajasthan state is lagging the national average by 10 points. Investing in family planning will help to improve health and development of Rajasthan.
In public health the study on knowledge, attitude and practice are highly focused evaluation studies that helps to identify the change in human behaviour, knowledge, attitude, and practice in regards to the specific programme intervention, KAP studies are widely used by the many of the researchers across the world evaluate the different programmes. These studies are easy to conclude and cost effective in compare to other research methods. However, these studies are limited in scope and highly focused.
In India family planning programmes are implemented from more than five decades. Government and the non-government sectors together launching the various IEC activities and Community engagement activities on family planning to create awareness and knowledge. by the government family planning methods are available at free of cost. it is observed to inadequate knowledge and awareness about the methods, erroneous information about their use, or fear of complication while using them. This study of knowledge, awareness, and practices, is very helpful to know more specific knowledge regarding the factor affecting the availability of contraceptive methods and which method is mostly used and accepted by the married women.
Various studies have been conducted on family planning in developing countries that has concluded that knowledge, attitude, and practice on contraception is present in the community but the coverage of contraception usage is very low. The practice of contraception is varying in many countries and its completely depends upon the community local, religious and ethical belief.
With this study we will be try to determine the knowledge, attitude, practice, in married women of Rajasthan city, regarding the family planning will also evaluate the factors that affecting the need and outcome of the program.

Rationale: The knowledge, attitude, and practice of Family Planning is rooted under the scale of social, economic, health, and wellbeing factors of the community and the individual. Also encourage that everyone should have adequate information,

positive attitude and effective practice towards family planning which can have multiple benefits such as: -

- Having right and adequate knowledge regarding the contraception methods promote individual and couples to choose the how and when to have child by preventing from unwanted pregnancy.
- Promote maternal and child health by understanding reproductive process allow individuals to ensure safe pregnancies to prevent health outcomes for mother and children.
- Sexually transmitted infections (STIs) and HIV/AIDS can be prevented through the knowledge of safe sex practice which can help in disease prevention.
- This empowers the women by educating them on family planning regarding their reproductive rights which can lead to a gender equality.
- Having positive attitude regarding the family planning helps in the open discussion and acceptance within the individuals and the family. It also helps to reduce the myths and the barriers associated with the family planning services.
- Family planning knowledge and positive attitude promote to the practice, the couple can plan and space in the birth for wellbeing of the family.
- Small family size and good health indicators can lead to economic stability.
- Family planning is the major outcome to achieve the sustainable development goal of country.

The rational of family planning knowledge, attitude, and practice is considered as major important factor. Which includes the gender equality, individual health, environmental sustainability, and economic development.

Literature Review

The previous study conducted at international, national, State, and regional level by academics institutions, government agencies, social scientist or the NGOs have been reviewed.

Andrew G Onokerhoraye and johnson Egbemudia Dudu in his study on the women of childbearing age practice family planning, he conducted cross-sectional study was done using structured questioner method. He included three local government area of delta state. He included participants by multistage sampling methods of reproductive age group of rural and urban communities. They found that women have sufficient information on condom, pills and injectable however less information on contraception prevalence, this indicated that the awareness and current usage has a big gape. However, in both the areas rural and urban women are aware regarding the few contraception methods. Women of the study showed the positive behaviour regarding the contraception methods, family, friend and relatives gave the information. the source should be the government by promoting higher access of family planning as obtained in developed countries.

Stevie M Nangendo (2012) in his study adopted Interview method. he conducted study by doing close and open-ended questions. He interviewed 50 pregnant and non-pregnant women. He concluded that women have perceived negative side effects of modern contraceptive method. Thus, he suggested that to address the

myths and misconception about the family planning the extensive education and communication activity should be promoted.

Marc Boulay and Thomas W. Valente (1994) in his study he used situational survey in rural and urban cluster of Kenya (demographic and health survey). They concluded that after controlling demographic variables there is the association between the knowledge of modern method among women and club membership (Religious group, sports Club, and womens group). They also found that the women of club member were aware of more than five contraceptive methods then the non-member women. Member of religious club women were with no difference in knowledge of family planning.

Sidding Omer Handady in his study he has used facility based in primary health care of Khartoum state and cross-sectional study during one year. From the targeted population. By doing systematic random sampling women of reproductive age were selected. SPSS software was used by the researcher and he concluded that there is the strong statical relationship between the availability and accessibility of contraceptives, support from husband, distance from the centre and the level of education.

Motuma Adimasu Abeshu and Bekesho Geleta (2016) in their study he conducted a review from clients and healthcare system perspective. Conducted secondary research by analysing reports and publication, literature through academic search and web search. They reviewed the study against the set of parameters. Four parameters were used were adopted by the researcher which included- time of the study, eligibility, and location of the study, they concluded that the intervention is required to meet the expectation of commodities in reproductive health and it can exist when user can make choice of usage of contraception methods on low cost and high quality to achieve the short- and long-term health indicators. However, it was also found that there are multiple factors+ that impact the RHCS, socio-economic status, and access to reproductive health services, Knowledge, awareness and practice regarding the contraception, acceptance, and utilization.

Sengupta R, Das A, (2012) in his study he conducted on reproductive and child health at district level household survey. It covered 1000 household of representative sample from each district. They found that none of the contraceptives are not used by the women of (15-24) years of age in EAG states the total unmet needs of states are Jharkhand, UP and Bihar. Muslin women found to be more vulnerable. The women who are not using contraception are either want to limit the childbearing or postpone, however they are found on the risk of pregnancy.

Higher education level and the high standard of living, using electronic media and visit by the service providers of family planning workers significantly influence the unmet needs.

Ahirwar R, He applied cross-sectional observational survey; Non-random convenience sampling method was used by conducting interview in the Shivpuri district. They found that the common age group 18-30 year were married and they have very poor knowledge and attitude towards contraceptives, only few participants using contraceptive occasionally. However, none of the participants

were using contraceptives regularly. Hence need to focus on this migrant population to enhance their awareness and change their attitude toward contraceptives.

Javed quereishi and Kavitha Mathew conducted KAP study on Bhagbara block, Mahasumud district in Chhattisgarh state India. They included 326 female participants of reproductive age group form the rural Baghbara area. They conducted semi-structured interview method for data collection and found that increase level of education can lead to knowledge and favourable attitudes regarding the contraception method. however, the gap between knowledge and practice was evident in this study. The study suggested that the strategy for female education need to improve and accessibility of services need to ensure to solve these problems.

Deshmukh P (2017), conducted study on contraceptive knowledge, attitude, and practice among women of the reproductive age group 15-45 years. Cross-sectional study was conducted with the predesigned questionnaire. He did interview in the tertiary care hospital of Mumbai. He found that there was inadequate practice of family planning methods, ignorance in the use of family planning methods due to fear of side-effects. He suggested that there are need to design awareness programs based on bringing the knowledge gap among the women of reproductive age group.

Bhattarai D, patna B.Om (2013) in a cross-sectional study on knowledge, attitude and practice on contraception on women of Khotang village. The study was conducted to know the prevalence of contraceptive use at the health facility of Khotang district during the health camp in January 2011. He used predesigned questionnaire for interview and found that women have positive attitude regarding the family planning. The most common method used for family planning was depo povera and was currently used. Study concluded that in the remote area of Nepal the knowledge of contraceptive in high however use of contraceptive is very low.

Premaranjan Kc. Narayana (2003), conducted a study on rapid appraisal of knowledge, attitude, and practice related to family planning methods. The men and women who are married within 5 years were included as a sample for this study. He used interview method on 50 men and women form the urban health centres service area of kuruchikuppam, Pondicherry. The local language was used in a pretested questionnaire while conducting the interviews the privacy was ensured. The study concluded that the permanent method of contraception tubectomy was the most popular method used by the men and women in compare the condom was used 54% as a temporary method of contraceptives. However, the responded have the positive attitude toward the family planning also the study justify the need for involving men in reproductive health.

Muthukumar V (2017), conducted study on the knowledge, attitude, and practice of family planning in rural India, predesigned and pretested questionnaire was used. 100 women participated in the study to know the important aspects in achieving the population control. His study found that women at least have knowledge regarding the one contraceptive method. the most used method was the condom. He also suggested that there is need to make strategies to make people aware an motivate regarding the contraceptive acceptance and various family planning method.

Manjeera L, (2013), in her study she conducted cross-sectional study in China for outpatient and inpatient of Mangalore medical college. She conducted interview of the participants and found that community is not sufficient aware about the use of contraceptives. The study shows that for the positive effects of contraception various programmes are required to create awareness and influence the community for the positive effects of contraception usage. The study shows that to create awareness and usage of contraception more programmes are required.

Raji MO (2013) in his study titled Awareness and utilization of family planning commodities in a rural community of north west Nigeria conducted Cross sectional study using multi-stage samplingin the Kware local government area of Soko state of Nigeria. He selected 100 women of reproductive age group and found very low contraceptives prevalence rate and low male support for family planning. He thus suggested that there is need to develop the strategies involving men in reproductive health, as a way of improving contraceptive use and reduction in maternal mortality. However, the study also discovered negative corelation between the number of alive children respondent had and the number of children ever born.

Thus, the above reviews are focused on the knowledge, attitudes, practices of family planning methods among married women. It is evident from various research studies that most of the women have some or inadequate or incorrect knowledge regarding the contraception methods.

Research Methodology:

Research Questions

The study was conducted with the need and objective to determine the KAP and commodity about the family planning measure and explore the factors that affect the use of contraceptive.

1. To investigate the awareness level in married women (18-49 years) regarding the family planning methods.
2. To access the level of attitude of women and their family members towards the contraception methods.
3. To access the level of practice of contraception methods in married women (18-49 Year)

Study design

Cross-sectional study was used with descriptive research design as the enough literature related to preliminary studies on family planning knowledge, attitude and practice was accessible. There were many studies done at international level and national level in different states of India. used mixed methods of research, qualitative research techniques were comprised of KAP survey and secondary data research by analysing reports and publication, literature through academic search and web search. Selection of women for KAP survey was done by the purposive sampling method of married women of (18-49 years) of age in Jaipur city.

Operational definition
Knowledge, attitude, and practice survey is used to represent the study of specific population to collect information on various factor of what is believed and known in regards to the specific topic and issues, KAP survey are used to collect the data orally or in online form by using structured and standardized questionnaire. This data can be used for qualitiave and quantitative analysis also depends on the objective and the kind of study design.

The study Area
The study was conducted in Jaipur Rajasthan city, this study was carried out in the urban residential area of Jaipur Vaishali Nagar Gandhi Path West lalarpura.

Sample size
In the proposed study the samples size was selected at multiple levels. Firstly, the purposive selection of married women of (18-49 years) selected form Vaishali Nagar residential area of Gandhi Path west Jaipur city. This includes total of 85 women out of this 50 women of reproductive age group were selected used purposive sampling method in which 47 respondent participated in KAP online survey.

Source of data collection
Source of data collection was majorly the primary data collection used by google form of KAP survey in the selected participants of research area. Both qualitative and quantitative information was collected by using the structural questionnaire. That includes open ended and, close ended and multiple response questions to obtain the information on education, socio-economic status and KAP of contraceptives methods.

Tools and techniques of data collection
In this study the KAP survey (knowledge, attitude, and practice) is used as a tool to data collection of data. This will help the researcher in collecting the qualitative information which will strengthen the quantitative findings.

Inclusion Criteria
Married women of (18-49 years) living in the Jaipur Rajasthan city will be included in this study.

Exclusion Criteria
- Unmarried women,
- Women in Menopause,
- Pregnant women,
- Women who have just delivered the child,
- Women who denied,

Reliability and validity

The quantitative and qualitative method is used to enhance validity and reliability of the study.

Legal and Ethical Consideration

Before administrating the tool, the researcher explained to the respondents regarding the objective and importance of the research. informed consent was taken before filling the questionnaire.

Result And Discussion

Socio-demographic profile of the study participants

A total of 84 women of study area and out of 84 women 50 respondent belonging to the age group of 18-49 years were selected as a sample size for the study, however 3 participants did not respondent total 47 women of reproductive age group of 18-49 years participated in the study. The analysis on age group represents that (53.2%) respondents belonging to the category of (26-35) year of age group, (25.5%) respondents are in the category of (36-45) age group, (12%) are in the (18-25) age group and (4.2%) are in the category of (49 &above). The study analysis on education status shows that (68.1%) participants are post graduate, (12%) participants are graduate and (6.3%) are high school and (2.1%) participants are till 10th standard.

Table 1. Sociodemographic Correlates (n=47)

Characteristics	Number	Percentage
Education Status (n=47)		
5th	1	2.1%
10th	1	2.1%
12th	3	6.3%
Graduate	8	12.7%
Post Graduate	32	68.0%
B-ed	1	2.1%
Age* (n=47)		
18-25	8	12.7%
26-35	25	53.2%
36-45	12	25.5%
49 & above	2	4.2%

Awareness level in married women (18-49 years) regarding the family planning methods.

Most of the women of the study (91.3%) have heard regarding the family planning methods, (6.5%) women of the study have never heard and (2.2%) women do not know anything regarding the family planning methods

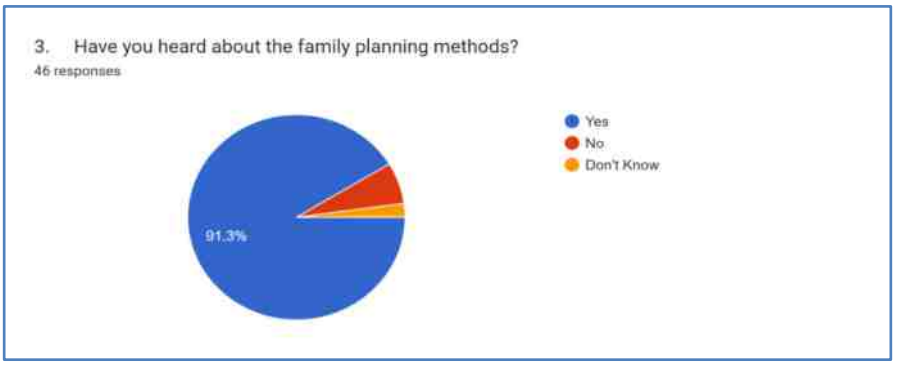

Figure-1, Have you heard about the family planning methods?
When the respondents were evaluating regarding the various type of family planning methods it was realised that most of the women (46.6%) have knowledge on male condom, while (20%) women are aware on traditional method, (15.5%) women are aware on female sterilization, (11%) women are aware on male sterilization, (4.4%) are aware on IUD, and only (2.2%) women are aware on OCP. It was observed that women have good awareness on mele condom and the least awareness was observed on male sterilization.

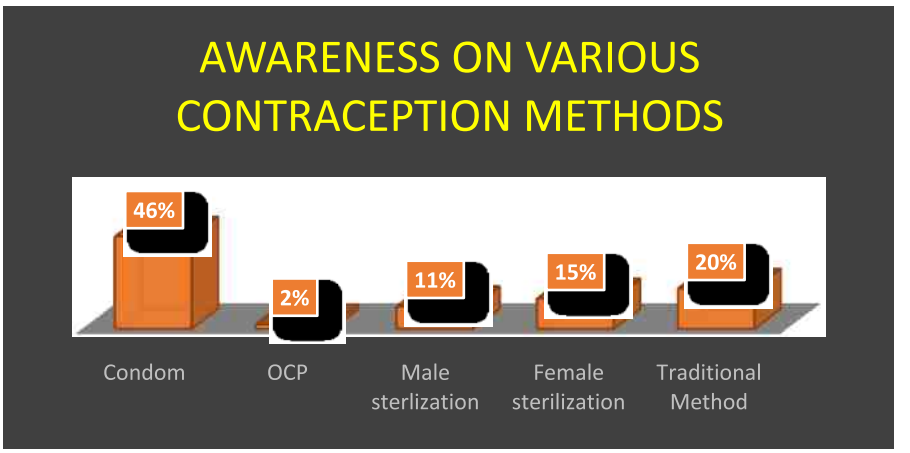

Figure-2 Awareness on various contraception methods
The awareness source of family planning methods was mainly doctors, maas media and friends/relatives (37%) women get the information from their relatives and friends, (6.5%) women get information from others. (30.4%) get information from the doctors.

Table 2. Knowledge and awareness regarding the contraception (n=47)

	Number	Percentage
Heard about family planning	42	91.3%
Aware of contraceptives	42	91.3%
Methods of contraception* (n=45)		
Condom	21	46.6 %
OCP	1	2.1%
Male Sterilization	5	11%
Female Sterilization	7	15.5%
IUD	2	4.4%
Traditional method	9	20%
Source of information* (n=46)		
Doctor	14	30.4%
Mass Media	12	26.0%
Friend/ Relative	17	36.9%
Other	3	6.5%

Attitude toward Family Planning method

When the participants were evaluated regarding their attitude on family planning methos (95.7%) women showed positive attitude. Only (4%) women have showed negative attitude on family planning methods. It observed that (68.0%) participants are using contraceptives to prevent unplanned pregnancy or to avoid unwanted pregnancy, (4.2%) participants have attitude that by using family planning methods they can create proper spacing in birth. However (25.5%) participants are using contraceptives to prevent from sexually transmitted infection. When the women participants were inquiring regarding the attitude if their husband on methods it is measured that (72.2%) of the husband have positive attitude and they approve the use of contraceptives, whereas (14.8%) of husband has showed negative attitude and they disapprove the family planning measures**.**

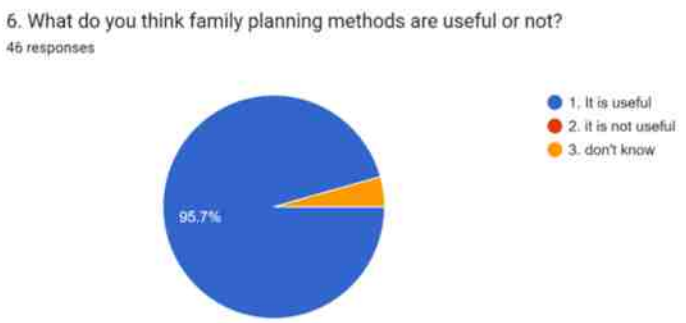

Figure-3 What do you think family planning methods are useful or not?

Table 3. Attitudes towards family planning methods.

Attitude*(n=47)	Number	Percentage %
Contraceptive is useful	45	95.5%
Contraceptives are not useful	2	4%
Why Contraception methods are useful		
To Prevent Unplanned Pregnancy	32	68.0%
To prevent Sexually transmitted infection	12	25.5%
Spacing in Birth	2	4.2%
Husbands Attitude		
Approve the use of contraception	34	72.3%
Disapprove	7	14.8%

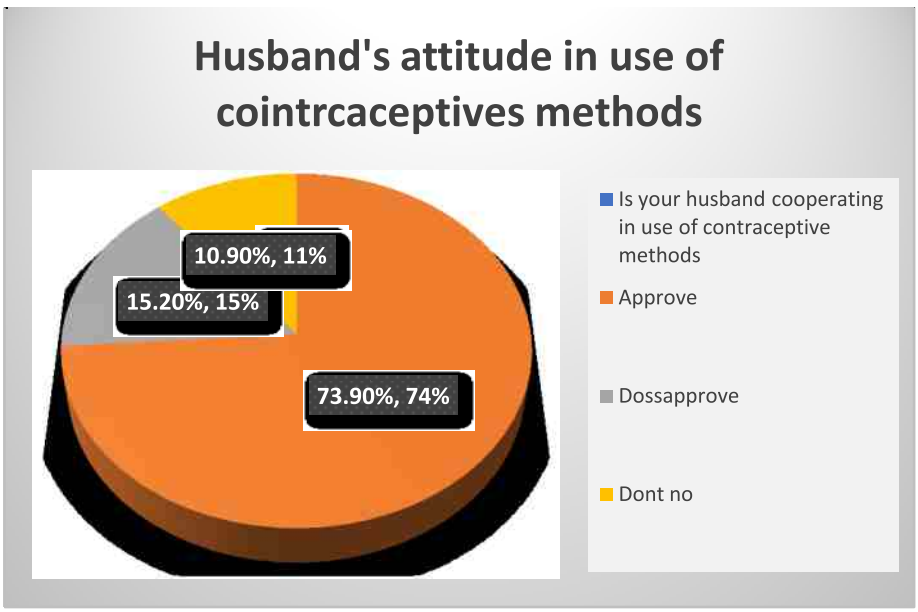

Figure-4, Husbands attitude in use of contraceptive methods

Practice of family planning methods: -

When the respondents are asked the question on the use of contraceptives it was observed that (42.2%) of women are regular using at least one or two type of contraceptives the most used method is the male condom (42.5%) women are regularly using it. Some women have never used any kind of contraceptive yet. (29.7%) of the respondent are occasionally using the family planning methods.

(23.4%) women are using traditional method of family planning, (14.8%) women are using the permanent female sterilization, however only (4.2%) Male sterilization is observed, (2.1%) women are using oral control pill and IUD method of contraceptive.

(17%) women respondent has the mentality that the contraception should be used by the male partner only it is the responsibility of husband, whereas (8%) women respondent felt that it is the responsibility of female partner, wife should use the contraception, (72%) women think that using the contraception is the responsibility of both, husband and both should use the contraception as per demand.

Table 5. Practice of family planning methods

Practice *(n=47)	Number	Percentage%
How often practice		
Regular use	19	42.4%
Never use	10	21.2%
Occasionally use	14	29.7%
Which contraceptive methods are in practices		
Traditional Method/Natural	11	23.4%
Female Sterilization	7	14.8%
Male Sterilization	2	4.2%
Male condom	20	42.5%
IUD	1	2.1%
OCP	1	2.1 %
Other	3	6.3%
Who should use the contraceptives		
Only Male need to use	8	17.7%
Female need to use	4	8.5%
It is the responsibility of both	34	72.3%
From do you get the contraceptives		
Public medical store	13	27.6%
Private medical store	25	53.1%
Other	7	14.8%
Availability		
Easily Available	39	82.9%
Difficult to get	5	10.6%
Not availability	3	6.3%

When we analysed the commodity and availability of contraception methods, we found that (53%) of women purchase the contraception form the private medical store and (82%) women have the easy access of contraception, (27%) women get the contraception from public medical store, (14%) get form other source of contraception, (6%) women did not get contraception form any sources and they do not use contraception.

When we obtained the information regarding out-of-pocket expenditure on contraception (26%) women monthly spent average 200 Rs, (24%) women spent

100 Rs monthly, (11%) women spent 50 Rs monthly, (37%) women have no out-of-pocket expenditure on contraception.

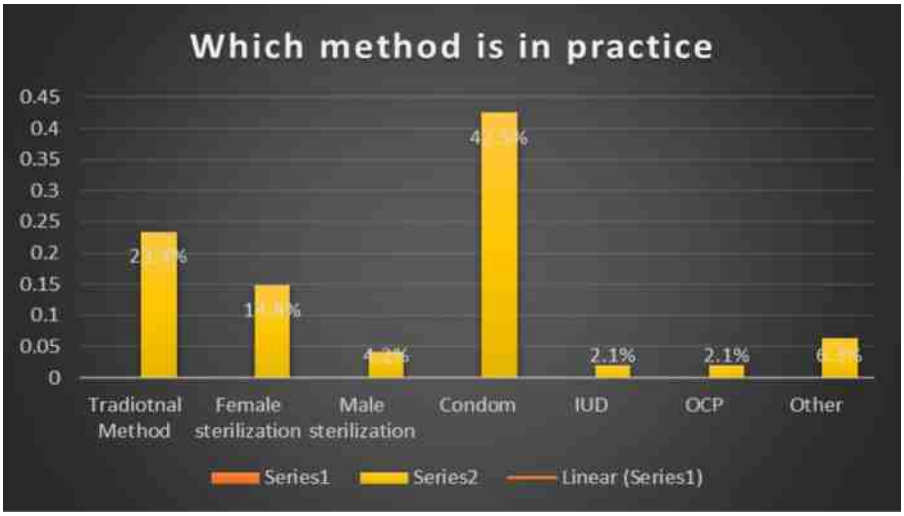

Figure-5, Which method is in practice

Discussion :

The study was conducted through reviewing of some articles, journals, and research papers were searched the literature review for family planning term is easily available. The current study represent that 100% women of the study were literate. And most of the women (91%) have knowledge on family planning methods. But only (6%) women those who are less educated have less knowledge on family planning methods. The study of Manjeera LM et has suggested that 94% respondents have knowledge of more then one method of contraception

In our study represent that more than 50 females was in the age group of (26-35) however maximum contraceptive users are at the age of (26-35) similar like the research of Qazi M et al in his study the maximum patient who are using family planning services are at the age range of 21-30 years. Contraception is mostly used at this age because (20-35) years in considered to be more high fertility age group. In many areas the women complete their family till the end of this age group.

The result followed that the one of the major source of information of family planning methods (30%) is the doctor which is like the study of Vikas Gupta in his study the source of information was the doctor/multipurpose health worker (70.4%) of the respondent get information from the doctor. This is because the community and individual have more trust and faith on the doctors rather than the other source if information.

Approximately more than (65%) respondents were currently using one or more methods of contraception which is nearly the study finding of Khan et al. (65.5%), however higher than the study done by the prasad (42%) and less to the findings of Srivastava (51%).

The present study indicates that the participants are using family planning methods in order to maintain space in birth and the husbands attitude towards the family planning method by asking the question if he approve or not (73%) has approved to use the family planning methods which means they have positive attitude towards the family planning methods. In many studies the contraception choice made by the participants is different. This difference of choice in contraception are because of easily accessible, government policies for promoting the usage like incentive, free of cost or subsidised family planning methods.

In our study it was observed that majority of the study women 43.5% followed temporary method male condom and 15% female followed permanent method of family planning which correlates to the study of DR Gaur et al where they found that 61% women followed temporary method and 37% women followed permanent method respectively. When compare to the study of Neelu Saluja et al most of the women 46% followed permanent method which is higher to our study.

In the present study 21% women had not used any kind of contraceptive methods which is comparable to the study of young et al in his study 8% women had not used any contraceptive. The study of Srivastava et al showed higher number that 55% women had not used contraceptive methods due to lack of awareness, accessibility religious and family custom and various myths are also present in the community which are the barrier of issue for not using the contraception.

The finding of the current study indicates that the factor that affect the utilization of contraceptive methods such as fear of side effects 36% lack of awareness 29%, family custom 15% and husband opposition 18% which is compare to the study of Gupta et al in urban area of Haryana. The study of Qazi M et al and Nayak AU et al, showed that factor affecting the use of contraceptives are lack of awareness 50% and husband opposition 44% cases seen.

In the present the study despite of good knowledge and positive attitude regarding the family planning, a significant number of participants are practiced contraception. However, the reason for not using any contraception is either fear of side effects or husband opposition. Economic and educational advancement will help to enhance the knowledge and attitude and the importance od birth spacing and family size. We conducted cross sectional study and purposive random sampling of the participants which is showing the association between the socio-demographic variable and family planning acceptance which gives the strength to our study.

Recommendations

This study has indicated that women have sufficient knowledge, positive attitude regarding the family planning methods. Specially towards the condom. Oral control pill and female sterilization, with relatively low prevalence of contraception usage, thus showed the huge difference between the KAP of contraception. have correct choice of contraceptive and family planning is very important. The government and the health care worker need to ensure that the contraception awareness and motivation is needed specially in male towards the male contraception. The other non-government organisation needs to take extended efforts to spread the right information in the community towards the family planning methods. The more

programs and educational activities should be designed and implemented to combat the influence of various factor that affect the usage of family planning.

Conclusion

The current study has indicated that adequate knowledge and positive attitude towards family planning methods is totally different approach and practicing these methods in day-to-day life are two different things. The level of awareness and knowledge and attitude about different methods of family planning services are increasing due to several things such as promotional activities done by the government and other non-government organisations, maas media activities, and different educational and behaviour change camps on awareness of family planning services. However, it is quite difficult to change the attitude and behaviour of the individual and community which is completely depends upon the socio-demographic and socio-economic factors. Being the part of patriarchal society, the major decisions are depending on the husband, whereas education and religion is also play an important role.

This present study showed that mainly participants was with adequate knowledge and positive attitude regarding the family planning methods however the huge gap in the practice was seen in this study. All the respondent were aware on one or two method of contraceptives but usage is lagging, the reason was, myths associated and the religion and family customs. Which is comparative to the study of different developing countries. Counselling of couples and women education can help to adopt the family planning services. The family planning activities and program should be multidisciplinary they should involve and motivate both female and male and the other member of the family to empower regarding the usage of various contraceptive method and to correct the misconception and barrier regarding the family planning methods and services. The family planning is not just a birth control but also a major part of maternal and child health indicator.

Though the study had a small group of participants, and several limitations should be considered.

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Dharma in Economics, Management, and Governance: Indic Perspectives

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Abstract

Purpose: This research aims to explore the ethical and moral dimensions of economic and governance models from an Indian perspective, particularly focusing on the application of ancient Indian principles of Dharma. The purpose is to provide insights into how these principles can inform contemporary policies, with a specific focus on political parties and their policies towards marginalized communities like Scheduled Castes (SC), and the consequent impact on social welfare programs.

Methodology: This research employs a systematic approach to gather and analyze existing scholarly works, historical texts, policy dcuments, and case studies related to Dharma, economics, management, and governance in the Indian context. Key databases including Scopus, Google Scholar, and Web of Sciences are utilized to identify relevant literature. The review is structured around thematic analysis, drawing connections between ancient Indian principles and contemporary policy frameworks.

Findings: The findings of this research suggest that principles of Dharma can offer valuable insights into crafting ethical and inclusive policies within economic, management, and governance frameworks. Specifically, the review reveals that political parties' adherence to Dharma principles can lead to more equitable policies towards marginalized communities such as Scheduled Castes. Moreover, the integration of Dharma principles into governance structures can enhance the effectiveness of social welfare programs, ensuring greater distributional justice and societal well-being.

Originality: This research contributes to the discourse on governance and ethics by offering a comprehensive examination of how Dharma principles can be applied in contemporary policymaking. While previous studies have explored the philosophical underpinnings of Dharma, this research provides a practical lens by examining its implications for political parties' behavior and social welfare initiatives. By synthesizing insights from diverse fields such as economics, management, and governance, this research offers a holistic understanding of the relevance of Dharma in shaping modern socio-economic policies.

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Keywords : Dharma, ethics, governance, economics, management, Indian perspective, political parties, Scheduled Castes, social welfare programs.

Introduction

Background of the Study

The concept of Dharma holds significant importance in Indian philosophy and culture, embodying principles of duty, righteousness, and moral order. Rooted in ancient texts such as the Vedas, Upanishads, and Dharmashastras, Dharma serves as a guiding framework for individual conduct, societal harmony, and governance structures (2). Throughout history, Dharma has influenced various aspects of Indian society, shaping norms, values, and ethical standards. It provides a moral compass for navigating complex ethical dilemmas and promoting the welfare of all beings.

Scholars and philosophers have long deliberated on the implications of Dharma in different spheres of life, including governance, economics, and leadership. The richness and depth of Indian tradition offer insights into how Dharma can inform contemporary debates and practices (7). By examining historical texts, philosophical treatises, and cultural practices, researchers have sought to unravel the timeless wisdom embedded in Dharma and its relevance in modern contexts.

Contemporary scholars have increasingly recognized the importance of integrating Dharma principles into governance and leadership frameworks. In a rapidly changing world marked by globalization, technological advancements, and socio-political challenges, there is a growing need for ethical leadership and inclusive governance. Dharma offers a comprehensive ethical framework that emphasizes the well-being of all individuals and the greater good of society (6). Thus, understanding the philosophical underpinnings of Dharma and its practical implications is essential for addressing pressing societal issues and fostering sustainable development.

Relevance of the Study

The relevance of studying Dharma in contemporary society lies in its potential to offer ethical guidance and foster inclusive governance. In a world characterized by diverse cultural backgrounds, rapid globalization, and complex socio-economic challenges, the principles of Dharma provide a universal framework for ethical decision-making and social cohesion (12). By examining the applicability of Dharma in governance, economics, and leadership, researchers can gain insights into how ancient wisdom can address modern-day dilemmas and promote societal well-being.

Furthermore, the study of Dharma is pertinent for understanding the cultural heritage and philosophical foundations of Indian society. As India emerges as a global economic powerhouse and a key player in international affairs, the principles of Dharma offer valuable insights into the country's values, norms, and aspirations (8). By exploring the cultural-specific rights, responsibilities, and duties embedded in Dharma, researchers can bridge the gap between traditional wisdom and contemporary practices, fostering mutual understanding and respect.

Moreover, the study of Dharma has practical implications for policymaking,

particularly in the context of social welfare and inclusive development. By integrating Dharma principles into governance structures and policy frameworks, policymakers can promote equity, justice, and compassion (9). For instance, understanding the ethical dimensions of Dharma can inform the design and implementation of social welfare programs, ensuring that they cater to the needs of marginalized communities such as Scheduled Castes (6).

The relevance of studying Dharma in economics, management, and governance lies in its potential to foster ethical leadership, promote cultural understanding, and enhance social welfare. By exploring the practical implications of Dharma principles, researchers can contribute to the development of inclusive policies and practices that prioritize the well-being of all members of society.

Objective of the Study

The objective of this study is to investigate the practical implications of Dharma principles in shaping modern socio-economic policies, particularly concerning political parties' behavior and their impact on marginalized communities such as Scheduled Caste. By systematically analyzing existing literature and case studies, the research aims to provide valuable insights into crafting more equitable and inclusive governance frameworks that prioritize the well-being of all citizens, contributing to greater social justice and societal welfare.

Literature Review

Ancient Texts and Ethical Principles

Ancient Indian texts such as the Vedas, Upanishads, and Dharmashastras serve as foundational sources for understanding the ethical and moral principles underpinning Dharma. These texts provide rich insights into the philosophical and cultural milieu of ancient India, offering guidance on individual conduct, societal harmony, and governance structures (2).

