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Topic

An Analysis of Climate change and Sustainable Development Programs in Bihar

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Introduction.

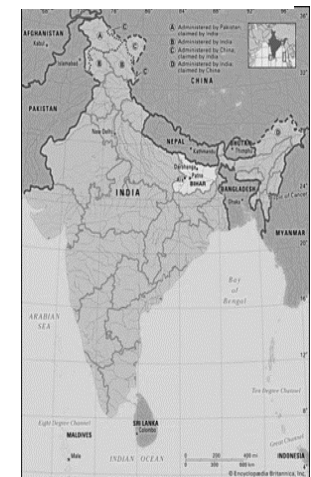
Climate change includes both **global warming** driven by human-induced emissions of greenhouse gases and the resulting large-scale **shifts in weather patterns** (National Geographic). Climate change is affecting every country on every continent. It is disrupting national economies and affecting lives. Weather patterns are changing, sea levels are rising, and weather events are becoming more extreme. With an average of over 10 percent annual growth, Bihar has registered higher growth than the Indian economy in the three years preceding 2019/20. Bihar has two percent of the world's total population and is also a state that is vulnerable to climate change in the form of **erratic rainfall, extreme temperature conditions, falling groundwater level, drought, flash floods**, etc., which threatens to undermine its developmental efforts. The Central government has already identified as many as 14 districts vulnerable to extreme weather conditions. According to the 2019-20 Bihar Economic Survey- a shift towards more **sustainable development** is imperative for the state's continued economic growth (Bihar state Action plan on Climate Change 2015).

The study area: -

The state of Bihar is located in the eastern part of the Republic of India. It covers an area of 94,163 square kms bounded by 24°20'N to 27°31'N latitude and

83°20'E to 88°18'E longitude. It is an entirely land-locked state, having an average elevation of about 150 meters above mean sea level. The state shares its boundary with Nepal to the north, the states of West Bengal to the east, Jharkhand to the south a, and Uttar Pradesh to the west It has three parts on the basis of physical and structural conditions: the Southern Plateau, the Shivalik Region, and Bihar's Gangetic Plain. Furthermore, the vast stretch of fertile Bihar Plain is divided by the Ganges River into two

Fig 01 Location of



unequal parts – North Bihar and South Bihar. The Ganges flows west–east, along with its tributaries, regularly floods parts of the Bihar plain. In the North, Bihar shares its boundary with Nepal. Humid West Bengal in the east and the sub humid Uttar Pradesh in the West provides it with a transitional position in respect of climate, economy, and culture.



Fig.2 physical divisions of Bihar

Source: <http://www.vcpmaps.com/bihar-physical-map-1803172.html>

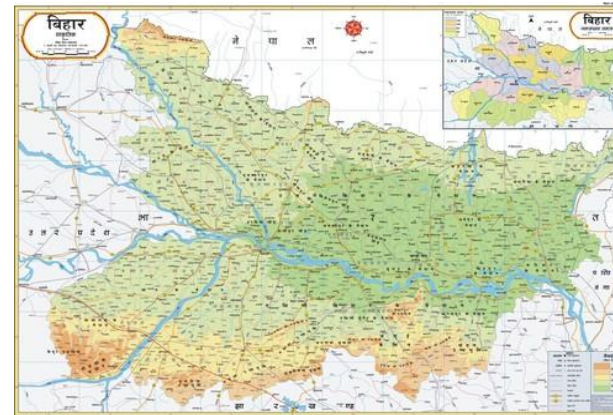


Fig.3 climatic zone of Bihar

Source:

<https://imd pune.gov.in/library/public/Climate%20of%20Bihar.pdf>

Bihar lies completely in the **Subtropical region of the Temperate Zone**, and its climatic type is humid subtropical. With a yearly average of 26 degrees the climate is very warm, but has only a very few tropical and humid months. Several months of the year it is warm to hot at temperatures continuously above 25 degrees centigrade, sometimes up to 29 degrees. The most rain days occur from May to September.

The objective: -

The objective of this paper is to investigate (i) the implications of climate change in the state and (ii) to analyze the impact of different growth strategies such as, **water conservation and greening initiative** under “jal, jivan, Hariyali” program; adopted by the state government under Sustainable Development Goals, in response to these challenges.

The Methodology; -

The Methodology will include (a) An analysis of different climatic components such as rainfall and temperature data over a decade, (b) to observe the levels of groundwater over the decade and (c) to analyze drought and flood conditions in Bihar over a decade and (d) to assess the development programs taken up by state Government in response to these problems.

The general climatic conditions of Bihar: -

Rainfall and temperature are two main climatic variables which affect agriculture, water, forest, health and other sectors therefore it is important to understand the general climatic conditions and changes over the years.

According to the Köppen climate classification, Bihar's climate ;mainly falls under **subtropical monsoon**, mild and dry winter, and hot summer (Cwa), except for south-eastern parts of the state, such as Jamui, Banka, Munger, Lakhisarai, Khagaria, Shekhpura, and some parts of Bhagalpur, Saharsa, and Begusarai. The south-eastern part of the state is located in an extreme that falls under tropical savanna, hot, and seasonally dry (usually winter) (Aw).

The state is free from maritime influence. The orographic features play a dominant role in the climate of the state. It affects the northern parts of the state which is the neighbourhood of Sub Himalayan foot hills. Bihar is affected by severe cold, severe heat and plenty of floods. Following figures represent the general temperature conditions (fig. 4 & 5) and rainfall conditions (fig. 6&7) in Bihar.

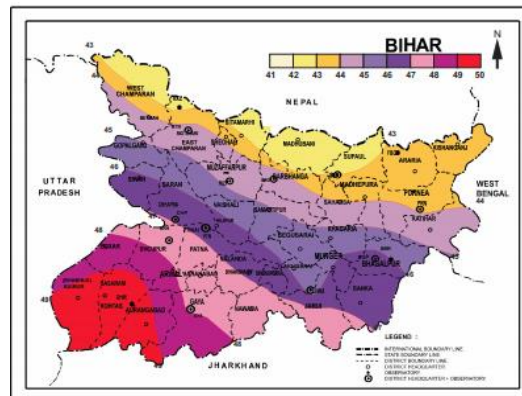


Fig. 4 Highest temperature recorded ever
source <https://imd pune.gov.in/library/public/Clima%20of%20Bihar.pdf>

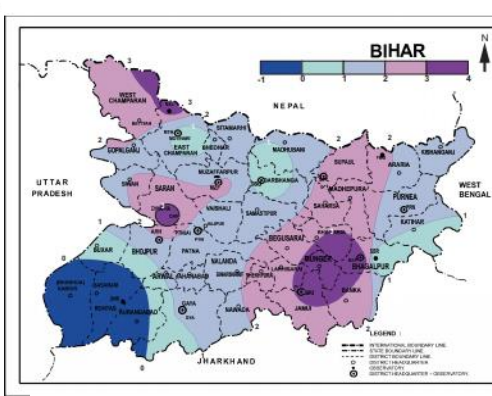


Fig.5 lowest temperature recorded ever
Source:
<https://imd pune.gov.in/library/public/Clima>

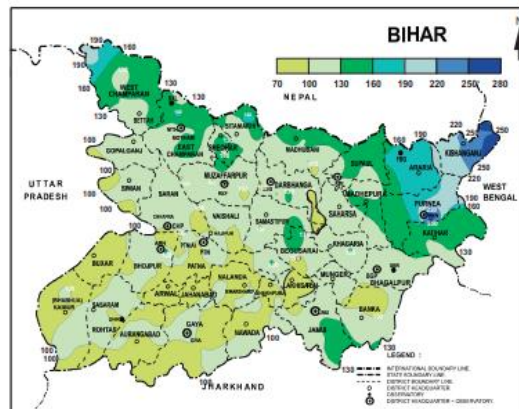


Fig. 6 Annual Rainfall of Bihar(cm)
Source:<https://imdpune.gov.in/library/public/Climate%20of%20Bihar.pdf>

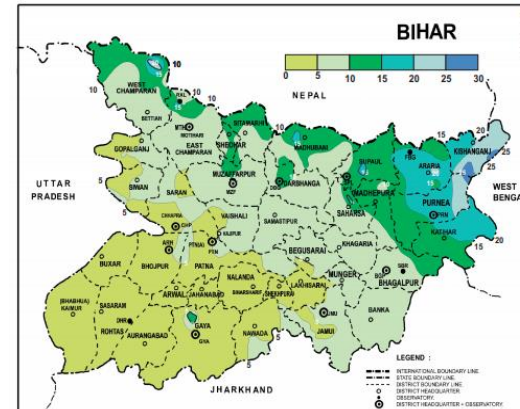


Fig. 7 Seasonal Rainfall in Bihar
Source:<https://imdpune.gov.in/library/public/Climate%20of%20Bihar.pdf>

Implications of climate change: -

Fourteen out of 50 districts most vulnerable to climate change in India are in Bihar. The state is unique in its vulnerability to **hydro-meteorological disasters** as the northern part of Bihar faces annual floods and the southern part is prone to droughts (Rohit Kumar, <https://scroll.in/author/20587>). According to a 2014 study in the Journal of Natural Sciences Research, 21.1% of the total area of Bihar falls in seismic **Zone V** (Vol.4, No.13, 2014 – Special Issue). While 27 out of 38 districts of the state are fully affected by high-speed winds of 47 m/s density. Climate change is making extreme climate events **more frequent** in the state and the incidences of **landslides, flash floods and droughts** are on the rise.

Fourteen (out of 50 in India) most vulnerable districts to climate change that are in Bihar include Araria, Kishanganj, Purnia, Jamui, Sheohar, Madhepura, Purbi Champaran, Lakhisarai, Siwan, Sitamarhi, Khagaria, Gopalganj, Madhubani and Buxar

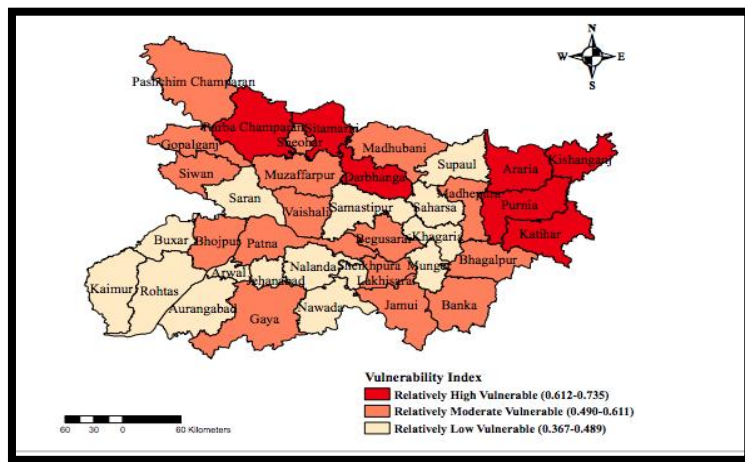


Fig.9 Map showing the categories of vulnerability of the districts in Bihar

Source: Climate Vulnerability Assessment for Adaptation Planning in India Using

(1) Excessive Rainfall and Temperature conditions :-

Rainfall sufficiently in excess of the normal, is a predominant factor for occurrence of floods, particularly in high rainfall regions. An annual rainfall of 125% or more of the normal is considered as excessive rainfall. The following figure 10 gives the year wise rainfall years and no. of rainy days in Bihar. In June 2019, Bihar recorded only 91.6 mm rainfall about 41 per cent less than normal. In the year 2020 the state with 38 districts had 1272.5 mm rainfall, 25% above normal. Bihar has received surplus rainfall in June following the arrival of monsoon for the second year in a row. Through June 22, 2021, the state had received 269.3 millimetres of rainfall — **171 per cent surplus** than normal (99.3 mm). The phenomenon is unusual, according to weather experts.

They have not ruled out the impact of climate change behind it. The surplus rainfall has affected farmers and poor; living in the catchment areas of Gandak, Burhi Gandak, Bagmati and Koshi rivers in Nepal.

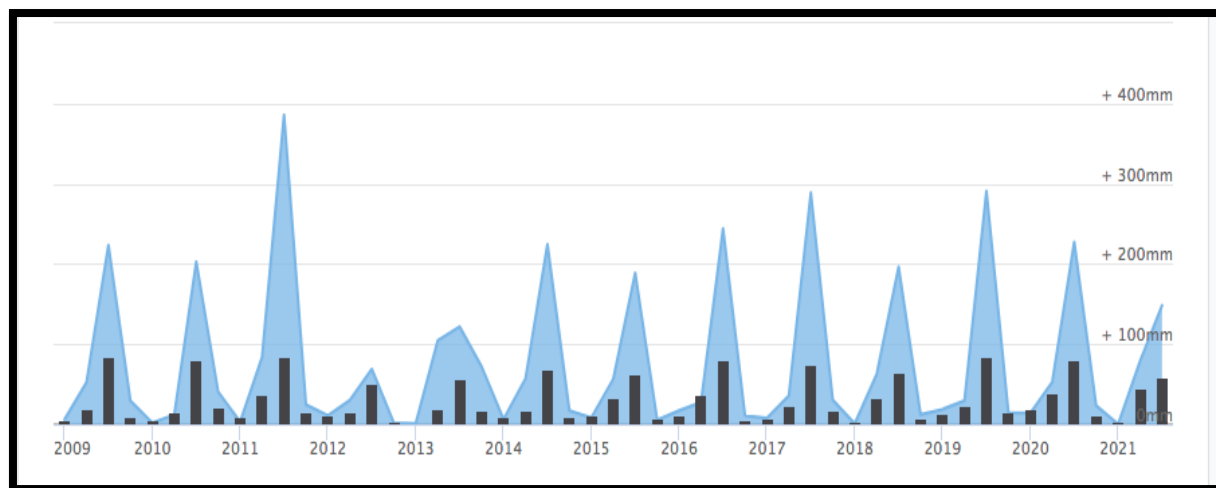


Fig.10 Average annual rainfall and rainy days (mm))
Source: <https://www.worldweatheronline.com/bihar-weather-averages>)

Temperature conditions: -

Rapid changes in Earth's surface temperature are affecting weather and climate patterns across the globe – and Bihar is witnessing similar developments. The changes in surface temperature over Bihar has created new challenges – of uncertain intensity – for cropping patterns, according to a study by experts at the Central University of South Bihar, Gaya (CUSB). Such changes have crucial implications for **agriculture and water availability**. (Praveen Kumar & Parth Sarthi, [Pure and Applied Geophysics](#) volume 176, 2019). The temperature is increasing in every season which is shown in the following para and figure 11.

Observed temperature (Based on temperature time-series for 1951-2010)

Annual Mean temperature = 0.01°C, increase

Mean temperature in monsoon = 0.01°C , **increase**

Mean temperature in post monsoon = 0.02°C **increase**

Mean temperature in winter and summer = No trend

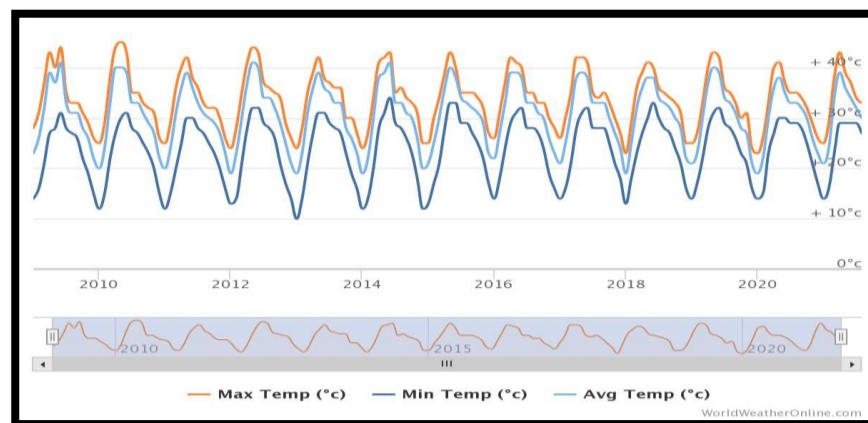


Fig.11 Year wise temperature conditions of Bihar
(Source: <https://www.worldweatheronline.com/bihar-weather-averages/bihar/in.aspx>)

Flood and Drought in Bihar

According to the BSDMA (Bihar state Disaster Management Authority), **73.63%** of the geographical area of North Bihar is considered to be prone to floods. In catchment areas of Kosi, Bagmati, Kamala Balan, Gandak, Budhi Gandak and Adhwara, swelling of rivers led to water overflowing into villages, damaging houses, schools, government buildings and primary health centres.

From 2001 to 2010, the number of districts affected by severe flood; ranged from 9 to 25. The number of human lives affected ranged from 7.18 lac to 244.42 lakh, livestock affected ranged from 0.1 lac to 86.86 lakh. The total area affected ranged from 1.81 lakh ha to 19.69 lakh ha out of which agriculture land ranged from 1.6 lakh ha to 14.4 lakh ha, and non-agricultural land ranged from 0.39 lakh ha to 9.3 lakh ha. (Journal of Natural Sciences Research Vol.4, No.13, 2014 – Special Issue)

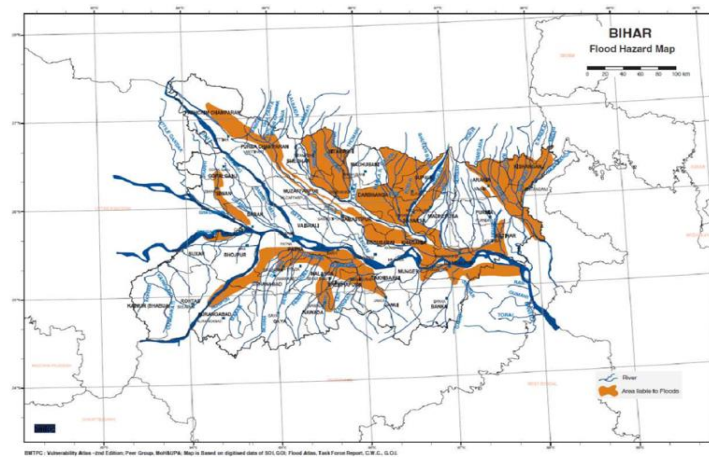


Fig. 11 flood hazard map of Bihar.
(Source: researchgate.net/figure/Bihar-Flood-Hazard-Map)

Drought conditions:-

It is a paradoxical situation that a state so rich in water bodies, also suffers from severe droughts. Bihar often faces drought situation of different scales/levels that intrinsically lead to famine situations. This situation necessarily occurs when the summer monsoon gets weak and which causes percentage departure of seasonal rainfall from the normal. 33 percent of the State receives less than 750 mm rainfall, making the southern part of Bihar vulnerable to drought. Even the 35 percent of north-eastern part of Bihar that receives around 1120 mm rainfall suffers drought once in four to five years due to scanty rains. Apart from deficiency in rainfall prime reasons of recurring drought in Bihar is the nature of soil with low mineral and humus-contents besides extremely poor water holding capacity.

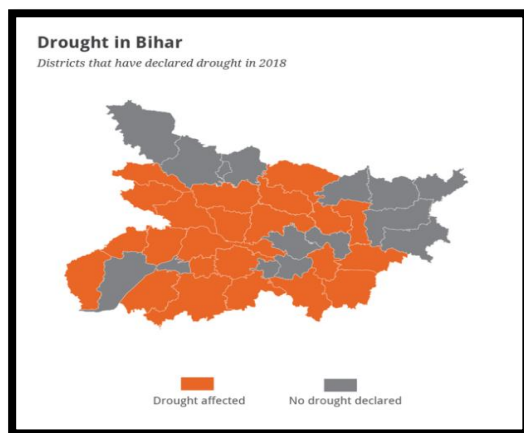


Fig. 13 Drought affected areas of Bihar, 2018
source: Scroll.in

Ground Water -level: -

The Water table has **dipped** alarmingly across Bihar between August 2019 and February 2020, according to the latest telemetry report by the state Minor Water Resources Department. The dips in water table range from 13 feet to 25 feet. The situation is particularly alarming in the Seemanchal and the southern part of the state. A recent study(<https://science.thewire.in/environment/bihar-climate-change-agriculture/>) by the Central Ground Water Board suggests that at least eight cities – including the capital, Patna – and 11 blocks of different districts in Bihar are likely to face a severe water crisis soon.

Uneven distribution of rains, lack of water-harvesting measures and encroachment upon water bodies are being cited as the major reasons for the alarming dip in water table across Bihar. A recent survey by the state government showed that 34,559 water bodies had been encroached upon.

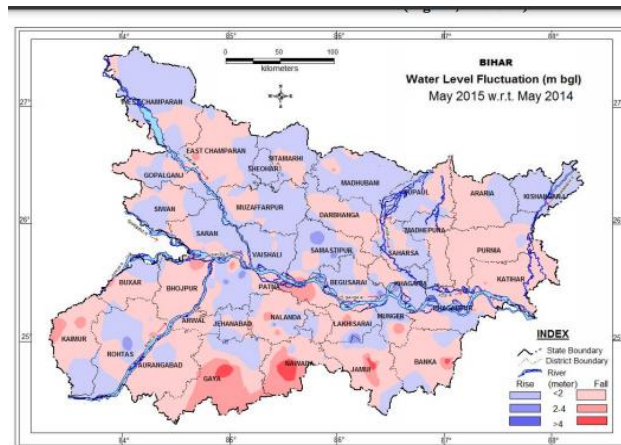


Fig.8 fluctuations in groundwater leve.2014-15
Source: Ground water year book, Bihar (2015-16),pg. 20

Causes of Climate Change: -

According to the study done by IIT Mandi and Guwahati (Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework, dst.gov.in).the chief reasons behind the climate change in Bihar are :lack of forest area for the rural population, high yield-variability of food grains, the prevalence of rainfed agriculture, lack of crop insurance, compounding agricultural vulnerability, high sensitivity of the health sector (disease prevalence) coupled with a low adaptive capacity due to a lack of healthcare workers are the major drivers of vulnerability for Bihar.

The study also recognises a high proportion of below the poverty line population, the prevalence of marginal and small landholdings, and lack of women's participation in the workforce, low road density, lack of implementation of the Mahatma Gandhi National Rural Employment Guarantee Act as the other drivers of vulnerability.

State's Action Plan Against Climate change.

The Bihar government has geared up to prepare a comprehensive action plan to mitigate the impact of the climate crisis on different sectors. The State has articulated climate concerns in its Approach Paper for the 12th FYP, and as such, is committed to fostering an integrated approach to inclusive, sustainable, and climate resilient growth and development. (Bihar Action Plan of Climate Change (BAPCC))

The Bihar government vision is through pursuing: -

- (a) broad streaming of climate concerns into all aspects of development policy and implementation,
- (b) integrating **low carbon and climate resilient** development models into its growth strategy, (c) ensuring complementarity with and contributing to the national agenda on climate change.

The Bihar State Pollution Control Board (BSPCB) signed an agreement with UNEP to frame a strategy to develop a **low carbon emission** pathway in February this year.

Challenges to sustainability: -

On October , 2019, the Bihar chief minister launched the Jal-Jeevan-Hariyali campaign which was to be implemented at the cost of Rs 24,524 crores. to limit the impacts of climate change, promote ecological balance, and promote water conservation.

An assessment/ journey so far-

After completion of one year an annual report has been published by the state govt. of Bihar. Some of the highlights are as follow: -

Water conservation

- 20837 public water harvesting structures such as pond /puddle/ aahar /pine has been identified under encroachment; out of which 15397 has been cleared.
- Restoration of 50150 Public water harvesting structure like ponds/puddle has been identifies out of which 3963 have been restored.

- 60739 public wells have been identified for restoration out of which 2522 has been restored.
- The target of constructing 9493 new sources of water and transporting of water from water surplus area to water deficit areas have been identified out of which 4699 constructions have been done. Water recharge and reuse facility were constructed near 177791 public handpumps and 5022 public wells.
- 7999 check dams has been identified for water harvesting and water conservation on small rivers and canals out of which 6072 check dams have been constructed.



Restoration of ponds.

construction of new check dams Clearing encroachments from water bodies.

Green initiative

Under this scheme, 366 new nurseries have been established across the state. 737.702 hectares. area covered under this scheme The total no. of saplings includes 49552004; Out of which 13516767 are planted. The green cover of the state has increased up to 15% and aims to 17 %.

Irrigation and solar energy programs

To reduce the water consumption in agriculture; organic farming in 188870.26-acre land has been started and out of this; drip a sprinkler irrigation technique have been applied on 36276.85 acres of land. To promote solar energy power, 37864 buildings were selected out of which in 529 buildings solar power system has been installed.

Conclusion

Bihar have over 60% districts in the category of highly vulnerable districts. These are impacting people socially as well as economically. Thus, the state's growth and development are also halted and offers little opportunities to rebuild economies. Climate change is making extreme climate events more frequent in the state and the incidences of landslides, flash floods and droughts are on the rise.

The state is unique in its vulnerability to hydro-meteorological disasters as the northern part of Bihar faces annual floods and the southern part is prone to droughts. the state has seen intensified public discussions on climate change and its impacts. But indeed, very little has reflected in policies. The reason for the low political interest is due to sustainable development challenges – growing populations and limited resources.

People with extremely low incomes are among the most vulnerable because they have little or no financial capital. So, they have the least capacity to adapt to the impacts of climate risks.

The way forward

Experts says that Jal-jeevan-hariyali is neither a holistic nor a better-implemented program undertaken by the state government to combat the problem of climate change. The major component of this program (jal-jeevan-hariyali) is to deal with water scarcity in major parts of Bihar. The state officials too need timely workshops to understand the dynamics of unfolding climate crises. For example: north Bihar; floods recharge the soil fertility every year. Fertility can be utilised by the government by enabling the farmers. Similarly for south Bihar, restoration of wells and canals is needed

A large chunk of people in Bihar are dependent on climate-sensitive livelihood, The state needs to also focus on non-farming sectors. The state government is basically need to reduce poverty, enhancing the sources of livelihood, better health facilities, and strengthening institutions – all these are going to make state climate resilient.

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Abstract:

Copyright Act provides protection to the creators of unique work from being copied by others without giving the credit. With the advancement of Information technology and Digital media, the importance of the act is growing because chances of duplication have increased as more and more contents are being created. To curb such malpractices technology is also in use. Sites like YouTube has put an automated mechanism to detect copyrights violations. The rights and the protection that a copyright owner gets along with the meaning of copyright, copyright owners, copyrights infringements, cases of copyrights violations, reasons for its violations, mechanism to curb the copyright infringements and the recent developments in the copyright acts have been discussed.

Introduction:

Copyright is a sort of licensed innovation that safeguards unique works such as canvases, photos, representations, melodic pieces, sound accounts, PC programs, books, sonnets, blog entries, motion pictures, engineering works, plays, etc. Now a days human has been producing many such things in a very quick manner due to the technical and educational advancement of the society. In these fast-paced development, it becomes important to check whether the produced work is copied or original. In India copyright Act 1957 provides protection to the original works mentioned above. With the advancement in Information technology and Digital Media the cases of copyrights infringements are increasing with the ever-increasing numbers of created contents.

Original works: Works are considered original if it has minimal degree of creativity. As per the supreme court the work is considered creative if it contains "spark" and "modicum" of creativity. Copyright is essentially a protection for expression it does not protects ideas, procedures, methods, systems, processes, concepts, principles, or discoveries.

Copyright owner: A person becomes a copyright owner if he/she creates an original works of the type covered under the copyright act. Copyright allows ownership through "work made for hire," which establishes that works created by an employee within the scope of employment are owned by the employer. Copyright ownership can also be taken through contracts.

Copyright Violation/infringement in Digital world: We are living in a world of Web 3.0 which indicates that the digital world is going to become an essential part of our life. Creation of contents has become highly dependent on internet and hence chances of copying is increasing with the development of content creation. Copyright violations take place when somebody copies the work of others without giving credit to the creator of original content.

Objectives of the study:

The present article focuses on the reasons of copyrights violations taking place in the digital world. It also focuses on finding out the development to curb the copyrights violations.

Cases of copyrights infringements in Digital world: The cases of copyrights infringements are increasing in the digital world. In first half on 2021, around 722.65 million infringement cases on just one digital platform “YouTube” were reported by automated detection route out of which 718.95 million cases were undisputed¹.

Reasons of Copyrights violations:

1. Lack of awareness of Copyright rules: Most of the copyright’s violations are taking place because of unawareness of the law related to copyright.
2. Rote learning method: This is one of the main reasons for copyright violation, if we analyse our education system, we come to a conclusion that analytical based study is missing and rote learning is common among most parts of the country. When it comes to creating original work, one needs to have deep understanding of the subjects. In rote learning system the focus is on memory and not on understanding, that is the reason most of the copyrights violations are taking place as the content creator has developed the habit of rote learning rather than analytical thinking.

Mechanism to curb copyrights violations on digital platforms:

1. Automated route for detection of Copyrights Infringements: Most of the Digital platforms have already developed their mechanism to catch copyrights violations, YouTube has its automated route through which it detects the violations quite often.
2. Manual reporting mechanism of copyrights infringements: Almost all the Digital platforms offer the user to report the copyrights violations which is reviewed by the designated person and actions are taken accordingly.

Copyright owners get the following rights as per the copyrights law.

1. Imitate the work in duplicates or phone records.

¹ <https://www.statista.com/statistics/1281165/automatic-copyright-claims-youtube-by-status/>

2. Plan subsidiary works in light of the copyrights' work.
3. Appropriate duplicates or phone records of the work to people in general by deal or other exchange of proprietorship or by rental, rent, or loaning.
4. Play out the work freely in the event that it is a scholarly, melodic, emotional, or choreographic work; an emulate; or a film or other varying media work.
5. Show the work freely in the event that it is a scholarly, melodic, emotional, or choreographic work; an emulate; or a pictorial, realistic, or sculptural work. This right likewise applies to the singular pictures of a movie or other varying media work.
6. Play out the work openly through a computerized sound transmission in the event that the work is a sound recording.
7. Copyright likewise gives the proprietor of copyright the option to approve others to practice these select privileges, dependent upon specific legal impediments.

Duration of Copyrights protection.

In the event of unique abstract, sensational, melodic, and imaginative works the time span of copyright in India is 60 years notwithstanding the creator's life expectancy. Where there are numerous creators, the term is 60 years post the demise of the last creator.

For cinematograph films, sound accounts, photos, post mortem distributions, mysterious and pseudonymous distributions, works of government and works of worldwide associations, Copyright security stays alive for a time of a long time from the extended period of distribution. In the event of unpublished Cinematograph movies, Photographs, and PC programs the copyright subsites as long as 60 years from the year in which the first work was made.

Copyright for Sound recordings is legitimate for 60 years from the date of first publishing of the sound recordings. Broadcast reproduction rights are valid for 25 years from the year of broadcast and performers rights last for 50 years from the year the performance was made.

Recent Developments in Copyrights protection.

On 30 March 2021, the Copyright (Amendment) Rules, 2021 was brought into effect with the primary objective of bringing the existing rules in parity with other relevant legislations and ensuring accountability and transparency. Moreover, the amendment of the Copyright rules aimed at facilitating smoother functioning by adopting electronic means as primary mode of communication and working in the Copyright Office. The amendments have incorporated a new provision of publication of a copyrights journal which is available at the official website of the Copyright Office. The Copyright rules aimed at facilitating smoother functioning by adopting electronic means as primary mode of communication and working in the Copyright Office. The amendments have incorporated a new provision of publication of a copyrights journal which is available at the official website of the Copyright Office.

Moreover, for better accountability and transparency, the Copyright Societies are now required to draw up an Annual Transparency Report for the public. Such a report typically contains information on license refusals, royalties collected and distributed, transactions with foreign societies or organization and many more.

The time limit for the Registrar of Copyrights to either accept or reject an application for registration of a copyright society has been extended from sixty days (60) to one hundred and eighty days (180), for comprehensive examination.

As per the new amendments, an applicant does not have to submit the entire "source and object code" for registration of software. The present requirement is the submission of the first 10 and last 10 pages of source code, or the entire source code if less than 20 pages, with no blocked out or redacted portions.

Conclusions:

The financial development of a nation generally relies upon the discovery, inventions and innovations of the people. People are putting efforts in those initiatives because there is a copyright law that provides protection to the creators of the original work. With the advancement of information technology and digital media the chances of piracy are also increasing. Prevention of Piracy and Plagiarism is very important otherwise the content creator will get discouraged if their original work doesn't get any protection. For achieving this objective, we need to create awareness about the economic, social and cultural importance of the copyright protection. Along with the awareness the government must implement the copyrights law stringently in order to protect the copyright owners. Several Digital Platform such as YouTube is using the technology in order to protect the interest of copyright owners yet the technology need regular updates, there is also a manual way to tackle such issues but that requires support from people and to get the support there is a need to create awareness regarding the Copyright Act. This Article is one such small step to bring awareness among the people regarding the Copyright Act.

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Topic

Literary transcendentalism in American works

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An American literary movement called transcendentalism emphasised the value and equality of the individual. It started in America in the 1830s and was greatly influenced by English writers like William Wordsworth and Samuel Taylor Coleridge as well as German philosophers like Johann Wolfgang von Goethe and Immanuel Kant. Transcendentalists held that human knowledge of nature extends beyond that which the senses can perceive. Additionally, they cherished spontaneity, love, independence, and the splendour of nature.

Ralph Waldo Emerson, Henry David Thoreau, Margaret Fuller, Orestes Brownson, Elizabeth Palmer Peabody, and James Freeman Clarke were a few of the well-known transcendentalist authors. They conveyed their opinions on religion, society, politics, and art in essays, poems, journals, lectures, and novels. They also started the publication *The Dial*, which printed some of their works. Several significant American writers who contributed to the development of the country's literary identity were influenced by transcendentalism. Herman Melville, Nathaniel Hawthorne, and Walt Whitman were three of these men.

Several significant works by transcendentalists.

Transcendentalist works are widely represented in American literature. Among them are:

Emerson emphasises his conviction that individuals can find God and truth in nature in his essay *Nature*, which is regarded as the credo of transcendentalism. He pushes people to trust their own instincts and criticises the reliance on institutions and tradition.

Henry David Thoreau's book *Walden* chronicles his two-year experiment of living by himself in a hut close to Walden Pond. He talks about his daily activities, his observations of nature, and his considerations on politics, philosophy, and society. Additionally, he supports independence, self-reliance, and civil disobedience.

Margaret Fuller's *Woman in the Nineteenth Century*: One of the first feminism-related books published in America is this one. Fuller promotes women's rights, education, and intellectual and spiritual advancement. Additionally, she investigates the connections between the sexes, nature and culture, and oneself and society.

Walt Whitman's collection of poetry, *Leaves of Grass*, honors both the uniqueness and freedom of the human soul as well as the diversity and vibrancy of America. Whitman expresses his transcendentalist beliefs on democracy, nature, love, and death using free verse, imagery, and symbolism.

The Civil War era is the setting for Louisa May Alcott's book *Little Women*, which follows the lives of four sisters. It realistically and humorously depicts their hardships, joys, dreams, and relationships. Additionally, it exhibits the transcendentalist principles that Alcott was raised with, including learning, independence, creativity, and social change.

Transcendentalism's cultural impact on American society.

American culture was significantly impacted by transcendentalism in a number of ways. Among them are:

It had an impact on the time's literature, art, and music since it emphasised individuals and nature as sources of creativity. Transcendentalist themes and writing techniques were used by authors including Walt Whitman, Emily Dickinson, and Herman Melville in their works. Landscape paintings by masters like Thomas Cole and Frederic Church praised the splendour and sublimity of nature. Hymns and songs that emphasised transcendentalist spirituality and social reform were written by musicians like William Billings and Lowell Mason.

It supported social reform movements like women's rights, education, temperance, and prison reform as well as abolitionism. Transcendentalists held that although people were naturally good, society and its institutions had tainted them. They pushed for bettering people's lives and the freedom of persecuted populations. In an effort to build perfect societies based on transcendentalist concepts, they also promoted experimental living arrangements like utopian communities.

It influenced American ideas and beliefs by promoting independence, education, freedom, and democracy. Transcendentalists emphasised the value of individual autonomy and personal accountability. Additionally, they viewed knowledge and education as tools for realising one's potential and pursuit of interests. They promoted democracy and freedom as being necessary for maintaining human dignity and pleasure.

Transcendentalism has its detractors.

There were several criticisms of transcendentalism from diverse angles. Among them are:

Some, who valued reason, logic, and proof over intuition, imagination, and emotion, saw it as overly idealistic, unrealistic, and impractical. They claimed that transcendentalism offered nebulous and abstract solutions while ignoring the complexity and difficulties of human nature and society.

It was opposed by some religious leaders and orthodox Christians who saw it as harmful, heretical, and blasphemous. They charged transcendentalists with supporting pantheism, individualism, and relativism as well as opposing the authority of the Bible, the church, and God.

Some political and social conservatives rejected it out of concern for its radical consequences for the status quo. They disparaged transcendentalists for their abolitionist stance, pacifism, support for women's rights, and opposition to institutions of government and law. They said that transcendentalists were also responsible for eroding the country's stability and cohesiveness.

Relationship between transcendentalism and romanticism.

Because both transcendentalism and romanticism are components of the larger Romantic movement that evolved in Europe and America in the late 18th and early 19th centuries, they are tied to one another. There are numerous traits that transcendentalism and romanticism have in common, including:

They place more weight on feeling, creativity, and intuition than on reason, logic, and reasoning.

They value the beauty, inspiration, and spirituality that nature offers.

They place more emphasis on individuals, freedom, and innovation than on tradition, authority, and compliance.

They convey a sense of awe, wonder, and mystery about the universe and the state of humanity.

However, there are several areas where transcendentalism and romanticism diverge, including:

Transcendentalism emphasises the interconnectedness of all things and the capacity of the individual to rise above physical reality. Romanticism frequently emphasises the variety and complexity of objects as well as the ability of the mind to conjure up new worlds. Simplicity, independence, and spirituality are prioritised by transcendentalism as means of reaching harmony with the natural world and God. Complexity, passion, and sensuality are frequently praised in romanticism as means of expressing one's uniqueness and emotions. Numerous philosophical and religious movements, including German idealism, Neoplatonism, Hinduism, Buddhism, and mysticism, had an impact on transcendentalism. Gothic novels, folktales, mediaeval stories, and foreign cultures are only a few of the literary and aesthetic influences on romanticism.

Transcendentalists in the contemporary era.

Since transcendentalism is not a formal or structured movement, there is no clear-cut response to the question of who some contemporary transcendentalists are. However, there are a few viable techniques to recognize contemporary transcendentalists: The writings and ideologies of the original transcendentalists, including Emerson, Thoreau, Fuller, and Whitman, had an impact on them. They might cite them, make references to them, or adopt their topics and idiom. The inherent goodness of individuals and nature, the significance of individualism and self-reliance, the rejection of authority and tradition, and the pursuit of spiritual enlightenment and harmony are some of the fundamental principles and beliefs of transcendentalism that they share. They use diverse mediums, such as art, literature, music, or activism, to communicate their transcendentalist viewpoints. They might produce original works that express their unique perspective and experiences, or they might question or critique the institutions of the prevailing culture. People like the following are a few examples of modern transcendentalists: Poet, memoirist, and civil rights advocate Maya Angelou wrote about her own challenges and accomplishments as a Black woman in America. She expressed her feelings and thoughts using lyrical language and images. She also promoted justice, freedom, and human dignity. Bob Dylan is a singer-songwriter and Nobel Prize winner whose poetic lyrics and distinctive voice revolutionised folk music and popular culture. He looked at a variety of topics, including politics, religion, social change, love, and war. He continually reinvented his musical approach and persona as another way to express his uniqueness and ingenuity. Oprah Winfrey is a media magnate and philanthropist who overcame adversity to become one of history's most significant and inspirational personalities. She advocated for empowerment, spirituality, and education through her platform. She also exhorted individuals to pursue their goals and passions.