The Vedas considered the oldest scriptures of Hinduism, contain hymns, rituals, and philosophical teachings that form the basis of Dharma. They emphasize the importance of righteous conduct (Dharma) in upholding cosmic order and societal well-being. For example, the Rigveda contains verses that exhort individuals to uphold truthfulness, honesty, and integrity in all aspects of life (6)

Similarly, the Upanishads, philosophical texts that explore the nature of reality and the self, delve into the concept of Dharma as a guiding principle for ethical living. They emphasize the interconnection between individual actions (karma) and their consequences, underscoring the importance of acting by Dharma to attain spiritual liberation (11).

The Dharmashastras, legal and ethical treatises that emerged during the post-Vedic period, provide detailed guidelines for moral conduct, social hierarchy, and governance. These texts, attributed to ancient sages like Manu and Yajnavalkya, delineate the duties (dharma) of individuals based on their varna (caste) and ashrama (stage of life). While some Dharmashastras prescribe strict codes of conduct and social norms, others advocate for flexibility and adaptation to changing societal contexts (9).

Scholars have extensively analyzed these ancient texts to decipher the ethical principles embedded within them. They have explored concepts such as varna dharma (duties based on caste), ashrama dharma (duties based on life stage), and svadharma (one's duty) to understand the nuances of Dharma in different contexts (3).

Moreover, the interpretation of Dharma in ancient texts has evolved, reflecting changes in societal norms, cultural practices, and philosophical perspectives. While some scholars view Dharma as a static set of rules and duties, others interpret it as a dynamic principle that adapts to changing circumstances (10).

In contemporary times, the study of ancient texts and ethical principles of Dharma continues to inform discussions on morality, ethics, and governance. By drawing upon the timeless wisdom contained in these texts, scholars and practitioners seek to address pressing societal challenges and promote values such as justice, compassion, and social harmony (7).

The ancient Indian texts such as the Vedas, Upanishads, and Dharmashastras provide valuable insights into the ethical and moral principles underpinning Dharma. By examining these texts, scholars gain a deeper understanding of the philosophical foundations of Dharma and its relevance in contemporary society. Through careful analysis and interpretation, they seek to extract timeless wisdom that can guide individuals and societies toward ethical conduct and spiritual fulfillment.

Capabilities Approach and Human Well-being

The capabilities approach, pioneered by scholars such as Amartya Sen and Martha Nussbaum, offers a framework for evaluating human well-being and societal progress. This approach emphasizes the importance of enabling individuals to achieve a range of capabilities and functions that are essential for a life of dignity and fulfillment (8).

Sen's seminal work on capabilities and development highlights the multidimensional nature of human well-being, going beyond traditional measures such as income or GDP. He argues that individuals' capabilities, or their substantive freedoms to lead the kind of lives they value, should be the central focus of development efforts (8).

Nussbaum further elaborates on the capabilities approach by identifying a set of central human capabilities that are essential for human flourishing. These capabilities include basic capabilities such as life, bodily health, and bodily integrity, as well as more complex capabilities such as practical reason, affiliation, and control over one's environment (8).

Scholars have drawn parallels between the capabilities approach and Dharma's emphasis on human flourishing and well-being. Both frameworks prioritize the enhancement of individuals' capabilities and functioning, recognizing that material wealth alone is insufficient for a good life (6). Dharma, with its focus on ethical conduct, social justice, and spiritual fulfillment, complements the capabilities approach by providing a normative foundation for evaluating human well-being (6).

Furthermore, the capabilities approach resonates with Dharma's emphasis on the

interconnectedness of all beings and the importance of promoting the well-being of society. Dharma encourages individuals to act by their duties (dharma) while considering the welfare of others, thus fostering a sense of social responsibility and solidarity (6).

In the context of economics, the capabilities approach offers a broader perspective on development that goes beyond economic growth to encompass social, political, and cultural dimensions. Scholars like Kaushik Basu and Esther Duflo have emphasized the importance of ethics and social norms in economic decision-making, echoing Dharma's emphasis on righteous conduct in economic activities (12).

The capabilities approach provides a valuable framework for understanding human well-being and evaluating the effectiveness of policies and interventions. By integrating insights from Dharma, scholars, and policymakers can develop more holistic approaches to development that prioritize the enhancement of capabilities and functions, ultimately contributing to a more just and equitable society.

Ethics and Social Norms in Economic Decision-Making

Ethics and social norms play a crucial role in shaping economic behavior and decision-making. Scholars have highlighted the significance of ethical considerations in economic activities, emphasizing the importance of social norms, cultural values, and moral principles in guiding individual and collective choices (9).

Dharma, with its emphasis on righteous conduct and ethical behavior, offers valuable insights into the ethical dimensions of economic decision-making. The concept of artha (material well-being) in Dharma encompasses not only material wealth but also ethical wealth, emphasizing the importance of earning a livelihood through honest and ethical means (9)

Economists such as Kaushik Basu and Esther Duflo have explored the interplay between ethics and economics, highlighting the role of social norms in shaping economic behavior. Basu's work on the "economics of Dharma" examines how cultural norms and ethical values influence economic outcomes, arguing that ethical behavior can enhance economic efficiency and social welfare (9).

Similarly, Duflo's research on development economics emphasizes the importance of understanding local social norms and cultural practices in designing effective policy interventions. She argues that interventions that align with existing social norms are more likely to be accepted and adopted by communities, leading to better outcomes (12).

The concept of trust, a fundamental component of social capital, also intersects with Dharma's emphasis on ethical conduct and righteous behavior. Research has shown that societies with higher levels of trust tend to have more efficient economic systems and better outcomes in terms of economic growth and development (12).

Moreover, the concept of dharma buddha (righteous warfare) in Dharma provides insights into the ethical dimensions of competition and conflict in economic contexts. Just as in warfare, economic competition should be conducted by ethical principles, respecting the rights and interests of all stakeholders (9).

Ethics and social norms play a significant role in economic decision-making, shaping individual behavior, organizational practices, and societal outcomes. By integrating insights from Dharma, economists and policymakers can develop more ethical and sustainable approaches to economic development that prioritize the well-being of all stakeholders and promote social justice and equity.

Methodology

This research follows a systematic approach to gather and analyze existing scholarly works, historical texts, policy documents, and case studies related to Dharma, economics, management, and governance in India. Using databases like Scopus and Google Scholar, relevant literature is identified. The review is structured around themes, focusing on connections between ancient Indian principles and modern policy frameworks.

First, literature is collected using keywords like "Dharma" and "economics." Then, articles are screened based on relevance, followed by a detailed review. Through thematic analysis, key themes like ethical considerations in economic decisions and the application of Dharma in governance are identified.

This methodology enables a comprehensive examination of how Dharma principles influence contemporary policies. By comparing various perspectives, the study aims to provide insights into the practical implications of Dharma in modern socio-economic contexts. Through this approach, the research contributes to understanding Dharma's role in shaping ethical governance and societal well-being.

Findings

Ethical and Inclusive Policies

The findings of this research highlight the significant role that principles of Dharma can play in informing the crafting of ethical and inclusive policies within economic, management, and governance frameworks. Dharma, deeply rooted in Indian philosophical and cultural traditions, offers a comprehensive ethical framework that emphasizes moral conduct, social justice, and the well-being of all beings (2). By drawing upon these principles, policymakers can ensure that policies are guided by values of fairness, compassion, and integrity.

Dharma advocates for the pursuit of righteous conduct (Dharma) in all aspects of life, including governance and public administration. Ancient Indian texts such as the Mahabharata and the Manusmriti provide insights into the ethical principles underlying Dharma and their relevance in contemporary contexts (9). These texts emphasize the importance of upholding truthfulness, honesty, and fairness in decision-making processes, thereby promoting the greater good of society.

Furthermore, the concept of Dharma encourages individuals and institutions to act with a sense of duty and responsibility towards others. This ethical imperative extends to policymakers and political leaders, who are entrusted with the task of promoting the welfare of the entire community (6). By aligning policies with Dharma principles, policymakers can ensure that the interests of all members of society, especially the most vulnerable, are considered.

Moreover, Dharma emphasizes the interconnectedness of all beings and the

importance of fostering harmonious relationships within society. This holistic perspective encourages policymakers to consider the broader implications of their decisions on social cohesion, environmental sustainability, and intergenerational equity (12). By adopting a Dharma-inspired approach to policymaking, governments can create a more inclusive and equitable society that promotes the well-being of all its citizens.

Equitable Policies for Marginalized Communities

One significant finding of this research is the potential of Dharma principles to inform the formulation of more equitable policies toward marginalized communities, such as Scheduled Caste. Dharma underscores the importance of social justice and compassion towards those who are marginalized or disadvantaged (6). It calls upon policymakers to address systemic inequalities and discrimination, ensuring that all individuals have equal opportunities to thrive.

Political parties' adherence to Dharma principles can lead to policies that prioritize the needs and rights of marginalized communities, thereby promoting greater social inclusion and cohesion. For example, policies aimed at empowering Scheduled Caste through education, healthcare, and economic opportunities can be guided by Dharma's principles of social justice and equity (9). By recognizing the unique challenges faced by marginalized groups and tailoring policies to address their specific needs, policymakers can promote a more just and inclusive society.

Additionally, Dharma encourages policymakers to adopt a compassionate and empathetic approach toward marginalized communities, recognizing their inherent dignity and worth (8). This compassionate governance approach entails listening to the voices of marginalized groups, involving them in decision-making processes, and ensuring that their perspectives are considered. By incorporating Dharma's principles of compassion and empathy into policymaking, governments can foster greater trust and cooperation with marginalized communities, leading to more effective and sustainable outcomes.

Enhanced Effectiveness of Social Welfare Programs

Another significant finding of this research is the potential for the integration of Dharma principles into governance structures to enhance the effectiveness of social welfare programs. Dharma emphasizes the importance of collective responsibility for the welfare of society as a whole, advocating for the equitable distribution of resources and opportunities (6). By embedding Dharma principles into governance frameworks, policymakers can ensure that social welfare programs are designed and implemented in a manner that promotes greater distributional justice and societal well-being.

Social welfare programs, such as poverty alleviation initiatives, healthcare schemes, and education subsidies, can be strengthened by incorporating Dharma's principles of fairness, compassion, and social responsibility (12). For example, Dharma calls upon policymakers to prioritize the needs of the most vulnerable members of society, including children, the elderly, and persons with disabilities, in the design and implementation of social welfare policies (9). By ensuring that social welfare

programs are targeted toward those who need them the most, governments can maximize their impact and effectiveness.

Moreover, the integration of Dharma principles into governance structures can help foster a culture of accountability, transparency, and ethical conduct within public institutions (2). Dharma encourages policymakers to act with integrity, honesty, and humility in their interactions with citizens, thereby enhancing trust and confidence in government institutions. By promoting a values-driven approach to governance, Dharma-inspired policies can contribute to greater social cohesion, stability, and progress.

The findings of this research suggest that the principles of Dharma hold significant potential for informing the crafting of ethical and inclusive policies within economic, management, and governance frameworks. By adhering to Dharma principles, policymakers can promote social justice, equity, and the well-being of all members of society. Moreover, the integration of Dharma principles into governance structures can enhance the effectiveness of social welfare programs, ensuring greater distributional justice and societal well-being. Through these findings, this research contributes to the growing body of knowledge on the practical implications of Dharma in shaping modern socio-economic policies.

Discussions

The integration of Dharma principles into contemporary policymaking presents both challenges and opportunities for governance in modern, pluralistic societies. While Dharma offers a rich ethical framework rooted in ancient Indian traditions, its application in diverse and complex socio-political contexts requires careful interpretation and adaptation to ensure relevance and effectiveness.

One of the key challenges in integrating Dharma principles into policymaking lies in reconciling traditional values with modern realities and evolving societal norms. As societies undergo rapid changes due to globalization, technological advancements, and cultural shifts, policymakers must navigate a diverse landscape of competing interests, values, and priorities (9). This necessitates a nuanced understanding of how Dharma principles can be contextualized and applied in contemporary governance frameworks.

Moreover, the inherent diversity within societies poses challenges in ensuring that Dharma-inspired policies are inclusive and equitable. Different communities may have varying interpretations of Dharma and divergent interests and needs, requiring policymakers to strike a delicate balance between competing demands (6). This underscores the importance of fostering dialogue, collaboration, and consensus-building processes that respect diverse perspectives and promote social cohesion.

Despite these challenges, the integration of Dharma principles into policymaking also presents significant opportunities for promoting ethical governance and social justice. Dharma's emphasis on principles such as compassion, fairness, and social responsibility provides a normative foundation for addressing pressing societal issues and promoting the well-being of all citizens (2). By prioritizing the welfare of marginalized communities and vulnerable groups, policymakers can advance principles of distributive justice and equity, thereby fostering a more inclusive and

cohesive society.

Political parties, as key actors in the policymaking process, have a crucial role to play in promoting Dharma-inspired governance. By incorporating Dharma principles into their platforms and policy agendas, political parties can signal their commitment to ethical conduct, social justice, and the common good (9). This includes advocating for policies that prioritize the needs of marginalized communities, protect human rights, and promote sustainable development.

Furthermore, effective implementation of Dharma-based policies requires robust institutional mechanisms that promote transparency, accountability, and citizen participation (8). This entails strengthening democratic institutions, enhancing access to information, and fostering a culture of civic engagement and activism. By empowering citizens to hold policymakers accountable and participate in decision-making processes, governments can ensure that Dharma-inspired policies are responsive to the needs and aspirations of the people they serve.

The integration of Dharma principles into contemporary policymaking offers both challenges and opportunities for promoting ethical governance and social justice. While navigating the complexities of modern society requires careful consideration and adaptation, Dharma provides a timeless moral compass that can guide policymakers in their quest to create a more just, inclusive, and compassionate society. By embracing Dharma-inspired governance, political parties and policymakers can uphold the values of integrity, fairness, and social responsibility, thereby advancing the well-being of all citizens and fostering sustainable development.

Conclusion

The integration of Dharma principles into contemporary policymaking offers a promising pathway toward ethical governance, social justice, and inclusive development in modern societies. Throughout this study, we have explored how Dharma, rooted in ancient Indian traditions, provides a rich ethical framework that emphasizes principles such as compassion, fairness, and social responsibility. The findings suggest that Dharma-inspired governance has the potential to address pressing societal challenges and promote the well-being of all citizens, particularly marginalized communities. By prioritizing the needs of the most vulnerable and disadvantaged, policymakers can advance principles of distributive justice and equity, fostering greater social cohesion and harmony. However, the application of Dharma principles in modern, pluralistic societies poses challenges that must be addressed. Policymakers must navigate diverse cultural perspectives, evolving societal norms, and competing interests to ensure that Dharma-inspired policies are inclusive, relevant, and effective. This requires careful interpretation, adaptation, and dialogue with stakeholders to promote consensus-building and collaboration. Effective implementation of Dharma-based policies requires robust institutional mechanisms that promote transparency, accountability, and citizen participation. Strengthening democratic institutions, enhancing access to information, and fostering a culture of civic engagement are essential for ensuring that Dharma-inspired governance is responsive to the needs and aspirations of the people. While

integrating Dharma principles into contemporary policymaking presents challenges, it also offers significant opportunities for promoting ethical governance and social justice. By embracing Dharma-inspired governance, political parties and policymakers can uphold the values of integrity, fairness, and social responsibility, thereby advancing the well-being of all citizens and fostering sustainable development in our increasingly complex and interconnected world.

Abbreviations

Scheduled Castes (SC)

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Leading within the Age of Discontinuity: Navigating Uncharted Terrain

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Abstract:
Management is facing a paradigm transition in an era defined by unprecedented technical advancements, global interconnection, and constant upheaval. Leaders who can stimulate innovation, navigate difficult and unpredictable terrain, and preserve mainstream ideals while reacting to unprecedented disruptions are essential in the age of discontinuity. The distinguishing characteristics of leadership in the era of discontinuity are examined in this comprehensive study piece. It provides a thorough examination of the tactics and proficiencies that successful leaders must possess to prosper in a time of reliable options. We dive into the nuances of managing these dynamic environments, stressing the importance of ongoing learning, situation-making plans, agile corporations, technology integration, and stakeholder engagement. We focus on adaptability, imagination, prescience, worldwide perspective, resilience, and moral management. Through familiarity with these fundamental ideas and methods, leaders may effectively guide their organizations through the challenging circumstances and possibilities presented by discontinuity. Leaders need to be resilient enough to face challenges and hardships without wavering in their dedication to their objectives and core principles. Even in uncertainty, leaders may instill stability and confidence in their businesses by practicing resilience.
In conclusion, a comprehensive strategy that incorporates flexibility, inventiveness, vision, resilience, and ethical stewardship is needed for effective leadership in the age of discontinuity. Leaders may successfully handle the opportunities and difficulties posed by disruption by adhering to these fundamental ideas and tactics, propelling their companies toward success and sustainable growth in a world that is always changing.

Keywords : Discontinuity, Resilience, Stakeholder engagement, Adaptability, Ethical Leadership.

Introduction

Leadership is a dynamic idea, and its definition has advanced notably over the years to mirror the converting dynamics of the world. In the contemporary era, frequently called the age of discontinuity, leaders are faced with an array of complex, unpredictable demanding situations that call for a new set of abilities and processes. This article examines the specific characteristics and techniques required for leadership within the age of discontinuity.

The age of discontinuity is characterized by speedy technological improvements, shifts in worldwide electricity structures, and a remarkable stage of interconnectedness. These elements contribute to a rapidly converting landscape, which poses enormous demanding situations for leaders. Leaders in this age need to adapt to the ever-evolving environment, encourage innovation, possess an international angle, build resilient organizations, and uphold moral standards. In this newsletter, we explore these key characteristics and delve into strategies for leading successfully in an era of regular exchange.

The Characteristics of Leadership in the Age of Discontinuity:

Adaptability

For leaders, adaptability is a critical quality in the age of discontinuity. Leaders must be flexible and able to modify their tactics as needed due to the fast-paced nature of commerce and the unpredictable nature of external influences. This flexibility applies to the entire organization because it is not ideal for a hard, unyielding form to maneuver over a discontinuous terrain. Adaptive leaders recognize that trade is not only a challenge but also an unavoidable source of opportunity. They push change and view it as a chance for growth and creativity in their teams. Leaders may ensure that their agencies are better equipped to succeed in uncertain settings by cultivating an adaptable culture.

Adaptability is recognized as a primary feature of management in the age of discontinuity. It enables leaders to reply efficaciously to speedy modifications within the enterprise surroundings and to encourage their groups to do the same. Research via Yukl (2009) emphasizes the significance of leaders' behavioral flexibility, which includes the ability to regulate their management style because the scenario demands it.

Moreover, Zhang and Bartol (2010) strain the fee of leaders fostering an organizational culture that promotes adaptability among personnel. This culture of adaptability permits organizations to quickly reply to changes, making them extra resilient in the face of discontinuity.

Vision and Innovation

Leaders in the age of discontinuity have to have a clear imaginative and prescient of the destiny, coupled with the potential to encourage innovation within their businesses. They want to be ahead-wondering, identifying developments and possibilities earlier than they end up obvious to others. By doing so, they could function their organizations as industry leaders and innovators.

Innovation is at the coronary heart of leadership in this era. Leaders ought to sell innovative problem-fixing and inspire a way of life of experimentation. They should support and reward personnel who provide you with new thoughts and tactics, and they ought to be open to taking calculated dangers. Innovation is not completely the responsibility of R&D or innovative departments; it should be integrated into the complete corporation's DNA.

Leaders within the age of discontinuity have to own a clean imaginative and prescient of the future even as encouraging innovation within their agencies. Bennis and Nanus (1985) argue that visionary management is instrumental in inspiring exchange and putting a brand-new direction. Leaders with a nicely described vision can help their corporations perceive possibilities in instances of uncertainty.

Innovation is carefully connected to visionary management. Tushman and O'Reilly (1997) highlight the significance of leaders creating a subculture of innovation. Such cultures foster creative hassle-fixing and experimentation, permitting businesses to stay aggressive and applicable in a swiftly changing global.

Global Perspective

The age of discontinuity is marked by globalization, which has blurred traditional boundaries and interconnected economies, cultures, and industries. Leaders ought to have an international perspective, know-how the interconnectedness of those elements and consider the broader implications of their choices. This angle is crucial in choice-making, strategy development, and average organizational operations.

Global angle also extends to handling numerous, multicultural groups. Effective leaders have to be adept at working with people from one-of-a-kind backgrounds and studies, as range can foster creativity and innovation. Navigating the complexities of a globalized global requires cultural sensitivity and the ability to bridge cultural gaps inside the organization.

The worldwide angle is an essential element of management in the age of discontinuity. As groups function in an increasing number of interconnected worlds, leaders should apprehend the results of worldwide trends and choices. McCall, Lombardo, and Morrison (1988) argue that effective leaders must have an international mindset, enabling them to see the bigger image and make knowledgeable selections.

In line with this, international leadership research has emphasized the importance of cultural intelligence and pass-cultural communication (Thomas, 2006). Leaders who can manipulate diverse, multicultural teams are better equipped to navigate the complexities of a globalized international.

Resilience

Discontinuity often brings adversity and uncertainty. Resilient leaders are people who can face up to setbacks, analyze from disasters, and maintain their composure in tough conditions. Building a resilient company necessitates cultivating a culture of resilience among employees.

Resilience in leadership includes several factors, inclusive of emotional intelligence, the potential to manipulate pressure, and the capacity to provide stability and route for the duration of times of crisis. It also includes selling an increased mindset amongst personnel, in which setbacks are seen as opportunities for getting to know and develop.

Resilience is another crucial characteristic for leaders facing discontinuity. Leaders want to be emotionally resilient to deal with adversity and to provide stability in the course of crises (Luthans, Avey, Avolio, & Norman, 2007). Resilience isn't always best a non-public trait however also a cultural function that leaders can foster inside their groups.

Resilient leaders maintain an increased attitude, viewing setbacks as possibilities for gaining knowledge and improvement (Dweck, 2006). This mindset may be contagious, influencing the organizational way of life and selling a greater resilient and adaptable body of workers.

Ethical Leadership

In an era marked by way of rapid trade and expanded scrutiny, it's miles essential for leaders to anchor their decision-making in moral ideas. Ethical management builds consideration and credibility, not only the most effective inside the enterprise but also with external stakeholders. Upholding integrity and values is essential for long-term success.

Ethical leaders now not only act in a moral way themselves but also sell an ethical culture within their companies. They set a strong instance for their employees and set up clear expectations regarding ethical behavior. This includes being transparent and honest, valuing variety and inclusion, and making socially responsible picks.

In an era marked by speedy exchange and elevated scrutiny, ethical management is paramount. Brown and Treviño (2006) emphasize that leaders need to lead by using example, acting in a moral manner themselves, and selling ethical behavior inside their agencies. Ethical management builds trust and credibility, both internally and externally.

Research on ethical management also highlights the significance of moral decision-making (Treviño, Weaver, & Reynolds, 2006). Leaders who make decisions rooted in moral concepts are highly placed to advantage the assistance and trust of their stakeholders.

Strategies for Leading within the Age of Discontinuity:

Continuous Learning

Leaders within the age of discontinuity should be committed to ongoing self-improvement and mastering. Staying up to date on emerging developments, technologies, and international traits is critical for making knowledgeable selections and keeping relevance. Continuous learning isn't constrained to formal training; it contains an attitude of interest and a willingness to evolve to new statistics and ideas.

Leaders must encourage a tradition of mastering within their corporations, imparting sources and opportunities for personnel to enlarge their information and talents. This can encompass training applications, access to academic materials, and fostering a way of life of understanding sharing, and collaboration.

Continuous mastering is a middle method for leaders in the age of discontinuity. The literature indicates that leaders must decide to ongoing self-improvement and learning (Day, 2000). Staying knowledgeable approximately emerging traits, technology, and global developments is crucial for making informed selections and retaining relevance.

Leaders must also foster a tradition of continuously gaining knowledge of inside their agencies. This involves presenting sources and possibilities for personnel to expand their understanding and capabilities, consisting of education applications, access to educational substances, and encouraging information sharing and collaboration (Pulakos, Arad, Donovan, & Plamondon, 2000).

Scenario Planning

Given the unpredictable nature of discontinuity, leaders need to have interaction in scenario planning. This entails growing more than a few possible future scenarios and corresponding techniques. By thinking about a variety of results, leaders can be more prepared to respond to modifications and uncertainties successfully.

Scenario-making plans facilitate corporations to identify potential risks and opportunities and prepare for distinctive contingencies. It affords a dependent approach to navigating discontinuous events, making sure that leaders have a strategic framework in the vicinity for a ramification of potential effects.

Given the unpredictable nature of discontinuity, state-of-affairs planning is a critical method for leaders. Research in this area emphasizes the price of growing a number of viable future situations and corresponding techniques (Schoemaker, 1995). By considering a variety of outcomes, leaders can be more prepared to respond to adjustments and uncertainties efficaciously.

Scenario planning facilitates businesses to become aware of ability dangers and possibilities and put together for unique contingencies. It presents a based technique for navigating discontinuous events, ensuring that leaders have a strategic framework in place for the ramifications of potential results (Van der Heijden, 2005).

Building Agile Organizations

Leaders should focus on growing agile agencies that may reply swiftly to exchange. Agility includes breaking down silos, encouraging collaboration, and empowering personnel to make choices at various stages of the business enterprise. It additionally calls for a culture that values experimentation and studying from each success and screw-ups.

An agile organization can adapt quickly to changing market situations, customer options, and competitive threats. It permits leaders to capitalize on possibilities as they get up and make necessary changes without bureaucratic delays.

Building agile groups is vital for leaders in the age of discontinuity. Research on this region highlights the importance of breaking down silos, encouraging collaboration, and empowering employees to make choices at numerous tiers of the company (Hitt, Ireland, & Lee, 2000). Agile companies are better prepared to adapt quickly to changing marketplace conditions, customer choices, and competitive threats.

Agility also involves creating a way of life that values experimentation and gaining knowledge from each success and disaster (Eisenbeiss, Knippenberg, & Boerner, 2008). Leaders must encourage an increased mindset amongst their employees, in which setbacks are seen as possibilities for gaining knowledge and development.

Embracing Technology

Technological improvements are at the center of discontinuity. Leaders need to know not simplest undertake and adapt to new technology but also to leverage it to benefit a competitive part and beautify performance. This requires staying knowledgeable about emerging technologies and know-how of how they can be included in the company's methods and strategies.

Digital transformation is a key factor in leading within the age of discontinuity. Leaders ought to ensure that their corporations are prepared with the essential virtual infrastructure, skills, and competencies to harness the era successfully. They have to also be organized for potential disruptions that can come with generation, which include cybersecurity threats and statistics privacy worries.

Technological improvements are at the heart of discontinuity, and leaders must include them as a strategic asset. The literature underscores the importance of now not only adopting and adapting to new technologies but also leveraging them to advantage an aggressive side and enhance efficiency (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013).

Digital transformation, mainly, is an important issue of leading within the age of discontinuity. Leaders ought to make certain their agencies are geared up with the essential virtual infrastructure, talent, and talents to harness technology effectively. They ought to also be prepared for capability disruptions that can come with technology, such as cybersecurity threats and information privacy concerns (Westerman, Bonnet, & McAfee, 2014).

Stakeholder Engagement

Leaders must interact with various sets of stakeholders, such as clients, personnel, traders, and the broader network. Building sturdy relationships and open communique channels is essential for navigating uncertainty. Effective leaders understand the significance of maintaining trust and transparency with their stakeholders.

Stakeholder engagement is a fundamental approach for leaders in the age of discontinuity. Effective leaders understand the significance of preserving consideration and transparency with their stakeholders (Freeman, Harrison, Wicks, Parmar, & de Colle, 2010). Research highlights the need for leaders to interact with

a large set of stakeholders, which include customers, employees, buyers, and the broader network.

Stakeholder engagement includes no longer taking note of the worries and needs of stakeholders but also actively involving them in choice-making procedures (Mitchell, Agle, & Wood, 1997). Leaders who can build strong relationships and open communique channels with their stakeholders are highly placed to navigate uncertainty and benefit from the aid of those who have a vested interest in the organization's success.

The Evolving Nature of Leadership

The age of discontinuity has ushered in a new generation of leadership-demanding situations, characterized by an unexpectedly evolving era, extended globalization, and unheard-of levels of uncertainty and alternate. To navigate this complicated landscape correctly, leaders need to be prepared with a unique set of talents, characteristics, and techniques.

Leadership has gone through giant modifications through the years, reflecting the shifts in worldwide, social, and technological paradigms. Early leadership theories, which include trait and behavioral approaches, targeted figuring out specific tendencies or behaviors that made leaders effective. However, these models didn't account for the contextual nature of management.

In response to the evolving panorama, management theories advanced, giving upward push to contingency and situational theories. These theories emphasized the significance of adapting leadership styles to healthy the state of affairs or the fans. In the age of discontinuity, the want for adaptable management has by no means been more stated. Research in this region highlights the significance of leaders being flexible, agile, and able to navigate uncertainty.

Conclusion:

In conclusion, leadership in the age of discontinuity demands a multifaceted approach, mixing adaptability, imagination, prescient, international focus, resilience, and ethical integrity. As our world grapples with speedy technological improvements, globalization, and ongoing disruption, leaders have to domesticate these developments and techniques to thrive amidst uncertainty.

The present literature underscores the importance of non-stop studying, state of affairs planning, agile organizational systems, technological integration, and stakeholder engagement in effective management. These ideas now not only offer a roadmap for navigating the complexities of discontinuity but additionally provide precious insights for researchers and practitioners alike.

In these dynamic surroundings, leaders face demanding situations and possibilities. Those who can embrace change, foster innovation, and uphold moral values will be well-ready to persuade their groups toward success. By incorporating the characteristics and strategies highlighted in this overview, leaders can chart a course via the uncertain terrain of discontinuity and guide their agencies to thrive amidst steady alternatives.

Incorporating current examples into destiny research can provide valuable insights and relevance to the evolving landscape of leadership within the age of discontinuity. Here are some present-day examples that researchers may want to explore in-depth:

Elon Musk and Tesla, Inc.: Elon Musk's management fashion at Tesla gives a compelling case to have a look at in navigating technological disruption, worldwide growth, and moral concerns within the automotive and renewable electricity industries. Researchers should look at Musk's technique for innovation, strategic decision-making, and stakeholder engagement amidst fast enterprise changes.

Satya Nadella and Microsoft: Under Satya Nadella's leadership, Microsoft has undergone an extremely good transformation, embracing cloud computing, synthetic intelligence, and digital innovation. Future research ought to discover Nadella's management techniques for fostering innovation, coping with global operations, and navigating ethically demanding situations within the tech enterprise.
Greta Thunberg and Climate Activism: Greta Thunberg's leadership in weather activism has galvanized worldwide interest and sparked conversations about environmental sustainability and corporate obligation. Researchers should look into the effect of Thunberg's grassroots movement on organizational practices, public coverage, and societal attitudes toward environmental stewardship.

Jack Ma and Alibaba Group: Jack Ma's leadership of Alibaba Group presents insights into leading a multinational organization in the digital age. Researchers may want to examine Ma's strategic vision, approach to international expansion, and initiatives
to promote inclusive growth and entrepreneurship through systems like Alibaba's Singles' Day shopping festival.

Angela Merkel and Political Leadership: Angela Merkel's tenure as Chancellor of Germany offers a case study in political leadership for the duration of instances of economic uncertainty, geopolitical challenges, and social change. Future studies should study Merkel's leadership style, disaster control techniques, and contributions to European integration and global diplomacy.

Sundar Pichai and Alphabet Inc. (Google): Sundar Pichai's management of Alphabet Inc. (Google) gives possibilities for studies on an era conglomerate through innovation, company governance, and societal impact. Researchers should discover Pichai's management in regions that include artificial intelligence ethics, privacy law, and digital inclusion.

Jacinda Ardern and Crisis Leadership: Jacinda Ardern's management as Prime Minister of New Zealand for the duration of crises like the Christchurch Mosque shootings and the COVID-19 pandemic offers insights into crisis control, empathy-driven leadership, and constructing societal resilience. Future research may want to

look at Ardern's management conversation techniques, public health coverage responses, and long-term recuperation efforts.

Jeff Bezos and Amazon: Jeff Bezos's leadership of Amazon has formed e-trade, cloud computing, and virtual disruption on a worldwide scale. Researchers should look into Bezos's management principles, innovation culture at Amazon, and the employer's societal effect in regions along with exertions practices, sustainability, and antitrust law.

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Bharat Vikas - Steering nation growth with Public-Private Partnerships

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Abstract
Public-Private Partnerships (PPPs) have emerged as an increasingly popular approach to delivering public services in recent years. This paper provides an overview of PPPs, including their definition, historical background, types, advantages, and disadvantages. PPPs involve collaboration between the government and private sector organizations, where the private sector company provides financing, expertise, and resources to design, build, and operate public services on behalf of the government. PPPs are based on a contractual agreement between the government and the private sector company, where the government retains ownership and regulatory control over the public service and pays the private sector company for its services. The success of PPPs depends on careful project design and management, effective risk sharing, and transparent and equitable regulatory frameworks. PPPs offer several advantages, including risk sharing, improved efficiency and innovation, cost savings, and access to private sector expertise. However, PPPs also have some disadvantages, including complexity, potential for conflict of interest, lack of transparency, and cost overruns. The objective of this paper is to provide a comprehensive understanding of PPPs and their role in delivering public services. By examining the literature and research on PPPs, this paper will provide insights into the effectiveness and potential risks of PPPs, as well as suggestions for future research and improvements in the implementation of PPPs.

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Introduction

Public-Private Partnerships (PPPs) have become an increasingly popular approach to delivering public services in recent years, particularly in infrastructure and social services sectors. This approach involves a collaboration between the government and private sector organizations, where the private sector company provides financing, expertise, and resources to design, build, and operate public services on behalf of the government. PPPs are based on a contractual agreement between the government and the private sector company, where the government retains

ownership and regulatory control over the public service, and pays the private sector company for its services.

PPPs have emerged as a response to the challenges faced by governments in delivering public services, including limited funding, rising costs, and the need for expertise in complex projects. By partnering with the private sector, governments can leverage private sector resources and expertise to improve the quality and efficiency of public services. PPPs are also seen as a way to transfer risk from the government to the private sector, and to create incentives for private sector companies to deliver services on time and within budget.