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Topic
**Determinants of Infant Mortality
among the Primitive Tribes in
Jharkhand**

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ABSTRACT:

The present study aims to examine the components of infant deaths of the primitive tribes namely neonatal, post-neonatal and infant mortality rate with reference to various demographic, social, economic, sanitation and infrastructural variables through zero order correlation matrices. The analysis is based on primary data collected from 2209 households spread over 100 primitive tribal villages in 11 districts of Jharkhand, which was surveyed in 2017. The primitive tribal groups (PTGs) consist of the Sauria Paharias, the Mal Paharias, the Savars, the Asurs, the Birhors, the Korwas, the Birjias, and the Parhaiyas and their population were either on decline or stagnant state till 2001 Census. Further, it tries to establish the role of infant deaths for overall unprecedented high mortality among the PTGs. The variables namely early breastfeeding of babies, economic participation of mother, antenatal care, immunization of children and productivity of land reduce neonatal mortality rate whereas it is positively associated with the distance of medical centres from their villages. The variables namely breastfeeding within one day, mother's economic participation, antenatal care led to the lowering PNMR among the PTGs. However, infant deaths with fourth and higher order of births and immunized infant deaths largely contribute to high PNMR. Simultaneously, IMR is negatively affected with early breastfeeding, economic participation of mother, antenatal care & safe drinking water but it is positively correlated with fourth and higher order of birth.

Keywords: Neonatal mortality rate (NMR), Post-neonatal mortality rate (PNMR), Infant mortality Rate (IMR), Primitive tribal groups (PTGs), Zero order correlation matrix

Introduction

Explanatory variables of infant mortality vary from country to country and also within the country. They vary depending on the socio-economic, demographic and cultural factors. It occurs in response to wide range of factors, which affect different children in different ways and to which children do not necessarily respond in an identical fashion. Abject poverty with low income, unequal distribution of land, low productivity of land, inaccessibility of primitive tribal villages, location of villages in forested scarp land and hill tops, prevailing superstition regarding morbidity and its cure, inculcation of

unhygienic habit, insanitation, complete dearth of medical facility, misconception regarding reproductivity, unmet need, low level of immunization, unavailability of transportation amenity, illiteracy, addiction of alcohol drinking and narcotic smoking,

unavailability of safe drinking water, dilapidated housing condition, malnutrition, insufficient intake of food by the mothers during gestation and lactation period, home delivery by the untrained dais and old woman in place of institutional delivery, no implementation of any welfare scheme on the ground regarding the health of children, delayed breastfeeding and immediate bathing after delivery, higher order of births, early marriage etc. are the main factors behind unprecedented level of infant mortality, which have put the whole communities in the group of endangered primitive tribes in Jharkhand. However, the inclusion of explanatory and dependent variables depends on their importance and the availability of their measurement. Different models and techniques have been evolved to study the effect of various factors associated with infant deaths but the present study is limited to only zero order correlation matrix for examining the determinants of infant deaths.

There are several factors for the well-being and quality of life of infants in terms of their health and survival hood. The study aims at finding out the likely determinants of the deceased babies and their intense relationship. More specifically, the focus is on six interrelated questions based on the objectives of the study: (a) Do the familial characteristics exert any influence on health and chances of survival of infants? (b) Do the maternal characteristics have any effect on reduction of infant deaths? (c) Do the perceptions of mothers have any role for good health among the children? (d) Do the biological characteristics of infants affect the major role in reduction of infant deaths? (e) Do the socio-economic profiles of the households have major say in curtailing of infant deaths? and (f) Does the availability of infrastructural facilities plays a major role in declination of child deaths? Using a correlation matrix, an analysis of neonatal mortality, post-neonatal mortality and infant mortality rates have been carried out with several variables of infrastructure, health, demography and socio-economic conditions here. The likelihood of neonatal mortality rate, post-neonatal mortality rate and infant mortality rate depend upon various social, economic, demographic, infrastructural and sanitary factors. However, the present study is limited to only 16 explanatory variables, which have been examined to seek the relationship between infant deaths and these predictor variables, which are presented in correlation matrix table of 1. The explanatory variables are less in number due to multicollinearity problem. In this exercise neonatal mortality rate (Y_1), post-neonatal mortality rate (Y_2) and infant mortality rate (Y_3) are considered as dependent variables whereas mother's literacy (X_1), share of infants with fourth and higher order of births (X_2), share of mother's age between 20 & 30 years (X_3), share of mothers with breastfeeding within one day (X_4), share of working mothers (X_5), proportion of mothers received antenatal care (X_6), percentage of addicted mothers (X_7), child-woman ratio (X_8), share of immunized infant deaths (X_9), percentage of households having handpump & tap facilities (X_{10}), percentage of households having house with one room provision (X_{11}), percentage of landless households (X_{12}), per capita income in rupees (X_{13}), distance of bus-stand facility from village (X_{14}), distance of medical centre from village (X_{15}), and Productivity per acre (X_{16}) are included under the heading of independent variables.

Mother's literacy (X_1):

Indeed, mother's education plays a key role in social development approach, which finally reduces infant deaths. It raises the opportunity cost of women's time and generally opens up greater opportunities for women that often conflict with repeated child bearing. These educated women may be more receptive to modern social norms and family planning campaigns, which ultimately reduces child deaths. Again, infant feeding, clothing and treatment of common ailments are generally carried out scientifically by the educated mother. That kind of infant care reduces child deaths. Moreover, in primitive tribal society of Jharkhand knowledge about bearing and rearing child is also derived from folklore, traditionally handed down from mother to daughter. The above notion is also corroborated in the present finding, where mother's literacy among the primitive tribes is negatively correlated with neonatal mortality rate (NMR), post-neonatal mortality rate (PNMR) and infant mortality rate (IMR) and the values of correlation coefficients are -.10, -.11 and -.14 respectively. Moreover, the relationships among them are not significant, which leads to manifest that only simple mother's literacy is not solely responsible for curtailing infant deaths among the children of PTGs in the state.

Share of infants with fourth and higher order of births (X_2):

The prevalence of higher infant mortality rate among the late born siblings has been well documented and provided the basis for the classical approach to the planned parenthood movement. It is generally perceived that reduction in fertility imply reduction in unmet need of higher-order births, which would ultimately lead to a lowering of the overall infant mortality rate. The primitive people have abject level of poverty and endowment of limited resources. Hence, whenever they have a large number of children, they are not properly taken care of. That is why, infant deaths are found more in number while the family consists of fourth and higher order of births. It is also evident in case of primitive tribes in Jharkhand and the value of correlation coefficient between neonatal mortality and share of fourth and higher order of infant births is .18. The relationship between the above birth order and PNMR is further accentuated, which is substantiated by the value of correlation coefficient i.e., .32 and it is significant at 1 % level of confidence. The above relationship between IMR and higher order of birth is further substantiated by the value of correlation coefficient, which is .32 and it is also significant at 1 % level of confidence. From the above results, it can easily sum up that the higher the share of 4th and higher order of births among the primitive tribes in Jharkhand have higher the proportion of infant deaths.

Share of mother's age between 20 & 30 years (X_3):

It is an established fact that the infant mortality is found at the lowest level, while the age of mother in case of child bearing is between 20 and 35 years. As the mothers of primitive tribes generally don't take sufficient and nutritious food, their reproducing capacity of healthy child last very early period of youthfulness. This poor nutrition starts in uterus and extends throughout the life cycle. This not only amplifies the risks to the individual's health but also increases the likelihood of damage to future generations through further foetal growth, retardation and a limited ability to cope with stresses within the

family and in the provision of child care. This particular variable has negative bearing upon neonatal mortality and infant mortality rate and the values of correlation coefficients are -.06 and -.01 but both of them are not statistically significant. However, mothers having the age of 20 to 30 years is positively correlated ($r = .06$) with post-neonatal rate but it is also not significant. From the above relationship, it may infer that the age of mother does not play an important role for diminishing in curtailing of child deaths. Moreover, the above finding partially accepts that infant mortality in general and neonatal mortality in particular are lower in the age group of 20 to 30 years of age at the time of child births but the values of correlation coefficients are not significant at any level.

Share of mothers with breastfeeding within one day (X_4):

Although breastfeeding is nearly universal among the primitive tribes in Jharkhand but almost all infants are deprived of first nutritious milk i.e., colostrum and antibodies it contains and more than 99 % of children are given animal milk, honey, gummy, ghee, sugar, glucose, boiled water etc. as their first food among the primitive tribes other than breast milk during that initial period. It is recommended that nothing should be given to children other than breast milk in the first three days of life when the milk has not begun to flow regularly. However, mothers breastfeed for an average of 33 months in the state, which is longer than the minimum of 24 months recommended by WHO for most children. It is a scientific fact that women who intensively breastfeed their babies, do experience a longer interval before next menstruation. Breastfeeding is likely to lengthen birth intervals by an average of five to eight months. It is nature's way of helping to space children. It is further observed that those mothers who started breastfeeding within one day, their chances of survival among such children increase many more times than their counterparts. That kind of relationship is also established in correlation matrix here that neonatal mortality, post-neonatal mortality and infant mortality rate are strongly negatively associated with the share of mothers, who started breastfeeding within one day. The values of correlation coefficients of the above three parameters of infant deaths with early breastfeeding are -.41, -.43 & -.54 and all of them are significant at 1 % level of confidence. Thus, it is crystal cut clear that so many lives of infants can be saved through mass campaign for early start of breastfeeding and alarming situation of infant deaths among the primitive tribes can be easily reduced through social awareness.

Table- 1: Zero Order Correlation Matrix between Infant Deaths of the PTGs & Variables of Rural Development in Jharkhand

	Y ₁	Y ₂	Y ₃	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂	X ₁₃	X ₁₄	X ₁₅	X ₁₆	
1	1																			
Y ₂	.21*	1																		
Y ₃	.81**	.74**	1																	
X ₁	-.10	-.11	-.14	1																
X ₂	.18	.32**	.32**	-.04	1															
X ₃	-.06	.06	-.01	.23*	-.25*	1														
X ₄	-	.41**	1.00	.54**	.47**	-.18	.34**	1												
X ₅	--	.41**	.43**	.54**	.29*	.50**	.27**	.55**	1											
X ₆	-	.34**	-.26*	.39**	.47**	-.14	.41**	.89**	.49**	1										
X ₇	.16	-.13	.04	-.21*	.03	-.14	-.02	-.20	.26**	1										
X ₈	-.09	-.15	-.15	.28*	.29*	.23*	.55**	-.06	.45**	.19	1									
X ₉	-	.34**	.23*	.30**	.08	.09	.01	.01	.02	.07	-.24*	-.13	1							
X ₁₀	-.18	-.19	-.25*	-.14	-.12	-.23*	.06	.13	.03	.14	-.18	.10	1							
X ₁₁	-.10	.14	.01	.01	-.06	.01	-.06	-.12	.06	-	.34**	-.01	.24*	.11	1					
X ₁₂	.15	-.03	.08	-.19	-.11	-.15	-.11	-.05	-.17	.39**	-.30**	-.04	.28**	-.26**	1					
X ₁₃	-.13	-.12	-.16	.46**	.45**	-.23*	.26**	.12	.27**	-.20	.10	.13	.07	-.12	-.15	1				
X ₁₄	.10	.02	.09	-.13	-.06	.15	-.13	-.12	-.07	-.01	-.05	-.21*	.01	.10	-.09	.17	1			
X ₁₅	.26*	.05	.21*	-.01	.17	.14	-.08	-.23*	-.01	.01	.08	-.08	-.13	.19	-.06	.13	.42**	1		
X ₁₆	-.24*	-.10	-.11	.19	.04	.18	.10	.16	.21*	-	.60**	.16	.15	-.23*	.29**	-.91**	.17	.11	-.02	1

**Significant at 1 % level of significance, *Significant at 5 % level of significance

Share of working mothers (X₅):

It is preconceived notion that babies of working mothers face a higher risk of infant mortality than babies born to non-working mothers among the general society. The situation is completely contrary for the primitive people where females are the principal bread earner of the family. It is also pointed by Vidyarthi (1969) that the percentage of women earners is higher among the tribal people. It has already been discussed earlier that the primitive people are half-fed and half-dressed people where severe economic hardships are observed among almost all families of the state. It is remarkable to note that the primitive tribal females earn for the livelihood of the family whereas males spend major of their income on liquor consumption. Simultaneously the females are more laborious than their counterparts. As a matter of fact, that the occupation of mother is more fruitful for the survival of their children. That is why, occupation of mother is negatively related with all three variables of infant deaths viz. neonatal, post-neonatal and infant mortality rate. The values of correlation coefficients among them are -.41, -.43 and -.54 and all are significant at 1 % level of significance. Thus, the creation of more avenues of job for the females will curtail in reduction of child deaths.

Proportion of mothers received antenatal care (X₆):

No concern about antenatal care is still a reality in PTGs and pregnancy is considered as a natural state and not a state of illness requiring medical attention, taking rest and other precautions. Jejeebhoy (1997) had remarked that very few women have access to antenatal care and untrained attendants conduct a number of deliveries in unhygienic conditions. The awareness of eligible couples regarding four different aspects of maternal health care such as (i) tetanus toxoid injection to pregnant women (ii) at least three check-ups of antenatal mother (iii) healthy and nutritious food during gestation and lactation period and (iv) consumption of IFA and calcium tablets during pregnancy are completely cypher about the above health precautions. Again, the lower immunization coverage is due to the lack of awareness, poverty and neglect by the system. As a matter of fact, only negligible portion of pregnant women among the PTGs is taken care of the above concerns during the gestation period but the result is very much promising and all three components of child deaths get weakened through proper care of mothers. The proportion of antenatal cared mothers are strongly negatively related with neonatal, post-neonatal and infant mortality rate and the values of correlation coefficients are -.34, -.26 and -.39 respectively. The result clearly adds to the fact that there will be a dramatic decline in child deaths if the primitive tribal females are properly taken care of during their gestation period. The women who enjoyed superior physical conditions and good diets during pregnancy brought forth babies in excellent health condition.

Proportion of addicted mothers (X₇):

Drinking wine is a part of social milieu among the primitive tribes in Jharkhand from the times immemorial. The indigenous beverage prepared by fermentation of rice has been the favourite liquor of the primitive tribes in general and the females in particular. This is the traditional liquor of the tribes, which is prepared within the four walls of home and this indigenous beverage apart from fulfilling some of their religious and ritualistic needs, also

supplements some of their nutritional deficiency. However, the primitive mothers also consume local distilled liquor these days along with their male counterparts, which is really intoxicant and carries little food value. Consequently, the share of liquor addicted mothers is positively associated with the neonatal and infant mortality. The values of correlation coefficients of proportion of addicted mothers with NMR, PNMR & IMR among them are .16, -.13 and .04 and all of them are not significant at any level, which explicitly manifest that all three components of infant deaths are not largely responsible for ill health of children through the habit of drinking among the primitive females in the state.

Child-woman ratio (X_8):

Child-woman ratio is a better indicator of fertility, which measure the ratio between the number of children below the age of 5 years and the women aging between 15-49 years per thousand of reproductive age group. It is very high i.e., 4.48 among the primitive tribes in Jharkhand because of uncertainty of their survival in absence of medical facilities. A large number of children involve for spreading the available meagre income into very thin and the children almost invariably receive a smaller share of food and medical care. This situation often leads to forced neglect, infantile ailments and even death in the absence of medical care, which are located far away from their localities. Again, the parents are not able to afford economic cost for their treatment. Many parents look upon children as a kind of social insurance for their old age. In the absence of social security and old-age benefits parents tend to have many children so that a few may survive. It is further investigated that the higher number of children are born in those families which are comparative well off from the rest. Consequently, the inverse relationship is established between child-woman ratio and infant deaths. All three components of infant deaths viz. neonatal, post-neonatal and infant mortality rate are inversely related with child-woman ratio among the primitive tribes in Jharkhand and the values of correlation coefficients are -.09, -.15 & -.15 respectively but they are not significant at any level. Thus, any scientific association between child-woman ratio and infant mortality cannot be established among the PTGs in the state.

Share of immunized infant deaths (X_9):

The child survival programme has not received considerable attention and this is particularly true with the primitive tribes of Jharkhand. Immunization of children against seven serious but preventable diseases: tuberculosis, diphtheria, pertussis, tetanus, polio, measles and hepatitis B constitutes the cornerstone of preventive health care services in the state. These services are delivered in rural children through a chain of health care centres viz. sub-centre, primary health centre and community health centres in the rural areas but its damn failure in implementation of immunization among the primitive tribal children, which is only 0.5 %. In fact, it is the low level of immunization, which has created dim situation of IMR. It is; therefore, a UNICEF (1991) study has pointed out that 90 % of the deaths among young children in the developing countries are caused by the combined factors of malnutrition, unsafe drinking water, inadequate sanitation and lack of immunization. There is negative relationship between IMR and ratio of immunized children and this relationship is further established in case of NMR ($r = -.34$), which explicitly reveals that had the maximum number of children been immunized, the infant deaths

would have been at lower rate but this is not the storey with PNMR, where it is positively associated ($r = .23$) with the proportion of immunized children. Moreover, the value of correlation coefficient between infant mortality rate and share of immunized infant deaths is $-.30$, which points out that immunization drive among the PTGs can lead to sudden decrease in infant deaths. Thus, the above verification through correlation matrix upholds that higher the share of immunization among the children of PTG, lower the proportion of infant deaths. This is also due to external factor wherein children are not provided with nutritious diet and safe drinking water.

Percentage of households having handpump & tap facilities (X_{10}):

A significant portion of infant and child deaths is attributed to water-borne diseases and provision of potable water can bring down infant mortality to a noteworthy extent. Since electronic water purifier is non-existent in their localities, the proportion of handpump & tap is considered as means of safe drinking water. In fact, the primitive tribal children suffer from many chronic diseases but the most prevalent taking heavy toll them are water-borne. This is mainly due to the very poor drinking water supply. Even when it is available in plenty, it is mostly dirty and contaminated and consequently the children are easily susceptible to intestinal and skin diseases (Hasnain,2013). Table 1 clearly manifests that NMR and PNMR are negatively associated with the proportion of households having handpump and tap facilities and the values of correlation coefficients are $-.18$ and $-.19$ in the survey year of 2017. That kind of negative relationship is further established between the share of households having safe drinking water provision and IMR and the value of correlation coefficient is $-.25$, which is significant at 5 percent level of confidence. The above analysis explicitly demonstrates that there will be unprecedented decline in child deaths when the provision of safe drinking water through handpump and tap is supplied in their villages. Thus, the availability of safe drinking water reduces the mortality rate of children among the PTGs.

Percentage of households having house with one room provision (X_{11}):

Housing is one of the essential needs of human being. It is one of the vital determinants of the standard of living and the quality of life. Sewage treatment and waste disposal should form part of housing design. Housing design should have in built mechanism for harvesting sun and rain. Unfortunately, around 68 % of households dwell in kutchha houses with only one room provision among the PTGs in Jharkhand. In fact, these houses are constructed with thatched walls and thatched roofs and ground floors are built up of earthen mud. These houses have no provision of ventilation and usually houses have no window at all. The ceiling height of houses are lower, which are generally lower than 8 feet height and people can enter into these through crawling. Even during mid-day, the houses remain dark. Again, pigs, cattle, hen etc. are also kept in the same room and their waste materials are spread in the room. It is very difficult for an outsider to live in their houses as these waste materials stink too much but the small children play with them. There is provision of kitchen in the corner of same room, which is generally surrounded by three feet thatched mud wall. Further, there is no drainage system in their houses and the houses become hells in the rainy season. As a result, NMR is negatively related with the proportion of households with one room facility and the value of

correlation coefficient is -.10 at the time of survey. Other components of infant deaths i.e., PNMR ($r = .14$) and IMR ($r = .01$) are positively associated with the above variable but they are not significant at any level. Thus, even after living in healthy natural and unpolluted environment; poor ventilation increased heat and smoke during cooking; spreading of waste materials on the floor of houses have increased the PNMR among the children of primitive tribes in the state.