However, PPPs are not without challenges and criticisms. PPPs can be complex and difficult to design and manage, and require a transparent and equitable regulatory framework. PPPs can also be seen as a potential risk to the public interest, as private sector companies may prioritize profit over public service delivery.

This paper provides an overview of PPPs, including their definition, historical background, types, advantages, and disadvantages. The objective of this paper is to provide a comprehensive understanding of PPPs and their role in delivering public services. By examining the literature and research on PPPs, this paper will provide insights into the effectiveness and potential risks of PPPs, as well as suggestions for future research and improvements in the implementation of PPPs.

Review of Literature

In their article "Public-Private Partnerships and the Public Interest," S. Frédéric and T. Murray (2015) examine the role of PPPs in the provision of public services. They argue that PPPs have the potential to deliver high-quality public services at a lower cost than traditional government provision, but caution that they must be designed and managed carefully to avoid negative impacts on the public interest.

H. Komives et al. (2018) provide a comprehensive overview of PPPs in their book "Public-Private Partnerships for Infrastructure." They examine the historical development of PPPs, different types of PPPs, and best practices for designing and implementing successful PPPs.

G. Hodge and C. Greve (2017) examine the role of PPPs in the delivery of public services in their article "The Challenge of Defining Public-Private Partnerships." They argue that PPPs are a complex and contested concept, and that there is a need for greater clarity and consistency in how PPPs are defined and evaluated.

In their article "Public-Private Partnerships: An International Review," G. Grossmann and S. Janusch (2018) provide a comparative analysis of PPPs in different countries around the world. They examine the different institutional, legal, and regulatory frameworks for PPPs, and identify key success factors and challenges.

Objective
The objective of this paper is to provide a comprehensive overview of PPPs, including their definition, historical background, types, advantages, and disadvantages. This paper will also examine the research methodology used in studying PPPs, as well as provide suggestions for future research.

Public-Private Partnerships:
PPPs involve a collaboration between the government and the private sector to deliver public services. PPPs are based on a contractual agreement between the government and the private sector company, where the private sector company is responsible for financing, designing, building, and operating the public service. The government retains ownership and regulatory control over the public service, and pays the private sector company for its services.

Types of Public-Private Partnerships:
Build-Operate-Transfer (BOT): This is a model where the private sector company designs, builds, and operates a public service for a fixed period of time, after which ownership is transferred back to the government. During the concession period, the private sector company is responsible for financing, constructing, and operating the facility.

Build-Own-Operate-Transfer (BOOT): In this model, the private sector company designs, builds, operates, and owns the public service for a fixed period of time, after which ownership is transferred back to the government. The private sector company is responsible for financing the project and recovers its investment through user fees or payments from the government.

Design-Build-Finance-Operate (DBFO): This model involves the private sector company financing, designing, building, and operating the public service for a fixed period of time, after which ownership is transferred back to the government. The private sector company is responsible for the entire life cycle of the facility, from design and construction to operation and maintenance.

Concessions: In this model, the government grants a private sector company the right to operate and maintain a public service for a fixed period of time. The private sector company is responsible for financing, operating, and maintaining the facility, while the government retains ownership and regulatory control.

Management Contracts: This model involves the private sector company managing and operating an existing public service for a fixed period of time. The private sector company is responsible for the day-to-day management and operation of the facility, while the government retains ownership and regulatory control.
Each type of PPP has its own advantages and disadvantages, and the choice of model will depend on the specific needs of the project and the interests of both the government and the private sector company involved. Ultimately, the success of any

PPP will depend on careful project design and management, effective risk sharing, and transparent and equitable regulatory frameworks.

Advantages and Disadvantages of Public-Private Partnerships:
Advantages of Public-Private Partnerships (PPPs):
Risk sharing: PPPs enable the sharing of risk between the government and the private sector, which can reduce the financial burden on the government and encourage private sector investment in public services.

Improved efficiency and innovation: The involvement of private sector companies in public service delivery can lead to increased efficiency and innovation, as private sector companies have a profit motive and may be more motivated to find cost-effective solutions.

Cost savings: PPPs can provide cost savings to the government, as private sector companies may be able to deliver public services more efficiently and at a lower cost than the government.

Access to private sector expertise: PPPs can provide access to private sector expertise, which may be beneficial in complex projects that require specialized knowledge.

Disadvantages of Public-Private Partnerships (PPPs):
Complexity: PPPs can be complex and require careful project design and management, which can lead to increased costs and delays.

Potential for conflict of interest: PPPs can create a potential conflict of interest between the private sector company and the government, as the private sector company may prioritize profit over public service delivery.

Lack of transparency: PPPs can be opaque and lack transparency, which can make it difficult to hold private sector companies accountable for their actions.

Cost overruns: PPPs can be subject to cost overruns, which can increase the financial burden on the government and undermine the benefits of the partnership.

Research Methodology:
Data collection: The research for this overview of PPPs was conducted using a literature review of academic articles, reports, and case studies on PPPs. The data used in this paper was collected from various academic databases, including JSTOR, ProQuest, and Google Scholar.

Period of research: The period of research for this overview of PPPs covers the last ten years, from 2013 to 2023. This ensures that the research is based on current and relevant literature on PPPs.

Type of research: This overview of PPPs is based on a literature review, which involves analyzing and synthesizing existing research and literature on PPPs. The purpose of a literature review is to provide a comprehensive understanding of the topic and identify gaps in knowledge that can be addressed in future research.

Limitations: The limitations of this research include the potential for bias in the selection of articles and reports, the use of secondary data sources, and the limited scope of the literature review. The results of this research should be interpreted with these limitations in mind.

Suggestions:

Proper project design and management: PPPs require careful project design and management, which includes clear objectives, timelines, and performance indicators. Governments should ensure that PPP projects are designed to achieve their objectives and that the performance of private sector companies is monitored and evaluated regularly.

Effective risk sharing: PPPs require effective risk sharing between the government and the private sector, which includes clear allocation of risks and responsibilities. Governments should ensure that the risks associated with PPP projects are appropriately allocated between the parties involved.

Transparent and equitable regulatory frameworks: PPPs require transparent and equitable regulatory frameworks to ensure that private sector companies are held accountable for their actions and that the public interest is protected. Governments should establish clear rules and regulations for PPP projects and ensure that they are enforced effectively.

Capacity building: PPPs require a high level of expertise and skills from both the government and private sector. Governments should invest in capacity building for their staff and private sector companies to ensure that they have the necessary skills to manage and implement PPP projects effectively.

Stakeholder engagement: PPPs involve multiple stakeholders, including the government, private sector companies, and the public. Governments should engage with all stakeholders in a transparent and open manner to ensure that their concerns are addressed and that they have a voice in the decision-making process.

Evaluation and monitoring: PPPs should be subject to regular evaluation and monitoring to ensure that they are delivering on their objectives and that private sector companies are meeting their contractual obligations. Governments should establish clear monitoring and evaluation mechanisms for PPP projects and ensure that they are applied consistently.

Addressing social and environmental concerns: PPPs should take into account social and environmental concerns and ensure that they are aligned with sustainable development goals. Governments should ensure that PPP projects are designed and implemented in a socially and environmentally responsible manner.

Conclusion:

PPPs have emerged as an important strategy for delivering public services in recent years. PPPs offer several advantages, including risk sharing, improved efficiency and innovation, cost savings, and access to private sector expertise. However, PPPs also have some disadvantages, including complexity, potential for conflict of interest, lack of transparency, and cost overruns. The success of PPPs depends on careful project design and management, effective risk sharing, and transparent and equitable regulatory frameworks.

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Examining the progress of working women: a bibliometric analysis and systematic review of two decades of research

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Abstract
This review study provides a comprehensive examination of the progress made by women in the workforce over the past two decades. The analysis is conducted using bibliometric analysis and a concentrated investigation of the Indian environment. In the initial stage of the study, a thorough gathering of pertinent literature from multiple databases was conducted to ensure a comprehensive exploration of the subject matter. Afterwards, a thorough bibliometric study was carried out using well-known databases such as Scopus and Web of Science. This analysis yielded useful insights into the trends, patterns, and thematic development within the research environment concerning women in the workforce.
The second phase focused specifically on analysing the Indian setting. This entailed a comprehensive examination of the distinct obstacles, prospects, and forces that impact the experiences of employed women in India. This analysis examines how several factors, including socio-economic status, cultural norms, government laws, and workplace practices, intersect to influence the experiences of Indian women in the workforce. This research provides a comprehensive picture of the advancements and ongoing difficulties encountered by women in the workforce during the past twenty years by combining the results of a bibliometric analysis and a contextual examination. The findings obtained from this study not only enhance the scholarly discussion on gender and employment but also provide valuable guidance to governments, organizations, and advocacy groups aiming to advance gender equality and empowerment in the workplace.

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Highlights of the Present Study

Comprehensive Bibliometric Analysis: This study performs a complete bibliometric analysis utilizing key databases such as Scopus and Web of Science. It offers a comprehensive picture of the research landscape on employed women

during the last twenty years. Through a methodical examination of publishing trends, citation patterns, and topic evolution, this study provides significant insights into the direction of research in this particular field.

Special Focus on the Indian Context: In contrast to numerous prior research, this paper devotes considerable focus to investigating the specific circumstances of working women in India. The report provides a detailed examination of the socio-economic, cultural, and policy aspects that are special to India. It offers insights into the distinct obstacles and opportunities that women encounter in the Indian workforce. This specialized approach enhances comprehension of gender dynamics in various cultural and socio-political contexts.

Holistic Perspective on Progress and Challenges: This study provides a comprehensive viewpoint on the progress of women's life in the workforce by combining the results of a bibliometric analysis and an investigation of the Indian setting. The report not only identifies areas of improvement but also emphasizes ongoing difficulties and inequalities, offering vital insights for governments, companies, and advocacy groups working towards gender equality and the empowerment of women in the workplace.

Introduction

India has a rich cultural heritage but has faced challenges due to patriarchal norms dominating its social structure historically. In urban areas such as Jaipur, the climate is evolving due to a growing number of women overcoming traditional barriers and establishing themselves in various professional sectors, achieving financial independence. The trend is mainly due to globalization, urbanization, and proactive governmental policies that focus on women's rights and aim for gender equality. The education sector, an important area that shapes societal perspectives and facilitates change, has experienced a notable rise in female participation. Despite a favorable trend, the industry nevertheless encounters several impediments that hinder the advancement of women's professions. Women in India have a significant role in the intricate process of the country's socio-economic advancement. Female professionals face several obstacles such as unequal remuneration, organizational prejudices, limited leadership opportunities, and societal gender role expectations. Women's delicate balance between professional commitments and household duties exacerbates these challenges, leading to emotional and physical strain. Previous research, carried out by many experts, has identified common issues, revealing the particular obstacles women encounter in fields like banking and the private sector. Government programs like maternity benefits and gender sensitivity training, along with shifting views in urban households, are driving changes despite the difficulties. Industries traditionally linked to women, like education, still encounter gender-related obstacles, such as inequitable compensation systems, restricted chances for women to assume leadership roles, and instances of harassment.

Bibliometric analysis is a crucial tool in this study, offering a structured approach to charting the intellectual landscape and thematic evolution of research on the

advancements and obstacles faced by women in their professional lives. This method enables the identification of significant trends, prominent authors, institutions, and countries in the development of a study field over a span of four decades. It accomplishes this by analyzing a substantial dataset consisting of 4,000 research publications published from 1984 to the present. Bibliometric analysis can identify heavily researched topics, regions with little attention, and emerging domains of interest. This analysis guides the study towards relevant and impactful research questions. This study primarily focuses on the following research questions:

Q1. What are the main themes and trends in studies on career progression and challenges encountered by employed women in the last forty years?

Q2. What are the primary individuals, organizations, and nations influencing the discussion on this subject?

1. Q3. What are the key knowledge deficiencies and new areas that need more investigation in this study field?
2. Q4. How have globalization, urbanization, governmental legislation, and sociological shifts impacted research on women's career advancement?
3. The questions aim to comprehend the complexities of women's careers in order to provide valuable insights for shaping future research and policy decisions. This study aims to conduct a comprehensive bibliometric analysis of research papers published from 1984 to the present, specifically examining the career advancement and obstacles faced by women in the global workforce. The study aims to examine the intellectual framework, notable patterns, impactful authors, and thematic progression in the subject by utilizing data from Scopus and Web of Science databases. The analysis will be performed using VOSviewer software. The project intends to explore key questions about the progression of women in their professions, the influence of sociocultural issues, barriers inside companies, and the consequences for legislation. The aim is to offer significant insights on gender differences in workplaces and provide advise on methods to empower and promote equality for women.

Methodology of Bibliometric Study

This study utilizes a systematic bibliometric approach to analyze the advancement of women's careers and the obstacles they encountered during the past four decades. The study utilized bibliometric methods to analyze a dataset of 4,000 scientific papers listed in the Scopus and Web of Science databases. Bibliometric approaches like citation counts, co-citation analysis, and keyword co-occurrence are used to identify main themes, notable authors, and the development of research trends in the subject. The VOSviewer software is used to visualize data and map the intellectual structure of the study area. This systematic approach enables the research to provide important insights on the societal influences, organizational challenges, and policy implications that impact women's professional trajectories.

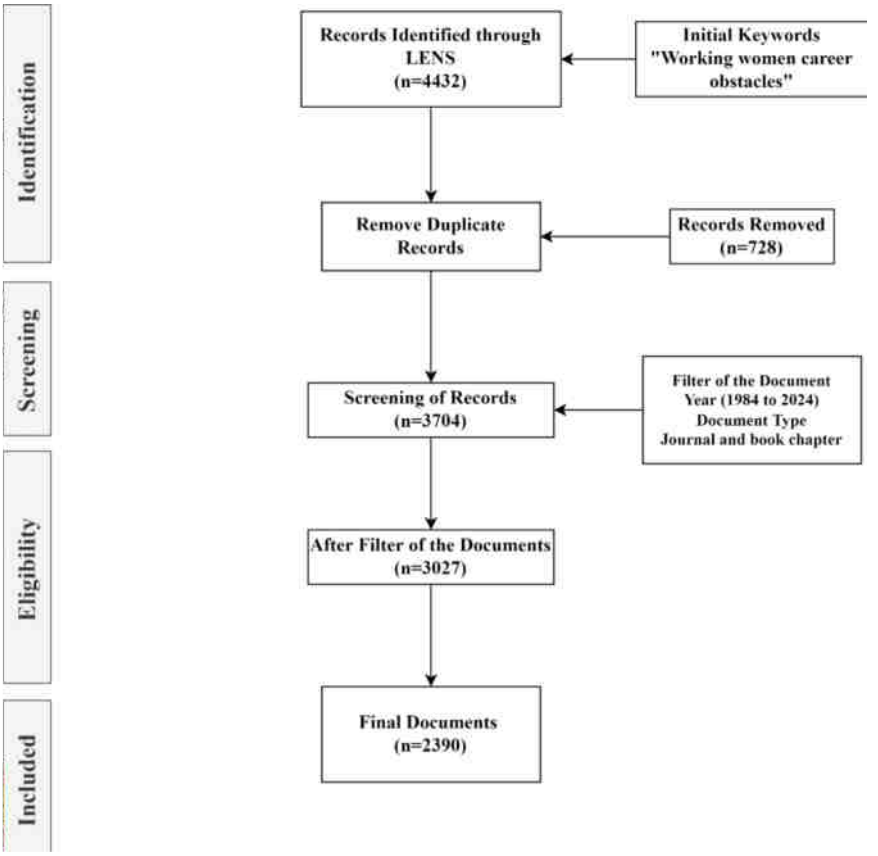

Figure 1 Screening of the documents for bibliometric analysis

The study aims to comprehensively explore the challenges and benefits faced by women in the workplace through the application of sophisticated statistical methods and examination of bibliographic information. This will assist in shaping strategic decision-making and directing future research in the realm of gender equality and women's empowerment. The study utilized the screening procedure outlined in Figure 1, using the PRISMA approach.

The investigation revealed that Education, Sociology, and Political Science were the most prevalent disciplines, with 624 and 616 papers, respectively, highlighting the relationship between women's occupations and educational and cultural settings. General Social Sciences, Arts and Humanities (miscellaneous), and Economics and Econometrics were also strongly linked to the topic, showcasing the diverse disciplinary viewpoints employed in its investigation. The disciplines emphasized were Cultural Studies, Gender Studies, and Developmental and Educational Psychology, focusing on the cultural, gender-related, and psychological components

of women's career pathways. Table 1 displays the main subjects of the materials chosen for the study.

Table 1 Top subject selected for present bibliometric analysis

Subject	Document Count
Education	624
Sociology and Political Science	616
General Social Sciences	294
Arts and Humanities (miscellaneous)	279
Economics and Econometrics	258
Cultural Studies	212
Gender Studies	211
Developmental and Educational Psychology	194
Law	193
History	192
Health(social science)	183
Health (social science)	178
Social Psychology	176
Social Sciences (miscellaneous)	172
General Business, Management and Accounting	153
Business and International Management	129
Anthropology	114
Political Science and International Relations	113
General Medicine	103
Applied Psychology	96

Fields like Law, History, and Health (a subdivision of social science) offered unique perspectives on the legal, historical, and health aspects that influence women's professional paths. By incorporating numerous themes, the research topic's complexity is emphasized, leading to a comprehensive understanding of the challenges and opportunities that impact women's professional trajectories across many areas.

Result and Discussion

The results and discussion section adopted several bibliometric methods to analyze the scholarly environment regarding career advancement and obstacles faced by working women. Co-occurrence analysis was used to identify main topics and their

connections in the text. The citation analysis provided valuable insights into the most prominent publications and writers that have had a substantial impact on the subject's development. Keyword analysis helped identify important terms and emerging trends across time, while publication year analysis revealed the evolution of study focus and intensity. The author's keywords were evaluated to understand the nuanced perspectives and main themes in different studies, facilitating a comprehensive understanding of the subject domain.

Publication over time

Research production has shown a fluctuating but mostly increasing trend over the past forty years, as seen by publishing patterns. Starting with 35 publications in 1984, there was a significant increase in the 1990s, peaking at 90 publications in 2003. The trend has been consistently stable, with a significant growth in recent years, culminating in a total of 85 publications in 2022. Figure 2 displayed the publication trend over time.

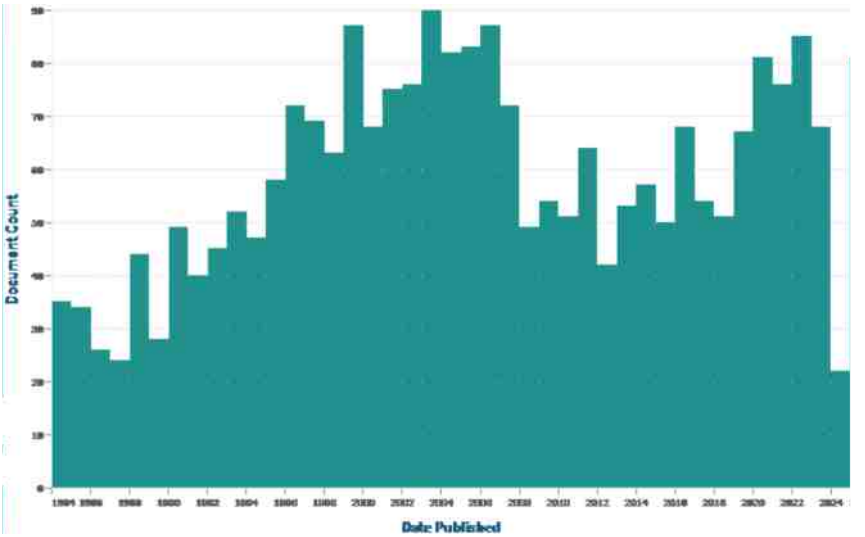

Figure 2 Publication over time for present study

Author keywords

Examining author keywords uncovers various topic focuses in the study of career progression and challenges encountered by employed women. The keyword 'Gender' is the most commonly mentioned, indicating its prominent importance in the discussion. This is followed by 'demographic factors,' 'economic considerations,' and 'population,' each mentioned five times. Terms like 'covid-19,' 'education,' and 'stem' signify current worries and the interconnectedness of problems impacting women's professional paths. The term 'medical education' has the lowest connection strength, suggesting its peripheral relevance in this context. The keywords highlight the many constraints and opportunities that influence women's career paths.

Figure 3 displayed a network plot analysis of the top ten keywords used by the authors.

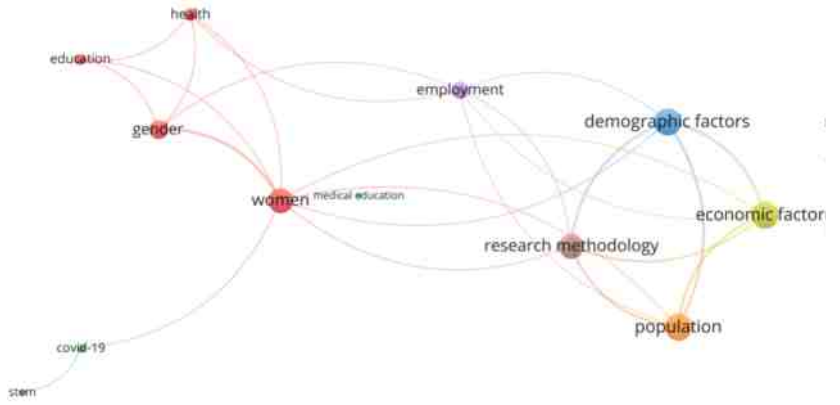

Figure 3 Most important keywords used by Authors

Conclusion

This bibliometric study provides valuable insights into the evolving professional advancement and obstacles faced by working women in the past forty years. The study's results suggest a growing academic emphasis on the relationship between gender, demographics, and economic factors that influence women's career trajectories. The importance of terms like 'gender,' 'demographic issues,' and 'economic considerations' underscores the many challenges that women face in their careers. The research highlights the present importance of 'covid-19' and demonstrates its impact on women's employment and prospects. Despite progress in promoting gender equality and empowerment, persistent disparities and biases continue to hinder women's career progression in several sectors. The fluctuating publication trends throughout time reflect evolving research objectives and societal impacts on scholarly dialogues. The study's comprehensive methodology, which includes various disciplines and subject areas, improves our detailed understanding of the complex factors that impact women's careers. The results have significant implications for policymakers, educators, and institutions seeking to establish equitable and diverse work settings, promote systemic enhancements, and enhance the status of women in the international workforce.

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Revisiting the indigenous farming knowledge through ritualistic performance among the Santhals of Bengal

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Abstract
Indigenous farming practices in Santhal community is an age-old practice which is embedded with rituals and culture. The indigenous people i.e. the Santhals possess a unique set of belief towards nature which is constituted through relationality, dependency and respectful representation. For them land, water and forest are not only their means of indigeneity but it is also their mode of existence. The indigenous ways of farming with distinctive ritual practices offer an insightful human- environment relationship. Their knowledge about farming practices have evolved through their long-standing social institutions that is inherited from the elder folks in family. It provides them the norms for crop selection, technology adoption and also conservation of natural resources which is ultimately based on rationality and has scientific alignment. This ethical basis has helped them to promote their social identity bestowed with values and deep reverence for nature. Therefore, this paper attempts to document some of the indigenous farming practices through their ritualistic performance which would serve as a symbol of their cultural information. Through an in-depth interview and field visit an attempt has been made to understand how indigenous farming practices along with their rituals have laid a strong foundation of their cultural identity.

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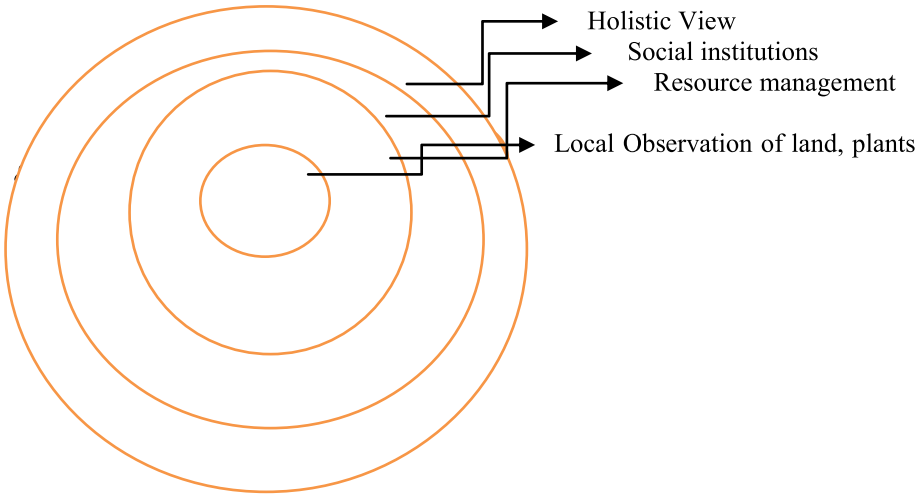
Introduction

Indigenous farming knowledge is an age-old convention which is transmitted from one generation to another in the form of beliefs and practices derived from experiences. This knowledge is based on available local resources and traditional tools and techniques best adopted to meet the local needs. It is inherited and is also built on customary practices of the communities. (Behera,2021). The practice of indigenous knowledge is all about the story of how a particular community adapts

to a specific ecosystem. (Berkes,2017). The long-standing social institutions of the indigenous community through their rituals and custom teaches them to build relationship with environment bestowed with deep respect and reverence. Hunn (1993) states that traditions are the product of the intelligence of generation which has been tested and verified in the rigorous laboratory of survival.
India has a rich repository of indigenous knowledge. So, West Bengal is a land having enriched cultural heritage with varied communities. The tribes especially the Santhals of Bengal perform different rituals related to agricultural production which is guided by their culture. Every agricultural operation is associated with rituals performed by the community as a whole. In this connection Mahapatra (1982) has discussed that rituals were devised in the culture of tribal community in order to know the supreme power of nature. It symbolically represents mans submission to the divine power. Farming before the Santhals is not just a means of economic activity but it is deeply ingrained with cultural values, beliefs as well as relationship with land.

Studies have revealed that such modes of practices are sustainable as it is based on sound scientific principles. Thus, Bronowski (1978) clearly mentions that in every society man practices both art and science in order to survive. These rituals are a part of their culture which signifies meaning and is rooted in the land closely related to a sense of place. (Berkes,2017) This very attitude of the indigenous people brings a contrast between indigenous and scientific knowledge. Ingold (2006) therefore points out that our life should not be restricted to mere attributes rather inject sacredness into the machine-like scientific conceptualization of ecosystem.

Analysis of Indigenous Knowledge and Management System
The Santhals perceive nature in a holistic way and the idea of environmental aspects cannot be divorced from their spiritualism. The rituals signify meaning which is deep rooted with their land and their interaction with nature. The Santhals have their own heritage of rituals which is an integrative dimension of the cultural practices among them. These rituals bind the Santhal people together into an identifiable whole. They believe that humans have no control over the naturally evolved materials and through these rituals it teaches them to understand and interpret the mysterious power of nature. These rituals teach them to be submissive and pay reverence to nature. All natural elements (land, water, forest) are considered as one entity due to the presence of their religious, cultural and sacred values. So, before we understand the indigenous ways of farming practices, it is pertinent to have an insight of how they develop their relationship with environment.



Levels of analysis of traditional knowledge and management system

According to Berkes (2017) there are four levels of analysis of traditional knowledge and management system. They are as follows:

At first, there is an empirical knowledge about animals, plants, soil and landscape. It is developed through observation and the source of survival is determined accordingly among the indigenous groups.

The second level of analysis is concerned with resource management system. Based on empirical observation tools and techniques are developed accordingly to work in environment. Here, a functional relationship develops between human and nature.

Third, rules, norms and code of ethics among indigenous groups are developed through rituals and cultural practices while interacting with environment. This culminates into deep emotional feelings with nature.

Finally at the fourth level of analysis is the holistic view which shapes their environmental perception and gives meaning to the observation made in the environment. It includes their observation-practice-beliefs that describes as a whole the system of indigenous knowledge. Indeed, the traditional environmental knowledge is significant not only for indigenous groups rather for mankind and nature as whole, thereby restoring the unity of mind and nature(Bateson,1979).

Objectives of the Study

1. To identify the indigenous farming practices among the Santhals of Bengal
2.To understand how the traditional rituals are related to the agricultural practices among the Santhals of Bengal

Methodology

Keeping the broad vision of sustainable goals in mind an attempt has been made to document some indigenous methods related to farming using ethnoscientific means. Ethnoscientific inquiry was undertaken to capture the Santhal experiences in

agricultural activities for in-depth understanding of the social phenomena within their natural setting. The study was based on semi structured interview, visit to different field sites as well as informal interaction with the Santal community members. The population of the present study was the Santhal tribe of Birbhum district of West Bengal. Three villages were chosen from Bolpur-Sriniketan in Birbhum district for the study because maximum rural Santhals (40.2%) reside in this district as per 2011 Census report.



Birbhum District

Purposive sampling was employed and the samples were selected occupation wise to fetch a unique set of understanding of farming practices among the Santhals. The samples comprised of farmers, landless labourers, cattle- rearers and rural woman who were the custodian of rich indigenous knowledge. A total of 6 informants were interviewed.

Distribution of Samples in the Villages

Villages	farmers	landless labourers	cattle rearers	rural women
Bishnubati	2			
Palashbani				2
Ramlakshman danga		1	1	

Before approaching the informants, the interview guide was translated in Bengali to further facilitate their understanding of the questions. The gatekeeper gave access to the informants and made all possibilities for a comfortable and a healthy discussion. Rapport building with the informants was made prior to the interview. While taking note of the key points during the session a voice recorder was used with informed consent from the informants. During the process of data collection, observation was also made about the various activities of Santhals.

Findings and Discussion

Before we proceed with the outcome of the study, it is indeed essential to have a general overview of the topographical feature of the region. Bolpur-Sriniketan is situated at 2340N 8743E at an average elevation of 56 meters. Agricultural practice has been the main source of their earning. The land in this area is not much fertile and comes under drought zones of West Bengal. But these communities have

developed sustainable measures through the application of indigenous knowledge passed through generations. They have applied their knowledge not only to maintain the soil fertility but also good crop yields.
Paddy is cultivated extensively in this region. Three varieties of paddy are sown throughout the year. They are called *Aman* (winter rice), *Boro* (summer rice), *Aus* (autumn rice).

Preparation of land before farming

During the field visit, it has been encountered that the Santal rituals are associated to the different agricultural operation. Hence, sacredness is a belief component of traditional knowledge (Bateson,1979). The Santal families living in these areas still practice these rituals with sincerity and dedication.
Land has a significant role to play in the lives of Santhals. They term land as (*Atubotre)* which they consider to be the most crucial resource for them. The land use pattern by the indigenous communities is shaped by strings of spiritual beliefs (Kapoor,2004). *Akhan Parab* (Jan-Feb) is performed just before the first ploughing of land to ensure success in agriculture. After the festival is over, the Santhal farmers begin to prepare the land by burning the cowdung cakes prior to the tillage as part of seed bed preparation. The process of tilling the land is carried out through ordinary wooden ploughs till the soil is loose enough to permeate air and moisture.The dried cowdung is finally mixed with ashes in the field at different places and leveling of the land surface is done with wood log.After the seed bed is prepared, a ritual known as *Jugnibiday* (March-April) is performed before sowing of seeds and to drive evil eyes and ensure success in agriculture. Thereafter the seeds are sown manually.

Cropping Pattern

Paira cropping is famous among the Santals. It is a practice where lentils, potatoes, onion are sown in the lower strata of the soil before the harvest of rice with an objective to use the residual moisture of rice field.Apart from it they also grow pigeon pea, cow pea, bengal gram,mustard as they are aware of it is nutrious value and it also brings enrichment to the soil.Inter cropping is also very common among them.It aims to maximize production from the field by mixing two kinds of species (Ramakrishnan,1992). Bengal gram has a special significance in the cultural life of the Santhals.*Gomhaparab* (Jul-Aug)is performed in *tulsi- sthan* to avert evil eyes from granary and they use these bengal grams and other grains as offerings to God.

Indigenous knowledge about Crop Protection

Maintaing the soil and crops are of utmost importance in the lives of Santhals because they believe that the spirits of their forfathers reside in these land. The Santal farmers prepare pesticides in a very natural way and prefer to use natural pesticides in the farm. They mix bitter leaveslike Neem with water and splash on the crops to prevent pest attack. Apart from it they use cowdung ash to prevent pest attack to solanecous vegetables (especially tomatoes and brinjal). The farmers have also experienced that the odour of *sal andsalap leaves* prevent crop attack.

Inorder to ensure success in agricultural activities and prevent crops from being infested from rodents and pests they observe a ritual known as *Mahmare* (April-May) to seek blessings from their benevolent spirits.

Post harvesting activities followed with rituals

The post harvesting activities are equally important as sowing of seeds.*Bonga rakab* (November- December) is associated with the completion of harvesting of Aman paddy. It is associated with the harvesting of Aman paddy which is presumed through using of traditional means and then the offering of the newly harvested paddy is made to the presiding deity of the village at *Jahirthan* i.e the sacred place.

After the rituals are over post harvesting activities begin. The stalks are taken away to their home and are beaten against the hard surface as a result straw,chaffs and other impurities are dropped with the thressed grain. After threshing is over, they soak those rice grains overnight.Next morning,they put those grains in boiling water to remove the chaff and other impurities.It ensures that only pure rice grains remain. Then they dry those rice grains under the sun for 2-3 days to prevent moisture content. After it is completely dried the rice grains are separated from the outer husk by an agricultural tool known as *Dheki*, which is exclusively done by women folk. It helps to retain the original taste of rice and maintain the nutritious value.

Immediately after the *Bonga rakab*, another festival *Sohraey* ,the biggest festival among the Santhals, is celebrated in the month of January. It is commemorated to thank their cattle for their hard work and also for everything that has helped them to attain good harvest.

Conservation of Natural Resource through Ritualistic Performance

Conservation of natural resources are universally practiced among indigenous communities (Gadgil et.al.1993;Mc Neeley and Schroth 2006), so among the Santhals of Bengal.*Baha parab* (March) is another festival which is very popular among them. During this time they worship mother nature for her new look as she blossoms with new leaves and flowers. There is a strict norm among the Santhals that they can not pluck leaves nor can they cut woods.during this month. It is only after the devotees pray at *Jaherthan* the sacred place of the Santhals they can use the resources from Nature. Through these festival they pay great reverence to the mother nature and also learn to conserve and protect natural resources.

In this way the Santhal farmers engage themselves in various rituals to please *Maram Buru* (the Almighty) with a belief that he would take care of them and bring prosperity in their life. Through their religious belief and practices, they build relationship with the environment and feel connected to it. There is a Fijian expression of spiritual affinity which is apt for all indigenous group- *ne qua vanua*, the land which supports me and to which I belong (Ravuvu,1988)

Conclusion

So, the whole corpus of this study is to accomplish the experiences of the Santhal famers in using the indigenous techniques of farming through their rituals and practices. They have used their local expertise to preserve the resources in the midst

of all crisis. It is also important to recognize that indigenous ways of farming are not mere traditions but strategies which have evolved from time immemorial and has proved to be beneficial in contemporary times. These practices are associated with ethics of resource conservation by which future generations can survive without stress (Behera,2021). Therefore, traditional wisdom is indeed required to fill the essential gaps in the ecological understanding (Biswas & Bain,2002) of contemporary urban people as it helps to combat with the adverse environmental condition. It can thus be hoped that the synthesis of several indigenous traditions can make this earth into a new, sustainable and beautiful planet (Kuchli,1996).

Delimitations: this study was restricted to Santhals of Bengal and to their agricultural practices.

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droplets facilitated widespread outbreaks across international borders, leading to significant illness, mortality, and disruptions to daily life and economies.
In response to the pandemic, communities worldwide have relied on their local knowledge and practices to navigate the challenges posed by COVID-19. Community knowledge. Community knowledge developed over generations and transmitted orally refers to the knowledge and practices of local communities around the world. It is developed from experience gained over hundreds of years and changed to the local culture and transmitted from generation to generation orally. Traditional medicine consists of knowledge received from the past and handed down from generation to generation. Its encompasses of traditional medicine, cultural beliefs, agricultural practices, and more. This indigenous knowledge, deeply rooted in local cultures, has proven valuable in addressing various aspects of the pandemic.
It is collectively owned and takes the form of stories, folklore, proverbs, beliefs, rituals, community laws, agricultural practices and animal breeds. Today the value of indigenous knowledge is growing. This knowledge is valuable not only to those who depend on it in their daily lives, but also has a profound contribution to modern industry. Indigenous medicine encompasses knowledge and practices used for diagnosis, prevention, and cure. In this sequence Indian knowledge system and it's tradition helped a lot to deal with the pandemic.

Traditional Indian knowledge systems and practices have played a significant role in combating COVID-19. Ayurveda, Yoga, and other traditional medicinal practices have been utilized for their potential therapeutic benefits. Herbs and spices traditionally used in Indian cuisine, such as turmeric, ginger, and tulsi (holy basil), are believed to possess immune-boosting and anti-inflammatory properties that may aid in fighting respiratory infections. These traditional medicines, spices, even the daily routine of our past helps in fighting this pandemic. The paper is going to give a brief insight on how the Indian methods were helpful in overcoming this frightful situation we were in.

Objectives

1. To analyse the initiatives taken by people on their level to deal with COVID-19.
2. To understand the different ingredients that were helpful according to the Ancient Indian Knowledge System.
3. To identify the specific uses of home remedy in preventing and managing COVID-19.

Discussion

According to the World Health Organization (WHO), approximately 80% of people in developing countries rely on traditional medicines for their primary healthcare needs. In India, traditional medicine systems like Ayurveda, Yoga, Unani, Siddha, and Homeopathy have been deeply ingrained in the cultural fabric for centuries. Leveraging this indigenous knowledge, Indians took various initiatives at their own level to combat the COVID-19 crisis. When India announced a nationwide

lockdown on 24th March 2020 in response to the escalating COVID-19 cases, it posed significant challenges for millions of people. With no vaccine available and cases surpassing 4.4 million by mid-September 2020, the situation seemed daunting. However, amidst these challenges, grassroots initiatives and traditional practices emerged as crucial pillars of support.

Despite the absence of a vaccine and the surge in COVID-19 cases, individuals across the nation took proactive measures to protect themselves and others. The initiatives taken by people on their own level helped them a lot as well as the government to overcome such crisis. The government's efforts to contain the virus were complemented by the voluntary compliance of citizens with guidelines such as hand washing, wearing masks, social distancing, and limiting outside contact. In addition to washing hands, wearing face masks, practicing social distancing, and limiting outside contact, people also embraced innovative solutions such as homemade face coverings and hand sanitizers when commercial products were in short supply. Communities organized themselves to provide essential services and support to vulnerable populations, demonstrating resilience and solidarity in the face of adversity. In a densely populated country like India, where enforcing regulations can be challenging, public trust played a pivotal role in fostering adherence to preventive measures. The collective commitment of citizens to the common goal of curbing the spread of the virus demonstrated the power of community resilience and solidarity. Public trust in government directives played a crucial role in fostering compliance with preventive measures. Research indicates that trust in government institutions and leadership positively influences public adherence to guidelines during health crises. In India, the government's communication strategies, including public awareness campaigns and messaging from political leaders, helped build trust and promote compliance with COVID-19 guidelines.

As we know that COVID-19 is a disease that impacts the people with low immunity significantly. So the main task was to boost up the immunity of people. While building trust political leaders in India have emphasized the importance of adopting traditional remedies and home-based measures to boost immunity and safeguard public health. Recognizing the rich heritage of indigenous knowledge systems, leaders have urged citizens to incorporate practices like consuming kadha (herbal decoctions) and adhering to home remedies into their daily routines. These messages align with the World Health Organization's recognition of traditional medicine as a valuable resource in addressing public health issues. Traditional remedies, often derived from natural sources and passed down through generations, have been known for their immune-boosting and preventive properties. Prime Minister Narendra Modi had said that people should follow official guidelines to use particular herbal combination known as 'Kadha', which will increase the immunity of people. Use of kadha, drinking warm water, doing gargling with salt water, were the common initiatives taken by people of India to prevent COVID-19.

Kadha, a traditional Indian herbal concoction, comprises a blend of potent ingredients renowned for their therapeutic properties in combating respiratory disorders such as cough, cold, and flu. This time-honored remedy features a rich assortment of Indian herbs, including basil leaves (tulsi), turmeric (haldi), giloy, black pepper, ginger, clove, cardamom, lemon, and ashwagandha. Each component of kadha is carefully selected for its unique medicinal benefits, contributing to its efficacy in promoting respiratory health and overall well-being. A comprehensive study conducted by the Ministry of Ayush has underscored the instrumental role of kadha in achieving holistic health. This research highlights kadha's ability to bolster the body's defense mechanisms by combating microorganisms responsible for infections. The antioxidants present in kadha's ingredients play a pivotal role in neutralizing harmful free radicals and enhancing immune function, thereby fortifying the body's natural resilience against illnesses. Furthermore, kadha serves as a veritable powerhouse of essential vitamins and nutrients, making it a potent and natural immunity booster. It is enriched with a diverse array of vitamins, including vitamin A, B, B2, B3, E, and C, along with folic acid. Also, kadha contains essential minerals such as iron, zinc, potassium, and magnesium, which play crucial roles in supporting various physiological functions and maintaining overall health. As a natural and potent immunity booster, kadha continues to be embraced by individuals seeking to enhance their well-being and safeguard their health against external threats.

Apart from this, during the COVID-19 pandemic, several key herbs emerged as prominent allies in bolstering immunity and alleviating symptoms associated with the virus. Among these, Giloy, scientifically known as Tinospora cordifolia and revered as "Amrit" in Sanskrit, played a pivotal role in enhancing the body's natural defense mechanisms. This miraculous herb is renowned for its immune-boosting properties and is widely consumed to fortify the body against infections. Additionally, Giloy exhibits anti-toxic, antipyretic, and antioxidant effects, further contributing to its therapeutic efficacy.

Another important home remedy used widely during COVID was turmeric. Turmeric, also known for its active compound curcumin, emerged as another potent home remedy during the pandemic. Studies suggested that patients who incorporated turmeric into their regimen experienced faster recovery from symptoms such as fever, cough, sore throat, and breathlessness. Furthermore, individuals using turmeric exhibited oxygen saturation levels above 94%, indicating its potential in improving respiratory health. The Council of Scientific and Industrial Research (CSIR) highlighted turmeric's historical use in India for wound healing, underscoring its multifaceted benefits in combating infections and promoting overall well-being.

Apart from these, one more important herb was Tulsi that is basil leaves to increase the immunity in the battle against COVID-19. Tulsi, or basil leaves, emerged as a formidable ally in the battle against COVID-19, owing to its strong antiviral,

antibacterial, and immune-boosting properties. Hartha Shyam, Chief Dietician from Apollo Hospital, Jubilee Hills, emphasized the synergistic effects of Tulsi and turmeric in enhancing immunity. Tulsi holds a revered place in Ayurveda for its diverse healing properties and is rich in essential nutrients like vitamin C and zinc, further augmenting its role as a natural immunity booster. Its ability to prevent infections underscores its significance in promoting overall health and well-being.

Beyond the well-known immune-boosting properties of Giloy, turmeric, and Tulsi, other herbs like ginger, cloves, cardamom, and black pepper also play significant roles in supporting respiratory health and immune function. Ginger, renowned for its anti-inflammatory and antimicrobial properties, not only aids in digestion but also promotes respiratory health by reducing inflammation in the airways. Similarly, cloves exhibit antimicrobial and analgesic properties, offering relief from respiratory symptoms and contributing to overall well-being. Cardamom and black pepper, rich in antioxidants and antimicrobial compounds, further enhance immune function and respiratory health by combating harmful pathogens and supporting the body's defense mechanisms.

In addition to herbal remedies, various home-based practices have gained prominence for their role in enhancing immunity and combating COVID-19. Gargling with warm water mixed with salt or turmeric stands out as a simple yet effective method to alleviate throat irritation and reduce the risk of respiratory infections. This practice helps to cleanse the throat and oral cavity, eliminating pathogens and soothing inflammation. Moreover, drinking warm water throughout the day is recommended for its hydrating effects, which support overall health and facilitate the elimination of toxins from the body. Adequate hydration is essential for maintaining optimal immune function and promoting the body's natural detoxification processes.

During this challenging time the importance of hand hygiene has been emphasized like never before. Traditional herbal sanitizers offer a natural and effective alternative to chemical-based products. These sanitizers typically contain potent antibacterial and antiviral herbs such as neem, tulsi (holy basil), and aloe vera. Neem, known for its antimicrobial properties, acts as a natural cleanser and disinfectant, while tulsi provides additional protection against respiratory infections. Aloe vera soothes and moisturizes the skin, preventing dryness and irritation commonly associated with frequent hand sanitization. Notably, the adoption of namaskara over handshakes in many countries underscores the global recognition of Indian traditions amidst the pandemic.

Nasal application, or Pratimarsh Nasya, which is a traditional Ayurvedic practice that involves applying sesame oil, coconut oil, or ghee into the nostrils was also advised by Ministry of AYUSH during this crucial time. This therapeutic technique helps to lubricate the nasal passages, alleviate dryness, and prevent infections. Sesame oil and coconut oil possess antimicrobial properties that help to cleanse the

nasal passages and protect against respiratory infections. Ghee, with its soothing and nourishing qualities, helps to maintain the health of the nasal mucosa and support respiratory function. Practicing nasal application regularly, especially in the morning and evening, can help to enhance respiratory health and strengthen immunity.

Also herbal tea and jeera water have gained prominence as immune-boosting beverages. Herbal tea, infused with potent ingredients like ginger, tulsi, cinnamon, and black pepper, offer a comforting and therapeutic drink. These herbs are known for their immune-stimulating and anti-inflammatory properties, helping to strengthen the body's defenses against infections. Similarly, jeera water, prepared by soaking cumin seeds overnight, aids digestion and enhances immune function. Rich in antioxidants and antimicrobial compounds, both herbal tea and jeera water provide valuable support for overall health and well-being during these challenging times.

Apart from this, the incorporation of yoga and meditation into daily routines has been widely recognized for their profound impact on physical and mental well-being, particularly in the context of COVID-19. Yoga, with its emphasis on breath control, gentle movement, and relaxation techniques, helps to manage stress, improve respiratory function, and enhance overall immune function. Similarly, meditation practices promote mental clarity, emotional resilience, and inner balance, fostering a sense of calm and equanimity amidst uncertainty and adversity. These mind-body practices not only strengthen the body's defenses against infections but also promote holistic well-being by addressing the interconnectedness of physical, mental, and emotional health.

Concluding Remarks

From the condition spreading throughout the whole country, the method of precaution and boosting immunity was the best choice to prevent ourselves from Coronavirus. In those precarious situations these home remedies, herbs and spices played a huge role against viral infections. In the present paper, various remedies like kadha, gargling and many herbs used in them like Giloy, turmeric, cloves, ginger, etc, that has been present and being used from ancient times in Indian system with their antiviral, Anti microbial, antioxidants and immunity boosting properties. These simple products played a significant role in overcoming such diverse situation. These natural products became a huge reason for boosting immunity in people of India that has been present and used from ancient times. Hence definitely the Indian knowledge system played a huge role during the crises of COVID-19.

In the face of the widespread transmission of COVID-19 across India, a preventive approach centered on immunity-boosting and precautionary measures emerged as a primary strategy to mitigate the risk of infection. Amidst the precarious circumstances, traditional home remedies, herbs, and spices garnered attention for

their potential efficacy against viral infections. The paper highlighted several remedies such as kadha and gargling, incorporating key herbs like Giloy, turmeric, cloves, and ginger, which have been integral components of the Indian healthcare system for centuries. These remedies are revered for their antiviral, antimicrobial, antioxidant, and immunity-boosting properties, making them invaluable assets in combating infectious diseases. The utilization of these simple yet potent natural products played a pivotal role in navigating the challenges posed by COVID-19. With roots deeply embedded in ancient Indian knowledge systems, these remedies have stood the test of time, offering a holistic approach to wellness and disease prevention. Their widespread adoption during the pandemic underscored their relevance and effectiveness in contemporary healthcare practices. This resurgence of traditional knowledge and practices in the face of a modern-day health crisis highlighted the importance of preserving and promoting indigenous healthcare systems.

In conclusion, the Indian knowledge system played a pivotal role in navigating the COVID-19 crisis, offering practical solutions and guidance rooted in centuries-old wisdom. As the world continues to grapple with the challenges posed by infectious diseases, the integration of traditional remedies and practices into mainstream healthcare approaches holds promise for promoting health, resilience, and well-being in communities worldwide.

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Indian Traditional Knowledge in Agriculture: A Revisit

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Abstract
In the last few decades, many a number of our resources and traditional practices has been lost and forgotten in the name of different revolutions, modernization and globalization. Amongst them, culture and cultural intervention are of great importance. It includes knowledge and practices developed by different groups of people in the different geo-climatic regions of our country through the practical experiences and innovations which is retained by family, group or race generation after generation through oral, folk lore, physical practices and many other methods. Among them, India had the richest sources of Indigenous Traditional Knowledge (ITK) regarding the practices of agriculture which was literally sustainable. But indiscriminate application of agrochemicals after green revolution extended our greed and reduced the quality of crops, destroyed the environment, damaged the soil health, lowered the water table level, affect the plant and animal health and shrink the biodiversity. Now time has come to rethink and reform our system of agriculture which is the main pillar of our country. In the present-day situation, the agriculture must be sustainable and organic with traditional practices and indigenous cultivars of crops. But there are still some hindrance to bridge some gaps like lack of proper communication between research sector and common farmers, IPR issues regarding ITK, validation and acceptance of farmers knowledge by the scientists, lab to land project initiatives by the scientists and so on. To make the mission successful, immediate initiatives need to be taken to rescue the lost information/ knowledge and translation of ITK with appropriate modification blending with scientific technologies to make it more amicable for organic farming.

Keywords : Indigenous Traditional Knowledge, Organic farming, Sustainable agriculture.

India is a blessing-land of the Nature as it is provided with a vast range of geo-climatic regions with different soil types to harbor a spectrum of flora and fauna. From the prehistoric period several ethnic groups of people of this country with their own experience, knowledge and technology domesticated local plants and animals as per need utilizing local natural recourses. These knowledge, experience and continuous improvement of technology moved forward generation after generation through different mode of verbal communications and direct physical

practices in the form of Traditional Knowledge (TK). Every country has its own bag of knowledge according to their native diversity of flora and fauna, local natural resources, climatic conditions, socio-economic culture and life style pattern. Thus every country has its own TK in the form of Indigenous Traditional Knowledge (ITK). TK are of different kinds like Cultural knowledge, Artistic knowledge, Medicinal knowledge, Biodiversity and natural Resources knowledge, Agricultural knowledge and sacred knowledge (Jose & Manchikanti, 2021).

Agriculture is the backbone of Indian society. Presently, about 60% of its population is dependent on agriculture and this sector is the highest contributor to the GDP of India (Princy D., 2022). Indian agricultural system exhibited a remarkable transformation after Green Revolution due to increased concept of globalization and modernization. During the last few decades the agriculture system has gradually been shifted from the practice of environment friendly, labour-insensitive, local resource utilization based, traditional knowledge based, lesser crop- risk factor based, local variety seed based indigenous system of organic agriculture to agrochemical based, monocropping concept based, labour based, capital based, New-age farm equipment based, HYV seed based, surplus profit based agri-business (Princy, 2022). The consequences of this situation caused a drastic damage on environment and ecology, loss of indigenous varieties of crops along with traditional knowledge and culture. Initiatives have been taken into consideration to compensate this damage since 1980s in the name of sustainable agriculture. Environmental protection and food security are two main benefits of sustainable agriculture. Sustainable agriculture is able to cover several SDGs to fulfill Agenda 2030 like SDG -2 (zero hunger), SDG -3 (good health and well-being), SDG -8 (decent work and economic growth), SDG -12 (responsible consumption and production), SDG -14 (life below water), SDG 15 (life on land). To make the agriculture sustainable and to achieve the above mentioned goals specific strategies should be adopted in different geo-climatic regions of our country according to local need and tradition.

Effect of Green Revolution on traditional crops and socio-economic structure:

India is an agriculture-based country which displays eight major groups of soil throughout the country like Alluvial soils, Black soils, Red soils, Laterite and Lateritic soils, Forest and Mountain soils, Arid and Desert soils, Saline and alkaline soils and Peaty and Marshy soils (Siddiqui & Fatima, 2017). Amongst them alluvial soil is the most fertile soil and found in a large area of this country because eight major and about four hundred of total numbers of rivers are traversed by most of the states of India. The Ganga river passed through Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal, the Yamuna through Uttarakhand, Himachal Pradesh, Hariyana, Delhi, and Uttar Pradesh, Mahanadi through Odisha and Chhattishgarh, Godavari through Maharashtra, Andhra Pradesh, Chhattisgarh and Odisha, the Krishna through Maharasthra, Karnataka, Andhra Pradesh and Telengana, Cauvery through Karnataka, Tamilnadu, Kerala , the Narmada through Madhya Pradesh, Maharashtra and Gujatat, Sabarmati through Rajasthhan and Gujarat depositing fertile soil on their banks.

The Deccan Plateau covering the states of Madhya Pradesh, Maharashtra, Gujarat, Rajasthan, northern parts of Karnataka, and some part of Andhra Pradesh, Odisha, and Tamil Nadu is composed of Black soils (Mishra *et al*, 2011). Red soils are found in Madhya Pradesh, Tamil Nadu, southeast Maharashtra, Odisha, Kerala, Goa, Bihar, Uttar Pradesh, Nagaland Manipur, Tripura, Assam, Nagaland and Meghalaya (Baligar *et al*, 2004). Lateritic soil is widespread in Karnataka, Kerala, Maharashtra, Madhya Pradesh, Odisha, Assam, and Tamil Nadu. The soil of Western part of Rajasthan, Southern part of Haryana and South-West part of Punjab is example of desert soil. Mountain soils found in Jammu & Kashmir, Himachal Pradesh, Manipur, Western Ghats in Karnataka, Kerala and Tamil Nadu. Saline and Marshy soils mainly found in the coastal region of Kerala, Odisha, West Bengal (Kullu *et al* 2021). The fertility of soil differs in different types of soil as the mineral composition, organic matter, microbial association, water and air holding capacity of it varies greatly. As nature of crop is dependent on nature of soil and climatic condition, India exhibited a vast range of crop diversity in the Pre-Green Revolution period (Nelson *et al*, 2019).

Such diverse type of soil harbored a vast range of traditional major crops like rice, wheat, sorghum, and maize, barley (Hall, 1964) along with pulses, oilseeds, fruits and vegetables. But during the last few decades traditional agriculture system has gradually been cornered, neglected, obsolete and erased by the introduction of HYV crops, huge use of agrochemicals and thus destruction of a diversified gene pool of our country (Nelson *et al*, 2019). During the period of Green Revolution the main focus of the human race was on the crop productivity. Interest was not imposed on the superior characters of indigenous crops like drought resistance, flood resistance, salinity tolerance, disease resistance etc. As a consequence of indiscriminate use of agrochemicals the structure, quality and biological health of the soil get destroyed. The nature of agro-farming system was changed, excessive use of underground water for irrigation disturbed the water table, investment in agriculture was increased and crop diversity became narrower. Excessive use of chemicals to save the newly introduced HYV monohybrid crops, in monoculture practice, eradicated several indigenous species (Parayil, 1992). With the increasing infertility of soil due to application of excessive chemical fertilizers gradual decline in yield of crops was started during 1980s.This situation caused remarkable impact on ecology and socio-economic condition of country like loss of local varieties of plants, loss of productivity, chemical resistance of pests and pathogens, more investment in agriculture, increased rate of suicide among farmers (Nelson *et al*, 2019) then, farmers become habituated with modern type of agriculture forgetting the traditional practices. Ultimately, a large portion of present-generation young farmers become unwilling to continue this profession. India is now facing a four-dimensional agricultural crisis like rising agricultural expenditure, depletion of natural recourses declining of farm income, and narrower range of agro-biodiversity (GoI, 2020).

Importance of Traditional crops: India is a country of wisdom. Our old scriptures described about a world peace, sustainable socio-cultural life, stable education system and environmental ethics. Due to arrival of different foreign races at

different time, mixing, distortion and loss of our own culture and knowledge often happened posing both positive and negative impact on our socio-cultural scenario. The impact of globalization during 20th century also set a shadow in our own knowledge- system and culture. After Green revolution, the cultivation area of rice, wheat, maize and pulses were increased significantly whereas cultivation area of coarse cereals like sorghum, pearl millet decreased which influenced the consumption and food habit and nutrition of rural and urban households (Nelson *et al*, 2019). Traditional millets, rice and other crops are rich in proteins, vitamins, minerals, essential amino acids fibers, important dietary minerals, and lots of other important micronutrients than introduced HYV product (NNBM report, 2003). The traditional foods are full of nutrition.

In the time of our independence, 90% of Indian population lived in 600,000 villages depending mainly of agriculture without any technological change for a few centuries (Lockwood *et al*, 1971). Agricultural fields were of small plots in the old days as compared to present day system and protected by tree covers to cut the wind forces. For centuries, the farmers practiced several methods of organic husbandry, crop rotation, and exposed fields fallow for a desired periods of time in order to allow the soil to retain its nutrients and sanitation (Das, 1999). The recovery strategy for the present agriculture crisis lies in the traditional knowledge and system adopted by the ethnic group of people. In our traditional system, crop rotation, mixed cropping, use of locally selected varieties, seed exchange, application of FYM, green manure, compost was under regular practice. The traditional practice protected our nature, biodiversity and soil fertility. To make the present-day agriculture sustainable, organic way of cultivation gained major importance. Interestingly, all the above said traditional methods are included the organic cultivation process. A few additional endeavors are needed in the organic cultivation process to recover the damaged agro-system like (i) tracing of lost traditional crops, their conservation and distribution among farmers (ii) recovery of soil fertility (iii) proper documentation of traditional knowledge (iv) generate interest among the educated young people to come back into agriculture profession. Recently an urge has been developed to trace and conserve lost varieties of local crops and to regain the lost fertility of soil by traditional methods to cultivate those crops. Along with the crops the TK has also been lost as it retains through different mode of verbal communications and direct physical activities within the specific group of people. Thus proper documentation is become necessary to go ahead. Although, documentation has been reported from Arunachal Pradesh, Meghalaya, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Rajasthan, Kerala and Tamil Nadu, more effort need to be imposed to keep written record of traditional agricultural practices from other places of our country (Patel *et al*, 2020).

Some Traditional formulations for crop production and protection: The use of ITK based organic formulations in traditional crop production has a good effect on plant health and productivity along with human health and the environment (Biswas and Das, 2022) Application of traditional organic mixtures in the soil like Panchagavya, jeevamrut, beejamruta can enhance the growth of beneficial microbial

community in the soil and thus help in plant growth. Brahmastra, agneyastra, neemastra act as potent insecticides. The basic formulation of Panchagavya is cow dung, cow urine, milk, curd, and ghee, however, Tamil Nadu farmers add coconut water, farmers of Maharastra and Uttar Pradesh add jiggery and neem, amla and brahmi extractto this mixture (Gawade *et al*, 2007) This mixture is found to be rich in nitrogen, phosphorus, potassium, sulfur, magnesium, calcium and can boost the growth of root, stem and leaves (Kumar and Singh, 2020). Jeevamrut is made up of cow dung, cow urine, jiggery and gram flour which help in the growth of beneficial bactria and fungi in the soil. It serves as a source of nitrogen, phosphorus, potassium, magnesium and copper (Kumar et al, 2021). Beejamruta is composed of cowdung, cow urine, lime, soil and water. This solution helps to grow nitrogen fixing bacteria, Phosphate solubilizing bacteria, actinomycetes and fungi in the soil (Devakumar *et al*, 2014). Neemastra is an ITKI based biopesticide composed of neem leaves, cow dung and cow urine , used as foliar sprey method to control a wide range of insects and other pests . It also acts as a good biofertilizer when applied with other organic materials (Verma, 2015). Brahmastra is a biopesticide prepared from neem pulp, custard apple leaf pulp, papaya leaves, pomegranate leaves and guava leaves which is active against sucking pests, pod borer, fruit borer aphids, leafhopper, thrips and white fly (Patel *et al*, 2019). Agneyastra is a biopesticide prepared from cow urine, tobacco leaves, green chili, and garlic with neem leaf pulp and is used after fermentation having significant repellent activity against insect larvae (Gandhi *et al*, 2020).

Table: Composition and application of some traditional organic formulations:

Name of the Organic formulation	Composition	Used for	Mode of application
Panchagavaya	Cow dung, Cow urine, curd, milk, ghee. Rich in nitrogen, phosphorus, potassium, sulfur, magnesium, calcium. (Devpatni *et al*)	Improve soil fertility, Plant growth, crop productivity	In the soil along with FYM (Shekh *et al.,* 2018), 3% as foliar spray ((Swarnam *et al.,* 2016)),
Jeevamrut	Cow dung, Cow urine, Jaggery and gram flour, fermentated for several days. Rich in nitrogen, phosphorus, potassium, manganese, copper, (Kumar *et al.,* 2021).	Enhanced development of crop.	Soil application
Beejamruta	Cow dung, Cow urine, lime and soil, rich in nitrogen fixing	Improve soil fertility, enhance soil	Soil application

	bacteria, phosphorus solubilizing agent, action mycetes and fungi.(Devakumar *et al* 2014)	microbial activity, Plant growth, crop productivity, protect harmful pathogens (Nirmale and Ulape, 2020)	
Bramastra	Crush 3 kg neem leaves in 10 lit cow urine. Crush 2 kg custard apple leaf, 2 kg papaya leaf, 2 kg pomegranate leaves, 2 kg guava leaves in water. Mix the two and boil 5 times at some interval till it become half. Keep for 24 hrs, then filter squeeze the extract. This can be stored in bottles for 6 months. Useful against sucking pests, pod/fruit borers.Dilute 2-2.5 lit of this extract to 100 lit for 1 acre(TANU Agritech portal)	Effective against aphids, leafhopper, thrips , whitefly shoot borer, etc	Foliar spray
Agneyastra	Cow urine, tobacco leaves, green chilli, and garlic.	Repellent activity of insect larvar (Gandhi et al, 2020)	Foliar spray
Neemastra	Crush 5 kg neem leaves in water, add 5 lit cow urine and 2 kg cow dung, ferment for 24 hours with intermittent stirring, filter squeeze the extract and dilute to 100 lit (TANU Agritech portal)	Organic pesticide effective against a broad range of pest, useful against mealy bug.	Spraying and soil application.
Jaivic Chhabutra **(TANU Agritech**	Oil cow urine diluted with water in 1:20 ratio	Effective in the management of pathogens and insects, but also	

Portal)		acts as effective growth promoter for the crop.	
Dashparni extract (TANU AGRITECH portal)	.Neem leaves 5 kg, *Vitex negundo* leaves-2 kg, Aristolochia leaves - 2 kg, Papaya (*Carica papaya*)-2 kg, *Tinospora cordifolia* leaves-2kg, *Annona squamosal* (Custard apple) leaves-2 kg, *Pongamia pinnata* (Karanja) leaves-2 kg, *Ticinus communis* (Castor) leaves- 2 kg, *Nerium indicum*- 2 kg, *Calotropis procera* leaves-2 kg, Green chilly paste-2 kg, Garlic paste-250 g, Cow dung-3 kg, Cow urine-5 lit, Water-200 lit.	Plant health booster, broad range disease protector, antifungal, insecticide	Spraying

Constrains at the field level: Many a number of farmers are now trying to convert their damaged field to biologically active fertile land. Gradually farmers started soil testing, using more FYM and compost to increase the organic matter in the soil to create a favorable environment for growth and reproduction of beneficial microorganisms like nitrogen fixing bacteria, phosphate solubilizing microbes, Plant growth promoting rhizobacteria, Mycorrhizal fungi and other beneficial life forms that act as biofertilizers and biopesticides. They are showing interest to use biofertilizers and biopesticides for healthy growth of the crop and quality product.

During study in the villages of West Bengal, a few constrains were experienced regarding land conversion for organic agriculture practice. Most of the villagers left the habit of domestication of cows in their household. Marginal and small farmers often have to manage raw materials for the preparation of traditional formulations. Young generation even of farmer families are less interested in agriculture profession and shifted the occupation to other mode, unwillingness to go for agriculture profession as it became less profitable, crunch of local resources for production of traditional organic formulations, deficient in insect pollinators and local species of earthworms and sources of green manure. A trend has been started to convert of agricultural land to fish dam, interest towards cultivation of newly introduced foreign fruits and vegetables which seems to be more profitable to them.

Conclusion:

The venture of making agriculture sustainable has started its journey in India initially with some hindrance. Our country is full of traditional knowledge but due to negligence, proper identification and documentation it remains disoriented in a scattered form. Moreover, IPR issues often cause complications. Effort should be imposed on compilation and documentation of that knowledge so that proper implementation could be done. More partnership between institutions and farmers should be opted so that a both-way knowledge transformation channel should remain open to move land to lab TK transfer and lab to land technology transfer activities.

Blending of the TK with some appropriate scientific technologies might be more helpful to get the optimum result. Reintroduction of local seeds, lost rituals, local festivals related biodiversity restoration and crop production, respect and acceptance to local culture might be helpful to protect our planet and to reach the SDGs mentioned earlier. But the primary factor for revival of indigenous crops remains within the passion of farmers, administrative initiations, market availability and strategy of the Government.

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Scientific Disciplines in Indian Knowledge System

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Abstract
The Indian subcontinent has an interesting story about science and its ancientglorious knowledge. Indian ancient knowledge involves lots of information, traditional practices, wisdom that people have and it is transferred from generation to generation. Indian knowledge system has a strong foundation in Indian culture, philosophy and spirituality which have evolve thousands of years. The knowledge system of Ayurveda, Yoga, Vedant and Vedic science are applicable in several ways for the modern world. Vedic knowledge espouse physics, mathematic, astronomy, logic, cognition, music and other disciplines.

This paper provides brief overview of Indian knowledge system and highlights the reason for which we should know about Indian traditional knowledge. It also emphasizes on the importance to preserve, protect and pass it to the next generation. It will provide glimpse into the ancient knowledge system of science to promote sustainability. Paper also summarises the nature and characteristic of traditional Indian knowledge system drawing particular examples from different scientific aspects. This will also try to unravel the contribution of IKS to scientific disciplines. Further it will describe the extract from some literature which narrates contemporary scientific fact.

It concludes with the importance of recognising and valuing IKS as it offers a unique perspective and insight that can enhance scientific outlook.

Keywords: Indian Knowledge System (IKS), Scientific Disciplines, Sustainability, etc.

We owe a lot to the ancient Indians, teaching us how to count. Without which most modern scientific discoveries would have been impossible

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Albert Einstein

In the Bhagwad Gita, (4.33&37 38) Lord Krishna explain to Arjuna, that knowledge is the greatest means of self-purification and liberation. India has a long history of knowledgefrom Vedic period to post Independence that has been in an unbroken continuum, like the Ganga River.(Kapoor & Singh, 2023)

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Indian Civilization has been live from a long time, even conservative estimates date it at least 5000 to 8000 years. The civilization always added to knowledge pool. Therefore, India has a rich depository of knowledge which is accreted in the Indian subcontinent and these knowledge is manifested in terms of traditions and practices. Indian knowledge systems have a strong foundation in Indian culture, philosophy, and spirituality which have evolved through thousands of years. The knowledge systems of Ayurveda, Yoga, Vedanta, and Vedic sciences, are applicable in several ways for the modern world.