Percentage of landless households (X_{12}):

The primitive tribes of Jharkhand have great emotional attachment with their lands. Land ownership is one of the basic measures of economic status in a village. In an economy where most people earn their living from the land, land ownership is relevant in determining the rate of infant mortality. Besides agriculture, the primitive people have also adopted artisan and fourth grade government job on a large scale. Since almost all primitive people get along in the midst of forest, they subsist on forest and some of them also work as labourers in the forest department. As a result, the share of landless households doesn't control the infant deaths in a persuasive manner. The percentage of landless households is positively associated with NMR ($r = .15$) and IMR ($r = .08$) whereas it is negatively related with PNMR ($r = -.03$). Nevertheless, all the values correlation coefficients are insignificant at any level. On the whole, no definite conclusion can be ascertained between the above variables.

Per capita income in rupees (X_{13}):

Income plays a crucial role in the curtailment of infant mortality among the primitive tribes in Jharkhand because a number of factors like food, hygiene, sanitation, housing, affordability of medical aid and so on and so forth. All three components of infant deaths viz. NMR, PNMR and IMR are negatively related with per capita income in rupees and the values of correlation coefficients are -.13, -.12 and -.16 respectively. From the above correlation, it may be inferred that higher the income level of primitive people would bring a positive change in the survival rate of livelihood among the children. In fact, income generated malnutrition, insanitation and unhygienic condition are primarily responsible for large scale ill health and death of children among the primitive tribes in Jharkhand. Indeed, the primitive tribes have become synonymous with lowest level income group, chronic & mass poverty in the state and almost all are living below the poverty line. Thus, the higher the share of low-income group among the primitive tribal groups has the higher share of infant mortality. Extreme poverty, indebtedness and high level of mother's illiteracy have been responsible for their backwardness and infant deaths.

Distance of bus-stand facility from village (X_{14}):

Roads are the only means of transportation as far as the primitive tribal localities are concerned in Jharkhand. The average length of roads per thousand square kms in the above areas is very poor and distance of bus-stand facility is further aggravated in these far-flung areas where inaccessibility and difficult terrain create a lot of problems in transfer of child patients, who are forced to walk here as no mobile medical unit and ambulances are traced in their

localities. Therefore, all components of infant deaths viz. NMR, PNMR and IMR are positively related with the villages located at the distance of above 5 kms from the bus-stand and the values of correlation coefficients are .10, .02 and .09. Thus, the primitive tribal villages located away from bus-stand amenity increase infant deaths among the primitive people. Moreover, the above relationship is not statistically significant at any level.

Distance of medical centre from village (X_{15}):

Over the years the state of Jharkhand has expanded its primary health centre (PHC) up to 330 in 2017 but none is noticed in the areas where the primitive tribes are inhabited. It is, therefore, primitive tribal villages located more than 5 kms from the primary health centre is considered as an important variable for measuring infant deaths viz. NMR, PNMR and IMR are positively related with the villages situated beyond 5 kms from PHC and the values of correlation coefficients are .26, .05 and .21. The first and last component of infant deaths are significant at 5 % level of confidence, which clearly transpires that the location of sub-centre and PHC is an important determinant for the child's survival rate and powerful force for improving the life of the child. A majority of men and women of the medical profession are very reluctant to offer their services in their villages, which are usually situated in rugged, hilly terrain covered with thick forests and dissected in all directions by numerous streams and rivulets. That is why, efforts must be made to train local people. Besides this, the use of Ayurvedic and tribal herbal medicine should be encouraged because of the fact that the primitive tribal people are already used to herbal remedies and hence there will be little problem of acceptability. Thus, the longer distance of medical centre from the village enhances the larger the share of infant deaths among the PTGs in Jharkhand.

Productivity per acre (X_{16}):

The primitive tribal region is undulating marked by isolated peaks and interspersed by numerous streams and rivers. The soil in all categories of land is poor, badly leached, acidic, and deficient in organic material, nitrogen and lime. The rain water because of undulating terrain is quickly lost from the fields. Again, inadequate water availability during the crop growth coupled with the inherent infertility are the principal factors for low productivity. The principal livelihood of the primitive people in the region is cultivation and productivity of land is considered as the chief determinant of well-being of people. Since most of the people consume those products what they produce from the field. That is why, productivity per acre in rupees is negatively related with NMR, PNMR and IMR and the correlation coefficients among them are -.24, -.10 and -.11 respectively. Thus, high productivity of land diminishes all components of deaths as female during gestation period and children during their early stage of life get proper food in those households, whose productivity of land is more for socio-economic sustenance. Moreover, the provision of assured irrigation may enhance the productivity of land whereby there will be reduction in infant deaths.

Conclusion

The relationship between infant deaths and various variables of rural development exhibits that neonatal mortality is negatively influenced by early breastfeeding of babies, economic participation of mother, antenatal care, immunization of children and productivity of land whereas it is positively associated with the distance of medical centres from their villages. The variables namely breastfeeding within one day, mother's economic participation, antenatal care is responsible for high PNMR among the PTGs. However, infant deaths with fourth and higher order of births and immunized infant deaths largely contribute for high PNMR. Simultaneously, IMR is negatively affected with early breastfeeding, economic participation of mother, antenatal care, & safe drinking water but it is positively correlated with higher order of birth. Thus, the social awakening regarding early start of breastfeeding, antenatal care of mothers, abstaining from alcohol drinking during gestation period, immunization of mothers and children, consumption of safe drinking water and improvement in hygienic & sanitation conditions among the primitive tribes will reduce the infant deaths at unexpected level within a short period of time in Jharkhand.

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TOPIC

A study toward the role of teacher empathy in student's curriculum and school management

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ABSTRACT

Teachers are ultimately responsible for curriculum delivery. the micro-curriculum or classroom responsibilities of teachers as a focus on inclusive education are to ensure the holistic development of student in social, intellectual and emotional dimension for this to happen teachers have to plan and execute strategies for teaching and learning. while a lot of emphasis has been placed on teachers planning in respect of pedagogical content knowledge, assessment and classroom management, the situation in classroom is that sometime a lesser degree of premium is placed on significant values that must accompany these important. Pedagogical practices. the hidden curriculum which normally entails values which contribute to the holistic development of students is sometimes not prioritized or privileged. Beside subject content students have to be taught values such as respect, tolerance, care, collaboration and very impotently empathy.

Key Words: - Student, Challenges, abilities, self-awareness, Interpersonal skills

Introduction

The present study sought to examine empathy and teacher self-efficacy among students. An online survey that contained three sections, background information, the Interpersonal Reactivity Index, and the Teacher Sense of Efficacy Scale was sent to the analyzer. After online surveys were completed, the data was analyzed to observe the relationship between the four empathy subscales (Perspective-Taking, Fantasy, Personal Distress, and Empathic Concern) and total self-efficacy among both groups of students. Results indicated a significant positive relationship between Perspective-taking and total self-efficacy among students in their many years of study. The results also revealed a significant difference in the two groups self-efficacy scores. Students in their second year of study had higher self-efficacy then students in their fourth year

The benefits of empathy in education include building positive classroom strengthening community and preparing students to be leaders in their own communities Empathy is a way of connecting with other people that shows you understand that they are experiencing something meaningful even though you may not understand exactly how it feels for them .in other words empathy is about finding a way

to connect and to be able to say I want to understand how this feels to you and let you know that you are not alone. Empathy is a powerful tool that can help you better understand what's driving your students and find strategies to help. It can also help you connect and work through difficult moments together.

Empathy is regarded as an important quality for instructors, medical doctors and social workers, and those interacting with individuals. Since cognitive and affective categories of empathy are significant for interactive operations, they are useful for occupations that need emotional support from society. Although many studies have been done on the empathy of psychoanalysts and physicians, few investigations highlighted teacher empathy. Studies have revealed that empathy plays an important role in the development of teachers and learners in terms of ethical, communal, and educational issues. Concerning the educational contexts, stated that “when a teacher has the

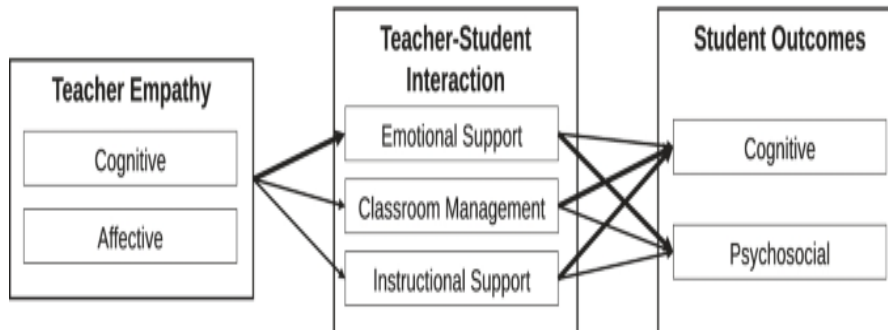
ability to understand the student's reactions from the inside, has a sensitive awareness of the process of how education and learning seem to the student then the likelihood of learning is significantly increased” defined teacher empathy as an aptitude to communicate with learners' concerns and understand their concerns and perceive the situations from learners' points of view. Moreover, found out that teachers can convert a context into a place for education, through satisfying the demands of learners and responding to their apprehensions. In an investigation, found out that empathic teachers control learners' violence, increase their psychological wellbeing, and decrease their violent actions. , in a study about exceptional instructors, highlighted the importance of teacher empathy, teacher motivation, and learner cooperation as valuable factors for teaching exceptional learners. Teacher empathy is affected by numerous variables such as gender and attitude found the relationship between personality traits like teacher agreeableness with teacher empathy which enhances teaching effectively. studied the relationship between teachers' cognitive empathy, mindsets, and job burnout. They found out that cognitively empathic teachers tend to have positive mindsets about learners' performance, and they have an ability to manage learners' problematic behaviours. They also found out that teachers with higher levels of cognitive empathy are inclined to use problem-solving strategies, and they have lower levels of job burnout in educational contexts. Trying to inspect the patterns of teacher empathy, _ found fantasy, personal apprehension, teacher engagement, autonomy, and different personality traits as the key elements influencing teacher empathy. , in another study, highlighted the importance of life satisfaction in teacher empathy, and they implicated that providing appropriate conditions can be helpful to increase teacher empathy. also found out that teachers' professional identity positively influences teacher empathy. The significant correlation between EFL teachers' emotional intelligence and teacher empathy was approved in the study conducted by also found teacher compassion as a mediating factor in the relationship between teacher empathy and apprehension.

How is teacher empathy related to learning?

In the same way physicians provide better health care when they empathize with their patients. we argue that instructors provide a better education when they empathize with their students. Nursing students reported that teacher empathy improved their learning. In addition, students' perceptions of teacher

empathy are related to both students' perceptions of their learning and to their performance on objective tests and papers. Additional evidence comes from a meta-analysis of teacher-student relationships, which noted that teacher empathy was among the strongest predictors of positive student outcomes, a broad category that included academic performance as well as affective and behavioural outcomes. Although many people suspect that empathy is associated with lowering academic standards, we argue that sympathy, not empathy, is associated with lowering standards. Sympathy is "a pity-based response to a distressing situation that is characterized by a lack of relational understanding and the self-preservation of the observer". If instructors sympathize with students, they might lower standards and make the course easier as a way to quickly reduce the student's distress. But if teachers empathize and sincerely try to walk that mile in students' shoes, they conclude that lowering standards is absolutely the last thing that they should do. An empathetic response considers what students need to be successful after they graduate. This means students need to be well prepared and held to high standards of academic performance. Instructors high in teacher empathy do not lower standards; they identify and remove obstacles to learning. Experts Argues that poverty, racism, and social marginalization reduce students' mental bandwidth and interfere with students' learning as well as their likelihood of graduating. One example of this reduction of bandwidth from poverty comes from research. When faced with an unexpected hypothetical expense, poor people show a drop in intelligence that wealthier people do not experience. Experts offers a wide variety of examples of interventions likely to increase students' mental bandwidth, including persuading students that intelligence is changeable, dividing large projects into smaller pieces and providing feedback on each step, and prompting students to identify multiple pathways for meeting their goals. Removing obstacles in these ways does not involve lowering standards, but it does increase the chances students' will successfully complete their courses. **Barriers to empathy:** Even with this kind of encouragement, some things can get in the way of noticing others, feeling empathy, and acting on that empathy. These barriers include feeling different or distant from another person. They also include feeling overwhelmed or distressed by concern for another person, because that can make it hard to act to help prevent and overcome these and other barriers, educators can help students

- Notice and reject stereotypes
- Respect and value differences
- Widen their circle of concern
- Listen closely to peers and adults
- Manage difficult feelings like sadness, anger, and frustration
- Navigate social situations ethically and fairly



Five Essential Steps for schools

1. MODEL EMPATHY

- When frustrated with students, pause and take a deep breath and try to see the situation from their perspective before responding.
- When a student is upset, reflect back his feelings or the rationale for his behavior before redirecting the behavior.
- Be aware of students' non-verbal cues and follow up on them. For example, if a student is slumping in her chair and appearing withdrawn or angry, say something like "I noticed that you are quieter than usual today. Is something bothering you?" rather than immediately reprimanding her.
- Ask for students' input when appropriate and feasible (for example, when establishing classroom rules or generating ideas for group projects) – and really listen. Find opportunities to incorporate their feedback and respond to their needs.

2. TEACH WHAT EMPATHY IS AND WHY IT MATTERS

- Clearly explain that empathy means understanding and caring about another person's feelings and taking action to help. Explain how it improves the classroom and school community.

- Stress the importance of noticing and having empathy for people beyond immediate friends, including those who are different or who are too often invisible.
- Give examples of how to act on empathy, such as helping, showing kindness, or even simply listening.

3. PRACTICE

- Create opportunities to practice taking another's perspective and imagining what others are thinking. Play charades and do role plays, read and discuss books, and use "what would you do" style vignettes or case studies.
- Name the barriers to empathy, like stereotypes, stress, or fears of social consequences for helping an unpopular peer. Share specific strategies to overcome them. For example, encourage students to privately offer kind and supportive words to a student who was bullied.
- Foster emotional and social skills, like dealing with anger and frustration and solving conflicts. Use an evidence-based social and emotional learning (SEL) program and teach specific routines for calming down and resolving disputes. Use advisories and guidance counseling to develop social and ethical skills.

4. SET CLEAR ETHICAL EXPECTATIONS

- Be clear that you expect students to care about one another and the entire school community. Don't just put it in the mission statement or on a poster – talk about it, model it, praise it, and hold students to it.
- Do an exercise with students to help them reflect on who is inside and outside their circle. Discuss why and how they can expand the circle of who they care about.
- Establish specific guidelines for unacceptable language and behaviors. Ban slurs or hurtful language like "that's retarded" or "he's so gay," even when said ironically or in jest — and step in if you hear them. Encourage students to think about why these words can be hurtful.
- Enlist students in establishing rules and holding each other accountable.
- Use restorative justice practices and peer mediation when conflicts arise.

5. MAKE SCHOOL CULTURE AND CLIMATE A PRIORITY

- Collect data from students and staff at least once a year about whether they feel safe, respected, and cared about at school.
- Take time to examine the data and make efforts to address problem areas identified by students and staff.

- Avoid over-emphasizing comparative evaluation, getting ahead by beating others, or other pressures that can erode trust and undermine empathy.

Developing a Vision for Responsive Teaching

- (a) Initial opposition to responsive teaching Describing his vision of an “ideal” teacher at the beginning of the course A deep knowledge of the subject area—far beyond the level being taught—is, to me, the most important feature of a educator. Teachers need a vast well of knowledge from which to draw attention to teachers’ “well of knowledge” “far beyond” the content being taught was in line with his assumption that a teacher’s prime responsibility is to “help the students get to the correct interpretation” a perspective prevalent in his early posts.
- (b) It is therefore not surprising that when watching videos of student inquiry from responsive classrooms at the beginning of the course, Teacher expressed concerns about “leaving students with the wrong ideas.” it seems like the teacher was about to guide the conversation towards the proper solution, teacher’s position should eventually help the students get to the correct interpretation of the problem. After all, even a thorough, engaging discussion can be detrimental if they all leave with the wrong ideas.

Progress toward responsive teaching : Midway through the course, as teacher should continue to learn about responsive teaching and to see rich examples of its enactment in classroom videos, teacher should started question some of his incoming assumptions and started to recognize the importance of students’ active involvement and agency in shaping a lesson, noting that it would be important to integrate “a certain amount of flexibility” in lesson plans to “adjust to” and “take advantage of” students’ sense making: Something I have taken from the readings, as well as the entire course so far, is the notion of paying attention to what students already know, their “common sense”.. This suggests to teacher that lesson plans, which teacher have always assumed to be rigid things, must have in them a certain amount of flexibility, such that educators are able to adjust to what their students are thinking and take advantage of their inherent sense making

Empathetic tutors prepare students for the “world outside”:

it has been argued that tutors who are empathetic also tend to be those who are knowledgeable of the complexity of the world outside of educational settings and are, therefore, better able to prepare students for their lives after graduation. According to one author, teachers with empathy do more than deliver lesson content: Empathetic teaching helps our students forge their emerging sense of future professional identity. Our students cannot be what they cannot see, Empathy allows for narrative imagining, which enables one, as problem-solver, to arrive at a fuller view of the matter at hand, how its participants are apt to be feeling, and then how best to arrive at viable solutions. Tutors who are empathetic, so the argument goes, are better at conveying to their students the complexities of context and meaning, and to promote greater awareness of their own strengths and weaknesses when it comes to learning. As such, an empathetic tutor “facilitates the inculcation in the classroom of both hard and soft skills because it allows students to mimic experientially the teacher’s own range of those acuties”. In other words, tutors who are empathetic do more than forward goals set in the syllabi; they also

develop the emotional intelligence and conflict management skills of their students and, more generally, support the personal or professional growth of students.

Type of Cultural diversity in the classroom:

Every student is unique. In order to properly understand and promote culture awareness teachers need to understand all different types of diversity.

They may encounter in their classroom including.

Race

A person's skin color can have a great impact on their experience in society. It can also impact how they view themselves and others when engaging in classroom activities.

Ethnicity

Ethnicity relates to a person's culture and nationality. Ethnicity is sometimes confused with race but it is important to recognize that while some people may have the same skin color, they may come from different places and have vastly different beliefs and views of the world.

Language

While English is commonly used worldwide in the classroom, for some students it is not that language they speak at home. Accommodation should be made to help students for whom English is a second language.

A classroom has students from a different religion, economic status, sexual orientation, gender and linguistic setups. So, the classroom will have students who display different ways of behaving, learning habits, communication skills by celebrating the diversity within your classroom, you can enrich your students' learning experiences and help them expand their social circles. You will probably even benefit yourself in the process! There are many ways to incorporate diversity activities in the classroom. Here are some activities to promote diversity in your classroom.

Conclusion

With the multiple definitions, fields of study, and purposes of empathy research, along with the difficulties in measurement, and limited number of empirical empathy studies, the field of empathy research is still wide open. So, if, in fact, empathy is believed to be essential, then the research cannot stop just because a definitive answer has not been agreed upon yet. They had hoped their measures and study could have shed light on this question, shed light, maybe answered, no. Instead, the question still needs an answer without the many caveats attached. More empirical research must be done to continue to explore this topic and more attention must be paid to the future teacher's and the need for empathy in the classroom. As a teacher educator it can begin by modelling empathy in the preservice teacher's classroom and in interactions with both students, faculty, and staff throughout each day. We can create small group and whole class discussion topics that require students to think about empathy and its importance in the classroom. And once our students begin

practicums and residency requirements, as supervisors we can highlight real life scenarios where empathy could have been displayed and praise when empathy is shown. The hope of this current discussion is to show the importance of empathy training in teacher preparation. The path is not a simple path, but vital to meeting students' needs in the classrooms throughout our nation. With more research and attention paid to the socio-emotional trait of empathy we will continue to push forward to achieve classrooms where all children can thrive.

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TOPIC

Buckling Of Re-in forced Anisotropic Cylindrical Shells with Rings and Stringers Subject to Shear Load in the Case of Torsion of a Long Tube.

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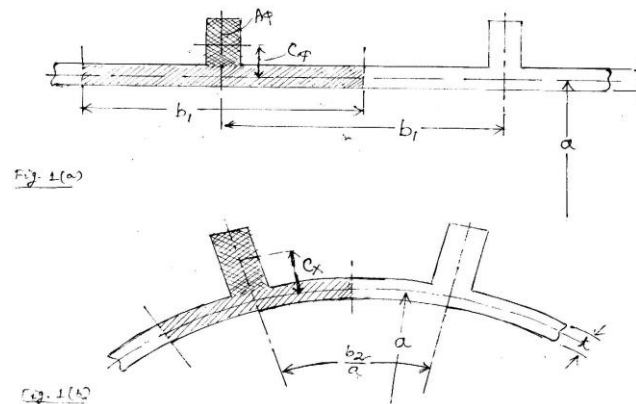
INTRODUCTION:

Anisotropic shell consists of composite materials such as Boron-Epoxy, Glass Epoxy, re-inforced plastics and whiskers. They are used in many advanced structural applications and quite often in cylindrical shells.

Buckling problem of isotropic material are known from literature on shells e.g., Flugge ^[1] (1973). The buckling problem of anisotropic cylindrical shells has occupied the interest of many researchers such as Tasi ^[2], Cheng & Kuenzi ^[3], Hess T.E^[4], Thielemann, Schnell and Fisher ^[5], Tasi, Fellmann and Strang ^[6], Cheng & Ho ^[7,8], Lie and Cheng ^[9], De, A ^[10-14].

The re-inforced anisotropic shell is the most important one. The shell of uniform thickness re-inforced by closely spaced rings or stringers or both (fig. 1)

Object of this paper is to investigate the solution of the differential equation of the buckling problem of re-in forced anisotropic shells with rings and stringers or both for shells with shear load in the case of torsion of a long tube. The condition of neutral equilibrium and the critical load and the critical value of the torque are found out in this case. The corresponding result for gridwork cylindrical shells are deduced as a special case which are found to be identical with the previous result.



(2). BASIC EQUATION:

Fig.1(a) shows the section $\phi = \text{constant}$ through a re-inforced shell i.e shell with rings and stringers and fig.1(b) shows the sections $x = \text{constant}$ through the reinforced cylindrical shell

We choose the middle plane of the wall as the middle plane of the entire shell. The equations of equilibrium in the case of buckling of cylindrical shell vide Flugge^[1](1973)(p-448) are given by,

$$a N_x' + a N_{\phi x} \dot{} - pa(\ddot{u} - w') - Pu'' - 2Tu' \dot{} = 0 \quad \text{-----(1-a)}$$

$$a \dot{N}_\phi + a N_{x\phi}' - \dot{M}_\phi - M_{x\phi}' - pa(\ddot{v} + \dot{w}) - Pv'' - 2T(v' \dot{} + w') = 0 \quad \text{-----(1-b)}$$

$$\ddot{M}_\phi + M_{x\phi}' \dot{} + M_{\phi x}' \dot{} + M_x'' + a N_\phi + pa(u' - \dot{v} + \ddot{w}) + Pw'' - 2T(v' - w' \dot{}) = 0 \quad \text{-----(1-c)}$$

where $()'$ and $() \dot{}$ denotes $a \frac{\partial}{\partial x}(\dots)$ and $\frac{\partial}{\partial \phi}(\dots)$ respectively.

The shell being simultaneously subject to three simple loads -

- (i) a uniform normal pressure on its wall, $p_r = -p$ (Fig.2)
- (ii) an axial compression applied at the edges, the force per unit of circumference being P
- (iii) a shear load applied at the same edges so as to produce a torque in the cylinder. The shearing force (shear flow) is T.

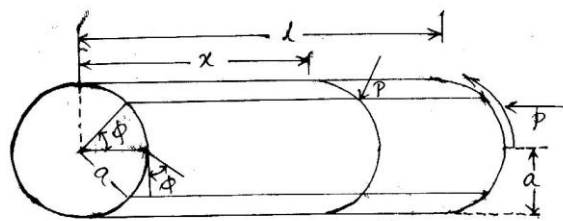


Fig. 2(a)

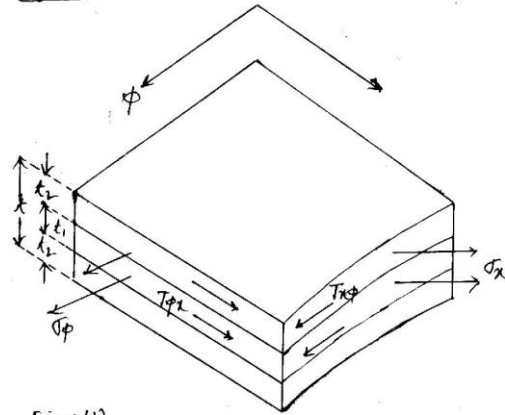


Fig. 2(b)

Substituting the values of elastic laws given by Flugge^[1](1973)(p-309) equation (5.116) in (1) we get after proper simplification,

$$u'' + A_1 \ddot{u} + A_2 v'^{\bullet} + A_3 w' - k_1 (A_4 w''' - A_5 w''^{\bullet}) - q_1 (\ddot{u} - w') - q_2 u'' - 2q_3 u'^{\bullet} = 0 \quad \dots\dots\dots(2-a)$$

$$A_6 u'^{\bullet} + \ddot{v} + A_7 v''' + \dot{w} + k_1 [A_8 (\ddot{v} + \dot{w} - \ddot{w}) - A_9 w''^{\bullet} - A_{10} \ddot{w}] - A_{11} [q_1 (\ddot{v} + \dot{w}) + q_2 v'' + 2q_3 (v'^{\bullet} + w')] = 0 \quad \dots\dots\dots(2-b)$$

$$A_{12} u' + \dot{v} + w - k_1 [A_8 (\ddot{v} + 2\ddot{w}) + A_{13} u''' - A_{10} \ddot{w} - A_{14} w''^{\bullet} - A_{11} w'''] + A_{11} [q_1 (u' -$$

$$\ddot{v} + \ddot{w}) + q_2 w'' - q_3 (v' - w') = 0 \dots\dots\dots(2-c)$$

$$\text{where, } A_1 = \frac{D_{x\varphi}}{D_x}, \quad A_2 = \frac{D_v + D_{x\varphi}}{D_x}, \quad A_3 = \frac{D_v}{D_x}, \quad A_4 = \frac{aS_x}{K_x},$$

$$A_5 = \frac{K_{\varphi x}}{K_x}, \quad A_6 = \frac{D_v + D_{x\varphi}}{D_\varphi}, \quad A_7 = \frac{D_{x\varphi}}{D_\varphi}, \quad A_8 = \frac{aS_\varphi D_x}{K_x D_\varphi}, \quad \dots\dots\dots (3)$$

$$A_9 = \frac{D_x (K_v + K_{x\varphi})}{K_x D_\varphi}, \quad A_{10} = \frac{K_\varphi D_x}{K_x D_\varphi}, \quad A_{11} = \frac{D_x}{D_\varphi}, \quad A_{12} = \frac{D_v}{D_\varphi},$$

$$A_{13} = \frac{aS_x D_x}{K_x D_\varphi}, \quad A_{14} = \frac{2K_v + K_{\varphi x} + K_{x\varphi}}{K_x D_\varphi}$$

$$\text{And } k_1 = \frac{K_x}{a^2 D_x}, \quad q_1 = \frac{pa}{D_x}, \quad q_2 = \frac{P}{D_x}, \quad q_3 = \frac{T}{D_x} \dots\dots\dots(4)$$

The equations (2) describe the buckling of equations for the buckling of re-inforced anisotropic shells with rings and stringers. In this case the parameters defined by (4) are small quantities.

For k_1 , it is obvious since we are interested in thin shells, where $t \ll a$. The three load parameters q_1, q_2, q_3 are approximately the elastic strains caused by the corresponding basic loads, and since all our theory is based on the assumption that such strains are small compared with unity, we shall neglect the parameters q_1, q_2, q_3 compared with 1 whenever the opportunity comes.

(3). SOLUTION FOR SHELLS WITH SHEAR LOAD

When $q_1 = q_2 = 0$, $q_3 \neq 0$, then there exists a solution, which is applicable in this case, of the form,

$$u = A' \sin\left(\frac{\lambda x}{a} + m\varphi\right)$$

$$v = B' \sin\left(\frac{\lambda x}{a} + m\varphi\right) \dots\dots\dots(5)$$

$$w = C' \cos\left(\frac{\lambda x}{a} + m\varphi\right)$$

$$\text{where } \lambda = \frac{n\pi a}{l} \text{ (n being an integer)}$$

It may be used for any combination of loads p, P and T. The terms of u, v, w and of their derivatives are found on lines $\frac{\lambda x}{a} + m\varphi = \text{const.}$, winding around the cylinder(fig.3). It is therefore not possible to satisfy reasonable boundary conditions on lines $x = \text{const.}$ and the solution (5) cannot be used to deal with the cylinder's length. We shall use it here to study the buckling of infinitely long cylinder subject to a torsion T only.

When we introduce the expression (5) in (2) we get a set of linear equations in A' , B' , C' :

$$A' [\lambda^2 + A_1 m^2 - 2q_3 \lambda m] + B' [A_2 \lambda m] + C' [A_3 \lambda + k_1 (A_4 \lambda^3 - A_5 \lambda m^2)] = 0 \dots\dots\dots(6-a)$$

$$A' [A_{12} \lambda + A_{13} \lambda^3 k_1] + B' [m + k_1 A_8 m^3 - 2A_{11} q_3 \lambda] + C' [1 + k_1 (2A_8 m^2 + A_{10} m^4]$$

$$+ A_{14} \lambda^2 m^2 + A_{11} \lambda^4) - A_{11} (2 q_3 \lambda m)] = 0 \dots\dots\dots(6-b)$$

$$A' [A_{12} \lambda + A_{13} \lambda^3 k_1] + B' (m + k_1 A_8 m^3 - 2 A_{11} q_3 \lambda) + C' \{1 + k_1 (2 A_8 m^2 + A_{10} m^2 + A_{14} \lambda^2 m^2 + A_{14} \lambda^2 m^2 + A_{11} \lambda^4) - 2 A_{11} q_3 \lambda m\} = 0 \dots\dots\dots(6-c)$$

The equations (6) are three linear equations with the buckling amplitudes A' , B' , C' as unknowns and with the brackets as coefficients.

Since these equations are homogeneous, they admit, in general, only the solution $A' = B' = C' = 0$, indicating that the shell is not in neutral equilibrium.

A non-vanishing solutions A' , B' , C' are possible if and only if the determinant of the 9 coefficients of the equations (6) is zero.

Eliminating A' , B' , C' from the equations (6) we get,

$$\begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{vmatrix} = 0 \dots\dots\dots(7)$$

where $a_{11}, a_{12}, a_{13}, \dots$ etc. are the coefficients of A', B', C' in the equations (6-a), (6-b), (6-c) respectively.

Whenever the condition (7) is satisfied ie the buckling condition is fulfilled, any two of the three equations (6) determine the ratios A'/C' and B'/C' and thus the buckling mode according to equation (5).

The coefficients of the equation (6) are linear function of k_1 and q_3 .

The determinant when expanded is therefore the polynomial of degree 3 in these parameters. Since they are very small quantities it is sufficient to keep the linear terms and to write the buckling condition as,

$$C_1 + C_2 k_1 = C_5 q_3 \quad \dots\dots\dots(8)$$

Where, $C_1 = A_7(1 - A_{12}) \lambda^4 \quad \dots\dots\dots(9-a)$

$$C_2 = (\lambda^2 + A_1 m^2)(m^2 + A_7 \lambda^2)(A_{10} m^4 + A_{14} \lambda^2 m^2 + A_{11} \lambda^4) - [A_{15} \lambda^6 - A_{16} \lambda^4 m^2 - A_{17} \lambda^2 m^4 - A_{18} m^6 + A_{19} \lambda^2 m^6 + A_{20} \lambda^4 m^4 + A_{21} \lambda^6 m^2 - A_{22} \lambda^2 m^2 - A_{23} \lambda^3 m^3 - A_{24} \lambda^5 m] \quad \dots\dots(9-b)$$

$$C_5 = 2 \lambda m A_{11} (\lambda^2 + A_1 m^2)(m^2 + A_7 \lambda^2 - 1) + \lambda m [A_{27} \lambda^2 - A_{21} \lambda^2 m^2] \dots\dots\dots(9-c)$$

$$\text{where } A_{15} = A_7 (A_3 A_{13} + A_4 A_{12})$$

$$A_{16} = 2 A_7 A_8 + A_9 + A_2 A_{13} + A_2 A_9 A_{12} - A_3 A_{13} \\ + A_4 A_6 - A_4 A_{12}$$

$$A_{16} = A_{10} + 2 A_1 A_7 A_8 + A_1 A_9 - 2 A_2 A_6 A_8 + \\ A_2 A_8 A_{12} + A_2 A_{10} A_{12} + A_3 A_6 A_8$$

$$A_{18} = A_1 A_{10}$$

$$A_{19} = A_2 A_6 A_{10}$$

$$A_{20} = A_2 A_6 A_{14}$$

$$A_{21} = A_2 A_6 A_{11} \dots\dots\dots(10)$$

$$A_{22} = A_8 A_{12} (A_2 - A_3)$$

$$A_{23} = A_5 (A_{12} - A_6)$$

$$A_{24} = A_5 A_7 A_{12}$$

$$A_{25} = A_{11} A_2 A_{12}$$

$$A_{26} = A_7 - A_{11} - A_2 A_{11} + A_3 A_6 A_{11} + A_3 A_{11} \\ - A_3 A_{11} A_{12} - A_6 + A_{12}$$

$$A_{27} = A_1 A_{11}$$

We see at once that neither λ nor m can be zero because in both the cases $C_5 = 0$ and hence $q_3 = \infty$.

It is also without interest to consider negative values of λ or m . When both are negative nothing is changed in the equation (8) when either λ or m alone is negative the buckling mode (5) is altered in so far as the nodal lines (fig.3) becomes right-handed screws.

One would expect that then the buckling load T must be applied in the opposite sense and this is exactly what happens. In the equation (8) the L.H.S remains the same while C_5 changes sign and hence q_3 .

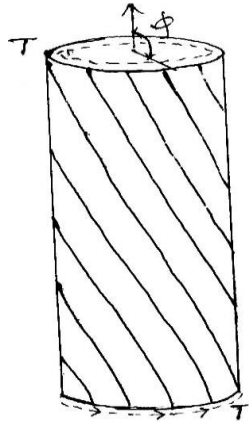


Fig 3

The discussion of the buckling formulae is now restricted to +ve values λ and to +ve integers m . One might think of solving for q_3 , differentiating the expression with respect to λ and m , and putting the first partial derivatives equal to zero. This would yield two algebraic equations for λ and m , and their solution (or one of them) would lead to the smallest possible q_3 . This procedure however, is rather tiresome and may be avoided. By some trial computations one may find out that any $m > 2$ yields a higher buckling load than does $m = 2$ and that λ must be chosen rather small, $\lambda \ll 1$, to obtain a low q_3 .

With this in mind we now investigate separately the two cases $m = 1$, $m = 2$.

For $m = 2$, the equation (8) gives,

$$q_3 = \left[\frac{C_1 + C_2 k_1}{C_5} \right]_{m=2}$$

When we neglect λ^2 , compared with unity we get,

$$q_3 = \frac{A_7(1 - A_{12})}{48A_1A_{11}}\lambda^3 + \frac{3A_{10}}{A_{11}\lambda}k_1$$

It is easy to find from,

$$\frac{\partial q_3}{\partial \lambda} = \frac{A_7(1 - A_{12})}{16A_1A_{11}}\lambda^2 - \frac{3A_{10}}{A_{11}\lambda^2}k_1 = 0$$

that, $\lambda^4 = \frac{48A_1A_{10}}{A_7(1 - A_{12})}k_1 \dots\dots\dots(11)$

This yields the lowest possible value of q_3 and is given by,

$$q_3 \big|_{\min} = 2 \cdot k_1^{3/4} \cdot \sqrt[4]{\frac{A_7(1-A_{12})A_{10}^3}{3A_1A_{11}^4}} = 2 \cdot \sqrt[4]{\frac{A_7(1-A_{12})A_{10}^3}{3A_1A_{11}^4}} \left(\frac{K_x}{D_x}\right)^{3/4} \cdot \frac{1}{a^{3/2}} \dots (12-a)$$

Using the last equation of (4) we may now return to the real shear load T and find its critical value given by,

$$T_{cr} = 2 \cdot \sqrt[4]{\frac{A_7(1-A_{12})A_{10}^3}{3A_1A_{11}^4}} \cdot \frac{(K_x)^{3/4} \cdot D_x^{1/4}}{a^{3/2}} \dots \dots \dots (12-b)$$

The total torque applied to the tube is given by,

$$M = T \cdot 2\pi a \cdot a$$

∴ The critical value of this torque is given by,

$$M_{cr} = 4\pi \cdot a^{1/2} \cdot D_x^{1/4} \cdot (K_x)^{3/4} \cdot \sqrt[4]{\frac{A_7(1-A_{12})A_{10}^3}{3A_1A_{11}^4}}$$

All this results have been derived for an infinitely long cylinder of re-inforced anisotropic shell with rings and stringers.

Since they do not contain any wave length we are tempted to apply them to cylinders of finite length.

However such a cylinder usually has some kind of stiffening at the end, say a bulk head requiring $w = 0$. Any such condition is in contradiction to the equation (5), and the additional constraint imposed by the bulkhead will increase the buckling load beyond the one given by the preceding formulae.

We may expect that the difference is not too big, if the cylinder is rather long.

When $m = 1$, the equation (8) gives,

$$q_3 = \left[\frac{C_1 + C_2 k_1}{C_5} \right]_{m=1}$$

$$\therefore q_3 = \frac{A_7(1 - A_{12})\lambda^4 + k_1 P}{\lambda^3 [2A_{11}(\lambda^2 + A_1)A_7 + (A_{27} - A_{21})]}$$

$$\text{where } P = [(\lambda^2 + A_1)(1 + A_7\lambda^2)(A_{10} + A_{14}\lambda^2 + A_{11}\lambda^4) - \{A_{15}\lambda^6 - \lambda^2(A_{16}\lambda^2 + A_{17} - A_{19} - A_{20}\lambda^2 - A_{21}\lambda^4 + A_{22} + A_{23}\lambda + A_{24}\lambda^3)\} - A_{18}]$$

Now neglecting λ^2 as compared with unity we may drop k_1 terms entirely and we get,

$$q_3 = \frac{A_7(1 - A_{12})}{2A_{11}A_1A_7 + A_{27} - A_{21}} \lambda \dots\dots\dots(13)$$

If we can choose λ arbitrarily, we may choose it as small as we like and thus make q_3 approach zero. This shows that there is no finite buckling load for the infinite shell unless we prevent the buckling mode with $m = 1$.

In this mode the axis of the tube is deformed to a steep helical curve, with the circular cross-sections remain circular and normal to the deformed axis. Since every such cross-section rotates about one of its diameters, this mode may be excluded by preventing such a rotation of the terminal cross-section of a long cylinder.

Particular Case:

Putting $D_v = K_v = 0$ in the equations (2), (6), (9) reduces to the corresponding equations for anisotropic gridwork cylindrical shells which are found identical with the previous result.