Indian Knowledge System

The Indian Knowledge System (IKS) is the systematic transmission of knowledge from one generation to next generation. It is a structured system and a process of knowledge transfer rather than a tradition. The Indian Knowledge System is based on the Vedic literature, the Upanishads, the Vedas, and the Upvedas. The Gyan, Vignan, and Jeevan Darshan knowledge systems in India have developed via experience, observation, experimentation, and thorough analysis. Our education, arts, administration, law, justice, health, manufacturing, and commerce have all been impacted by this tradition of validating and putting into practice. This has affected Bharat's classical languages as well as other languages that were passed down orally, through artistic and literary traditions. It includes knowledge from ancient India and, its successes and challenges, and a sense of Indias future aspirations specific to education, health, environment and indeed all aspects of life.
There is three term in Indian Knowledge System, Indian refers as a Indigenous sources of knowledge by Indian society(Mahadevan, Bhat & R.N., 2023). Knowledge, in western tradition, Knowledge as associated with Power that i s means of the fall of man but in Indian framework, Knowledge is instrument of liberation(Kapoor & Singh,) and by term system means structured methodology to access the available knowledge (Mahadevan, Bhat & R.N., 2023).

Need to know about Indian Knowledge System

As there is a question in our mind why its needed to knowledge about IKS. Its not just knowing about our ancestral knowledge but it about protecting received wisdom and national pride. Some example helps us to understand why we need to know about IKS like, legal battle for powdered turmeric between Indians Council of Scientific and Industrial Research (CSIR) and US Patent and Trademark Office (PTO), Patent on Neem leaves, Amla, Karela etc. Emerging patent help us make it that how important it is to know about our ancestral knowledge which help in patenting regime and economic power and now it is matter of nation pride and economic security(Mahadevan, Bhat & R.N., 2023).

Need to preserve, protect and pass on IKS to the next generation

In any society the great thinkers have created a thinking pattern and vast repository of knowledge which helps to new generation in creation of new knowledge and innovation. This repository of knowledge helps to understand the thought processes of previous generation and help them to analyses the wisdom received from ancestors and its contemporary context and identify opportunities to synthesize new knowledge. So ignoring the contribution of ancestors in a rich repository is short sighted options for current society.

Ancient Indian knowledge gives multiple role to the society i.e., identity, culture, received wisdom and economic value. Unless we preserve the ancient knowledge we will be able to prevent our identity, culture, received wisdom and economic value arising out of our Indian Knowledge system (Mahadevan, Bhat & R.N., 2023).

NEP 2020 tries to bring snippets of the Indian Knowledge system by providing a fresh relook in current education practices.

NEP 2020 envisages Knowledge of India include knowledge from ancient India and modern India. It also declare clear sense of Indias aspirations with education , health and environment etc. There snippets elements incorporate in an accurate and scientific manner in school curriculum to higher education. It could be in form of tribal knowledge, Indigenous and traditional ways of learning which covers mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as in governance, polity, conservation. Forest management, traditional (organic) crop cultivation, natural farming, tribal ethno-medicinal practices, etc. specific courses are also part of IKS . The ancient heritage and thought of Indian Knowledge System (IKS) has been guiding principle for NEP and Indian thoughts comes from knowledge(Jnana),Wisdom(Prajna) and truth (Satya) and these are essence of Indian education system which produced great scholars such as Charaka, Susruta, Aryabhata, Varahamihira, Bhaskaracharya, Brahmagupta, Chanakya, Chakrapani Datta, Madhava, Panini, Patanjali, Nagarjuna, Gautama, Pingala, Sankardev, Maitreyi, Gargi and Thiruvalluvar and others , who made remarkable contributions to world knowledge in diverse fields.

Ancient Indian knowledge of science promotes sustainability

`Veda' means knowledge. Since we call our earliest period Vedic period , this suggest that of the importance of knowledge and science, as a means of acquiring that knowledge, to that Indian ancient period . Vedic knowledge espouse physics, mathematics, astronomy, logic, cognition, music and other disciplines. Out of these Vedic science is the earliest science that has come down to us. Which has significant implications in our understanding of the history of ideas and the evolution of early civilizations (Kak, 2005).

The reconstructions of earliest science are based Vedas as well as on their appendicies called the Vedangas. The six Vedangas deal with: **Kalpa**, which deals with performance of ritual with its basis of geometry, mathematics and calendrics; **Shiksha**, phonetics(correct pronunciation); **Chhandas**, metrical structures;

Nirukta, etymology (explanation of obscure words) ; **Vyakarana**, grammar; and **Jyotisha**, astronomy and other cyclical phenomena(Kak, 2005).

There is a vital links between the IKS and sustainable development. IKS contributes to various sectors of human welfare and development . Indian knowledge system generally refer to that long standing information, wisdom and practices of peoples from vedic period to till date. Indian Knowledge System includes traditional knowledge and Indigenous knowledge. According to Sustainable development commission, Sustainable development is those development which help to meets the needs of present without compromising the needs of future generation.

As Indian knowledge system covers rich repository of knowledge, it covers Ayurveda, Yoga, Vedanta and Vedic sciences as well as mathematics, astronomy, medicine, agriculture, engineering etc. Ancient Indian literature has rich knowledge about all these sectors which is relevant to current issues of sustainable development. As mentioned in UNDP, there is seventeen sustainable development goal, IKS cover many issues which would be helpful and relevant to achieve those goals like Zero hunger, which is SDGs one, it can target. Indian Agriculture foster to the zero hunger by traditional (organic) crop cultivation, natural farming etc. Good health and well being is third goal of Sustainable development for which Indian Health science , medical and Indian ancient literature related to this field like Susruta Samhita, Charak Samhita and Yoga Sutra etc. can have great contribution to modern health and medicine. Quality education is the fourth SDGs which is possible through the IKS due to its multi-dimensional course content. Indian Astronomy has lot contributed in Climate and environment through their rich astronomy evidences in Indian ancient literature like Vedas, Vedangas etc.

Literature extracts cover different scientific aspects

There are naturalistic descriptions in the various vedic literature that tell us a lot about scientific ideas which is later discovered and explained by different scientists in the world.

Astronomy

- The world is due to the Sun god. The living beings get their strength and energy from Him. (TaittiriyaAranyakam- 3. 11)
  Sun is the source of energy was well known to Indians from Vedic period.
- The sun holds the earth and the celestial region. The sun is the attracting power of all heavenly bodies. (Taittiriya Samhita 3. 4.10.3.4.)
- Path of the all celestial bodies is elliptical. (Rigveda 1.164.2)
  (In the western astronomical firstly Copernicus proposed that the planets and other celestial bodies had circular orbits later Johannes Kepler gives new theory in 1609 that all the planets and other celestial bodies is elliptical.)
- Planetary Motion- Aryabhata stated planetary motion in the 5th century AD, much before the First law of Planetary motion given by Johannes Keppler in 17th century AD. Cause of Eclipse- AryabhatiyamGolapaadah 37- 499 CE
- The Moon the satellite of the earth Rigveda 10.189.1

Knowledge about astronomy was widely used by Indian, not only by experts even by villagers, farmers, craftmans. They know about the meaning of Rasi(Zodiac Sign), Naksatra (star), and Panchanga (certain detail about everyday). Indian astronomy continuously developed from Vedic period. In the Atharvaveda-samhita is reference about stars, planets and comets, Parasara-tantra describes planets and comet. In the Vedanga Jyotisan have concept of Yug consisting of 5 solar years of 62 lunar months.

Satapatha-brahmana is also a Krittika (Pleiades) and other such astronomical events also mentioned in Rgveda. The Nasadiya-sukta of Rgveda gives reference of origin of universe. There are full list of 27 stars commencing from Krittika(Pleiades) mention in Yajurveda and the Atharvaveda.

Indian Panchanga is the backbone of the Indian Astronomy and also include the water clock (ghati-yantra), gnomon (sanku), cross-staff (yasti yantra),armillary sphere (gola-yantra) , board for the suns altitude (Phalaka - yantra), sundial (kapala-yantra).

Physics and Chemistry

There have been abundant evidence regarding physical and chemical science in ancient literature of India. Vaisesika-sutra and the Padartha-dharma-sangraha by Prashastapada have dealt with matter, atomic character and the role of atoms and related reactions. Basically Samkhya system concerned with the origin and evolution of the matter under concept of Prakriti and its three gunas. In the Buddhists there is description of odour, taste, touch etc. for the substance. In the physical world mechanics motion of bodies vectorical concept have been described in prashastapasda , Vaisesikas explains resultant motion, concept of gravitational force also have been explained by Uddyotakara in 6th century under Nyayavarttika that a heavier body falls to the ground. Concept of Vega, Units of space and Time co-ordinate, fluid motion, viscosity, surface tension, evaporation, hydrostatics have been mentioned by different literatures. In a Rig Veda, Atharvan describes fires dimensions and Vaisesika and Nyaya school of philosophy describes Physico-chemical changes through the action of heat. About electricity in Upaskara , Sankara Misra describes amber attract grass and straw etc.

Development of chemistry in ancient India traced clearly. There have been evidences of use of Quartz, Copper and glaze etc. In Rig veda it is found that the use Gold, silver, copper and bronze. Yajurveda mentions lead and tin also find references to the tanning of hides for making sting head- string, dyeing of garments and other fermented drinks from barley, grain and milk. Atomic theory by Kanada and four kinds of elementary atoms i.e. ksiti, ap, tejas, and vayu. Some other evidences as

Physics

- Speed of light Rik samhita1.50.5
- Origin of matter Taittiriya Upanishad
- Cause and Effect Vaiseshikadarshanam 1.2
- Vairity of Magnets- Rasarnava, Patala 6, 40, 41(12th century AD)

- Electricity- Agastya Samhita (14th century AD) Generation of electrical energy using copper plates and chemicals kept in hundreds of earthen pots to make a battery bank.
- Lens Nayay Darshan 800 BCE

Chemistry

- Corrosion and loss on heating Rasarnavam 7. 96
- Extraction of Mercury- Rasaratnasamuchaya 7.67
- Salts- Rasaratnasamuchaya 90-99
- Preparation of Caustic alkali- Susruta Samhita, 11.11.
- Explosive Sukraniti 206.208

Engineering

Indian civilization has noteworthy contribution in technology and engineering in metalworking in term of metallurgy. There have been great evidences of iron and steel technology. India has number of archaeological specimens for copper industry. Multiple references for use of iron, copper, gold, silver,and tin have been found. It evident that Indians developed skills to explore ores. Some other evidence also in Indian literature like-

- Machine defined Yantrarnavam (14th century AD)
- Type of transport- Bhrigu samhita, verse 2 (6th century AD) Ship ply on water, vehicles moving on the ground are chariots. Those moving in the sky are space vehicles propelled by fire.
- Ship building, Types of alloy etc.

Metallurgy

- Extracting pure metal- Rasrnavam 4.52 AD 900
- Loss during heating- Yajnyavalky smriti 2.178
- Sources of Gold Rasarnavam- 7.99 etc.

Asronautics

- Protection of Aircrafts Vimanshastra, 50, 5
- Different type of aircraft

Life science and Medicals-

- Susruta Samhita- Over 1100 diseases are mentioned, Over 760 plants are described, method of selecting and preserving a dead body for the purpose of its detailed study, Rhinoplasty (plastic surgery) and Ophthalmic surgery (removal of cataracts), description of 101 instruments used in surgery. Susruta the author of Susruta Samhita, is called as father of Plastic surgery.
- Charak Samhita- Charak, writer of Charak Samhita, is considered the father of ancient Indian science of medicine First to talk about digestion, metabolism and immunity as important for health and so medical science. Ayurveda- It is the indigenous system of medicine that was developed in Ancient

India. Yoga- Patanjali was the first scholar to present yoga , great science systematically in his Yoga Sutras (Science in Sanskrit, 2007).
Vedas presents a primitive level of medicals and basic source of information about medicals are The compendium of Charaks in 1st-2nd century AD and in 4th century AD Sushruta. When we talk about the dealing of body and mind there is Ayurveda which is traditional system of Indian medical science. As Ayurveda term convey its meaning i.e. knowledge of life. Charaka and Sushruta mentioned classification of diseases and classified as Agantuja(extraneous) and Sarira (Constitutional). Sushruta (I.3513-14) describes the stages of disease development i.e. anyalaksana (Prilimary stage) , prak-kevala(Primary stage) and aupasargika(Secondary stage). Ayurveda classifies drugs as those gives strength and those cure diseases. Both of these are further divided in three categories like plant substance, animal product and minerals based (Sharma, 2023).
There are also many ancient literature decribes major work on medical field like Salihotra-samhita of Kalhapna (12th century AD), Chikitsa-sangraha, Palakapya-samhita by Palakapya.
As NEP 2020 describes the important of ancient Indian philosophy it also contribute in medicals as Samkhya as Natural Science and Yoga as Naturopathy (Sharma, 2023).

Some Examples of glorious ancient Indian Knowledge-
There are many examples from ancient Indian knowledge shows glorious history of rich and innovative inventions.

Damascus Blades
In 17th century India were extraordinary in steel making which is called Indian Wootz steel. This steel is majorly used in manufacture of Damascus blades. These Damascus blades were incredibly strong and usually sharp and used by Persians. Raw metal used in these swords imported from India to Persia. In Wootz steel Wootz comes from the word UKKU. UKKU means a material with a incredible strength. It is native to southern states of India since thousand of years (Mahadevan, Bhat & R.N., 2023).

Astronomical Instruments
Astronomy is a science of observation and computation. To ascertain the position of heavenly bodies, ancient Indians recognized and developed a variety of instruments (Yantras). These yantras includes Water clock (ghati-yantra), cross-staff (yasti yantra), Phalak yantra (board for the suns altitude), Sundial(kapala -yantra), gnomon (sanku) and armillary sphere(gola-yantra) etc.
Jantar Mantar is one of examples of observatories build by Raja Sawai Jai Singh. Jantar Mantar were build in five places i.e. Delhi, Varanasi, Jaipur, Ujjain and Mathura. The effort of Raja Jai Singh towards fostering the scientific observational practices with the combined used of Indian, Arabic and European advances astronomy. The Jantar Mantar is mark as a significant milestone from the history of Indian astronomy.

Musical Pillars of Temples in India

The long standing architectural monument like temples, pillars and forts of Indian sub-continent have testimony of the engineering and geometrical skills. There are several great temples in South India built by Cholas, Pandyas and Pallavas that are living examples of engineering and technology. The ancient Hindu temples from 8th to 16th century are testimony of interesting Hindu art in form of musical pillars. These musical pillars are generally carved from a single single piece of granite stone. India classical literature like Vaayu Purana, Vishwakena Samhita and Narnada Samhita gives in depth technical knowledge of the sculptures and specifically rocks used in these temples.

The art of making perfumes

Visnu-dharmottara-puran and Varahamihiras Brhatsamhit in 5th century CE are the source for how to use perfumes and methods of preparing perfumes in ancient India. First literature is source for process of preparing the perfumes which is eight in steps and another one have different methods of preparing perfumes using various ingredient are discussed. This literature gives instructions for making 174720 different perfumes.

Surgical Techniques

Susruta as the father of Indian surgery provided a clinical approach in his book Susruta-samhita . He describes tools and instruments that a surgeon possesses and mention 101 blunt and 20 sharp instruments. Rhinoplasty is great contribution of Sustruta. In Susruta-samhita, chapter 16 ia about the Sarirasthana, which is procedure for repairing the nose because in the list of Dharma-sastras cutting of nose and ear was the usual punishment.

Indian Therapeutic Practices: Agnihotra

In the ancient Indian scriptures there is solution for pollution which is healing fire called Agnihotra. It is a special type of Yajna and Homa therapy involves preparing a healing fire to perform twice a day on sunrise and sunset. It helps in purification of surrounding several studies proves. Dr. Ulrich Bery form Germany and International documents presents the positive impact of agnihotra ash on drinking water. It has also proven by experiment in Warsaw University in Poland that after 12 hours of performing agnihotrathe bacterial count went down.

These examples present the cohesion of ancient knowledge with science and its various disciplines. These glorious examples are evident in the form heritage sites, monuments or cultural practices.

Conclusion

Indian Knowledge System has made significant contribution to various science disciplines over thousands of years. Science placed in ancient Indian knowledge has capacity to make everyone be free from disease, be happy and wishes good luck to implementing Surve Bhavantu Sukhinah, Sarve Santu Niramaya. Ancient scientific knowledge serves as a bridge between the past and the present, providing

insights and inspirations that continue to shape modern science. Indian Knowledge System has left a lasting legacy in various scientific disciplines, influencing both ancient and scientific thought.

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Cooperation of the brics plus countries in the field of innovation: Opportunities and realities for India

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Abstract

The most important factor in achieving the dream of development of a modern global economy is international innovations and activities. Innovation is a key factor for connecting economies.

Innovation synchronizes the efforts of federal government organsations, R & D initiatives, financial and material resources to commercialization of technologies for a better future. BRIC to BRICS and BRICS to BRICS plus is well defying and justifying the prerequisite and prospect of its establishment. The power of BRICS is self explanatory as associated countries hold 31.5% of world GDP, 41% of world population and 16% of global trade. The development factors in these countries had comparative advantages: territory in Brazil, natural resources including hydrocarbons in Russia, large populations in India and China, natural resources in South Africa. So BRICS have a sound brick in its association. BRICS countries are speedily implementing their agenda i.e. expansion of BRICS and secondly trading in their own currency. They are expanding but they are selective. Entry of new members is spotlighting their vision. It can also be noted that over the years, joint research projects of the BRICS countries have been and are being successfully implemented. Since inception of BRICS from 2009 to 2023, Indo Russian (science and technology), Indo African(Infrastructure and mining), Indo Brazil(agriculture and animal husbandry) research projects shows inclusive growth as Indias urgent task is to transform innovations into jobs and uplifting of peoples quality of life.

Despite of a clear leadership of China, India has a lot to achieve. India is a strong supporter of multilateralism and as a member of many multilateral organizations has always played an important role for global peace and development. India is a country which has made important contributions in promoting peace, unity and cooperation among the countries of its association. Indias gifts in 15 th summit are sharp example of connecting tribal roots with associated countries. Except the excellence in scientific and technological areas, India has a lot of heritage advantage as well.

This paper examines the innovative development of BRICS (with special reference to India) at different stages by keeping GII (global innovation index), KEI

(Knowledge economy index), WMI (world modernization index), key achievement and problems of mentioned countries. This paper also tries to find How India can develop innovative industries with human capital and how low-income industries can be removed? Achieving "national self-sufficiency", especially in the field of advanced technologies, could be the new benchmark for India.

Key words- BRICS, Innovations, GII, KEI, WMI.

Introduction-

In 2009, with Russian efforts, five countries , holding 41% of world population,31.5% of world GDP, nearly 17% of trade, decided to challenge world order dominated by the United States and its Western allies. The block was established as an informal club, headquartered in Shanghai. Core principles of BRICS include sovereign equality, openness, consensus, and the aspiration to build a multi-polar international order and a fair global financial and trading system. Originally, it was known as "BRIC" before the inclusion of South Africa in 2010. Except Russia, all BRICS members are developing or newly industrialized countries with pattern of rapidly growing economies. Till 2023 India, Russia, China, South Africa and Brazil were included in BRICS. Galloping BRICS is showcasing influence i.e. BRIC to BRICS and now BRICS plus . summit at South Africa last year, a formal announcement of new five members in BRICS club i.e. Egypt, Ethiopia, Iran, Saudi Arabia and United Arab Emirates.

Where India stands?

India has largest population in the world and second fastest growing economy. Its FDI is third in the world and favorite destination of investors. India has shown its power in all areas i.e. third ranking in producing unicorns, inbuilt defense system, healthcare and infrastructure. Foreign minister S. Jayshankar is smart enough in balancing diplomatic relations e.g. Ukraine- Russia war or Israel-Hamas conflict or China-America tussle. Indias influence in BRICS is visible. India is no more a dumping market but its a producers market now a days. Recently Padam shree given to Foxconn CEO, Foxconn has shifted its business to India from china,(Foxconn is largest producer of I phone, Mac book and I pad for Apple),it is considered as a diplomatic move by India.

Brazil, Russia, South Africa and Gujrat connection- Indian Prime minister is trying to connect with BRICS countries in a cultural way as well. How one can forget ,Animal husbandry and dairy products have changed economy of Brazil? only a few know that maharaja sahib of Bhavnagar has gifted 10000 cows and a bull to Brazil 70- 80 years ago to develop its animal husbandry and dairy production. **in front of Brazilian Parliament there is statue of Krishan Kumar sinh ji built in honor of him**!

Failure of TAPI project is an eye opener. India has its need not only in the industrial but in household sector as well In order to ensure that Russia is not left behind in the global competition, Putin has put forward the idea of establishing an energy cooperation organization among the BRICS countries. This will benefit both Russia and India, as India is on the way to faster development and is in need of an interrupted supply of energy. At the time of Ukraine_ Russia war foreign minister

defended so well. Iran is not as reliable as Russia is! Amul is supplier of Russias 25% of dairy product need.

South Africa is having same tribes same as Gujarat. Who can forget M.K. Gandhi get his self realization in South Africa and returned home. Later how Nelson Mandela took inspiration is a history! Tribes are close to nature and have meaning of colors, stones, threads, paintings, apparels they are using! During visit to South African PM gifted Naga Shawls with colour combination of red ,black and green which portrays life and nature all together. His gifts of alloys, mainly sculptures, are an indication of rich mining traditions of India.

Indo-Iranian ties are not new . Mughals to TAPI , Kandla to chabahar , carpet to cumin, religion to medical tourism. But entry of Iran to BRICS is going to write a new success story of economic relations of India and Iran! How one can forget the silk route was boycotted with the help of Iran only. How shuhma swaraj convinced Iran to put labour contract in Indian regional languages also. Saudi was always a closed associate of US but in BRICS its sharing its economic benefits with Russia. New BRICS Plus is full of new and adventurous combinations.

Literature Review

Badar Alam Iqbal, (2019), BRICS as a Driver of Global Economic Growth and Development,(2019),in this paper importance of BRICS was explained in the era of covid. Three countries out of five have developed their own vaccine. It shows power and influence of BRICS. Secondly, the way India helped Latin American countries during and African during covid was remarkable. FDI is flowing high towards BRICS countries. In fact post covid the FDI flow has been increased.

Mihika Chatterjee & Ikuno Naka,(2022),Twenty years of BRICS: political and economic transformations through the lens of land, this paper mentions about the importance of land as Russia and China secure largest areas of land which is the most important factor of any economy. Ricardian theory shared importance of land in early days of 20th century which is relevant till date. Land is a factor which cannot be brought from anywhere or cannot be extended in any case. And there is no economy without natural resources.

Niti ayog,(2022) mentioned about consistency of ranks in GII and KEI maintained by India in couple of years. ICT, start up India- stand up India. Make in India, digital India are pillars in keeping India ahead of lower to middle income groups. Indias ranking is improved among poor countries. World started tak ing India and its innovation seriously in post covid era.

Why Innovation is the key?

The ideology of BRICS countries is very clear that except innovation nothing can bring them out of poverty. America and its west allies will always put a limit their technology sharing with them for the betterment of development countries.. BRICS countries had comparative advantages: territory in Brazil, natural resources, including hydrocarbons, in Russia, large populations in India and China, natural resources in South Africa. The potential exhaustion of these factors and the obvious lag in a number of areas that shape the modern economy. Challenge for all BRICS

countries is to find other drivers of development. At the same time an incentive for a new quality of growth is needed. One should not forget that during corona pandemic three out of five BRICS countries has developed an effective vaccine and shared with its fellow countries at a very reasonable price. BRICS plus countries are determined to work together in research and development for more efficient use of financial and material resources because Iran, Saudi, UAE, Egypt, Ethiopia and south Africa are rich in minerals, mines and energy and somewhat underutilized resources, innovation is the only key with can connect economies. After America India and china are recording unicorns and patents. Russia, India and china are challenging arms and animation too.

Currently, cooperation between the BRICS countries is to carried out in creation of a multilateral platform for the exchange of new industrial technologies, approaches based on UNIDO, implementation of certain infrastructure tasks, betterment of international relations and telecommunications and New BRICS Development Bank.

The main goal and guideline for cooperation in the innovation sphere in the organizational aspect should be the addition of bilateral as well as multilateral cooperation and the use of synergistic formation of an economy of a new technological order the economy of knowledge and information.

Issues of cooperation in the field of innovation are relevant for all BRICS countries:

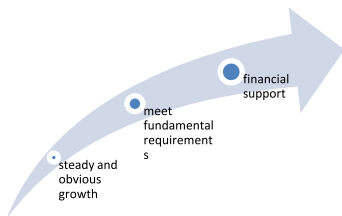

Figure 1- Issues of cooperation, Source- Authors conceptualization

India faces a number of external challenges,

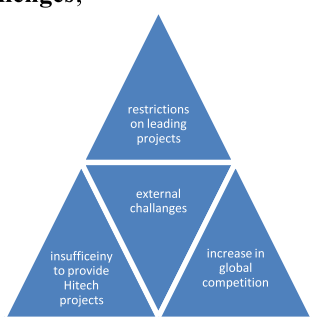

Figure 2- external challenges to India, Source- Authors conceptualization

India faces a number of external challenges, the key ones in terms of innovative development are:

- ✓ restrictions on the part of leading countries in the field of science and technology , Indias access to global markets for the d eployment of technologies
- ✓ increasing global competition is key factor that determines the competitiveness of innovation systems (highly qualified labor and smart money)
- ✓ challenges to humanity as a whole - climate change, aging population and healthcare challenges, global food scarcity
- ✓ Low profit cost ratio for High Tech products. Sometimes they are low in standards as well.

The mentioned lag is associated with the internal concepts and approaches to the innovation activities of the countries of the association, which, first of all, relied on globalization processes and the international division of labor, which to a certain extent leveled the impossibility of independently overcoming the innovation funnel of their own knowledge-intensive solutions, but did not pay due attention to the vertical integration, i.e. in this case, the creation of a specialized, state-protected high-tech ecosystem. The current and future macroeconomic and geopolitical situation has made adjustments to any economy.

Table 1. GDP of BRICS plus countries

Country name	GDP (billion $)	Rank	Economic Growth rate	R & D expenditure
BRAZIL	19,20,096	11	3.0%	1.15%
RUSSIA	22,40,422	8	5.5%	1.09%
INDIA	34,16,646	5	7.3%	0.7%
China	1,79,63,171	02	5.4%	2.43%
South Africa	4,05,271	39	1.6%	0.60%
Egypt	398,397	32	3.9%	0.91%
Ethiopia	155,804	159	6.1%	0.27%
Iran	366,438	42	2.0%	0.79%
Saudi Arabia	1,069,437	19	3.7%	0.45%
United Arab Emirates	509,179	34	3.38%	1.50%

Sources-Compiled from https://datacatalog.worldbank.org/search/dataset/0038130,https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?locations=ZA,https://data.oecd.org/rd/gross-domestic-spending-on-r-d.html, Statistic Research Development, published on Nov. 1, 2023

The above table depicts that Indias spending is lowest on Research and development. Worlds average spending on re search and development activities is near to 1.8% but developed countries like Sweden, Germany, Israel and Switzerland spend far higher than the average. Israel is spending nearly 4.5% of its GDP on these activities which is highest in the world. Switzerland is also spending quite high amount on R&D i.e. 3.4%. Among the BRICS countries china leads followed by Brazil and Russia.

The experience of Western countries, which have been paying significant attention to knowledge-intensive industries and the creation of specialized infrastructure since the 80s of the last century, as well as individual ASEAN countries and some other Asian economies, which were initially production centers for foreign high-tech products within the framework of the so-called flying g eese paradigm, and then themselves becoming innovation centers, showed that only accelerated technological development can ensure sustainable progress of society, which meets the goals of the BRICS countries. BRICS can promote the idea of accelerated growth and overcoming the gap with developed countries

In our opinion, when identifying promising areas of cooperation with the BRICS countries, the priority area should be cooperation in the field of innovation. Each country has its own approaches to innovation policy, solving its own national problems. The innovativeness of national economies is reflected in the Global Innovation Index (GII) and is calculated based on the average value of two sub indices:



Figure 3-

Source- Authors conceptualizatio n

- Contribution to innovation, which evaluates the elements of the economy that enable and promote the development of innovation, grouped according to the following parameters: institutions; human capital and research; infrastructure; diversification of the market and business.
- Innovative products, which reflects the effective result of innovative activity in the economy and is divided into two components: knowledge-intensive products and creative products.

As the results of the analysis of innovation indicators for the BRICS countries show, they are confidently moving forward in developing their innovation potential (Table 2), which is reflected in the improvement of their positions among 132 countries in 2023. GII is has more than 80 indicators to get the ranking i.e. science and advancement, technical process, adaptability towards technology, ecosystem, socio economic impact.

Table 2-Positions of BRICS countries in the Global Innovation Index (GII), 2022

Country name	Brazil	Russia	India	China	South Africa	Egypt	Ethiopia	Iran	Saudi Arabia	UAE
Income group Ranking in GII(2023)	6	7	1	1	12	11	7	6	41	31
GII Score (2023)	33.6	33.3	38.1	30.4	30.4	24.2	30.1	39.6	34.5	43.2
Regional rank (2023)	1	31	1	3	2	15	21	2	5	3

Source: compiled according to the Global Innovation Index 2023. What is the future of innovation-driven growth? https://www.globalinnovationindex.org/userfiles/file/reportpdf/gii-full-report-2022.pdf , https://www.visualcapitalist.com/most-innovative-countries-in-2023/

Brazil is continuously improving. It has reached to 1st position in Latin American region . Russia has fallen down to 31st rank, the Ukraine Russian war is showing its impact on research and development. India and china are stable and sharing ranks neck to neck where as South Africa stands second in his region. Newly added Arabian countries which are geographically adjoint to each other i.e. Iran, Saudi and UAE have nearby ranks in their region. Surprisingly UAE is quite ahead of its fellow muslim countries. Iran too holds a high score in GII.

It should be noted that all current BRICS countries have seriously progressed in the field of R&D in recent years: for example, India, which started in the study in 81st place in 2015, currently occupies 40th position. Brazil is the second most innovative economy in Latin America and the Caribbean (after Chile), South Africa is the leader in the sub-Saharan region, India is in Central and South Asia, China is third in Southeast Asia and East Asia and Oceania (after the Republic of Korea and Singapore). Russia is the third country in Europe according to this parameter.

For Brazil, the urgent task is to transform innovations into jobs and peoples quality of life.
In the field of science, technology and innovation, the biggest challenge in Brazil is to develop and implement long-term policies that would allow scientific and technological advances to reach the population in order to improve the quality of life. For Brazil, as well as for Russia, the transition from a resource model of economic development to an innovative and technological one is relevant. That is why the government promotes research, technological development and improvement as the main factors for increasing economic productivity and improving the well-being of the Brazilian population.
GKI and India-

Table 3.

Country name	Brazil	Russia	India	China	South Africa	Egypt	Ethiopia	Iran	Saudi Arabia	UAE
Score	45.4	47.9	41.7	58.9	44	42.5	27.8	39.6	54.5	60.5
Rank in GKI	75	57	95	31	85	90	128	98	40	26

Source- https://www.knowledge4all.com/country-profile
Recent addition of 5 countries is another feather in cap of BRICS. As mentioned in above table, UAE is topping in GKI. China which is a leading country and challenging America in economic terms stood beside UAE. UAE and Saudi Arabia are not fealty rich but they are face of muslim world as well. In geopolitics everything is closely associated. Fortunately our prime minister is speedily developing relations with Middle East countries. They have money as well as opportunities for innovation. A demanding population as well as zeal to reduce dependency on traditional fuel resources!
India's Innovative Growth Program (IIGP) 2.0 is a unique tripartite initiative between the Department of Science and Technology (DST), Government of India, Lockheed Martin and Tata Trusts. Supporting the Government of India's 'Startup India' and 'Make in India' mission, IIGP 2.0 enhances the Indian innovation ecosystem by enabling innovators and entrepreneurs at the ideation and innovation stages to develop technology solutions for tomorrow. Partners in the Program are FICCI, CIIE, IIT Bombay. The program aims to create an innovation pipeline in India through a high-impact program focused on the social and industrial innovation ecosystem. The program has provided mentorship and support to more than 400 innovators from various sectors across the country; more than 350 commercial agreements were concluded and more than $900 million in economic value was generated for India.

Through two annual parallel tracks, viz. University Challenge and Open Innovation Challenge, IIGP 2.0 identifies and supports both industry IIGP 2.0 identifies and supports both industrial and social innovation.Science, technology and innovation policy is characterized by the following goals:

✓ Achieving technological self-reliance and making India one of the top three scientific superpowers in the coming decade.

✓ Attracting, developing, strengthening and retaining human capital through a people -centric science, technology and innovation (STI) ecosystem. Atal innovation program is part of it.

✓ Doubling the number of full-time equivalent researchers, gross domestic R&D expenditure, and private sector contribution to R&D every 5 years.

✓ Achieving individual and institutional excellence in STI with a view to achieving the highest level of global recognition and awards in the coming decade.

India has more than tripled its gross research and development (R&D) expenditure over the past few years. The number of R&D employees in India has increased by 40-50% in the last 8 years.

India is currently experiencing an explosion of startups, with the number exceeding 75,000. About half of the startups (more than 49%) originate from remote small towns in the country. In 2022, India ranked as the 3rd largest startup ecosystem. India raised a total of $72 billion in 2021 (up from $1.8 billion in 2020). The explosive growth of startups was the country's response to Narendra Modi's call to make innovation the mission of the nation, which materialized with StartUp India in 2015. The Indian government has invested in ecosystem initiatives and implemented other startup-friendly policies. The most ambitious project is India Stack, a nationwide technology infrastructure for authentication and digital payments that paves the way to a cashless economy. This creates a base of more than 1 billion users, potentially boosting fintech, digital commerce and other startups. Such companies are becoming the backbone of the new India.

Threats from china

The PRC views technological innovation as the main driver for increasing overall production productivity and ensuring sustainable, stable and high-quality economic growth. This helps China cope with current economic problems, which include triple pressure on the national economy (reduced demand, imbalanced supply chains and rising inflation expectations in society).