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Topic**Survey Of Impact of Patna Town on Major Water Pollutants of River Ganga****ICSRD:**

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ABSTRACT

Through this survey the water quality of river Ganga has been analyzed in Patna district. The Water samples were collected from two different Ghats from western end and eastern end. Due to heavy discharge of municipal waste and anthropogenic activities in the river the biological, chemical and physical characteristics of water have changed to a considerable extent. The objectives of this study were to find out the changes in physicochemical nature as well as biological health of river Ganga. Samples were analyzed on various physicochemical parameter i.e. Total Hardness, pH, B.O.D., and D.O. by using the standard methods and procedures. The result shown that the average pH -7.95, average, D.O.-2.91 mg/L, average B.O.D. -2.41 mg/L, average total hardness -114.72 mg/L. Microbial analysis was also conducted in terms of Most Probable Number [MPN] of total coliforms in the water sample and it shown the highest value for all samples. The presence and absence of the gas bubble in each tube were used to calculate an index known as the Most Probable Number.

INTRODUCTION

The first civilizations appeared in major river valleys, where floodplains contained rich soil and the rivers provided irrigation for crops and a means of transportation. So, we can say that Rivers have been the focus of human activity since the early civilizations. Even in recent times, a large number of activities of the engineers such as water supply, irrigation, water quality control, power generation, flood control, river regulation, navigation and recreation are in practice. Ganga the most holy river in world & national river of India. She is the soul of Indian civilization, which established after collapse of Indus valleys civilization. The sink is settled since last 4 - 5000 years, proper irrigation systems are used since last 2700 years. Ganga is important for our - religion, history, culture, traditions, tourism, education, livelihood, economy, agriculture, industries, energy, transport & overall survival life. Ganga basin, has catchment sink covers about 1,000,000 sq. km, average depth is 52feet &

maximum depth is 100feet. Ganga have many tributaries in her journey of about 2525 Kms, she flows through Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, and West Bengal via 29 large cities, 23 small cities, 48 towns & countless villages.

Patna is the capital of the Indian state of Bihar. It is the second largest city in eastern India, after Kolkata. On the southern bank of River Ganga is situated the city of Patna (old Patliputra). About 25 km of bank from Danapur to Malsalami is protected by revetment. The southern bank has a number of Ghats (bathing places) evenly spread over the whole of its length of about 12 km. starting from Digha Ghat and moving towards east we come across Kurji Ghat, L.C.T Ghat, Bans Ghat (mainburning Ghat), Mahendru Ghat, Krishna Ghat, Gandhi Ghat, Rani Ghat, Gulbi Ghat,

B.N.R. Training Ghat, Khazekala Ghat, Damriahi Ghat and Masalami Ghat etc. The Sone River conflues with river Ganga near Suratpur (Maner) on its right bank. Before it conflues the Sone, river bifurcates into a number of channels which flows parallel to Ganga between Sherpur and Danapur. Further in the downstream just before Mahatma Gandhi Setu the river Gandak conflues with Ganga on the Northern bank i.e. Hazipur side.



With streams of untreated waste, chemical wastes, sewage, idol immersion as well as human and animal remain finding their way into the river. According to the statistics of the Central Pollution Control Board the total coliform count in Patna downstream had been calculated at 1,60,000 MPN/100ml against the permissible limit of just 2500 MPN/100ml. “The faecal coliform count is also alarmingly high at 50,000 MPN/100ml, about 100 times above the permissible. Even though the Ganga Action Plan was initiated in 1985, it has hardly helped in interception of major drains flowing into the river.

As per the survey conducted by various agencies, about 250 MLD (million liter per day) to 300 MLD waste water is routed to the river from different places, including the Patna municipal corporation (PMC) operated sump houses in the capital area alone, there are six major drains, which carry untreated water directly into the river. They are located at Kurji, Rajapur, Bans ghat, Anta ghat and Krishna ghat. About a dozen such drains emit drain waters from Danapur and Patna City area as well for want of sewerage treatment facility. However, the four sewage treatment plants (STPs) at Beur, Karmalichak, Saidpur, and Pahadi in Patna will be made functional by this year

Methodology

In the present survey an attempt has been made to estimate the major water pollutants added in the river Ganga due to domestic and industrial sewage.

Under this investigation physicochemical quality of Ganga water i.e., pH, D.O, B.O.D, and Total hardness were determined by using standard protocols at the two Ganga Ghats one is the western point in Danapur and another in the Eastern Ghat Malsalami. As bacteriological examination of water has a special significance for pollution studies as it is a direct Measurement of effects of pollution on human health. Total coliforms and faecal coliforms are indicator organism of fecal contamination in water. Microbial analysis are estimated in terms of most probable number (MPN). The study was conducted in the month of October 2021 to December 2021. The samples were collected every week at both ends of Ganga Ghats and total four samples were collected in a month for three consecutive months at each Ghats. The average or mean values with standard deviations of 12 values were calculated for every parameter on MS Excel, 2013.

ANALYSIS OF PHYSICOCHEMICAL AND BIOLOGICAL PROPERTIES OF WATER SAMPLES

Determination of Physicochemical properties

1. **Estimation of pH**-by the use of digital pH meter the values were obtained for the samples.
2. **Estimation of DO (Dissolved oxygen)** - The Winkler Method uses titration to determine dissolved oxygen in the water sample. A sample bottle is filled completely with water (no air is left to skew the results).The dissolved oxygen in the sample is then "fixed" by adding a series of reagents that form an acid compound that is then titrated with a neutralizing compound that results in a color change. The point of color change is called the "endpoint," which coincides with the dissolved oxygen concentration in the sample. Dissolved oxygen analysis

is best done in the field, as the sample will be less altered by atmospheric equilibration.

3. **Estimation of BOD-** The Biological Oxygen Demand test is used to measure waste loads to treatment plants, determine plant efficiency (in terms of BOD removal), and control plant processes. It is also used to determine the effects of discharges on receiving waters. A major disadvantage of the BOD test is the amount of time (5 days) required to obtain the results. When a measurement is made of all oxygen consuming materials in a sample, the result is termed “Total Biochemical Oxygen Demand” (TBOD), or often just simply “Biochemical Oxygen Demand” (BOD). Because the test is performed over a five-day period, it is often referred to as a “Five Day BOD”, or a BOD₅.

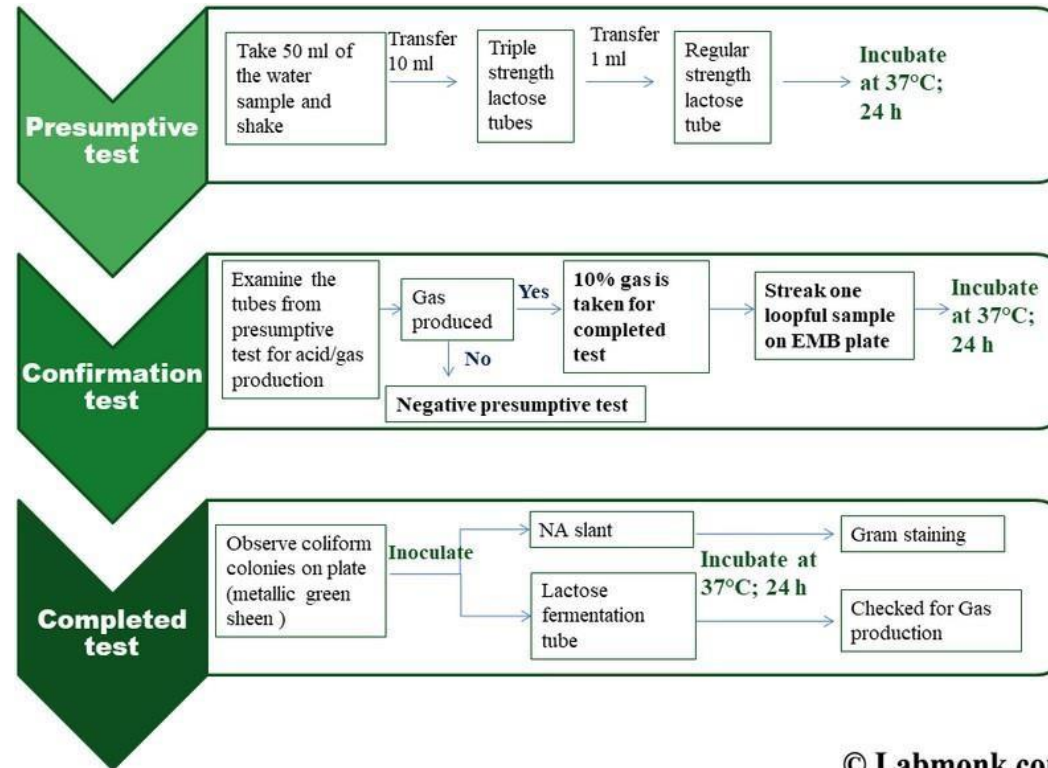
Determination of Total Hardness-

Total hardness due to calcium and magnesium in water is determined using the preprogrammed method, T7 Total Hardness. Calcium and magnesium in the sample are titrated to the equivalence point using an ethylene diamine tetra acetic acid (EDTA) titrant^{1, 2, 3}. A copper ion selective electrode (ISE) is used to follow the titration, and a copper- EDTA (Cu- EDTA) reagent serves as the indicator. Calcium and magnesium are titrated first, then the copper of the indicator reagent. The abrupt change in the copper concentration signals the endpoint. The copper ISE provides improved Titrations over the calcium ISE

The titration is sensitive to both calcium and magnesium and can go to lower concentrations.

Determination of Bacteriological analysis

The bacteriological analysis was carried out for the indicator organism i.e. Total and Fecal coliform. Bacteriological analysis of water is performed to check the number of bacteria the water is contaminated with or simply it is a basic test for knowing about the water quality. The complete analysis consists of series of test to identify the bacteria. It mainly consists of three test presumptive test, confirmed test and completed test. So, the basic objective of this test is identification of various bacteria present in a water sample.



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Presumptive test

Take 50 ml of the water sample and shake it well. Then transfer 10 ml of this sample to each of the triple strength lactose tubes. After mixing well, transfer 1 ml of this sample to regular strength lactose tube. Then place it in incubator at 37°C for 24 hours.

Confirmed test

Examine the tubes from presumptive test for acid/gas production. If no gas is produced then it is negative presumptive test. If any gas/acid is produced compare it with MPN (most probable number). Tubes showing more than 10% gas is taken for completed test. Take one loop full of this positive

presumptive test sample and streak it on EMB plate. Then incubate this at 37°C for 24hrs. For better result, the positive presumptive ones can be collected and one ml of each can be inoculated to Brilliant Green lactose bile Broth (BGLB) tube, after incubating at 45°C for 24 hrs. Then the tubes containing both gas and turbidity were to be considered positive for faecal coliforms.

Completed test

This test is for confirmation of coliform bacteria. The plates are observed for well-formed coliform colonies, by seeing any colonies of blue black with metallic green sheen on the plates. Then these colonies are inoculated in NA slant and lactose fermentation tube and incubated at 37°C. Then the colonies from lactose broth are checked for gas production and colonies from NA slant is taken for gram staining.

RESULTS AND DISCUSSION

The present study deals with the physicochemical and microbial analysis of Ganga Water collected from Ghats of Patna region, Bihar, India. The collected water samples were analyzed for their physicochemical properties like: pH, D.O. B.O.D. and Total hardness. The values are enlisted in following Tables.

Table: 1

Samples collected at Danapur Ghat.

Time	D.O.	B.O.D.	Hardness	Ph
October (First Week)	3.2	1.2	125	7.4
October (Second Week)	2.4	1.1	112	7.8
October (Third Week)	2.8	1.0	122	7.9
October (Fourth Week)	3.1	0.7	120	8.1
November (First week)	3.0	0.8	110	8.2
November (Second week)	2.9	0.6	110	7.7
November (Third week)	2.6	0.5	108	7.6
November (Fourth week)	2.8	0.6	120	8.2

December (First week)	3.2	0.9	115	7.9
December (Second week)	2.7	0.8	104	8.3
December (Third week)	2.8	0.8	102	7.5
December (Fourth week)	3.2	1.1	107	7.3
Mean value	2.8916667	0.84166667	112.91667	7.825
Standard Deviation	0.25746433	0.22343733	7.4401654	0.33337121

Graph 1

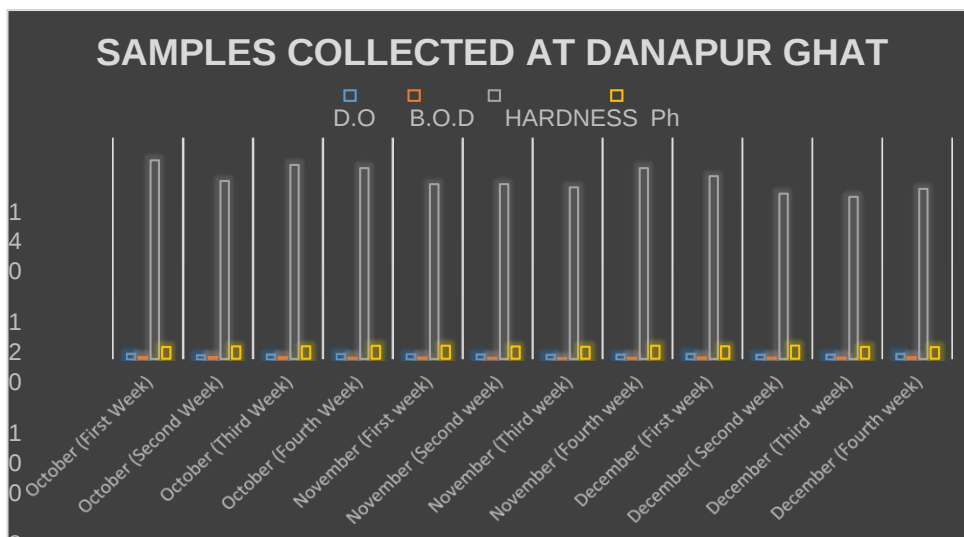


Table:2

Samples collected at Malsalami Ghat

Time	D.O.	B.O.D.	Hardness	pH
October (First Week)	3.0	1.0	128	6.5
October (Second Week)	2.2	0.8	114	7.7
October (Third Week)	2.7	0.6	125	7.2
October (Fourth Week)	3.1	0.4	126	7.1
November (First week)	2.7	0.5	117	6.2
November (Second week)	2.5	0.4	113	6.7
November (Third week)	2.3	0.4	127	7.3
November (Fourth week)	2.7	0.5	120	8.3
December (First week)	3.0	0.7	119	7.1
December (Second week)	2.6	0.6	116	6.8
December (Third week)	2.5	0.4	108	6.9
December (Fourth week)	2.9	0.9	109	7.3
Mean Value	2.6833333	0.6	118.5	7.0916667
Standard Deviation	0.28230652	0.20889319	6.8953212	0.55178773

Graph 2

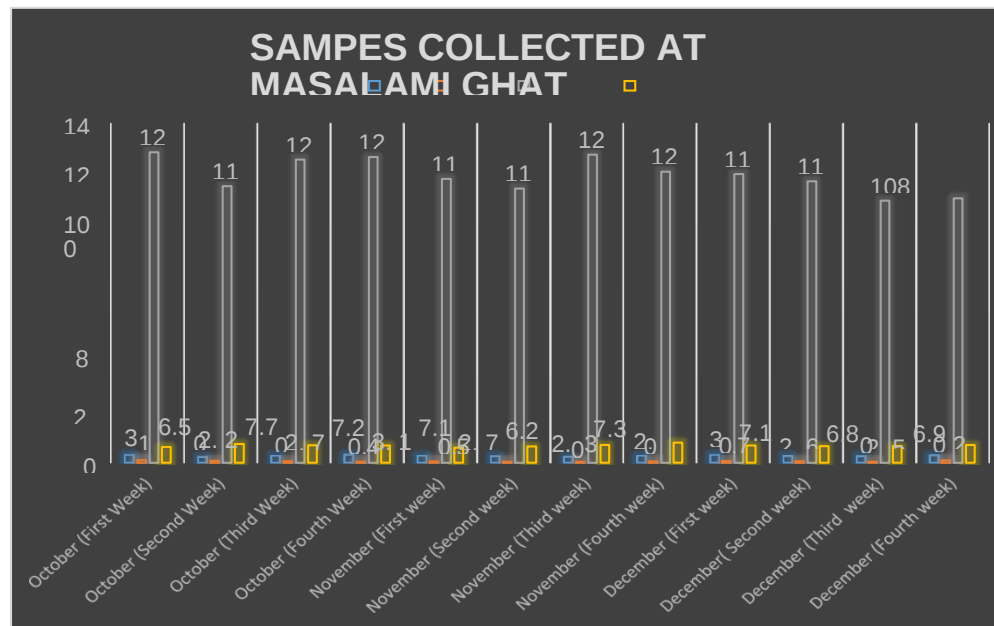


Table: 3

MICROBIAL ANALYSIS AT DANAPUR GHAT

Time	Total coliform (TC)	Fecal Coliform (FC)	Indole
October (First Week)	>800	>1700	Positive
October (Second Week)	>600	>1300	Positive
October (Third Week)	>950	>1600	Positive
October (Fourth Week)	>800	>1600	Positive

November (First week)	>600	>1100	Positive
November (Second week)	>800	>1100	Positive
November (Third week)	>600	>1200	Positive
November (Fourth week)	>600	>1500	Positive
December (First week)	>700	>1700	Positive
December (Second week)	>800	>1800	Positive
December (Third week)	>800	>1400	Positive
December (Fourth week)	>900	>1500	Positive
Mean Value	>745.83333	>1458.3333	
Standard Deviation	123.32207	239.15888	

Table: 4

MICROBIAL ANALYSIS AT MALSALAMI GHAT

Time	Faecal coliform (TC)	Total Coliform/100ml (FC)	Indole
October (First Week)	>600	>1600	Positive
October (Second Week)	>500	>1000	Positive
October (Third Week)	>900	>1400	Positive
October (Fourth Week)	>700	>1500	Positive
November (First week)	>500	>1000	Positive
November (Second week)	>600	>1200	Positive
November (Third week)	>500	>1100	Positive
November (Fourth week)	>400	>1400	Positive

December (First week)	>600	>1600	Positive
December (Second week)	>700	>1800	Positive
December (Third week)	>600	>1300	Positive
December (Fourth week)	>800	>1400	Positive
Mean Value	>616.66667	>1358.3333	
Standard Deviation	140.34589	250.30285	

The observation of Physicochemical and Microbial analysis, which is enlisted in the Table 1-4 respectively shown that the pH value of Ghats under study is coming under the permissible limit (6.5-8.5). The pH of water mainly depends upon carbonic acid and the interaction between carbonate and bicarbonates. Total Hardness of the water sample normal and come under the permissible limit (300mg/L).

There is no any major industrial setup present along city of Patna. Industrial effluents contain cations (calcium, magnesium and sodium) which increase total hardness.

Absence of industry along above the Ghats keeps hardness levels lower. The B.O.D value High values of this parameter indicate potential depletion of dissolved oxygen in the water body B.O.D values lower than the standard value (BIS) for all the sample. A similar result was reported by Arya et al.

Oxygen deficiency in the water bodies due to discharge of municipal waste, rich in organic compounds. The D. O values of water samples were recorded lower than the permissible limit (6mg/L). So the bacteria utilize the dissolved oxygen in the process of decomposition and DO have reached the lowest level. Decreasing of DO value from upstream to downstream indication of organic pollution load in river or it may be also due to increasing of temperature.

The value of pH, Total Hardness, B.O.D, D.O, and MPN were Compared to Standard of B.A similar study was carried out by Gupta et al. on river Yamuna and they reported high value of total hardness, B.O.D and Lower D.O level than the standard limits. The MPN values of all the water samples of 16 Ghats of Ganga were the permissible limit (50 cfu /100 ml). Such higher value of MPN is also supported from the studies of other researchers.

Conclusion:

From this study, the results clearly indicate that the water quality of the river Ganga is contaminated. The water quality declined mainly due to mass bathing, discharge of untreated sewage water, domestic waste water of Patna urban area. Establishment of the large number of apartments, industries, and hospitals on the bank of river Ganga has led to increasing the pollution. There is urgent need of taking some appropriate measurement to stop further deterioration of Ganga River water quality. Awareness is needed among the people of concerned areas to decrease the level of pollution in Ganga water, a collective approach by the Government, common people, media, students, and all the section of the society is essential.

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Topic**Impact of Women's Education in Rural Bihar: Issues and Challenges****ICSRD:**

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Abstract

Women's education has got a special significance in human society. It has many facets to cover. The fact, women being housewives and mothers play vital role in educating and moulding the citizens of the new generations should not be forgotten factor in our system of education. Education should not segregate women from the management of family but when they are accommodated in various professions as a matter of economic help, sufficient emphasis has to be given on their role in shaping a happy family society. The education of a man is the education of an individual and the education of a woman is the education of the family. This idea gives a clear exposition of social aspects, and social significance, of women's and its impact on social and family life, influence in curing ills and strengthening the wills of the society and exterminating prejudices and misunderstandings in society. Like man's education, woman's education is inseparably and inextricably connected and concerned with the human life and progress and its concept and character, principle and practice should be transformable in today's life. The purpose of this paper is to focus on the current status of women education level of rural Bihar and this paper will also highlights the various issues and challenges associated with. The ultimate purpose of this paper is to demonstrate some measures to deal with all these issues and challenges that faced it.

Keywords: Education, Society, Human, Mothers**Introduction**

You must have also used these terms on several occasions in conversation with others. What do we mean by education? Does 'teaching' or 'instructing' become education? Or is it learning in an institution? Does developing the child into good human being known as education? Is it possible to have one meaning of education? There are many more such questions that come to our mind when we attempt to understand the concept of education. The term 'education' has been interpreted by different people in different ways. Some people refer to it as formal schooling or to lifelong learning. Some others refer to it as acquisition of knowledge, skills and attitudes. Some say that education is nothing, but training of people's mind in a particular direction to bring about desired changes. If you ask a

statesman, an artisan, a teacher, a parent, a philosopher and a student about what education means to them, you would be surprised to know the multiple interpretations and views people have about education. This only shows that education doesn't have one precise universally accepted definition. It has various meanings with various functions. Analysis of these meanings would help us to understand what education really is. To begin with, let us look into how the term 'education' has evolved and some of the views of great thinkers that exemplifies the concept and meaning of education.

Etymologically speaking, the word education is derived from the Latin word 'educare' meaning 'to raise' and 'to bring up'. According to few others, the word 'education' has originated from another Latin term 'Educare' which means 'to lead forth' or 'to come out'. These meanings indicate that education seeks to nourish the good qualities and draw out the best in every individual. Education seeks to develop the innate or the inner potentialities of humans.

Conceptual Dimension of education

Mahatma Gandhi's interest in education was the outcome of a revolt against the British system of education that had many limitations and drawbacks. His educational thoughts emerged out of his own experiments with truth and nonviolence. According to Mahatma Gandhi, education not only moulds the new generation, but reflects society's fundamental assumptions about itself and the individuals who comprise it. By education, he meant, an all-round development drawing out of the best in the child's body, mind and spirit. He stated that literacy is not the end of education, and not even the beginning. It is only the means by which men and women can be educated. In his opinion, education should aim at developing self-reliance, where people learn to earn their livelihood. His aims of education also emphasized on character formation and all-round development (physical, mental, social, moral, aesthetic, and religious).

Swami Vivekananda (1863-1902), a great thinker and reformer of India, provides an insight into what education ought to be. According to him, "Education is the manifestation of the divine perfection, already existing in man". The aim of education, according to him, is to manifest in our lives the perfection, which is the very nature of our inner-self, which resides in everything and everywhere, which is known as 'satchitananda' (existence, consciousness and bliss). Hence, education, in Vivekananda's sense, enables one to comprehend one's self within as the self everywhere.

As regards education of girls, Vivekananda considered men and women as two wings of a bird, and it is not possible for a bird to fly on only one wing. So, according to him, there is no chance for the welfare of the world unless the condition of woman is improved.

Rabindranath Tagore was born in 1861 in Calcutta, and was one of the early educationists of India whose ideas gleamed through his various writings and educational experiments at Shanti Niketan. As an alternative to the existing forms of education, he started a small school at Shanti Niketan in 1901 that developed into a university and a rural reconstruction Centre, where he tried to develop an alternative model of education that stemmed from his own learning experiences.

According to him, education should aim at the development of the active tendencies of the child. It should be for developing an individual into 'whole being'. Education should also promote peace, love, kindness, and ideals and should aim at gaining a sense of freedom and of sympathy with all humanity. Tagore considered education as essential need of human life.

Objectives

To assess the changing socio-economic status of women in Rural Bihar.

Hypotheses

There is a correlation between socio-economic status and educational attainment.

Research gap

Indian Society is basically a Patriarchal Society and Indian Muslim community is not exceptions. Marriage is a big concern of the family specially a girl's marriage. Actually, father or Head of the family says that our girl or sister why getting education after his marriage she is basically a housewife so why he spending money or time on the education of his girl child so, this will discuss another gap with these literature. Narula (2014), Kishore Sunita and Gupta Kamla (2009) says that Early marriage, Gender Disparity and Negative attitude of Parents towards Muslim Education, Martial Inequalities, Gender relations and traditional norms, Accessing to resources, Spousal Violence, Female household leadership and School dropout ratio beyond the Primary level for both Boys and Girls also.

Methodology

Paper started with place selection, for which I selected Kishanganj District of Bihar. Further, for comparative studies between urban and rural population, I choose one urban block i.e. Kishanganj and other rural block i.e. Pothia in the same district, after looking into higher Muslim population and the low rates of education among women's to significant social development. Education itself reduces the gender gap and enhances gender equality. This ensures equal rights and opportunities for the people. These women enhance the quality of life for them. Women are able to make health decisions for themselves and children.

Empirical Analysis of women's education in rural Bihar

S.No.	Block's Name	Panchayat's Name	Village's Name	Units
1.	Kishanganj	Chakla	Chakla Ward - 3	50
		Kishanganj Nagar Parishad	Karbala Ward - 7	50
2.	Pothia	Budhra	Budhra Ward - 12	50
		Navkathha	Navkathha Ward – 4	50

Socio-economic condition of rural women in Bihar

Socio-economic impact of female education is an important subject. Women's education takes the rate of development to a higher level. Women's education increases women's income and GDP increases. Empowerment in women increases due to education women's education lead.

Table 1: Classification of Respondent according to their Occupation

Occupation	Karbala (Kishanganj)	Chakla	Budhra	Navkathha	Total
Agriculture	1 (2.00)	6 (12.00)	4 (8.00)	3 (6.00)	14 (7.00)
Animal Husbandry	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Agricultural Labor	1 (2.00)	1 (2.00)	15 (30.00)	2 (4.00)	19 (9.50)
Non-Agricultural Labor	33 (66.00)	31 (62.00)	26 (52.00)	36 (72.00)	126 (63.00)
Business	1 (2.00)	2 (4.00)	2 (4.00)	1 (2.00)	6 (3.00)

Govt. Job	7 (14.00)	3 (6.00)	0 (0.00)	2 (4.00)	12 (6.00)
Pvt. Job	1 (2.00)	0 (0.00)	0 (0.00)	3 (6.00)	4 (2.00)
Pensioner (Govt. Scheme)	0 (0.00)	0 (0.00)	0 (0.00)	1 (2.00)	1 (0.50)
Tailor	3 (6.00)	1 (2.00)	0 (0.00)	0 (0.00)	4 (2.00)
Homemaker	3 (6.00)	6 (12.00)	3 (6.00)	2 (4.00)	14 (7.00)
Total	50 (100.00)	50 (100.00)	50 (100.00)	50 (100.00)	200 (100.00)

Source: Field Survey

() : Denotes Percentage

The thought, living, eating food, health, social, economic, political and cultural life of a person depends on his occupation. Business affects a persons over all life style. As a result, the problems of collecting individuals of different systems are different. Therefore, analysis of occupation status of the respondents is necessary. Hence the following presents the status of occupations.

Respondents are classified on the basis of their occupation. It is clear from the table that in Kishanganj Panchayat, the occupation of 66 percent of the respondents are of non – agricultural labors, where as 14 percent of the respondents do government job non – agricultural labour, and 12 percent of the respondents do cultivation. 12 percent of the respondents in Budhra Panchayat are non- agricultural labour. In Navkathha Panchayat, 72 percent respondents are non – agricultural labour, and 6 percent of the respondents are related to agriculture and private job.

Table 2: Classification of Family according to their Economic Condition

Income	Economic Condition	Karbala (Kishanganj)	Chakla	Budhra	Navkathha	Total
Source of Income	Agriculture	0 (0.00)	3 (6.00)	6 (12.00)	0 (0.00)	9 (4.50)
	Labour	41 (82.00)	33 (66.00)	39 (78.00)	43 (86.00)	156 (78.00)
	Business	7 (14.00)	10 (20.00)	1 (2.00)	3 (6.00)	21 (10.50)
	Govt. Job	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	Pvt. Job	2 (4.00)	4 (8.00)	4 (8.00)	3 (6.00)	13 (6.50)
	Immamat in Mosque	0 (0.00)	0 (0.00)	0 (0.00)	1 (2.00)	1 (0.50)
Yearly Income (Rs)	up to 75000	27 (54.00)	33 (66.00)	8 (16.00)	12 (24.00)	80 (40.00)
	Rs. 75001-150000	23 (46.00)	11 (22.00)	23 (46.00)	26 (52.00)	83 (41.50)
	Above 150000	0 (0.00)	6 (12.00)	19 (38.00)	12 (24.00)	37 (18.50)

The main source of income of the respondents has been mentioned in Table no. 2. It is clear from the table that agriculture is the main source of income of the highest 12 percent of the respondents of Budhra Panchayat, while the lowest 3 percent of Chakla Panchayat respondent's main source of income is agriculture. The main source of income of the respondents of the highest 86 percent Navkathha Panchayat is Labour (Wages). Business is the main source

of income of highest 20 percent respondents of Chakla Panchayat respondents, while the lowest 2 percent comes under the category of respondents of Budhra Panchayat. The main source of income of the respondents of Chakla and Budhra Panchayat is Private Job 8 percent and Karbala (Kishanganj) have only 4 percent and Navkathha Panchayat have 6 percent Private Job. In Navkathha Panchayat 2 percent of the respondents have Immamat in mosque. It is clear from the table that the highest 66 percent of the respondents of Chakla Panchayat comes (up to 75000), whereas 54 percent of the respondents of Karbala (Kishanganj) come (up to 75000). In Budhra Panchayat 16 percent of respondent comes (up to 7500-0) and in Navkathha Panchayat 24 Percent (up to 75000). In Kishanganj 46 percent of respondents comes (75001 – 150000) and in Chakla Panchayat 22 percent respondents comes in this category. Whereas in Budhra Panchayat 46 percent respondents comes (75001 – 150000) in this category while in Navkathha Panchayat 52 percent respondents comes in (75001 – 150000) this category. In Chakla Panchayat 12 percent respondents comes in (above 150000) and in Budhra Panchayat 38 percent respondents comes in this category while in Navkathha Panchayat 24 percent respondents come in (above 150000).

Findings

- Above data shows that maximum respondents are literate, which is 56 percent, but only 5 percent of them are qualified to matric and inter level, at graduation level it is decreased to 0.50 percent. Most of the respondents in the study area are literate in which rural women and girls are not showing much interest in education.
- Above data show that maximum respondents are engaged in labour work, which is 63 percent, only 6 percent are engaged in government job, 2 percent in private job, this shows that they are largely dependent on labour work.
- According to the field data, Agriculture is the main source of income but respondents are poor and landless so that mostly dependent on labour work which is 78 percent while it is lowest in Immamat in mosque that is 0.50 percent.
- It can be seen from the above table that most of the respondents have their own house which is still Kuchha. Most of the people who have Pucca house have got P M Awas. If we talk about rooms, then most of them have only two rooms house. There is toilet facility but this too has been from the government scheme. Thus, we can say the Socio- economic condition of the respondents here is not good, whose effect is directly visible on the education here. People send their children to work instead of studying.

Suggestions

- The gap in human capital formation in case of various communities as well as the female's needs to bridge through community and gender sensitive educational programmes and schemes.

- In order to increase enrollment and retention of students, there is need to enhance the quantum of educational assistance in the district.
- Livelihood opportunities need to be provided to the rural poor, to eliminate the incidence of child labour.
- Education system should be designed in such a way that it should be employment oriented especially in a rural Bihar.
- There is need to improve the income level of rural households. Bank and financial institutions can play a major role by providing credit at cheaper rates, without any collateral guarantee for undertaking productive self – employment.

Conclusion

The overall socio-economic status of the rural women in Bihar is generally inferior to that of the other sections of the population, but the socio-economic distances between them are not the same on all counts. Both the extent of the distances and the reasons for their emergence and continuation vary, depending upon the nature of the indicator, the locale - rural or urban, and gender socio-economic situation of the respondents.

The pace of economic development in India during the seven decades since independence was at least moderate up to the eighties and reasonably high thereafter. This economic growth was also reflected, albeit partially, in the improvement of most indicators of social development like poverty levels, health status and educational achievements of the country's population.

In terms of social groups, women happen to be one who has been at the receiving end of the non-inclusive growth process in India. This has obviously reinforced the problem of security, identity and equity for the community. Bihar is one of those states in India where the Women constitute a sizeable part of the population (16.9 percent) and it is not possible to visualize a vigorous growth process in the state of which Women are not a beneficiary and in which it is not an equal and active participant.

Human development can be achieved by spreading education. Education is an instrument by which social change and development occurs. It helps to develop an individual as well as society and provides people with an opportunity to reflect on social, economic, cultural, moral issues facing humanity. Education also brings about reduction in inequalities and also improves their status within the family.

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Topic

State, Society and Religion: Sufism in Medieval India

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ABSTRACT

Sufism is derived from the Arabic word "suf" which means "wool", referring to the garments worn by the early Sufis. Some say that it is derived from "Suffa" or "bench", which refers to a group of poor Muslims living with the Prophet Muhammad (P.B.U.H) at the time, known as the People of bench.

There are different views on the time when Sufism came into existence, with most scholars holding that the term Sufism was first coined by a Sufi known as Abu Hashim Kufi. Whether this is true or not, the fact is that Sufism is not something that can be distinguished from Islam, although the term may have been used a little later. After Prophet Muhammad (P.B.U.H.), the Imams and their sheikhs spread the knowledge of Sufism. During the sixth and seventh centuries of the Islamic era, Sufism reached the height of its popularity, and Sufis such as Ibn Arabi and Rumi wrote important books about the mysteries of knowledge and the journey of God.

This paper deals with how Sufism affected politics, society, and economy in medieval India. On the other hand we forget to solve the mysteries of life that come in our daily life, because Sufism has provided guidance to mankind in all ages and will continue to do so. Sufism teaches that it is possible for us to see the world beyond our imagination. One who attaches himself to a Sufi can eventually find the state where one can actually see things, or when we worship God as you can see them. The aim of Sufi teaching is to make the tried and tested methods of attaining enlightenment accessible to people leading ordinary lives in the modern world.

KEY WORD - Sufism, Islam, Politics, Society, Medieval India

The introduction of Islam by Prophet Muhammad in Arabian Peninsula in 7th century C.E. had been the most important event in the history of world as the beginning of social, political and ideological changes. As the followers of Islam believed that spreading of its faith and ideology in the world is their duties. As a result, wherever it was spread, it brought changes and exercised a great influence on other religions and civilizations. These changes reached one region to another

region, one social group to another. Islam reached India in three waves. In first wave, the people who were connecting India as traders brought the ideology and message with them. In second wave, the political Islam came to India with the establishment of political domination by Arabson Sindh and the Punjab in 712-13 C. E. In the third wave, Mongol invasion on Iran, Iraq and other parts of the world in 13th 14th centuries, a number of Ulema and Muslim scholars migrated from their homeland to India and settled here. For instance, Alauddin Khalji had to extend the boundary of Quwwat al-Islam Masjid and Madrasa to provide accommodation for the migrated scholars in early 14th century. India was also regarded as most peaceful and safe place for Muslims at that time. As far as the definition of the term `Sufism` and its origin in India are concerned, Sufism was the result of political expansion, sectarian controversies, theological and philosophical developments during eighth century C. E. in Islamic world¹. For R. A. Nicholson, Sufism was a natural development of the ascetic tendencies.

This asceticism was not independent of Christian influence, but on the whole, it may be called a Muhammad an product.²As it is very well known that jurists, theologians and religions thinkers had a system of dogma and Sharia law, but Sufis had no dogma and differed in some principles and practices with others. For instance, the outlook of Chishtia regarding polity and society differed from Suhrawardia order. The Sufis of Firdausia order were different from other Sufi orders. Sufism also passed through several phases before taking its final shape. For instance, there was no term and word for defining Sufism in the first century A. H. Dhul-Nun al-Misri was the first person, who gave the permanent shape to Sufi doctrine during the first half of the third century A. H. During the latter part of the third century, Sufism became an organized institution with the concept of teachers disciples, and rules of discipline and the continual efforts by which it was tried to show that it was based on the holy Quran and the traditions of Prophet Muhammad.³There are a number of definitions for Sufism in Arabic and Persian, which have distinct and conflicting meanings. Here, it is necessary to mention these definitions for better understanding the ideology of Sufism. On the basis of Tadhkirah al-Awliya and the Risalah of Qushairi, R. A. Nicholson gave few definitions of Sufism.

“Tasawwuf is this: that action should be passing over the Sufi which is known to God only, and that he should always be with God in a way that is known to God only.” (AbuSulayman al-Darani)

“The Sufi is he that keeps a pure heart towards God”. (Bishar al-Hafi)

“Sufis are told who have preferred God to everything, so that God has preferred them to everything.” (Dhun` al-Nun)

“The Sufi is not defiled by anything, and everything is purified by him.” (Abu Turab al-Nakhshabi)

² Nicholson, R. A, `A Historical Enquiry Concerning the Origin and Development of Sufism`, Journal of the Royal Asiatic Society of Great Britain and Ireland, (Apr, 1906), pp. 303-348

³ Ibid, p. 306

“The Sufi is like the earth, on which every foul thing is thrown and from which only fair things come forth.” (Junayd)⁴

S. Athar Abbas Rizvi defined the term `Sufism` as “the inward or esoteric side of Islam, which may be described as the mystical dimension of Islam”.⁵ In fact, Sufism is a mystical experience adopted by Sufis to reach to God, and to get closeness and blessing of God. But nobody could have directly reached to God. Therefore, the concept of *pir*, *murid* emerged for completing this spiritual journey.

As it is very well known that a number of Sufis belonging to different orders (*silsilahs*) came to India and founded their khanqahs. Sufism entered in this sub-continent as a well-organized and in its final shape. AbulFazal mentioned 14 orders of Sufi in India in his work *Ain-i-Akbari*.⁶ Some of them became famous and exercised an immense influence on polity, society and economy during Medieval period. Rizvi wrote a famous book on Sufism entitled as *A History of Sufism in India* in 1978. He mentioned the Sufi orders like Chishtiya, Suhrawardiya, Firdausiya, Kubrawiya, Qadiriya, Shattariya and Naqshbandiya. He also wrote about the Qalandars, the martyrs, the legendary and semi-legendary saints and female Sufi including Sufi conception of kingship and government, and the interaction between Hindus saints, yogis and Sufis.