The government is gradually refocusing from carbon neutralization goals to high-tech products, including integrated circuits, artificial intelligence, new energies, new energy vehicles and new materials, accelerating the development of electronic information. The PRC's goal is to develop innovative industries to reduce low-income industries to get 13% targeted GDP from it. China has issued more than 2.53 million patents over the past five years, with an average annual growth rate of 13.4%..

Conclusion-

Summarizing the above analysis of the possibilities and realities in the development of innovative cooperation of the BRICS countries, it should be that modern

macroeconomic situation and geopolitical situation needs cooperation in the exchange of modern technologies. multilateral cooperation could be in metallurgy, mining, oil and gas industry, heavy engineering, precision engineering, engine building, microelectronics, radio electronics, optics. Cooperation in the area of ICT, in particular, in increasing the efficiency of commercial use of outer space, optimizing technologies for wireless information transmission and wired communication channels, has high potential.

Thus, cooperation between the BRICS countries will work to overcome existing and future problems of the innovation sectors of the member countries of the association and minimize dependence on certain technologies and the component base of individual countries, the implementation of concepts of technological transition that are relevant for each country, growth in per capita GDP indicators, and sustainable development of countries associations. Such cooperation takes on primary importance during times of global instability.

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Understanding the Traditional Yogic Practices for the Holistic Well-Being among Adolescents.

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Abstract
The philosophy of yoga belongs to ancient Indian that aims to achieve holistic well-being. The crux behind this philosophy is to awaken our inner consciousness and enable our self to differentiate between material and immaterial world. Yoga is deeply intertwined with overall well-being, offering a holistic approach that addresses the physical, mental, emotional, and spiritual dimensions of health. It's about cultivating self-awareness, practicing self-care, and making choices that support your overall health and happiness. Over the years, it has been realised by the educationist that the principle of yoga are indeed essential for the holistic development of an individual. Thats why NEP 1968 for the first time aimed to introduce yoga in all schools, but it did not put too much effect. Findings reveal that the rapid advancement of science and technology, competitive market have an adverse effect upon the overall well-being of students. Thats why even after 52 years NEP 2020 again embarks to include yoga in its educational contours. In this study, it aims to understand how the yogic practices has a positive impact upon the well-being of the students. It even aims to understand the students perception about the positive effect of yoga. Further the study also suggest how yoga empowers the students to lead a healthy life.

Keywords : holistic well-being, yogic practices, perception

Introduction

Yoga is a centuries-old practice originating from ancient India that encompasses and offers a comprehensive approach to achieving holistic well-being by harmonizing the physical (body), mental (mind), and spiritual (spirit) disciplines aimed at achieving holistic well-being (Singh et. al, 2017). The word "yoga" is derived from the Sanskrit root "yuj," meaning to yoke or unite, reflecting its goal of harmonizing the body, mind, and spirit (Sasidharan & Bijulal, 2013).

Yoga is a systematic and conscious process for accelerating the growth of a human being, further leading him/her towards all round personality development. Health is a state of dynamic equilibrium between body and mind (Tiwari & Negi, 2019).

Adolescence is a pivotal phase marked by significant physical, psychological, and emotional changes. During this transformative period, adolescents often grapple

with stress, anxiety, peer pressure, and identity formation (Hashmi & Fayyaz, 2022). In light of these challenges, there is a growing recognition of the need for holistic approaches to adolescent well-being. A comprehensive approach for promoting holistic health, including physical fitness, mental clarity, emotional resilience, and spiritual growth, is provided by traditional yoga practices. (Rawat et. al, 2024). This paper aims to explore the relevance of traditional yogic practices in promoting holistic well-being among adolescents, also the perception of adolescents about yogic practices.

Traditional Yogic Practices

According to Patanjalis yoga sutras, the eight limbs of yoga are YAMA Restraints, moral disciplines or moral vows, NIYAMA Positive duties or observances, ASANA Posture, PRANAYAMA Breathing Techniques, PRATYAHARA Sense withdrawal, DHARANA Focused Concentration, DHYANA Meditative Absorption, SAMADHI Bliss or Enlightenment. These eight limbs consist of moral guidelines for leading a meaningful and purposeful life. They act as a guide for moral behaviour and self-control, emphasising the spiritual parts of human nature while focusing on one's physical well-being. While any of the eight limbs can be practiced independently, the physical postures and breathing techniques associated with yoga philosophy prime the body and mind for spiritual growth and meditation (Maehle, 2006). A wide range of methods and disciplines are included in traditional yoga practices with the goal of fostering mental well-being, emotional equilibrium, physical well-being, and spiritual development. As we all know that adolescence is age of stress and storm. So to manage stress and get rid of any kind of negativity, yoga act as panacea. The most important techniques or practices are defined below through which holistic well-being could attained (Bussing et. al, 2012)

Asanas (Yoga Postures): Asanas, the physical postures of yoga, serve as a cornerstone for enhancing physical health among adolescents. Through regular practice, adolescents can cultivate strength, flexibility, and balance in their bodies (Abioye, 2020). Asanas not only promote physical fitness but also alleviate musculoskeletal issues commonly encountered during growth spurts. Moreover, they enhance body awareness and mindfulness, fostering a positive body image among adolescents grappling with self-esteem issues (Watts & Rydell, 2018).

Pranayama (Breath Control): Pranayama, the regulation of breath, holds profound implications for adolescent well-being. Adolescents often experience heightened stress and anxiety, impacting their respiratory patterns (Khajuria et. al, 2023). Pranayama techniques, such as deep breathing and alternate nostril breathing, offer potent tools for mitigating stress and promoting relaxation. By harnessing the breath, adolescents can regulate their physiological responses, fostering emotional resilience and mental clarity amidst turbulent emotions (Jayawardena et. al, 2020).

Meditation: Meditation, a fundamental aspect of yoga, serves as a transformative practice for adolescent mental health. In an era marked by constant stimulation and digital distractions, adolescents grapple with a barrage of thoughts and emotions. Meditation provides a sanctuary for adolescents to cultivate inner stillness and

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introspection (Hagen & Nayar, 2014). Mindfulness meditation, in particular, empowers adolescents to observe their thoughts without judgment, thereby reducing rumination and enhancing emotional regulation. Moreover, meditation fosters a sense of connection and empathy, nurturing healthy relationships and social skills among adolescents (Keng et. al, 2011).

Various researches conducted to study the effect of yogic practice establish that Asana, pranayama, Bandha, Mudra, Dhyana, Shatkriyas etc, if done according to the environment nature of individual, place & time, have positive influence on physical and mental health (Büssing et. al, 2012 and Sengupta, 2012)

The Current Study

It is vital to gain additional knowledge regarding the yogic practices and its effect on well-being of adolescents. The goal of this study is to produce results that gives the holistic approach practices to address a wide variety of physical, psychological and emotional difficulties that are relevant and helpful todays era. The results of earlier research served as the basis for this investigation. This review-based study aims to summarise the result of prior studies in this field.

Aim of the Study

This study's main goal is to assess how yoga practices affected adolescent' overall well-being for this only those study were included that used interventions of yogic practices in schools which effect the well-being of adolescents. The secondary aim of the study was to investigate how adolescents perceived yoga activities. For this, researcher investigated limited number of studies based on perception.

Research Questions

Specifically, the study attempted to answer the following questions:

Q1: Is Yogic practices effects the well-being of Adolescents?

Q2: What are the perception of the adolescents about Yogic practices?

Methodology

Method

Relevant studies were included through a systematic literature review. The studies were included from the timeframe of 2003 to 2023. Firstly, an electronic search of English language databases was conducted. The electronic search was applied in ERIC, SCOPUS, Google Scholar, Shodhganga, Pub Med, Taylor and Francis and Research gate. The search included keywords related to Yoga, effect of yoga on well-being, yoga and adolescents and perception of students towards yoga.

The selection of journals was based on criteria that its scope and aims deal with yoga and its effect on well-being of adolescents and perception of students regarding the effect of yoga.

A few procedures were used in order to choose the articles. First, Prior published review studies were searched to identify additional studies in the same field and the title of the study was read and if it was found appropriate, it was saved to the folder. After then, the selected publications were carefully examined and evaluated to

ensure that they met the study's general objectives. Furthermore, web search through Google was done using the similar keywords from the electronic search. To select articles for inclusion it was determined that the articles met eligibility criteria: (1) the intervention had to incorporate some form of yoga and/ or meditation, (2) the studies related to yoga and holistic well-being, (3) the sample included adolescents and (4) Both quantitative & quantitative as well as mixed studies are included.

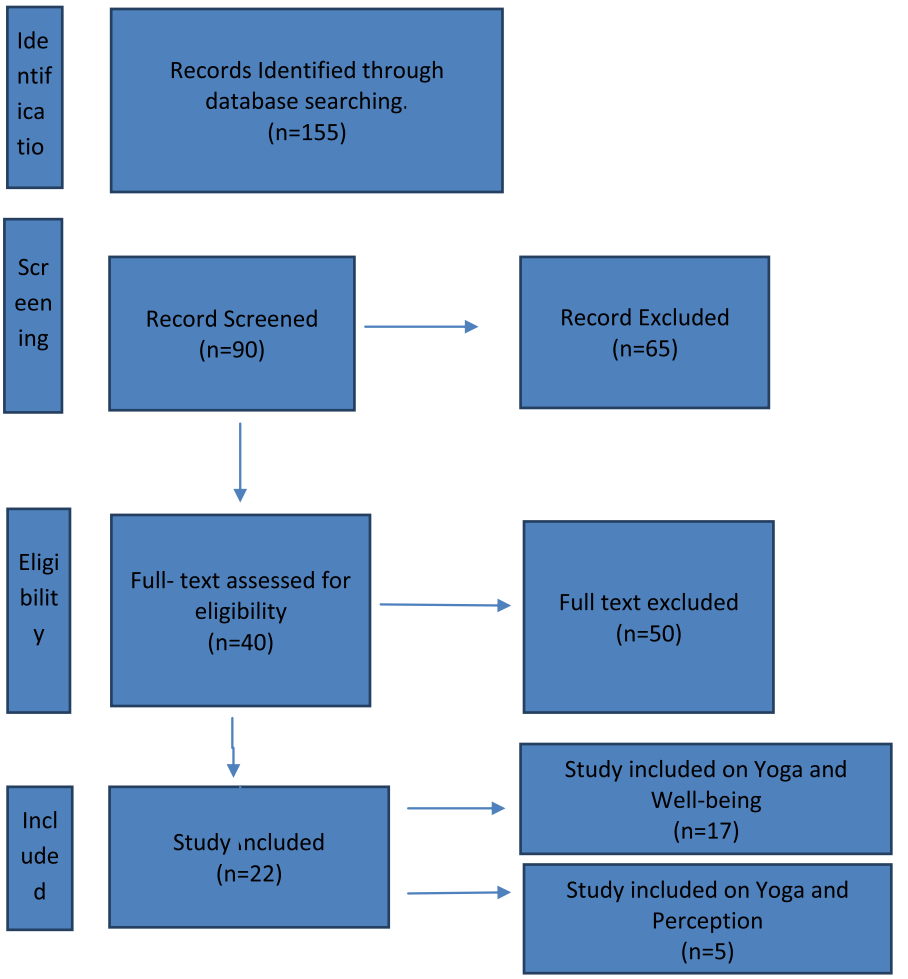

Fig 3.1.1: Flow Diagram- Study selection for review

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Result

All of the existing research was incorporated in order to evaluate the influence and effect of yoga on wellbeing as well as to understand the perception of adolescents regarding yogic activities. The results of the research showed a correlation between individual well-being and yoga practices. Yoga increased the self-esteem of school children, hence it should be incorporated into the curriculum (Bhardwaj & Agrawal, 2013). Yoga classes at school benefits the general health as well as social standing of children and help them avoid the bad habits that are common in the adolescent transition period of life (Sharma et. al, 2019).

Significant improvements were seen in all primary outcome measures following the yoga intervention. Happiness, excitement, calm, inspiration and alertness, activity, mental clarity, self-control over wrath, and self-assurance were among the notable improvements observed by the participants (Vaishnav et. al, 2018). The noteworthy impact of yoga on teenagers' emotional control, self-esteem, and sentiments demands policymakers to take notice and implement standardised yoga curriculum to introduce yoga into schools (Janjhua et. al, 2020). According to Iyerngar (2008), "If you practise yoga every day with perseverance, you will be able to face the turmoil of life with steadiness and maturity," is something we think equally applies to children. Achieving mental peace and cultivating a sense of well-being, relaxation, enhanced self-esteem, higher productivity, enhanced attentiveness, less irritation, and a positive view on life are some of the key objectives of yoga (Arora & Bhattacharjee, 2008).

Yogic practices energies enhances, and heals the mind, body and soul and is connected with psychological wellbeing (Nagendra et al., 2010). Yoga programmes offered in schools that incorporate poses and exercises, relaxation techniques, and meditation may help children to feel less stressed and anxious while also boosting their sense of self-efficacy (Jane et. al, 2010). The students perception on yoga is that they feel calm, focussed and relaxed. The study revealed the perception of students that how they felt about a yoga programme that was offered in schools and was intended to help them focus better in class and feel less stressed. The students said they had discovered techniques for being attentive and at ease, such taking deep breaths. The yoga programme, according to both the teacher and the students, was a good experience that raised the students' self-esteem (Jane et. al, 2010).

Discussion

The aim of this review-based study was to evaluate a literature surrounding the impact of yoga on well-being of adolescents. The results of the study indicated that, when done correctly, yoga practices can help everyone and develop them completely in all areas. This article suggests that yoga might be a helpful technique for adolescents. Children of today need a dynamic, creative curriculum that involves them in the teaching and learning process. Therefore, if we can successfully connect with children, they can learn to use yoga as a strong tool to reduce stress and build resilience to deal with it. We think research is essential to understanding how

children can benefit from learning yoga, continue practicing it, and apply it to their everyday lives. The current lifestyle of adolescent is degrading day by day due to their food habits and lack of physical activities. Adolescents have various issues such as psychological problem i.e. stress, anxiety and lack of self-confidence. So to reduce such issue yoga act as panacea for adolescents.

In present time, science proven that yoga is the best option for attaining a high level of brain i.e. mental health level to get a look over mental health (Sengupta, 2012). The benefits of emotional intelligence and mindfulness have recently been emphasised by NEP 2020, which explicitly includes imparting these ideas to teachers and students in order to improve the effectiveness of the teaching and learning process. Yoga is included in the instructional framework of the National Education Policy (NEP) 2020. The NEP 2020 seeks to provide public access to physical education, sports, yoga, and mental health. The Ayush system, naturopathy, and yoga are also anticipated to be taught in healthcare education curricula by NEP 2020. IKS courses, which are a part of the curriculum for engineering Diploma programmes, are also encouraged by NEP 2020.

Students believe that yoga makes them feel relaxed, peaceful, and focused. The investigation uncovered students' opinions regarding a yoga curriculum taught in schools with the goal of improving their ability to concentrate in class and reduce stress.Both the teacher and the students feel that the yoga curriculum is beneficial for them.

Overall, Yoga provides teenagers useful tools to help them deal with the difficulties of puberty with increased resilience, self-awareness, and wellbeing. Teenagers can acquire lifelong skills for stress management, building healthy relationships, and preserving their physical, mental, and emotional well-being by introducing yoga into their daily routines.

Conclusion

The practice of traditional yogic techniques offers a myriad of benefits for adolescent well-being. Physically, yoga promotes strength, flexibility, and coordination, thereby reducing the risk of injuries and improving overall fitness levels. Mentally, yogic practices enhance focus, concentration, and memory, supporting academic performance and cognitive development. Emotionally, yoga fosters self-esteem, resilience, and empathy, enabling adolescents to navigate interpersonal relationships and cope with stress more effectively. Moreover, the spiritual dimension of yoga provides adolescents with a sense of purpose, connection, and inner fulfilment, transcending the superficialities of material existence. To maximize the impact of traditional yogic practices on adolescent well-being, it is essential to integrate yoga into their daily lives. Schools play a crucial role in promoting yoga education by incorporating it into physical education curricula or offering extracurricular yoga classes. Community centres, youth organizations, and healthcare settings can also provide opportunities for adolescents to access yoga classes and workshops. Furthermore, leveraging technology through online platforms and mobile applications can make yoga more accessible and appealing to adolescents, allowing them to practice yoga anytime, anywhere.

S

In conclusion, Adolescent well-being can be holistically promoted by traditional yoga practices. Adolescents can benefit from the physical, mental, emotional, and spiritual aspects of yoga by adopting it into their lifestyles. As we work to promote the wellbeing and health of the future generation, let's embrace yoga's transforming potential in fostering adolescents' holistic wellbeing

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Exploring Ancient Approaches for Advancing Contemporary Science

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Abstract

The potential of ancient Indian knowledge systems to contribute to the advancement of contemporary science is investigated in the present study. Drawing from a diverse array of ancient Indian texts, including the Vedas, Upanishads, Ayurveda, and Jyotisha, as well as historical contributions in mathematics, astronomy, and philosophy, the research aims to uncover insights that can inform and enrich modern scientific practices. Through a comparative analysis of ancient methodologies and current scientific approaches, the study seeks to identify areas of convergence and divergence, as well as opportunities for integration. The objective is to elucidate how ancient Indian knowledge systems can offer alternative perspectives, methodologies, and solutions to address present-day scientific challenges.

In conclusion, this research underscores the enduring relevance of ancient Indian knowledge systems in the context of contemporary science. The comparative analysis reveals striking parallels between ancient methodologies and modern scientific practices, suggesting that insights from the past can significantly contribute to advancing current scientific endeavors. By bridging ancient wisdom with contemporary science, this study advocates for interdisciplinary collaboration and dialogue, fostering a deeper appreciation for the historical roots of scientific inquiry. Furthermore, the findings highlight the importance of leveraging diverse intellectual traditions to stimulate innovation and address complex scientific problems. Moving forward, integrating insights from ancient Indian knowledge systems into contemporary scientific discourse has the potential to enrich research methodologies, broaden perspectives, and ultimately foster transformative advancements in scientific knowledge and practice.

Keywords: Indian knowledge systems, Contemporary science, Ancient Indian texts, Ancient methodologies, Modern scientific practices

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Introduction : The human species seems to possess unique abilities of both creative contemplation and scientific analysis, as well as emotional and intellectual sensibility. This means that to create knowledge, culture, and concepts as human conditions, we need to use many different primary factors, including critical

thinking, evidence, and imagination. In addition, some ancient knowledge of many long-established cultures and/or sophisticated societies does not seem to recognize the distinction between empirical and theoretical ideas regarding known intents in the same way as contemporary West. Expectations are that cross-cultural considerations will help us understand the limitations and strengths of our unique methods better than if we are alone. This idea can create the concept of a "collaborative research system" where the general public shall be and could contribute to the commodity of knowledge. However, as proven empirically, respectful mutual engagement on a scientific approach will require an open exchange of information values, which will be a learning opportunity for indigenous scholars.

Through post-modern lenses, the analytical rigor and empirical methodologies of physical sciences could be viewed as supreme forms of knowledge, and the analytical methods of creative arts and humanities could be associated with the creation of lesser forms of knowledge or even "anti-science." Hierarchical academic structures, where humanities and social sciences are seen as simply less merit transitive components affiliated to a separate faculty of science, communicate the above-mentioned ideas. Therefore, adherence to valorizing contemporary sciences can allow individuals to project their claim to authority, access, and personal reputation. Others may choose humility and limit their work to compliance with canvassers' claims in the field of science, no matter how scientific it might be. However, several primate ecosystems do not perform in a way that these processes can naturalize their characteristics, ourselves, and their unique contributions, as if it could be applied to the experience of life and discovering the world.

Ancient Approaches in Science: Throughout history, advanced scientific methods were established by ancient societies, setting the groundwork for contemporary scientific research. These antiquated scientific methods covered a broad spectrum of fields, such as mathematics, astronomy, medicine, and engineering, and they were frequently combined with concepts from philosophy, convictions regarding religion, and real-world uses.

Astronomy was one of the most important ancient disciplines of science, developed by societies including the Egyptians, Greeks, Maya, and Babylonians. These societies created calendars, tracked the motions of celestial bodies, and forecasted astronomical occurrences. Their accurate observations and computations of the celestial objects shaped our knowledge of the cosmos and established the foundation for contemporary astronomy.

Ancient societies contributed important contributions to the creation of algebra, geometry, and number systems in mathematics. For instance, the Babylonians developed sophisticated techniques for calculating areas and quantities and employed a base-60 number system. Today's geometry curriculum is based on the fundamental concepts and propositions developed by the Greeks, who developed mathematicians such as Euclid and Pythagoras.

The advancement of medical procedures was greatly influenced by ancient medical theories. Among those who investigated the use of herbal treatments, surgical procedures, and diagnostic methods were the Greeks, Egyptians, and Chinese. The "Father of Medicine," Hippocrates, created ethical standards for the practice of medicine, while Chinese medicine consisted of acupuncture, medicinal products, and the beliefs of yin and yang.

Observation and Empirical Knowledge : The scientific method depends critically on observation and empirical knowledge. Observation is the process of learning about the world around us via the use of our senses, whereas empirical knowledge is derived from data gathered by experiments and observation. In science, theories are developed based on observations and subsequently verified by experiments. By methodically gathering and analyzing data, empirical knowledge is acquired, enabling conclusions to be made that are supported by facts rather than conjecture. Scientists may create ideas, make well-informed judgments, and deepen our understanding of the natural world by relying on observation and empirical information. This procedure aids in guaranteeing that scientific findings are supported by data and are testable and verifiable by other members of the scientific community. The scientific approach uses a methodical process of observation, experimentation, and analysis to produce empirical knowledge.

The Role of Mathematics in Ancient Science : Mathematics played a crucial role in ancient science by providing a systematic framework for describing and understanding the natural world. In ancient civilizations such as Egypt, Mesopotamia, Greece, and India, mathematics was used extensively in various scientific disciplines, including astronomy, physics, and engineering. Mathematics played a crucial role in ancient science, influencing the development of various scientific disciplines and shaping our understanding of the natural world. Ancient civilizations such as the Babylonians, Egyptians, Greeks, and Indians made significant contributions to mathematics, laying the foundation for modern mathematical concepts and methods. In ancient times, mathematics was used to solve practical problems, make precise measurements, and understand complex phenomena such as planetary motion and geometry. The Greeks, for example, developed the axiomatic method and Euclidean geometry, which had a profound impact on mathematics and science for centuries to come. In astronomy, mathematical models were used to predict celestial events and understand the movements of planets and stars. The ancient Greeks also explored the concept of infinity and developed early theories of calculus. Mathematics provided a universal language for communicating and describing natural phenomena, enabling ancient scientists to formulate theories, make predictions, and test hypotheses. The integration of mathematics into ancient science laid the groundwork for the scientific advancements that followed and emphasized the importance of quantitative reasoning and logical deduction in understanding the natural world.

S. No.	Mathematics influenced	Properties
1	**Measurement and geometry**	such as the Egyptian cubit, Roman foot, and Greek stadion, geometric shapes, such as circles, triangles, and polygons
2	**Engineering and architecture**	construction of monumental structures, such as pyramids, temples, and aqueducts, in ancient civilizations
3	**Astronomy**	understanding the cosmos, navigating the seas, and predicting celestial events
4	**Problem-solving and logic**	essential for formulating theories, conducting experiments, and making discoveries about the natural world.
5	**Mathematics of motion**	analyzing and describing the dynamics of objects in motion, both on Earth and in the heavens

Table no.-1

Natural Philosophy and Early Scientific Theories : Natural philosophy, also known as philosophy of nature or physiologia, was an early scientific approach that sought to understand the natural world through observation, reasoning, and speculation.
It was the forerunner of modern science and played a significant role in the development of early scientific theories.
Here are some key aspects of natural philosophy and early scientific theories:

Philosophical inquiry: Natural philosophy emerged in ancient Greece with philosophers such as Thales, Anaximander, and Pythagoras, who sought to explain the fundamental principles underlying the natural world. They used reasoning and speculation to formulate hypotheses about the origins of the universe, the behavior of matter, and the structure of the cosmos.

Theories of the elements: Early natural philosophers proposed various theories to explain the composition of the physical world. For example, Empedocles suggested that all matter was made up of four basic elements - earth, air, fire, and water. This theory influenced later ideas about the composition of matter.

Geocentric and heliocentric models: Ancient astronomers and natural philosophers developed competing models to explain the motion of celestial bodies. The geocentric model, advocated by Ptolemy, placed the Earth at the center of the universe, while the heliocentric model, proposed by Aristarchus and later refined by Copernicus, placed the Sun at the center.

Alchemy and early chemistry: Alchemy, a blend of philosophy, mysticism, and proto-science, was an early attempt to understand the nature of matter and transformation. Alchemists sought to transmute base metals into gold and discover the philosopher's stone, a mythical substance believed to bestow immortality.

Experimental methods: Early natural philosophers began to incorporate experimental observations into their inquiries. For example, Aristotle's empirical approach to studying natural phenomena laid the groundwork for the scientific method by emphasizing the importance of observation and classification.

Transition to modern science: The gradual shift from natural philosophy to modern science occurred during the Scientific Revolution of the 16th and 17th centuries. The work of figures such as Galileo, Kepler, Bacon, and Newton marked a transition from speculative reasoning to empirical observation and systematic experimentation.

Contemporary Science and Ancient Influences: Contemporary science has been greatly influenced by the knowledge, methodologies, and philosophies of ancient civilizations. While modern science has significantly evolved and advanced, many foundational principles can be traced back to ancient influences.

Modern Scientific Methodology: Contemporary science employs a rigorous approach to knowledge production, theory testing, and the study of the natural world. The scientific method is guided by some basic principles, even if specific methods and techniques may vary throughout scientific disciplines. Rigid information generation, hypothesis testing, and natural world research are all part of modern scientific techniques. First, scientists attentively study their surroundings before developing viable research questions or hypotheses based on the body of current knowledge. Scientists gather information, adjust parameters, and conduct controlled analyses of findings to make inferences. Data analysis uses statistical approaches and strict validation processes to guarantee the correctness and dependability of results.
Iterative peer review, experiment replication, and open dissemination of findings to the scientific community are all part of the process. Fundamental scientific tenets such as objectivity, rationality, empiricism, and skepticism aid in upholding strict standards and preventing prejudice in research.

Integration of Ancient Wisdom in Modern Science: A developing movement that acknowledges the importance of old knowledge systems in deepening our understanding of the world is the incorporation of ancient wisdom into contemporary science. Indigenous tribes, the Greeks, and the Egyptians were among the ancient societies with extensive understanding of the natural world, human nature, and the interconnectivity of all things. This knowledge is currently being applied to contemporary scientific research and procedures, resulting in a more thorough and all-encompassing method of handling challenging issues. For

instance, it has been discovered that indigenous healing methods, Indian Ayurveda, and traditional Chinese medicine may all provide important insights into the prevention and treatment of illness. These traditional practices frequently emphasize the harmony of the mind, body, and spirit, which is consistent with the expanding body of Western knowledge that is holistic medicine.

In addition, ageless teachings on ethics, self-improvement, and the essence of reality may be found in the teachings of ancient philosophies like Taoism, Buddhism, and Stoicism. To learn more about human behavior and cognition, psychologists, neuroscientists, and philosophers are now researching these teachings. we can access a wealth of information that has been passed down through the ages by fusing old wisdom with contemporary science. This broadens our perspective on the world and aids in the creation of more humane and long-lasting answers to today's problems. In the end, combining traditional knowledge with contemporary science enables us to benefit from the finest aspects of both cultures and build a society that is more peaceful and enlightened.

Ancient Approaches in Contemporary Science: The application of mindfulness meditation in psychology and neuroscience is one instance of how traditional methods are being used in modern science. Rooted in Buddhist teachings, mindfulness entails developing an unjudging awareness of the present moment. Studies have indicated that consistent mindfulness meditation practice can result in lowered stress levels, sharper concentration, and better emotional health. Researchers have been examining the impact of mindfulness on the brain; brain function and structural changes linked to mindfulness practice have been observed in neuroimaging studies.

Another example is the use of traditional herbal therapy in modern pharmacology. Many contemporary pharmaceuticals are derived from plant components that have been used for centuries in ancient medicinal systems such as Ayurveda and ancient Chinese Medicine. Furthermore, "biomimicry" refers to the application of natural design principles to solve technological and engineering issues. For example, studying the structure of a spider's silk has led to the development of more robust and versatile materials that may be used in a range of environments. By mimicking the solutions found in nature, scientists may create technology that is more sustainable and efficient.

Astronomy and Ancient Astronomical Techniques : The study of astronomy has a long history of being connected to ancient societies and their use of astronomy. Observing and comprehending the motions of celestial bodies was made possible by the complex systems built by several ancient societies, including the Babylonians, Egyptians, Greeks, and Maya. In addition to aiding these ancient societies in creating calendars, predicting eclipses, and navigating the seasons, these astronomical methods also established the groundwork for contemporary astronomy.

The building of Stonehenge in England is among the most well-known instances of prehistoric astronomical methods. The alignment of this prehistoric structure with

the solstices and equinoxes suggests that its architects had a profound awareness of celestial motions, leading experts to think that it was utilized as an astronomical observatory.In a similar vein, the sophisticated calendar system used by the Maya civilization in Mesoamerica was created via the study of the stars. They were able to forecast astronomical occurrences with extraordinary precision thanks to their accurate observations of the movements of the sun, moon, and planets. By creating solar system models and charting star locations, the Greeks including Aristotle, Ptolemy, and Hipparchus made important advances in astronomy. The foundation of contemporary astronomy was established by their observations and mathematical computations.

To better comprehend celestial occurrences and obtain insights into the history of the cosmos, modern astronomers still study historical astronomy techniques and observations. Astronomers can solve the mysteries of the universe and advance our understanding of it by fusing scientific principles and contemporary technology with ancient knowledge.

Medicine and Traditional Healing Practices : Many societies across the world combine ancient healing techniques with contemporary medical treatments, demonstrating the long history of cohabitation and collaboration between medicine and traditional healing practices. African herbal medicine, Ayurveda, Traditional Chinese medicine, indigenous healing methods, and other traditional healing modalities have all been handed down through the ages and are ingrained in the cultural customs and beliefs of many communities.

These conventional medical techniques frequently emphasize a holistic view of health, emphasizing the connection between the body, mind, and spirit. To encourage healing and well-being, they might incorporate the use of herbal treatments, acupuncture, massage, meditation, and spiritual rituals. Traditional healers, sometimes referred to as shamans, herbalists, or medicine men or women, are essential members of their communities because they offer support and direction, traditional healers, often referred to as shamans, herbalists, or medicine men or women, are essential members of their communities because they offer support and direction to those who are seeking healing. Growing interest has been shown in fusing modern medicine with ancient healing methods in recent years. Complementary and alternative medicine (CAM), an integrated approach, acknowledges the importance of traditional knowledge systems in boosting the efficacy of conventional therapies. Studies have demonstrated the potential for certain traditional therapeutic modalities, such as acupuncture for pain management or herbal therapies for certain illnesses, to enhance standard medical care and enhance patient outcomes.

Healthcare practitioners may give patients with a more thorough and individualized approach to recovery by adopting ancient healing methods in addition to contemporary medicine. In addition to deepening our understanding of health and wellbeing, the fusion of traditional knowledge with contemporary science encourages inclusion and diversity in healthcare practices. In the end, the cooperation between conventional medicine and healing arts underscores how

critical it is to respect and preserve the rich legacy of healing customs from all over the world.

Agriculture and Indigenous Farming Method : For ages, the use of indigenous agricultural practices has been essential to sustainable agriculture. Numerous indigenous tribes worldwide have developed advanced techniques that are environmentally conscious. These age-old agricultural methods have been handed down through the years as a means of protecting biodiversity, maintaining natural resources, and guaranteeing food security. They are firmly ingrained in the cultural and spiritual beliefs of indigenous peoples.

The "milpa" system used by indigenous populations in Mesoamerica is one instance of an indigenous agricultural technique. Intercropping maize, beans, and squash on the same piece of land is known as the milpa system, and it has been demonstrated to improve soil fertility, lower insect populations, and boost crop yields. In Africa, too, indigenous communities have been developing agroforestry systems combining crop cultivation with tree planting to increase soil health and water conservation as well as mitigating climate change. These farming methods have proved to be resistant and able to adapt to changes in environmental conditions through their integration with the traditions of plant species and ecological relationships.

The value of local agricultural methods for promoting Sustainable Agriculture and Food Sovereignty has been increasingly recognized over the last years. In the field of innovation and environmentally sustainable farming, researchers and policymakers are more and more looking to indigenous knowledge systems as an inspiration.The integration of traditional farming methods with contemporary agricultural technologies has significant promise for improving food security, safeguarding biodiversity, and lessening the effects of climate change.

All things considered, using indigenous agricultural practices teaches us important lessons about how to develop land in a way that respects the environment and benefits both people and the earth. To build a more resilient and sustainable food system for coming generations, we may benefit from the knowledge of indigenous groups by respecting and maintaining these ancient traditions.

Conclusion : Researching historic practices to advance current science can help us close the gap between conventional knowledge and technology, giving patients more individualized and comprehensive treatment. Our knowledge of healthcare is broadened by this integration, which also promotes inclusion and diversity in medical procedures.

We can improve patient outcomes and open the door for a more thorough and caring approach to treatment by embracing the best aspects of both cultures. The important contributions that traditional healing techniques have made to influencing modern healthcare must be acknowledged and honored.

Preserving The Past: Investing Factor Influencing The Continuation Of Uttarakhands Folk Arts & Culture

Swati Verma, Sourabh Dhiman

Abstract

The purpose of this project, "Preserving the Past: Investigating Factors Influencing the Continuation of Uttarakhand's Folk Art and Culture," is to investigate the elements that support traditional art forms' ability to endure in the face of societal change and modernity. Uttarakhand is known for its rich cultural legacy, which is shown in the variety of its folk music, dancing styles, theater, festivals, food, clothes, religious places, and artwork, including wood carvings, Garhwal paintings, and Pichora clothing. These components not only represent the identity of the area but also act as archives for customs and knowledge that have been passed Down through the ages.

However, the survival of these creative forms is threatened by elements including urbanization, modernization, and dwindling enthusiasm from younger generations. In order to solve this issue, the following will be looked into in this study: The present state of folk art and cultural activities in Uttarakhand, taking into account its historical relevance, diversity, and pervasiveness in modern culture.

The reasons behind the persistence of artists and other cultural practitioners, taking into account elements such as spirituality, economic reliance, and cultural pride. the success of current community and governmental programs meant to protect traditional art and culture. the difficulties that cultural practitioners and artists encounter, such as resource availability, shifting cultural norms, and financial limitations. Techniques for improving the maintenance and propagation of Uttarakhand's traditional art and culture that include community involvement as well as policy initiatives.

To comprehend the value of protecting cultural heritage and the part social networks play in maintaining traditional behaviours, the research makes use of the theories of cultural heritage and social capital. The goal of this research is to determine practical measures that may be taken to preserve Uttarakhand's distinct cultural heritage and guarantee that it remains relevant for next generations.

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Uttarakhand's Folk Tradition, Culture, and Festivals : The state's customs and traditions are very important to the region's residents as well as to the history of mankind as a whole. Uttarakhand's cultural customs, which have their roots in ancient customs and beliefs, convey a strong sense of community, spirituality, and the natural world. Every facet of Uttarakhand's culture, from vivid folk music and dance forms like the well-known "Jagar" and "Chholiya" to exquisite artwork like

wood carvings and Pahari paintings, captures the spirit of the state's people and their values. Customary celebrations like as Holi, Diwali, and Uttarayani are widely observed, bringing families and communities together for merrimentous celebrations that strengthen links between them and their shared culture. Furthermore, the wealth of myths, stories, and folklore that have been passed down through the years in Uttarakhand acts as a repository of wisdom, providing insights into the history, culture, and worldview of the area. Beyond its aesthetic and cultural value, the customs of Uttarakhand provide a framework for sustainable living and peaceful cooperation with the environment. They also operate as a storehouse of resilience and flexibility. In summary, Uttarakhand's cultural and traditional customs not only improve the lives of those who live there, but they also provide insightful guidance and motivation for maintaining cultural variety and promoting social cohesion worldwide.

A vital component of Uttarakhand's rich history, folk tradition, culture, and festivals capture the variety, spirituality, and peace of the people in the area. Here's a thorough list of each item's importance:

Folk Songs and Music : The lively folk songs and music of Uttarakhand are well-known, and they are distinctive to different areas such as Garhwal and Kumaon. The people's daily life, pleasures, sorrows, and spiritual beliefs are all shown in these songs. They are important because they transmit tales and customs from one generation to the next, protecting the state's oral tradition and cultural legacy.

Customary Dance Styles : The cultural fabric of Uttarakhand is deeply rooted in dance styles such as the well-known "Langvir Nritya," "Barada Nati," and "Choliya Dance". These dances, which highlight the region's vibrant culture and sense of community, are frequently performed at festivals and other special events.

Folk Theatre (Ramlila) : A major aspect of Uttarakhand's cultural scene is the presentation of the epic story of the Ramayana through Ramlila performances. In addition to providing entertainment, these theatrical productions provide moral and spiritual values, strengthening the community's bond and sense of oneness.

Festivals :

Kumbh Mela : One of the biggest religious gatherings in the world, the Kumbh Mela takes place in Haridwar once every twelve years. Millions of pilgrims are drawn to it each year to bathe in the Ganges' sacred waters in hopes of receiving blessings and spiritual cleansing.

Nanda Devi Raj Jat : Honoring Goddess Nanda Devi, this pilgrimage takes place once every twelve years. It entails a parade to the Garhwal Himalayan shrine of Nanda Devi, which represents the goddess' travel to her husband's house.

Harela and Bhitauli : The Kumaon area celebrates the agricultural festivities of Harela and Bhitauli during the planting season. In observance of the intimate

connection between the natural world and human existence, people worship the goddess of harvest and offer prayers for a plentiful crop.

Phool Dei : Celebrated with tremendous fervor in Uttarakhand, Phool Dei heralds the arrival of spring. Young girls celebrate the new season with traditional chants and flower-decorated doors, signifying wealth and rejuvenation.

Magh Mela : A month-long celebration honoring Lord Vishnu, the Magh Mela is held in Uttarkashi. In order to get blessings and spiritual elevation, devotees undertake religious rites and bathe in the sacred Bhagirathi River.

Cuisine : The culinary traditions and culture of Uttarakhand are reflected in its cuisine. Renowned traditional foods that have been handed down over the years include "Bhatt ki Churdkani," "Kumaoni Raita," and "Gahat ki Dal". In addition to pleasing the palate, these gastronomic treats help people feel more connected to their past and origins.

Traditional Clothes : Uttarakhand's traditional clothes, which include "Pichora" and "Dhoti-Kurta" for men and "Ghagra-Choli" for women, are a reflection of the region's rich cultural history. Wearing these clothes at festivals, weddings, and other joyous occasions represents cultural continuity and communal pride.

holy Sites & Pilgrimage Destinations : Uttarakhand is home to a large number of pilgrimage sites and holy places, including Gangotri, Yamunotri, Badrinath, and Kedarnath. For Hindus, these locations are of great religious significance. Each year, millions of devotees visit them, encouraging spiritual devotion and promoting cultural harmony.

Uttarakhand's art and craft : Garhwal paintings, which come from the Garhwal area, are highly regarded for their elaborate themes and religious symbolism. These paintings, which are said to confer good fortune and heavenly graces, are particularly evident in Aipan and Peeth artworks. The elaborate patterns of pichora dupattas, traditional clothes embellished with religious motifs, guarantee a prosperous married life by reflecting heavenly geometry. Every thread is painstakingly organized to represent divine nature in Bhotias' Shawls, which are produced by the Bhotiya community using divine symbolism. This procedure is reflective of meditation. Historical events have inspired the divinity and love seen in Pahari Paintings from the Garhwal School, while heavenly workmanship is symbolized by rich metal decorations.Dekaras, clay representations of deities, bestow heavenly benefits with their vivid colors and minute details, while wood carvings, representing a long tradition, embellish dwellings with patterns inspired by nature. While Leaf Painting deftly illustrates stories on dried leaves, Handloom Weaving protects cultural identities. Lastly, jewelry-making is an essential part of Uttarakhand's history and a representation of skill and cultural identity. Collectively, these visual expressions aid in the preservation of Uttarakhand's abundant cultural

legacy and customs, exhibiting artistic brilliance and sacred symbolism, rendering them priceless cultural resources.

Garhwal Paintings (Murals of Aipan and Peeth) :

- These paintings, which are native to the Garhwal area, are renowned for their holy geometry and heavenly symbolism.
- Detailed themes and patterns, such as those seen in Aipan and Peeth, are frequently included in Garhwal paintings and are thought to bestow good fortune and supernatural benefits.

Pichora Dupatta :

- A customary article of clothing decorated with holy geometry or symbols, which is said to confer heavenly benefits and guarantee a happy marriage.
- crafted with extreme care, frequently incorporating themes like swastikas and images of villages.

Bhotias' Intricately Designed Shawls and Woolen Wear :

- These woolen garments and shawls, which are crafted by the Bhotiya people, symbolize the women's divine essence through the use of sacred geometry or divine symbolism.
- The meticulous arrangement of every thread reflects a contemplative process that is similar to incorporating divinity into the art.

Pahari Paintings (Garhwal School of Painting) :

- The Garhwal School of Painting, known for its magnificent miniature paintings brimming with sensuality, love, and divinity, is based in Uttarakhand.
- These paintings, which were influenced by historical occurrences and artist migration, showcase the creative brilliance and cultural diversity of the area.

Ornaments :

- Uttarakhand is well known for its one-of-a-kind decorations made of copper, brass, silver, and gold, all of which have a timeless appeal and heavenly meaning.
- These decorations, which are representations of heavenly workmanship, include elaborate designs that are influenced by local beliefs and the natural world.

Wood Carvings :

- Uttarakhand is known for its wood carvings, which adorn furniture, doors, carpets, baskets, and utensils with distinctive designs derived from natural and heavenly themes.
- These carvings, which are a reflection of a rich legacy passed down through the years, give every home a hint of the beauty of nature.

Dekaras (Clay Models of Gods and Goddesses) :

- Three-dimensional clay sculptures of several gods, painted in vivid colors and featuring historical fortunate occasions.
- These exquisitely detailed and respectfully constructed clay figurines are said to bring supernatural benefits into households.

Handloom Weaving :

- The handloom weaving heritage of Uttarakhand creates unique blankets and woolen shawls in the Garhwal area and silk/cotton textiles in Kumaon.
- Native textile traditions are preserved and each region's weaving technique is a reflection of its cultural uniqueness.

Leaf Painting :

- Leaf painting is a craft practiced by artists in Uttarakhand, where they use natural colors to meticulously paint pictures from mythology, nature, and everyday life on dried leaves.
- This distinctive art style highlights the artistic brilliance of the area while preserving cultural tales.

Jewellery Making :

- A vital part of Uttarakhand's cultural legacy, jewelry-making entails creating magnificent items with age-old methods and regionally inspired patterns.
- The artistry and legacy of these jewelry items contribute to the region's cultural character.

In addition to boosting the state's economy, these artistic and craft forms are essential to maintaining Uttarakhand's rich cultural legacy and ingrained customs. They represent the area's exceptional artistic talent, sacred symbolism, and handcrafted quality, making them important cultural treasures.

Need of the study :

There are several reasons why it is essential to do the study "Preserving the Past: Investigating Factors Influencing the Continuation of Uttarakhand's Folk Art and Culture". First and foremost, in order to save priceless cultural heritage, it is imperative that endangered art forms be documented and preserved (Smith, 2019). Numerous traditional art forms in Uttarakhand are in danger of disappearing due to modernity, urbanization, and dwindling interest from younger generations (Jones & Patel, 2020).

According to Brown et al. (2018), it is imperative to comprehend the motives and obstacles encountered by folk artists in order to provide them with the requisite assistance and materials to maintain their trade in an economically and culturally viable manner. Furthermore, evaluating the effects of commercialization and

tourism on folk art will provide insight into the ways in which these variables affect the legitimacy and sustainability of traditional artistic expressions (Gupta, 2021). Furthermore, assessing the success of local and governmental efforts to preserve folk art might point up areas in need of development and innovation (Chopra & Kumar, 2017). In addition, investigating novel methods for advancing and maintaining folk art is crucial to guaranteeing its continuous significance and liveliness amongst evolving socio-economic environments (Singh & Sharma, 2019). Last but not least, exploring the possibilities for incorporating folk art into education will help future generations have a greater respect and knowledge of Uttarakhand's rich cultural legacy, assisting in its promotion and preservation (Yadav & Singh, 2020). Our goal in doing this research is to preserve Uttarakhand's folk art and culture while also honoring and preserving its distinct heritage for future generations.

Theoretical farmwork : theoretical framework include:

Cultural Heritage Theory : According to Smith (2019), this paradigm highlights the significance of cultural heritage preservation for communities' identity, continuity, and collective memory. Within a larger socio-political framework, Cultural Heritage Theory offers a thorough framework for appreciating and safeguarding cultural items, locations, and activities. It highlights the dynamic interplay between identity and legacy, recognizing that social structures, historical narratives, and power dynamics all influence how cultural heritage is interpreted and valued. Cultural legacy Theory examines how many stakeholders, such as communities, governments, and international organizations, produce, debate, and negotiate legacy. It does this by drawing on multidisciplinary views from anthropology, sociology, history, and cultural studies. In order to address questions of ownership, representation, and sustainability in heritage management, key ideas like authenticity, memory, and heritage tourism are critically addressed (Smith 2006; Smith and Akagawa 2009; Meskell 2010). With the use of this framework, academics and professionals may better explore the intricacies of cultural heritage and support approaches to its interpretation and protection that are more inclusive and fairer.

Social Capital Theory : The networks, connections, and social norms that promote collaboration and support among neighbors are the main subjects of social capital theory (Brown et al., 2018). Social capital theory may be used to examine how intergenerational knowledge transfer, communal cohesiveness, and shared values contribute to the preservation of traditional practices and the promotion of group action to safeguard cultural heritage in the context of Uttarakhand's folk art and culture preservation.
According to social capital theory, ties and networks within a community or society help to build social resources like reciprocity, trust, and cooperative norms, which in turn promote group activity and mutual gain. According to Bourdieu (1986), Coleman (1988), and Putnam (2000), this concept highlights the importance of

social ties and the resources they contain, emphasizing how they may be used to promote both individual and group well-being. In order to shape social cohesion, resilience, and access to opportunities, social capital can take on many different forms. These include bonding (connections within the same group), bridging (connections between different groups), and linking (connections between individuals and institutions) (Nahapiet & Ghoshal, 1998; Woolcock & Narayan, 2000).

Addressing social injustice, encouraging community growth, and fostering long-lasting social change all depend on an understanding of social capital dynamics (Portes, 1998; Lin, 2001).

Research Questions :

1. What is Uttarakhand's present state regarding folk art and cultural practices? This inquiry seeks to evaluate the range of artistic mediums, their historical relevance, and their pervasiveness in modern culture.
2. What inspires artists and other cultural practitioners to keep up their work? This inquiry delves at variables such as religious convictions, economic reliance, and cultural pride.
3. To what extent do current government and community initiatives contribute to the preservation of folk art and culture? This inquiry aims to comprehend these projects' advantages, disadvantages, and effects on cultural sustainability.
4. What obstacles must traditional art forms be overcome in order for artists and cultural practitioners to preserve and advance them? This inquiry highlights impediments including financial limitations, shifting social norms, and resource accessibility.
5. What effect do commercialization and tourism have on the preservation of traditional art? This inquiry examines the possible advantages and disadvantages of these elements, taking into account things like heightened visibility and weakened authenticity.
6. Is it possible to increase younger generations' awareness of culture by including folk art into the curriculum? This inquiry looks at how well this strategy could work to promote cultural sensitivity and comprehension.

Objectives :

1. To evaluate Uttarakhand's folk art and cultural practices now, taking into account the variety of these art forms, their historical relevance, and their pervasiveness in modern society.
2. To determine the main reasons why artists and other cultural practitioners in Uttarakhand persist in creating traditional works of art, taking into account elements like spirituality, economic survival, and cultural pride.
3. To evaluate the merits, drawbacks, and effects on cultural sustainability of the current state and local initiatives for the preservation of Uttarakhand's folk art and culture.

4. To ascertain the challenges and barriers Uttarakhand's artists and cultural practitioners have in preserving and promoting traditional art forms, including financial constraints, changing societal standards, and resource accessibility.

5. To determine the difficulties and impediments, such as budgetary limitations, shifting social norms, and resource accessibility, that Uttarakhand's artists and cultural practitioners face in maintaining and advancing traditional art forms.

Hypothesis of the study : The study titled "Preserving the Past: Investigating Factors Influencing the Continuation of Uttarakhand's Folk Art and Culture" aims to understand the factors that influence the continuation of traditional art forms in the face of modernization and changing social landscapes. Here are seven hypotheses that the study will investigate:

H 1. Modernization and urbanization have a negative impact on the prevalence and practice of folk-art forms in Uttarakhand. This hypothesis is supported by the claim that these factors pose a risk of extinction for many art forms (Jones & Patel, 2020). The study will investigate the correlation between modernization/urbanization and the decline of folk-art practices.

H 2. Economic dependence on folk art practices serves as a primary motivator for artists and cultural practitioners to continue their work. This hypothesis aligns with the study's emphasis on understanding artists' motivations, including economic livelihoods (Brown et al., 2018). The study will assess the economic significance of these practices for their sustainability.

H 3. Government and community initiatives aimed at preserving folk art have a positive impact on their cultural sustainability. One of the study's objectives is to analyze the effectiveness of existing initiatives (Chopra & Kumar, 2017). This hypothesis will be tested by investigating whether these initiatives achieve their intended goals of preserving cultural heritage.

H 4. Strong social capital within communities in Uttarakhand facilitates the intergenerational transmission of folk-art knowledge and skills. The study employs Social Capital Theory, which highlights the role of social networks in sustaining cultural practices (Brown et al., 2018). This hypothesis will examine whether strong community connections contribute to the continuation of folk art by enabling knowledge transmission.

H 5. Tourism and commercialization of folk art have a mixed effect on their preservation, potentially increasing visibility but compromising authenticity. The need to assess the impact of tourism and commercialization is mentioned in the study (Gupta, 2021). This hypothesis acknowledges the potential benefits of increased visibility while investigating the potential drawbacks of compromising the inherent authenticity of the art forms.

H 6. Integrating folk art into the educational curriculum in Uttarakhand can enhance student appreciation and understanding of their cultural heritage. One of the study's objectives is to explore the potential of educational integration (Yadav & Singh, 2020). This hypothesis will test if such integration can achieve the intended goal of fostering cultural appreciation among younger generations.

H 7. A combination of policy-level interventions and community-based participatory initiatives is more effective in preserving and promoting folk art than relying solely on one approach. The study objectives mention developing recommendations encompassing both policy and community participation (Singh & Sharma, 2019). This hypothesis will test the potential effectiveness of a combined approach compared to singular methods, aiming to identify the most successful strategies for preserving and promoting Uttarakhand's unique folk art and culture.

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Psychosocial problems faced by unorganized women laborers in Kerala

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Abstract
A particular sector of the economy in which women are actively leading their jobs is the informal industry. Women who work in the unorganized sector is mostly abused in their workplaceand they frequently experience violence, prejudice, and insecure employment as well.**Aim and objectives:**The purpose of this research is to examine the characteristics of sociodemography and also psychosocial issues of women who are all employed in unorganized sector.**Methodology:**The methodology chosen for the present research was a cross-section. The investigation was in the following places in Kerala: Ernakulam, and Palakkad. Fifty women who work in the informal industry were chosen through the use of intentional sampling. The goal of the study is to communicate with the participants, and also informed, written consent was acquired. Questionnaires that are mostly semi-structured are used to evaluate psychosocial disorders and socio-demographic characteristics.**Results:**42 percent of participants in this case study were working in the unorganized sector before reaching 18. The majority of the participants (32%), were employed as domestic servants. Due to their husbands' unemployment situation, over half (54%) of them started their work in the unofficial sector and joined as an employee. The majority of them (66%) had to deal with their family members who used to drink alcohol. A large percentage of participants (42%) reported that they are working between nine and twelve hours a day. Of the people who took part in the survey, 58% stated that there was discrimination in their wages at their current place of employment. In their work environment, there were problems like insufficient facilities for health (90%), transportation (88%), and Poor hygiene conditions (54%).Half of the participants (50%) in this survey said that they had come across unwanted touching (16%), whistling (42%), indecent comments (46%), and teasing (52%). Sixty percent of those who participated said that they were extremely unhappy with their jobs. In the end, it was noted that women in the unorganized sector experienced many issues like insecure employment, social in-assistance, and mistreatment in their places of employment. It can be achieved for governments to put them in suitable places and should take precautions for the health and well-being of women who are all working in the unorganized sector.

Keywords : Psychosocial problem, informal sector, women, sexual harassment.

Introduction

The majority of the women who are in developing nations are mostly worked in informal jobs (Hussmans, 2004). In this world, Women are a large percentage of employees who all work in an unorganized sector (Tinuke, 2012). By considering the women in the East Asian region for the case study, 43% of South Korean women, 79% of Indonesian women, and 57% of Indian women are employed in the informal sector (Carr, 2000). The World Bank (1991) highlighted the fact that over 90% of women employees are not included in official data and they work mostly in the informal industry. The majority of the women are working in the informal economy and they are not in the agriculture field. The informal industry mostly covered women employees in India.This is primarily because most of the women are looking for work to support themselves and their families (Mohapatra, 2012).According to Sharma (2013), the informal sector contains employees over 92% and contributes over 60% of the country's net domestic product as well.The common issues that women employees thoroughly face in the informal sector include financial difficulties, discrimination based on gender, protection during pregnancy, and the responsibility of child care (Ulrichs, 2016). Inequalities based on gender increase day to day that women face in the informal sector. These include discrimination, living below the poverty line, lack of appreciation for their efforts, assetless, illiteracy, and loneliness in society (Kabeer, 2008; Kabeer and Subrahmanian, 1999). Women mostly experience fewer chances, poverty, inequality, and job insecurity than men and as a result of gender inequality in society (Chatterjee&Sheoran, 2007).Women employeesoccupy a major portion of the unorganized or informal industry that supports the Indian economy. Women who work in the informal sector because they have only fewer options in their hands because of family background, and they are less educated than men, and they have less social status than men as well(Chatterjee&Sheoran, 2007). While compared to women who are all employed in the unofficial sector, the formal sector workers enjoy greater opportunities, and social respect, and they are living a respectful life. Due to their prolonged workdays, the majority of women are unable to make sufficient time for their families, which can sometimes lead to arguments among their husbands and also create unnecessary problems for their children. They also have higher chances of being affected by psychological disorders, Educational ignorance, domestic abuse, and other issues (Mohapatra, 2012). The current study examined Women and their mental issues which they are facing in an unorganized sector.

Materials and Methods

This study optimized the cross-sectional design for further investigation. For the data collection, the following two villages from the Kerala State were chosen for this study-Ernakulam, Palakkad. Employed women in the unorganized sector from two villages in Kerala were chosen as participants through optimization of the purposive sampling method. Nearly fifty women volunteers were chosen for the

current study which twenty-five came from Ernakulam village and twenty-five from Palakkad village. The research chose women who used to get paid every day, and their ages ranged between 18 and 60. The goal of the research was communicated to the participants, and written informed consent was also acquired. Sociodemographic characteristics were evaluated with a data collection sheet, and a semi-structured survey was used to collect their information to analyze their psychosocial issues.

Statistical Analysis

The 16-version of the Statistical Package for Social Science Research was used to assist with the statistical evaluation. For socio-demographic data, the mean, standard deviation, frequency range, and percentages are used in descriptive statistical assessments.

Tools Used

Socio-demographic data sheet:A socio-demographic questionnaire was developed for this investigation with inquiries regarding gender, age, religion, and educational details as well as family-related data created.

Semi-structured questionnaire: A semi-structured questionnaire was developed to evaluate the psychological challenges that were experienced by women who were employed in the unorganized sector. Assamese was the language that was used to compose the survey questionnaire. The person who was doing the research talked to an expert to make sure that the questions in the survey were good enough for the research. Preliminary testing was conducted on a subsample of 15 women to make sure that the survey questionnaire was reasonable and also to ensure all the questions had been conveyed correctly. Following the pre-test, several questions that were considered unsuitable were removed promptly, while others were modified or added.There were open-ended as well as closed-ended inquiries in this study. Participants received the final form of the semistructured questionnaire. Women who are employed in the unorganized sector fill out questionnaires at their place of employment or their home.

Results

The average age of those who took part in the survey was 30.12 (SD=11.341), with 42 percent being employed in the informal industry before turning the age of 18 and fifty-eight percent completing the age of 19. Among all participants in the survey, 54 percent people were Hindu, 42 percent as Muslim, and 4 percent as Christian. A large percentage of people (42 percent) completed elementary school; the secondary school completed people are nearly 36 percent and people with no formal education at all 36 percent. 72 percent of the participants were married, 20 percent were not married, and 4 percent were either widowed or divorced. Among the participants, 52 percent were from nuclear families, 26 percent people from joint families, and 22 percent people from extended families.About 32 percent of the participants in the survey had monthly earnings that varied from 5000 and 7000 rupees, while 24 percent had a monthly salary of between 1,000 and 3,000 as well as between 3001

and 5000 rupees, as given in Table 1. Following Table 2 shows the jobs of each person in detail. A large number of participants 32 percent worked as domestic servants; the rest of the participants were employed as workers for daily wages, street vendors, salespersons, grocery store employees, tailoring businesses, brick-and-mortar employees, and beauty shop employees (16%, 12%, 10%, 8%, 8%, and 6%, respectively). Because of husbands' joblessness situation, over fifty-four percent of women entered the unofficial sector; 36 percent of women started their working to support their family members, thirty percent started working to provide funds to their children's education, and 22 of percent women started their working because they were unable to find any other employment (table 3).Table 4 shows the participants' home-based psychosocial issues. Most of the women employees (66%,62%, and 58%) mostly dealt with family members' drinking habits, medical issues in family members, and problems with paying for daily expenses. The other major psychosocial issues included difficulty in teaching their children, insufficient food, physical weakness in family members, and a lack of availability for parenting their children (38%, 36%, 34%, 34%, and 30%). A majority of the participants (42 percent) used to work nearly eight to twelve hours a day28 percent of women worked twelve to sixteen hours and thirty percent of women worked for a maximum of eight hours. The majority (58 percent) reported inconsistent pay, whereas 42 percent received regular wages. Fifty-eight percent of women stated that there was wage inequality at their workplace, while 42 percent of women employees stated that there was none.While 46 percent of those women employers had a sanitary facility in their workplace, 54 percent of women employees stated that their workplace lacked adequate facilities for sanitation. Eighty-eight percent of participants lacked a means of transportation to their workplace. Just 10% of the participants had access to medical care at their workplace, compared to 90% who did not have such facilities. Half of the women employees experienced passing sexual remarks, 52 percent experienced mocking, 48 percent encountered vulgar remarks, 42 percent whistling, and sixteen percent experienced touching activities in their workplaces. Table 5 shows that sixty percent of individuals had strong work disappointment, whereas forty percent expressed mild job dissatisfaction.

Table-1: Information about the sociodemographics of women who employed in the unorganized sector

Variables	**Mean**	**Standard deviation**
Age (Mean& SD)	30	11.341
Age of entering in informal sector	**Frequency (N=100)**	**Percentage (100%)**
18 years and below	42	42
19 years and above	58	58
Religion		
Hindu	54	54
Islam	42	42
Christian	4	4

Educational Status		
Illiterate	20	36
Primary	70	42
Secondary	20	36
Marital status		
Married	72	72
Single	20	20
Divorced	4	4
Widowed	4	4
Family type		
Joint	26	26
Nuclear	22	52
Extended	52	22
Monthly income of respondents (in Rs.)		
1001-3000	24	24
3001-5000	24	24
5001-7000	32	32

Table-2: Information on the women's occupations in the unorganized sector

Variables	Frequency (N=100)	Percentage (100%)
Domestic servant	32	32
Daily wages	16	16
Street vendor	12	12
Sales girl	10	10
Retail Shop	8	8
Tailoring	8	8
Brick industry	8	8
Beauty parlor	6	6

Table-3: Psychosocial reasons for joining in the unorganized sector.

Variables	Frequency (N=100)	Percentage (100%)
To support family	36	36
To help in childrens education	30	30
Lack of opportunities of job	22	22
Unemployment of the husband	54	54

Table-4: Psychosocial problems at family that was faced by women who are all working in informal sector

Variables	Frequency (N=100)	Percentage (100%)
Disabilitieswithin the family	34	34
Family members drinking habits	66	66
Communicable diseases within the family	18	18
Difficulties with daily basis expenses	58	58
Difficulties in handling illnesses	62	62
Difficulties to teaching kids	38	38
inadequate time with their family	34	34
Not enough time for parenting their children	30	30
Not enough food for survey	36	36

Table-5: Psychosocial issues at work place that was faced by women who are all working in an informal sector

Variables	Frequency (N=100)	Percentage (100%)
Time spent at work		
Up to 8 hr	30	30
9-12 hr	42	42
13-16 hr	28	28
Regularity of wages		
Regular wages	42	42
Irregular wages	58	58
Discrimination in wages		
Present	42	58
Absent	58	42
Facilities for sanitation		
Have	46	46
Dont have	54	54
Transport facilities		
Have	12	12
Dont have	88	88
Healthcare facilities		
Have	10	10
Dont have	90	90

Sexual harassment		
Whistling	42	42
Testing	52	52
Passing sexual remark	50	50
Passing vulgar comments	46	46
Staring and gazing	48	48
Inappropriate touching	16	16
Satisfaction in their Job		
Mildly Dissatisfied	40	40
Strongly Dissatisfied	60	60

Discussion

As per the current study results, women join the informal workforce at a young age, and the majority of them are unable to finish their primary education, so they earn less money per day at their work. Similar outcomes have been reported in research and it is showing that women from less fortunate circumstances are used to working in the unorganized sector to support themselves (Devi & Kiran, 2013). This explains why women's enrollment in Assam's higher education overall was just under 33 percent. Over 70 percent of female students withdrew their college studies (Lalneihzovi, 2010).A variety of reasons are there, the unregulated industry has been considered very easy to join, and job seekers are considered the preferred option because those unregulated industries have only a few formalities (William et al., 2013). The majority of the young people are used to occupying the informal sector (Neetha, 2004), and Scheduled Castes and Schedule Tribes members are among those who are most frequently seen as they are working in this industry (Devi &Kiran, 2013). The majority of women worked as domestic workers and workers for daily wages. Their main motivation for joining the informal workforce was to mainly support their entire family's survival because their husband was jobless.The informal workforce is essential in giving many job possibilities to most of the people in India. All of such women are used to working in the unorganized sector to help their family's financial situation (Hazarika, 2009). Family-related issues included alcohol abuse by family, sickness, and an inability to provide money for household necessities. The exact same issue was discovered in an investigation by Hazarika et al. (2002) among those employed women's husbands.The participants had previously experienced domestic abuse since their spouse didn't work and instead asked their wives to get some income the reason behind that is to buy liquor, and they occasionally beat their wives. According to conclusions from a different investigation by Mohapatra (2012), women face a variety of issues related to their jobs, including difficulties at home, conflicts between paid and domestic duties, husband's behaviors, income sharing, attitudes of others in the family, domestic abuse, excessive workloads, involvement in making household decisions, attitudes of coworkers and employers, leave policies, workplace misconduct, low salaries, and typical as well as particular diseases that are affect women thoroughly.The following are the main problems that women used to face in their workplace including, 8 to 12-hour workdays, inconsistent and unequal pay,

insufficient transport facilities, sanitation issues, and healthcare facilities. While employed in the unregulated industry, women employees also encountered different kinds of sexual misconduct in their workplace. According to a research study conducted by Devi and Kiran (2013), there is also sexual abuse in the workplace occurring when women who are employed as daily wage workers and feel pressure to satisfy another worker to get a job from that company. Additionally, they still have to deal with insensitive behavior from their coworkers and their superiors, and women employees might come across insults or insults in their workplace.The same findings were discovered in another investigation that was conducted by Tiwari and Ganopadhyay (2011), in which Tiawari stated that female employees experienced a variety of workplace stresses at different times, including harassing behavior, racial prejudice, vulnerability to various illnesses, joblessness situation, illnesses such as vomiting, headaches, sleeplessness, as well as other side effects. It has been discovered that there is no privacy for reasons of cleanliness at their work. Employees of both male workers and female workers are working together. Their unrestricted interaction with men in their workplace may expose them to suffer by infections that are transmitted through sexual contact in their workplace.It was additionally found that the most frequent problems that women faced in this industry included, harassment by males, poor conditions of employment, discrimination at work, and unsatisfactory protection (Tiwary&Ganopadhyay, 2011; Chatterjee&Sheoran, 2007).

Limitation and Implication

According to the outcomes of this study, women employers employed in the unorganized sector faced numerous issues and they are not protected from maltreatment. They all worked in the unregulated industry as they lacked the required skills in the company. They don't have any alternative option because they're unable to finish their elementary school education as well due to their child marriage or family issues. Poverty is considered one of the important reasons that women are forced to be employed underunregulated industries. There are many reasons for this poverty, including insufficient wealth, isolation from society, vulnerability, lack of decision-making, and helplessness situations.Despite the fact that this unregulated industry pays its workers very poorly, it also assists women employees in making enough money to survive and it assists them in providing some money for their family members. The financial well-being of women in the unorganized sector can be improved by protections from society, employment obstacles clearance, and equal opportunities for women through laws and initiatives (Ulrichs, 2016). One of the important techniques known as, Purposive sampling was used to choose a small number of participants for a single cross-section evaluation research in this current research study.The study found that more women employees were included in the survey to understand their main problems at work and home. The issues that women face in their lives are health issues, inadequate income, psychological well-being, and also household duties which thoroughly affect women employees in the informal industries. Utilizing multiple approaches in a

comprehensive interview can lead us to understand and analyze the scope and main reason for the aforementioned issues.

Conclusion

There are numerous issues that women employees are facing women who work in an unorganized industry, and they are not exempt from maltreatment. They are mainly forced to work in the unofficial sector because they lack the required skills and they have no alternative because they are not able to finish their elementary school education because of children or other family issues. There are many reasons for poverty, including helplessness, vulnerability, lack of many options to choose from, absence of wealth, feeling unsafe, and isolation from society, and also these issues may be viewed as a major cause that women employees used to force to work in an irregular industry.Though this sector includes jobs or works that gives low wages to its employees at the same time this informal sector helps the women earn their livelihood, to support their children, their parents, and their entire families. In the end, it was noted that women in the unorganized sector experienced many issues like insecure employment, social in-assistance, and mistreatment in their places of employment. It can be achieved for governments to put them in suitable places and should take precautions for the health and well-being of women who are all working in the unorganized sector.Welfare funds need to be available for Assamese workers who are engaged in the unorganized industry. To lower the rate of exploitation in the workplace, there should be a need to start programs and should aimed at enhancing women employees health and also re quiring them to provide security advantages. The women from the unorganized sector reported experiencing many difficulties at the workplace in relation to their position, promotion, and secure employment. Additional research needs to be built up in the future and it might help in understanding such issues very broadly for further prevention of problems in the workplace.

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Fostering Tomorrow's Strength: Nurturing Youth's Mental Health for a Robust Society

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Abstract

This research paper underscores the crucial role of youth in shaping the future and contributing to societal resilience. The youth is of paramount importance as they represent the future architects of society. Their vitality and energy bring about innovation, fresh perspectives, and dynamic solutions to contemporary challenges. With a keen ability to adapt to evolving circumstances, the youth contributes significantly to technological advancements, cultural vibrancy, and social progress. Their active engagement in civic activities fosters community development, and their diverse viewpoints inject vitality into democratic processes. Recognizing the potential of the youth and providing them with support and opportunities not only ensures their personal growth but also cultivates a resilient and forward-thinking society, ensuring a sustainable future driven by creativity, productivity, and positive change. The youth is crucial for societal progress and continuity.

The primary objective is Comprehensive Understanding of Issues Faced by the Youth. At-risk youth encounter complex challenges, primarily rooted in socio-economic factors such as economic disparities and unstable family structures. Educational barriers, including high dropout rates, low academic achievement, career expectations, and the impact of digitalization, contribute to behavioural changes, and physical and mental health issues. Addressing these challenges is essential due to the evolving nature of youth issues, making today's experiences markedly different from those of the past.

The second objective is Identification and Proposed Target Intervention Strategies. This research identifies key intervention strategies to address the identified risks faced by at-risk youth. Proposed interventions include accessible mental health support programs, counselling, therapy, holistic youth development centres, employment opportunities, and educational and vocational training provided by institutions etc.

The researcher also tried to identify the expected changes after implementing these strategies is expected to catalyze positive change. Economic productivity will increase as a result of a mentally and physically healthy workforce. Proactive mental health support will contribute to reduced healthcare costs. Crime reduction is anticipated through improved socio-economic conditions and enhanced community integration. Holistic development initiatives will foster a resilient youth population

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capable of overcoming challenges, thereby contributing to a more robust and adaptive society.
In Conclusion, this research paper highlights the urgency of addressing the physical and mental well-being of at-risk youth. Through the implementation of focused interventions, society anticipates experiencing transformative advantages, fostering the emergence of a generation that not only prospers on an individual level but also makes substantial contributions to the resilience and advancement of the wider community.

Keywords : Importance of youth, Contribution of Youth, Issues faced by Youth, Identification and Proposed Target Intervention Strategies, Changes after implementing strategies.

Introduction :

Youth is the most valuable human resource asset of any country. The role of the youth in society is pivotal, they contribute significantly to the development and resilience of the society. The youth are essential contributors to societal progress, they help in change, innovation, and progress. Their energy, creativity, and adaptability shape the direction of social, economic, and cultural dynamics. Moreover, their active engagement in civic activities promotes community development q and enriches democratic processes. Recognizing the importance of youth and supporting their growth and development is crucial not only for their personal well-being but also for the resilience and sustainability of society as a whole. The permanent mark youth have left on the history is evident in the countless movements, innovations and cultural events that shaped human civilization from the civil rights struggle of the 1960s to the digital revolution of the 21st century, Youth-led efforts echo worldwide and through time.

But between the hopes and possibilities of youth lies a harsh reality, i.e. the challenges that hinder their growth and well-being, particularly for those who are at-risk, the first main objective of the research. These challenges rooted in socio-economic factors such as poverty and inequality, family-related issues like instability and neglect, and educational barriers such as inadequate access to quality education and high dropout rates. Additionally, the pervasive influence of digital technology has brought about behavioural changes and mental health issues among young people, further making their situation worse.

The breadth of these challenges underscores the urgent need for broader understanding and targeted intervention strategies to support at-risk youth and achieve resilient societies. This research aims to explore these issues in detail and propose effective interventions to empower at-risk youth and foster a resilient society, the second main objective of the research. By addressing the underlying factors that contribute to providing the support and developmental opportunities they need, we can empower at-risk youth to overcome adversity, full-fill their potential and they have made meaningful contributions to the development of the wider community.

In conclusion, the challenges faced by at-risk youth are complex and multifaceted, requiring concerted efforts from policymakers, educators, and communities to address effectively. By understanding issues they face and implementing targeted interventions, we can support the growth and development of at-risk youth and create a more equitable and resilient society.

Objectives

1. Comprehensive Understanding of Issues Faced by the Youth.
2. Identification and Proposed Target Intervention Strategies.

Comprehensive understanding of issues faced by the youth.

At-risk youth face a countless the challenges that creates obstacle between their personal growth and societal contributions. These challenges, rooted in socio-economic disparities, unstable family structures, educational barriers, and the impact of digitalization, these all demand attention and intervention. In this the researcher tried to provide a comprehensive understanding of the issues faced by at-risk youth and the need for targeted intervention strategies to support their well-being and success.

Socio-economic Factors:

Economic Disparities: The At-risk youth sometimes come from socio-economically disadvantaged backgrounds which includes poverty, limited access to resources, and inadequate support systems etc. These economic disparities may cause to increase the inequalities and the never free from cycle of poverty and can manifest in many other ways, including lack of access to quality education, healthcare, and employment opportunities.

Unstable Family Structures: Family instability is another common issue which is faced by at-risk youth, which includes parental separation, divorce, or neglect contributing to an unstable home environment. The absence of stable familial support can have detrimental effects on a youth's emotional well-being and development, leading to feelings of insecurity, isolation, and uncertainty about the future. Youth is facing the another challenges in the form of family instability and not having the support on their dreams from which they face heightened level of stress and uncertainty. Without a solid foundation at home, at-risk youth may struggle to cope with the demands of everyday life and may turn to risky behaviours as a means of coping with their circumstances.

Educational Barriers:

High Dropout Rates: Most of the At-risk youth are affected by high dropout rates, this may have caused due to a combination of factors such as academic struggles, disengagement from school, and lack of support systems. The youth may face additional challenges such as financial instability, family responsibilities, or inadequate access to educational resources, this makes difficult for them to stay enrolled in school and complete their education.

Low Academic Achievement: Limited access to quality education and resources further creates the problem of low academic achievement among at-risk youth. The youth may attend schools which is under resourced with inadequate facilities and poorly trained teachers, leading to not-so-good educational experiences and reduced opportunities for academic success. Additionally, the lack of support and encouragement from family members or may led to the feelings of academic inadequacy and disengagement from learning.

Career Expectations and Pressure:

Unrealistic Expectations: At-risk youth often face unrealistic expectations from family members, friends, and society too much regarding their academic and career aspirations. As a result, the youth may feel immense pressure and stress academically and to achieve professional success.

Stress and Anxiety: The constant pressure to meet these expectations of the society and family can take a toll on the mental health and well-being of at-risk youth, leading to feelings of stress, anxiety, and overwhelm. The heightened levels of academic pressure, fear of failure, and self-doubt, which can impact their ability to perform academically and cope with everyday stressors in the youth. Without adequate support, youth may turn into behaviours such as substance abuse or self-harm as a means of managing their stress and anxiety.

Impact of Digitalization:

Excessive Technology Use: The youth are increasingly vulnerable to the negative effects of excessive technology use, including social media addiction, online harassment, and cyberbullying. The influence of using digital technology too much can contribute to social isolation, disconnection from reality, and poor time management skills among the whole youth, which may further lead to the feeling of loneliness and alienation.

Mental Health Issues: The wide use of digital technology has been linked to an increase in mental health issues among the youth, including depression, anxiety, and low self-esteem. The constant exposure with the social media, unrealistic beauty standards, and cyberbullying can effect on the mental well-being of the youth, leading to feelings of inadequacy, loneliness, and hopelessness.

Identification and proposed target intervention strategies

In addressing the complex challenges faced by at-risk youth, it is crucial to identify and implement targeted intervention strategies aimed at supporting their well-being and facilitating their success. In this the researcher tried to identify the key intervention strategies proposed to address the identified risks faced by at-risk youth, which en-comprises of a holistic approach that addresses their socio-economic, emotional, and educational needs.

Accessible Mental Health Support Programs:
At-risk youth sometimes grapple with mental health issues rooted from various stressors, including socio-economic disparities, family instability, and academic pressures. Accessible mental health support programs which provides vital resources and services to help youth navigate these challenges effectively. These programs may include counselling services, support groups, and therapeutic interventions tailored to the specific needs of at-risk youth which is easily accessible for them. By providing accessible and culturally sensitive mental health support, the at-risk youth can receive the guidance and resources so that they can cope with stress, build resilience, and improve their overall well-being.

Counselling and Therapy:
Counselling and therapy play a crucial role in supporting the emotional and psychological well-being of the at-risk youth. Trained counsellors and therapists can provide individualized support and guidance to help youth address issues such as trauma, anxiety, depression, and self-esteem issues. Through regular counselling sessions and therapeutic interventions, at-risk youth can develop and build self-awareness, and work towards overcoming obstacles that may be having between their personal growth and success.

Holistic Youth Development Centres:
Holistic youth development centres offer comprehensive support and resources to address the diverse needs of at-risk youth. These centres may provide a range of services, including educational support, career counselling, life skills training, and community engagement opportunities. By taking a holistic approach to youth development, these centres aim to foster resilience, promote positive youth development, and empower at-risk youth to reach their full potential.

Employment Opportunities:
Access to meaningful employment opportunities is essential for the economic stability and social integration of at-risk youth. Employment programs aimed at at-risk youth may include job training, internships, and career related workshops. By providing opportunities for skill development, career exploration, and job placement, these programs empower the youth to gain financial independence, build self-confidence, and help achieve their career goals.

Educational and Vocational Training:
Educational and vocational training programs offer at-risk youth the opportunity to acquire valuable skills and credentials that enhance their employability and future prospects. These programs may include GD preparation, vocational training, job placement assistance, and access to higher education resources easily. By providing the youth with the necessary knowledge and skills for academic and career success, these programs empower them to break free from the cycle of poverty and achieve their full potential.

In summary, the proposed intervention strategies are purposed to address the multifaceted needs of the at-risk youth and empower them to overcome adversity and thrive. By providing accessible mental health support, counselling and therapy, holistic youth development centres, employment opportunities, and educational and vocational training, society can support the well-being and success of at-risk youth, so that the can pave the way for a brighter future.

How the implementation of these proposed target intervention strategies will create difference.

The implementation of targeted intervention strategies aimed at supporting at-risk youth can lead to transformative changes all over, which can ultimately benefit both individuals and society as a whole. The researcher tried to show here that how each of these intervention strategies can contribute to positive change in terms of economic productivity, reduced healthcare costs, crime reduction, holistic development, improved mental health, and enhanced physical well-being:

Accessible Mental Health Support Programs:

Economic Productivity: By addressing mental health issues, the at-risk youth can improve their emotional well-being, and productivity. With better mental health, they are more likely to engage effectively in educational and employment opportunities, which leads towards an increased economic productivity.

Reduced Healthcare Costs: Accessible mental health support programs can prevent the most of mental health issues, if done properly and reduce the need for costly medical interventions in the future, thus this lowers the overall healthcare costs.

Improved Mental Health: By providing timely support and resources, these programs empower at-risk youth to manage their mental health challenges effectively, which leads to improved emotional well-being, resilience, and overall quality of life.

Counselling and Therapy:

Crime Reduction: Counselling and therapy can address underlying issues such as trauma, substance abuse, and antisocial behaviour, this can reduce the at-risk youth engaging in criminal activities.

Holistic Development: Through therapeutic interventions, the at-risk youth can develop essential life skills, emotional intelligence that contribute to their holistic development and success in various aspects of the life.

Holistic Youth Development Centres:

Economic Productivity: Holistic youth development centres offer educational support, job training, and career counselling, empowering at-risk youth to gain valuable skills that enhance their employability and economic prospects.

Reduced Healthcare Costs: By promoting healthy behaviours and providing access to wellness programs, these centres can contribute to improved physical and mental health outcomes, thus this can reduce the burden on healthcare systems

Employment Opportunities:
Economic Productivity: Access to meaningful employment opportunities enables the youth to contribute positively to the economy through their labour and consumer spending, thereby this will increase the economic productivity.

Crime Reduction: Gainful employment provides the at-risk youth with stability, and financial security, reducing their engagement in criminal behaviour as a means of survival and with economic hardship.

Educational and Vocational Training:
Economic Productivity: Educational and vocational training programs provides the at-risk youth the skills and qualifications needed to secure stable employment and advance their careers, which leads to increase the economic productivity and financial independence.

Improved Mental and Physical Well-being: By fostering a sense of accomplishment, self-worth, and empowerment, these programs contribute to improved mental health and enhanced physical well-being among at-risk youth.
Overall, the implementation of these intervention strategies not only supports the well-being and success of the at-risk youth but it will also generate the positive effects that can benefit the society as a whole. By investing in the holistic development of at-risk youth, we can create a more resilient, inclusive, and prosperous society for future generations.

Conclusion:
In conclusion, this research paper underscores the critical importance of addressing the multifaceted challenges faced by at-risk youth and implementation of targeted intervention strategies to support their well-being and success. By recognizing the complexities of socio-economic disparities, unstable family structures, educational barriers, and the impact of digitalization, we have a comprehensive understanding of the issues facing at-risk youth in today's society.
Through the identification and proposal of key intervention strategies, which includes the accessible mental health support programs, counselling and therapy, holistic youth development centres, employment opportunities, and the educational and vocational training, the researcher have outlined some actionable steps towards creating positive change for the at-risk youth. These interventions will not only address the immediate needs of at-risk youth but will also contribute in the broader societal goals such as economic productivity, reduced healthcare costs, crime reduction, holistic development, improved mental health, and enhanced physical well-being.

By investing in the well-being and success of at-risk youth, we not only unlock their full potential but also cultivate a more resilient, inclusive, and prosperous society for all of us. As we move forward, the researcher continues to prioritize the needs of at-risk youth and work towards building a future where every young person has the opportunity to thrive and contribute positively to the world around them. Together, we can create a brighter tomorrow for generations to come.

India's multilateral initiatives and foreign policy

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Abstract

India and Nepal share a unique relationship of friendship and cooperation characterized by open borders and deep-rooted interpersonal kinship and cultural contacts. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and the Bangladesh-Bhutan-India-Nepal (BBIN) sub-regional initiative have taken shape and show great potential. In 2017, the Indian Ministry of External Affairs merged the BIMSTEC department with the SAARC department. From India's perspective, the above initiatives represent a necessary alternative to SAARC if any form of regional cooperation is to be pursued. They also reflect broader foreign and economic policy initiatives of India such as the Neighborhood First Policy, A very important element of these initiatives is India-Nepal cooperation, which has the potential to bring fruits of real development to the Himalayan country and support its efforts to achieve the Sustainable Development Goals. The first broad gauge passenger train service between Bihar and Nepal was commissioned in 2022 and is running successfully. India plans to expand the BBIN power grid to Southeast Asian countries, which could become a single market.

The bilateral relationship between India and Nepal is essential for a prosperous, secure and stable subcontinent. The connections are deep and are determined by history, culture, interpersonal relationships and geography. India is Nepal's natural partner. The prosperity of both countries is interdependent and it is the responsibility of all sectors of society, especially the intelligentsia and opinion makers, to preserve and support these vital relationships rather than relying solely on them. India hosted the G20 this year as usual. . India has attracted global attention and is now seen as an easy place to talk about the problems of the South. First, Nepal will benefit from India's initiative to play a larger role in global trade as it will draw attention to the region. Secondly, India will have to demonstrate its strength in neighboring countries to gain credibility as a country that can play a significant role in governance. Therefore, the 10,000 MW agreement with India is important for Nepal in this respect. Additionally, focusing on implementing a clean, sustainable, seamless and inclusive transition means the world will be watching how India deals with Nepal and Bhutan in terms of imports, market access and trade. More funds will be provided to solve different problems in Nepal and South Asia. This will greatly aid in the significant transformation to green, firm and full grass. India's biggest achievement in the past decade has been digitalisation, both digitally

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and digitally. There are proven platforms. Nepal may be part of the evidence base for many ideas about Indian expansion to other parts of the world. A week before the G20 summit, as part of the commitments in the declaration, India announced that the People's Forest in the Eastern Himalayas "The aim is to plant one billion trees and safeguard and rehabilitate one million hectares of ecosystems, specifically in the eastern Himalayas. – and the 1 billion people who depend on it from Northeast India, Bhutan, Nepal and Bangladesh. This will be a strong regional power that will greatly help Nepal if implemented.

At the Nepal Economic Forum (NEF), we have rolled out global initiatives and regional initiatives focused on networking. As part of this, the Himalayan Future Forum (one of NEF's research institutes) will hold its first launch table on October 10, 6, in collaboration with the University of Singapore's Center for South Asian Studies (ISAS). Another NEF research institute, the Center for Digital Transformation (CDT), hosted Digital Chautari as part of the World Bank's Digital Nepal program and is playing a key role in monetization. We hope that the commitments made by G20 countries will catalyze a new paradigm that will benefit countries like Nepal.

Key word - BIMSTEC , BBIN , SAARC , India ,Nepal,G20

Introduction

India’s multilateral initiatives serve as a cornerstone of its foreign policy strategy, particularly in its relationships with neighbouring countries like Nepal and regional giants like China. Over the years, India has fostered deep-rooted cultural, economic, and political ties with Nepal, while simultaneously navigating complex dynamics with China, characterized by territorial disputes and economic competition. Within the framework of multilateral forums such as BRICS (Brazil, Russia, India, China, South Africa), SAARC (South Asian Association for Regional Cooperation), and BIMSTEC (Bay of Bengal Initiative for Multi-Sectorial Technical and Economic Cooperation), India asserts its regional influence and advances strategic objectives that intersect with its relationships with Nepal and China .Nepal, a landlocked country situated between two nuclear states, has found bandwagon with either China or India to be an impractical option. Currently, Nepal has chosen to adopt a strategy of hedging with both its neighboring countries, while also maintaining a non-aligned foreign policy. Nepal has set a goal to tap into economic and infrastructure growth prospects from Beijing by taking part in initiatives such as the Belt and Road Initiative. This strategy could potentially help in addressing geopolitical hurdles. Nevertheless, India is worried about the increasing ties between Nepal and China, perceiving it as a substantial challenge to India's stake in Nepal. Nepal continues to uphold the principles of non-alignment in its foreign policy goals. India perceives Nepal’s current trend of hedging as a potential path toward future bandwagon with China, given China’s superior capabilities compared to India.

Despite the fact that Nepal formally established diplomatic relations with India on June 13, 1947, and with China on August 1, 1955 (MOFA, 2017), it has had a relationship with both countries since their inception. Nepal's diplomatic connections with China and India have changed over time, going through various events, stages, and time periods in its history. Therefore, Nepal has a wide range of connections with these two neighboring countries, including social, cultural, religious, geopolitical, economic, and diplomatic ties. These relations have grown through different ups and downs, And transformed from simple, linear relation to complex, weird Relations. Currently, Nepal has officially formed diplomatic connections with 155 countries (MOFA, 2017). However, the foreign relations between Nepal, China, and India are significantly more expansive, influential, essential, and ever-evolving, showcasing unique attributes.

After the declaration of new Constitution and establishment of federalism in Nepal, Nepal's relation with China and India needs to be redefined and revised In the changed perspective and is sure to evolve from new Dimension. The country's geographical position, land area, available resources, population, and other physical and environmental traits impact and shape the political, military, economic, and cultural aspects of a nation(Bhattarai, 2005). So, at this scenario, it is worthwhile to Discuss historical development of Nepal's foreign relation with China and India; different bilateral treaties with these nations; Dynamics of these relations in Nepal's geo-politics, socioeconomic, and culture; and different issues related to this. Nepal has actively engaged with the global economy to prevent economic decline and has expanded its involvement in the international trade system in response to the intricate geopolitical challenges it experiences. Nepal's involvement with international organizations like the World Bank, Asian Development Bank, and other similar institutions demonstrates its inclination towards institutional hedging (Mainali 2022).To understand Nepal's behaviour within its geopolitical context with China and India, it is necessary to analyze the country's actions through an analytical lens that considers the role of its neighbours and other superpowers.

Moreover, there is a lack of extensive study regarding the nonexistence of a bandwagon framework and the factors behind this nonexistence in the relationships between Nepal and its two influential neighboring countries.

Nepal's decision to neither align with China nor India stems from its strong determination to preserve its independence and ability to govern itself, as evidenced by multiple sources of information.(Paul 2019; Mainali 2022; Sridharan 2012; Dahal 2021). This study aims to address the lack of information and understanding surrounding Nepal's strategic choices by examining its historical and current foreign relations, as well as key events in South Asia. By doing so, the study hopes to provide insights into the absence of a bandwagon structure in Nepal's decision-making process. This literature is essential in revealing the intricate geopolitical challenges that Nepal confronts in order to determine the cause for their hedging strategy. The evaluation of the relationship between India and Nepal can be accurately conducted by examining the different stages at which their relations underwent changes. These stages are as follows: –

(1) Friendly Beginning, 1947-1955.
(2) Period of Change, 1956-1962.
(3) Beginning of New Approach, 1963-1971.
(4) Normal Relations but with Differences, 1972-1979.
(5) Changes and fluctuations, but friendly connections, from 1980 onwards.

Objectives

The fundamental objective of this article is to analyze the prospects and challenges of multilateralism between China, India and Nepal. In addition, the specific objectives are: To identify the possibility of changing Nepal's position from a buffer-state to bridge -state, to access the prospects of multilateralism between Nepal, China and India and explore the major challenges of multilateralism. In the present day of globalization no nation can remain untouched from incidents around the world, further the landlocked countries like ours are more affected from this change. Nepal's location between two giant economies has several opportunities to be benefitted from their progress. It is realized that tri-lateral cooperation is equally beneficial for India and China too. Some intellectuals and other efforts are also made towards this. So, the study is descriptive and analytical.

Historical Relation

Nepal-China Historical Relation Nepal and China share deep-rooted and age-old friendly relations with each other. According to Swayambhu Purana, the Kathmandu valley was a lake in the pre-history period. Bodhisattva Maha Manjushree came to the Kathmandu valley from Wu Tai-shan, China, and cut the gorge at Chobhar and drained out the water and human settlement was made possible in Kathamandu valley (Shrestha, 2016: 48). Buddhist monasteries first appeared in China during the Eastern Han dynasty but it was only after the Western Tsin dynasty (255-316) that Buddhism began to spread in China and flourished in the Southern Dynasty (Shrestha, 2016). Nepal and China relation exists since the 5th century BC (Subedi, 2016). In the fifth century, famous Chinese Traveler Faxian returned to China after the visit to Ramgram, Kapilvastu, and Lumbini (Shrestha, 2016).The marriage of Nepalese Princess Bhrikuti Devi with the emperor of Tibet, Songtsan Gampo in 7th century , visit of Nepali craftsman Araniko to China in the 13th century and visits to Nepal by Chinese monks and scholars at different periods in history paved a solid foundation in the development of Nepal-China relation (Bhandari, 2017).

Nepal China Relation

According to the Constitution of Nepal in 2015, foreign policy should adhere to the principles of the United Nations Charter, non-alignment, Panchsheel (a set of five peaceful coexistence principles), international law, and the importance of global peace. In reality, Nepal's foreign policy has focused on retaining independence and addressing internal economic and security matters rather than seeking global influence. Nepal's foreign relations are guided by the policies and guidelines of the Government of Nepal to safeguard its independence, sovereignty, territorial

integrity, and national interests abroad. The goals include promoting bilateral, regional, and multilateral relations for socio-economic development, fostering friendly relations with all countries and especially its neighboring countries, based on equality, respect, trust, goodwill, and understanding. Nepal also aims to actively participate in the United Nations and other international organizations to promote global peace, security, and development, and to contribute positively and meaningfully to the world. **(MOFA (2017).** Because of its geographical proximity to and historical links with China and India, Nepal's foreign policy was focused mainly on maintaining close and friendly relations with these two countries and on safeguarding its national security and independence **(Savada, 1991)**.

The successful second pro-democracy movement, the country needs to examine its conduct of foreign policy in the context of those changes and formulate and adopt its foreign policy correspondingly (Bhattarai, 2013). With respect to all of its neighbours, Nepal has taken concrete steps over the past two years to promote goodwill and deep economic and social connectivity with India. But nationalist sentiments in all these countries – often directed against India as the region's predominant power – will continue to present a challenge (**Jaishankar, 2016)**. Nepal ought to actively participate in the procedure of establishing treaties and agreements, making certain that they are grounded on principles of fairness and shared benefit. This can be achieved by thoroughly analyzing and assessing past treaties. Nepal and China have a lengthy past of establishing and maintaining robust and friendly connections. The marriage between the princess of Nepal, Bhrikuti Devi, and the emperor of Tibet, Songtsan Gampo, was documented in the Chinese Buddhist Encyclopedia during the 7th century. During the 13th century, Araniko, a skilled artisan from Nepal, traveled to China. Throughout the course of time, there have been instances where Chinese monks and scholars have journeyed to Nepal. As Bhandari mentioned in 2017, these exchanges established a solid basis for the growth of Nepal-China relations. The formal establishment of diplomatic ties between Nepal and China occurred in 1955. At present, Nepal and China enjoy a harmonious and friendly relationship characterized by mutual respect for each other's sovereignty, territorial boundaries, and freedom. As per the Chinese Embassy in Nepal in 2007, the foundation of the Nepal-China relationship lies in trust, fairness, and authenticity.

The two countries never present a danger to each other, inflict damage on each other, or harbor any suspicions or uncertainties about each other. On the contrary, they consistently demonstrate mutual respect, trust in each other, and lend a helping hand whenever needed. The Chinese government and its people believe in the principle of treating all nations equally, regardless of their size. In the past 50 years, China and Nepal have effectively worked together and accomplished important achievements in different fields, such as political ties, regional affairs, and international discussions, by following the Five Principles of Peaceful Coexistence. The two nations have developed a strong partnership by engaging in respectful and transparent conversations, efficient exchange of information, and seamless coordination. The nation of China views Nepal as its closest neighbor and highly esteemed partner. We highly appreciate Nepal's ongoing and significant support

regarding issues concerning Taiwan, Tibet, and other important matters related to China's rights and interests. The Chinese Embassy in Nepal acknowledged that Nepal has consistently shown a strong commitment to the "One China Policy" and has never allowed any actions against China to occur within its borders. China has supported the idea proposed by the deceased king Birendra to designate Nepal as a peaceful region and has refrained from interfering in Nepal's domestic matters. Moreover, China greatly respects the developmental route embraced by the people of Nepal. The information was provided by the Chinese Embassy in 2007. China has been an important ally in Nepal's development endeavors by offering significant support. Currently, Nepal and China have a mutually beneficial relationship.

Nepal India relations

Nepal and India have longstanding and deeply entrenched connections. In contrast to China, the relationship between Nepal and India has more fluctuations and fluctuations. Regardless of the unpleasant reality, the relationship between Nepal and India is multifaceted and primarily defined by an unrestricted border and extensive interaction among their people. In earlier times, Nepal and India had a strong and amicable connection rooted in their shared culture, religion, and trade. The diplomatic relations between Nepal and India were officiated in the year 1947. Currently, the relationship between Nepal and India is primarily influenced by the 1950 India-Nepal Treaty of Peace and Friendship, which the Nepalese side views as unfair. The Nepalese Nationals are displeased with India's excessive and abnormal involvement in Nepal's domestic political affairs. Even though Nepal and India have come to an agreement to revise past unjust treaties, particularly the 1950 India Nepal Treaty of Peace and Friendship, these revisions are still not concluded. There are two contrasting relationships between Nepal and India. The connection between individuals is consistently positive and steady, whereas the relationship between governments has its fair share of fluctuations and is quite unpredictable. Frequent border disputes between Nepal and India often create tense situations in the border area. Nepal is able to maintain a positive relationship with India while also maintaining respect for each other's sovereignty, integrity, and independence, despite the existence of various facts. The Indian Embassy to Nepal expressed its perspective on Nepal's new constitution, which was approved by a significant majority of the constituent assembly members in 2015. India's attitude towards Nepal can be best comprehended through these statements.

The second Constituent Assembly of Nepal passed a Constitution on 20 September 2015, despite facing opposition from Mashes-based parties and other organizations. The Indian government has shown serious worry about the continuing demonstrations and has advised the Nepalese government to work towards resolving all matters by engaging in a trustworthy political discussion.

This statement suggests that India has its own worries and priorities regarding the internal matters of Nepal. In recent times, the governments of Nepal and India have commenced an intellectual effort to reassess the 1950 treaties. Following the implementation of the new constitution in Nepal, there has been a significant transformation in the political landscape. The left alliance has taken control over the

government at various levels, ranging from the central to the local administration in Nepal. Nepal and India have a mix of amicable and adversarial relations.

Recent Development in India China Relation

One of the landmarks in Nepal-China relation was built when the then Prime Minister K.P. Oli signed Transit and Transport Agreement in his official visit to China in 2016. At present, Nepal and China are enjoying very friendly, broader and deeper relation followed by frequent exchange of high level officials' visit from both sides. Nepal and China have new tangent treaties for alternative point of view as well as one belt and one road initiative. In the recent years, the leaders of India and China have focused on development and economic prosperity. They have made significant advancement in road, railway and nautical connectivity. Xi Jinping's ambitious project of one belt one road has the aim to be connected with about 60 countries of Asia, Africa and Europe. President Xi Jinping has a vision of creating a 'community of common destiny' through 'Go West' and 'Peripheral Strategy'(Subedi, 2016) Nepal has also supported and agreed with this ambitious one belt one road project.

Recent Development in Nepal-India Relation

There were ups and downs in Nepal-India relation in past, At present also, Nepal and India have very volatile and unstable relation –sometime friendly and sometime hostile, although Nepal always wants to have stable relation with India. There has been lack of confidence and mutual trust to one another in Nepal-India relation after declaration of new constitution in 2015 that followed unannounced trade embargo from Indian side. Nepalese nationals' sentiment towards India is not good thereafter and people think that India has its own interests in Nepal's internal issues. So, in order to build good relation between Nepal and India, Indian government should respect Nepal's sovereignty and independence and all business dealings must be based on equal status. Indian government is directly and indirectly supporting to Madhes-based parties. Indian government through imposing undeclared blockage has violated Nepal's trade and transit right. Such influences could not promote good relation among adjacent neighbour's.

In the border area between Nepal and India, numerous instances of marriages between Indian and Nepali individuals can be observed. India has altered its foreign policy to strengthen the relationship with Nepal, particularly since Narendra Modi assumed power in 2014. One more justification for the Modi administration to communicate with Kathmandu on a higher political scale is because of China's growing investment in Nepal's infrastructure, energy, and other areas. The Federal Democratic Republic of Nepal has historically followed a non-aligned approach and shares amicable ties with its neighboring nations. Nepal, a small nation located between two bigger and more powerful countries, maintains positive relationships with China and India. Since Nepal and China established diplomatic relations, there has been a growing competition between India and China within Nepal. India aims to maintain its long-standing influence in Nepal, while China aims to weaken this relationship and establish its own presence in various sections of the government,

security agencies, military, and among the general public. In the 21st century, Nepal continues to suffer from poverty and deprivation, while India has achieved significant development and holds a prominent position in the international community. The close relationship between India and Nepal is built on the foundation of the India-Nepal Treaty of Peace and Friendship, established in 1950. During that period, Nepal was under an autocratic rule known as the Rana regime, and the country was characterized by a closed society. People were beginning to mobilize against the Rana rulers, while the rulers themselves were contemplating ways to extend their power. The treaty that was signed in that particular situation is not appropriate for current democratic circumstances. According to the terms of this agreement, citizens of Nepal have been able to experience unmatched benefits in India, including equal access to facilities and opportunities, just like Indian citizens. The Treaty has enabled Nepal to overcome the drawbacks of being a country surrounded by land and having no direct access to the sea. The Government of India expressed its support for the plan outlined in the Comprehensive Peace Agreement of November 2006, which aimed to bring political stability to Nepal through peaceful reconciliation and inclusive democratic processes. This support began with the agreement reached between the Seven Party Alliance and the Maoists in Delhi in November 2005, known as the 12-Point Understanding.

Conclusion

Nepal has age old and deep rooted relations between both China and India. Nepal-China and Nepal-India relations have evolved through different circumstances, stages and periods till date. Nepal-China and Nepal-India relations have multitude linkages- ranging from social, cultural, religious, geo-political, and economic to diplomatic affairs. One belt one road is the milestone point for both Nepal and China of 21st century. There is more mutual trust and less – or no disagreement-in Nepal-China relations but there are less mutual trust and more disputes in Nepal-India relation. The greatest challenges in Nepal's foreign relations, at the present context, are: to build good mutual trust and win confidence Indian from in Nepal-India relations, to maintain balanced and equal distance in relations with China and India, to make China and India join hands together for broader, deeper and stronger economic ties for equal mutual benefits of all. After the declaration of new constitution and new election being held under it, China and India must be ready in re-structuring foreign affairs with Nepal in the changed perspective from newer dimension. Also, economic growth, development and prosperity must take central stage while redefining and revising the one-to-one and triangular relation between Nepal, China and India keeping respect for each other's national sovereignty, integrity and independence intact. In conclusion, Nepal's foreign relation with China and India must be directed towards regional peace, integrity and prosperity.India's multilateral initiatives and foreign policy dynamics with Nepal and China are deeply intertwined, reflecting the complexities of regional geopolitics and India's evolving role as a global power. As India seeks to navigate the challenges and opportunities presented by its relationships with Nepal and China, it must adopt a strategic and forward-looking approach that balances cooperation with competition

and advances its own interests while promoting peace and stability in the region. Through diplomatic engagement, economic cooperation, and multilateral initiatives, India can assert its influence and shape the future trajectory of South Asian geopolitics in a manner that serves its national interests and promotes regional prosperity. India's nationalist perspective significantly influences its approach to China's foreign policy in Nepal. Viewing China's increasing presence in Nepal as a challenge to its own historical influence, India responds cautiously, striving to counterbalance China's moves while safeguarding its strategic interests. India perceives China's infrastructure projects, particularly under the Belt and Road Initiative, as potential threats to its regional dominance and seeks to offer alternative development initiatives through organizations like SAARC. Leveraging cultural ties, India emphasizes shared heritage and people-to-people exchanges to maintain its influence and counter China's cultural expansion efforts. However, India faces challenges in balancing assertiveness with respect for Nepal's sovereignty and addressing domestic issues that impact its ability to compete effectively with China. As India navigates this complex landscape, it must strike a delicate balance between nationalist aspirations and regional cooperation to preserve stability and safeguard its interests in the Indo-Nepal relationship.

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