As far as the Chishtia order is concerned, it was founded in India by Khwaja Muinuddin Chishti of Ajmer. This order remained important from the thirteenth to the eighteenth century. Gradually, it spread in all parts of India. For instance from Rajasthan to Delhi, Punjab, Uttar Pradesh, Bihar, Bengal, Gujrat and Deccan. It is necessary to know the Sufis and their centers for better understanding of their impact on polity, society and economy. Therefore, the Sufis of Chishtiya order, who had their own important disciples (*murids*) and successors (*khalifas*) were Khwaja Muinuddin Chishti of Ajmer, Shaikh Bakhtiyar Kaki of Delhi, Shaikh Fariduddin Ganj Shakar of Pakpattan, Shaikh Nizamuddin Awliya of Delhi, and Shaikh Nasiruddin Mahmud *Chiragh-i-Dehli*. They had their own disciples (*murids*) and successors (*khalifas*) by whom this order reached to other parts of this sub-continent. For instance, Shaikh Hamiduddin was the Khalifa of Muinuddin Chishti, and established his Khanqah at Nnagaur. The founder of chishtiya order in Bengal, Shaikh Akhi Sirajuddin was the Khalifa of Shaikh Nizamuddin Awliya. Saiyid Muhammad bin Yusuf, better known as Khwaja Banda Nawaz Gesu Daraz made Gulbarga as the centre of his activities, was the disciple of Shaikh Nasiruddin Mahmud. Shaikh Salim Chishti and his khalifa became important in Fatehpur Sikri and the Agra region.⁷

The Suhrawardiasilsilah was represented in India by Shaikh Bahauddin Zakkariya at Multan, Saiyid Nuruddin Mubarak at Delhi, Qazi Hamiduddin at Nagaur, and Shaikh Jalaluddin Tabrizi in Lakhnauti. Shaikh Bahauddin Zakaria was succeeded by his son Shaikh Sadruddin Arif and his grandson Shaikh Ruknuddin Abul Fateh. Shaikh Jalaluddin Bukhari, better known as Jalal Surkh was a khalifa of Shaikh Bahauddin. The author of *Lamat* Shaikh Fakhruddin

⁴ Ibid, p. 331-337

⁵ Rizvi, S. A. A, *A History of Sufism in India*, vol, I, p. 20

⁶ Nizami, K. A, *Some Aspects of Religion and Society during 13th and 14th Century*, p.147

⁷ Grewal, J. S, *Religious Movements and Institutions in Medieval India*, vol. vii, part 2, p. 324

Ibrahim was the disciple of Shaikh Bahauddin Amir Husaini, who wrote the *Nuzhat al-Arifin* and *Zad al-Musafirin* was the disciple of Shaikh Sadruddin Arif. The descendants of Jalal Surkh like Makhdum Jahanian, Raju Qattal, played an important role in spreading Sufism in Uch, Punjab, Kashmir and Gujrat. Suhrawardi order came to Kashmir with Saiyid Sharafuddin, better known as Bulbul Shah. Saiyid Sharfuddin, who spread the Suhrawardi Sufi order in Kashmir, was the disciple of Shaikh Shihabuddin in Turkistan. The first Muslim king of Kashmir Richana was converted to Islam by Bulbul Shah. During the reign of Sultan Zain al-Abidin, the influence was revived by Saiyid Muhammad Isfahani, the disciple of Makhdum Jahanian.⁸

As far as the Firdausia order (*silsilah*) is concerned, it was the second line of the Suhrawardi order. It was founded by Khwaja Badruddin Samarq and in Delhi, but it got popularity in Bihar due to the important role of Shaikh Ahmad bin Yahya Maneri. His disciples established a network of khanqahs from Bihar to Sonargaon in Bengal.

The Kubrawia order was founded in Kashmir by Mir Saiyid Ali Hamadani who was the disciple of Shaikh Alaudaula Simnami. Hamadani stayed in Kashmir till 1380. His disciples founded independent centers. Mir Muhammad, Suha Bhatta accepted Islam under the influence of Hamadani's son and exercised a great influence on Sultan Sikandar's policies.

The Qadiri order (*silsilah*) mainly flourished in 16th and 17th centuries was founded in India by Mir Nurullah bin Shah Khalilullah, the grandson of Shaikh Muhammad Nimatullah and was spiritual guide of the Bahmani Sultan, Shihabuddin Ahmad. The important centers of Qadri Sufi order were Ludhiana, Pali, Sirhind, Kaithal, Panipat, Delhi and Agra. Shaikh Muhammad al-Husaini al-Jilani, the descendant of Shaikh Abdul Qadir Jilani. Some Qadiri Sufis established khanqahs in Kashmir. During 17th century, Shaikh Mir Muhammad, better known as Mian Mir was the teacher of DaraShikoh, rose in prominence in the Punjab. Few khanqahs of Qadiri order were established in Uttar Pradesh, Bihar, and Bengal during the seventeenth century.⁹

The Shattaria order was founded by Shaikh Abdullah in India. The most important Sufis of this order were Shaikh Muhammad Allah, Shaikh Abul Fateh, Shaikh Hafiz, Shaikh Buddhan and Shaikh Abul Muyyad Muhammad. Humayun persuaded Shaikh Abul Fateh. Abul Muyyad Muhammad, better known as Ghaus of Gwalior, was associated with Babur, Humayun, and Akbar. He received large parts of land. He was also the author of a number of Sufi works. The important centers of Shattari order were Gujrat, Malwa, Bengal, Deccan, Rajasthan, Punjab and Uttar Pradesh.¹⁰

As far as the Naqshbandia order is concerned, it came to India with the founder of Mughal Empire, Babur. Khwaja Muhammad Baqi, better known as Khwaja Baqi Billah founded this order in India. The most famous Sufi of this order was Shaikh Ahmad Sirhindi because of his philosophy *wahdat al-shuhud*. He also claimed to be the *mujaddid –I Alif-I sani* (renovator of the second millennium)¹¹

⁸Grewal, J. S, *Religious Movements and Institutions in Medieval India*, vol. vii, part 2, p. 325

⁹Grewal, J. S, *Religious Movements and Institutions in Medieval India*, vol. vii, part 2, p. 325-326

¹⁰ Ibid, p. 326

¹¹ Ibid, p. 326

As far as the impact of Sufism on polity and society is concerned, first it is necessary to mention the relationship of Sufis with the ruler or sultan during medieval India for better understanding of their impact on polity and society. It is very well known, as J. S. Grewal mentioned that Sufis were not same in term of ideas, practices and customs. Modern historians debated on the relationship of chishti Sufis especially Shaikh Nizamuddin Awliya's relation with the courts of rulers. On one hand, S. A. A. Rizvi and K. A. Nizami pointed out that chishtisufis, especially Nizamuddin Awliya had no any relation with the sultans. They gave some evidence to strength their arguments. For instance, Sultan Iltutmish offered the post of *Shaikh-I-Islam* to khwaja Qutubuddin, but he refused to accept it.¹² They (Chishti Sufis) did not receive land grant or *futuh* from rulers. They did never go to court. For instance, Ulugh Khan, Sultan Balban visited Shaikh Farid and offered a *farman* of four villages to Shaikh and a cash payment for dervishes. But Shaikh returned the *farman*, although, accepted the money for distribution among the dervishes.¹³ Jalaluddin Khalji sent *futuh* and presented an offer of some villages, but Shaikh Nizamuddin Awliya replied that he was uncaring of all his disciples deserted him, his concerned was only for them.¹⁴ When Alauddin Khalji expressed the desire to meet Shaikh Nizamuddin Awliya, he refused to meet him and answered that there were two doors in his home. If sultan comes in house by one, he will go out by another. On other hand Simon Digby, who wrote his works on Sufism in social, political and economic perspective argued that Sufis had relationship with sultans. They were also the source of authority. He argued that there was the concept of *wilayat* in medieval period. Every Shaikh had his own *wilayat* by which he had great importance in society. Sufis was also regarded as spiritual king for both common people as well as important nobles of contemporary sultans. These were the threats for sultans. Digby also argued that Khusraw Khan, who murdered sultan Quutb al-Din Mubarak, distributed large amounts among derweshes in the city. Three Shaikhs refused to receive these offerings but Nizamuddin accepted five lakh of *tankas* and distributed amount among the *faqirs* and needy people of the city. When Ghiyas al-Din Tughlaq defeated Khusraw Khan and got the throne, he wanted to recover that, but Nizamuddin argued that he had distributed it among needy people. Here attention is that why Khusraw Khan gave that amount? For Digby it shows the indirect relationship between Nizamuddin and state. As it is very well known that a number of disciples of Nizamuddin, so Khusraw had desire to get support of nobles and the people by giving amount to their Shaikhs.¹⁵

Apart from this, the study of the role of khanqahs is also important to know the social cultural, political and economic condition of common people as well as activities of traders and merchants. It was also the centre of cultural activities of local people. It also provided the shelters to traders and merchant. The people like scholars, politicians, soldiers, Hindu jogis, qalandar, and merchants used to visit the khanqahs, and every visitor brought some problems with him. For instance. "My brother is ill." "My officer is harsh to me." Because sufis, shaikhs were regarded as spiritual doctors who treated both mental and bodily diseases by spiritual means like giving amulets (*tawiz*), putting hand on the sick, breathing on body. Some visitors came to Sufis for the solutions of

¹²Rizvi, S. A. A, *A History of Sufism in India*, vol, I, p. 142. Nizami, K. A, *Some Aspects of Religion and Society during 13th and 14th Century*, p. 302-3

¹³Rizvi, S. A. A, *A History of Sufism in India*, vol, I, p.144

¹⁴ Ibid, p. 160

¹⁵Digby, Simon, *The Sufi and Sultan: A Conflict of Claims to Authority in Medieval India*, Iran, Vol. 28 (1990), pp. 71-81

their worldly problems through amulets, blessings or recommendations.¹⁶ Describing the influence on the khanqahs on Hindu society, K. A. Nizami talked about the role of kanqahs in conversion to Islam by low caste people. According to him, when the khanqahs were established in northern India, Hindu society was passing through the darkest phase of history. The caste-system was very rigid in India. The workers and artisans like Hadis, Domas, Chandalas and Badhatus had to live outside the city walls. They were not allowed to stay in the cities after sunset. They were not allowed to enter in temples. These were Sufis, their broad human sympathies, mystic ways and khanqahs which attracted the people of low sections of Indian society. They found a different social order which was entirely different from Hindu society. As a result, they accepted Islam.¹⁷ But some modern historians like Irfan Habib, S. I. A. Zaidi and R. M. Eaton do not agree with these arguments. Habib says that it is true that after the establishment of Delhi sultanate, a number of economic and technological changes occurred, but conversion to Islam by a lot of people did not happen. Zaidi says that if Sufi attracted the people is different from that people were influenced themselves individually. R. M. Eaton says that there is no evidence in primary Persian sources in the support of this argument. In fact, Muslim intellectual did not stress the Islamic ideal of social equality against Hindu caste system. They stressed Islamic monotheism against Hindu polytheism.¹⁸ Nizami also argued that the rise of the Bhakti movement in 14th and 15th centuries was the result of the influence of the khanqahs. For him, the leaders of Bhakti movement came from the lower section of Hindu society were deeply influenced by the Muslim mystics and their khanqahs atmosphere. Irfan Habib does not agree with this view. He looks it from economic perspective not religious perspective.¹⁹ But it is true that the khanqahs were opened and visiting places for every person. For instance, Shaikh Nizamuddin had opened the doors of his khanqahs, for all classes of men like nobles and commoners, rich and poor, educated and uneducated, citizen and villagers, free men and slaves.

Apart from this the khanqahs also played an important role in the development of urbanization during Delhi sultanate. The tradition of the establishment of khanqahs came to India from Arab world where these were constructed for noble family, travelers for providing accommodation and food. For instance, Nizamul Mulk Tusi, the wazir of the Saljuqs got a khanqah built in Asfahan, and posted Amir Saiyid to run it. This tradition came to India with Muhammad Ghori, which was followed by sultan Qutubuddin Aibak and other rulers of Delhi sultanate. For instance, Malik Ikhtiyaruddin Muhammad Bakhtiyar Khalji add sultan Ghiyasudin Iwaz Khalji got a number khanqahs, mosques and Madarsa constructed in Bengal. The responsibility of maintaining the khanqahs

¹⁶Nizami, K. A, 'Some Aspects of Khanqah Life in Medieval India', *Studi Islamica*, No. 8 (1957), pp. 51-69

¹⁷ Ibid, p. 51-69. This argument was also supported by some other historians like Mohd Habib in his work, *Politics and Society During the Early Medieval Period*, says that "workers whose social position was precarious in the caste ridden Hindu society were attracted to philosophy of Islam which provided them equal respectful status in society", pp. 61-71 I. H. Qurailhi expressed same view in his work, *The Muslim Community of the Indo-Pakistan Sub-Continent*, 1962, pp. 78. M. G. S. Hodgson in his work, *The Venture of Islam: The Expansion of Islam in the Middle Period*, 1974, says that "the pirs of lesser tariqas must have influenced the lower social groups who with hope to ameliorate their social status became Muslims", pp. 557-58

¹⁸Habib, Irfan, 'Historical Background of the Monotheistic Movement in the 15th century', Delhi, 1965. S. Inayat. A. Zaidi & Sunita Zaidi, 'Conversion to Islam and Formation of Castes in Medieval Rajasthan', p. 29-30, R. N. Eaton, *Approaches to the Study of Conversion to Islam in India*, p. 117

¹⁹Habib, Irfan, 'Historical Background of the Monotheistic Movement in the 15th century', Delhi, 1965

was given to *shaikhul-Islam* and all state charity in kind and cash was distributed among travelers and other needy people by him. There is evidence that Shaikh Sharfuddin Yahya, the Sufi of Firdausiasilsilah was made the incharge of khanqahs.²⁰

The Sufis and their khanqahs also played an important role in economy in Sindh and East Bengal. According to Sunita Zaidi, when Islam took place among nomadic and semi-nomadic tribes. They were brought under the influence of religious, political and economic spheres. In this process, the sufis and state helped each other. While state had no desire to convert them to a particular religion or sect, but it wanted to bring these tribes into state fold and promote them the economic interests and political influence. In this process, the state gave economic help to religious persons by assigning revenue free land for establishing khanqahs and their maintenance. In course of time, these khanqahs were visited by the tribal and became the centers of their cultural activities. So, in this process, two developments took place. First, tribal people came into the fold of Islam. Second, they became *rayati* or cultivators.²¹ The same process also happened in East Bengal. For Eaton the east Bengal was a delta during sultanate period. There was tribal people lived without any religion. They were rarely influenced by Buddhism. The people of west Bengal did not like to go there. This region became the fertile area and cultivable because of the river Ganga and Barhamputra changed their roots in course of time. During Mughal period, some sufis were sent to the East Bengal, where they established their khanqahs which became the center of cultural activities of the tribal people. They were also attracted to peasantry and agricultural. In this process, the state got benefit from the revenue collected from that region. Thus, the Khanqahs of sufis played an important role in the economy of medieval India.²²

1. Thus on the basis of above description and information, it can be said that the Sufism which developed in Islamic world exercised a great influence on Indian society, polity and economy by their khanqah atmosphere and their broad thinking of human being, and by sufi concept of wahdat al-wujud of Ibn al-Arabi. Because akbar` sulahkul and his other policies were deeply influenced by this doctrine of Ibn al-Arabi. Above description also shows the the khanqahs mostly were established at the trade centers like Multan, Ajmer, Lahor, Delhi, Agra etc. These were not only local trade centers but also international markets where the people of other countries like Iran, Iraq and central Asia came for profession and visited sufikhanqahs. Zaidi, S, Inayat A. &Sunita, `Conversion to Islam and Formation of Castes in Medieval Rajasthan`
2. Zaidi, Sunita, `The Mughal State and Tribes in Seventeenth Century Sind`, I. E. S. H. R, vol. xxvi, no. 3. July-September 1989. Pp. 343-62
3. Siddiqui, Iqtidar, Hussain, Delhi Sultanate: Urbanization and Social Change, Delhi, 2010

²⁰Siddiqui, Iqtidar, Hussain, *Delhi Sultanate: Urbanization and Social Change*, 2010, p.29-30

²¹Zaidi, Sunita, `The Mughal State and Tribes in Seventeenth Century Sind`, *The Indian Economic and Social History Review*, vol. xxvi, no. 3. July-September 1989. Pp. 343-62

²² Eaton, R. M, *The Rise of Islam and Bengal Frontier, 1204-1760*, p. 140

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Topic

Numerical Methods for Solving Fractional Ordinary and Partial Differential Equations

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Abstract

During the last decades *fractional calculus* has blossomed and grown in pure mathematics as well as in scientific applications. But to classify fractional calculus as a young science would be utterly wrong. In fact, the origin of fractional calculus lies nearly as far back as classical calculus itself. On the other hand, today's mathematical topics which fall under the class of fractional calculus are far from being the calculus of fractions. as one might suspect by the notation itself. Instead, *integration and differentiation to an arbitrary order* would be a better notation for the field of fractional calculus as it is understood today. And many applications of FBTE in viscoelasticity problems and of FROE in many realms of nature, these serve more like miniature fractional differential equations. Their solution by any method would lead to innovation in the bigger family of fractional differential equations. In this research paper, we have solved the two equations using fractional differential transform method and established it with two examples. The results are as good as the available analytic solutions.

Keywords: FBTE, FROE Fractional Ordinary & Partial Differential Equations

Introduction

During the last decades *fractional calculus* has blossomed and grown in pure mathematics as well as in scientific applications. But to classify fractional calculus as a young science would be utterly wrong. In fact, the origin of fractional calculus lies nearly as far back as classical calculus itself. On the other hand, today's mathematical topics which fall under the class of fractional calculus are far from being the calculus of fractions. as one might suspect by the notation itself. Instead, *integration and differentiation to an arbitrary order* would be a better notation for the field of fractional calculus as it is understood today. Both the age of fractional calculus and the fact that *fractional calculus* itself is a misnomer in its use today can be explained by surveying some aspects of the history of this mathematical field. Therefore, the beginning of this work is concerned with a short summarization of the history of fractional calculus.

In this article differential transform method has been used to solve one dimensional fractional differential equation namely the fractional Bagley Torvik equation (FBTE) and the fractional relaxation oscillation equation (FROE). In day-to-day life one comes across structures containing elastic and viscoelastic components. Mathematical model for such kind of material is well described by Bagley Torvik equation.

$$Lz''(x) + Mz^{3/2}(x) + Nz(x) = \psi(x); \quad L \neq 0, \quad N \in \mathbb{R}$$

This fractional differential equation was given by P. J. Torvik and R. L. Bagley [73] in 1984 in their work on the manifestation of the non-integer order derivative in the behavior of real materials. They concluded with the finest of statements, "The fractional derivative appears naturally in the behavior of real materials. Thus, there is some basis for suspecting that the utility of constitutive relationships involving fractional derivatives for describing the behavior of real materials may not be just a happy coincidence."

His equation has been since solved for its analytic and numerical solution by many scholars. Igor Podlubny in 1999 proposed a numerical method for inhomogeneous BT equation and also solved the constant coefficient Bagley Torvik (BT) equation analytically using fractional Green's $G_3(t)$ function. Afterwards many authors worked upon the numerical solution of BT equation such as Leszczynski et. al. Erturk et. al. El-Sayed et. al. Edwards et. Al, Diethelm et. al. etc. There were authors who worked upon the analytic solutions rather than numerical ones. Ray and Bera had found the analytic solution of BT equation by Adomian method verified by Podlubny's results. The same has been used as a benchmark for our result in the second example. Arikoglu and Ozkol applied DTM to BT equation in brief for specified initial conditions and a specific function. Yücel Çenesiz et al solved the BT equation with generalized Taylor collocation method. T. Mekkaoui, Z. Hammouch used fractional iteration method to get an approximate solution of BT equation. In this chapter fractional DTM is implemented on general and particular forms of BT equation and comparison has been made with the analytic solution and the solution by generalized Taylor collocation method. On the other hand, the relaxation oscillation equation is a significant equation of relaxation and oscillation processes, based on the behavior of physical system's return to equilibrium after being disturbed. The process of relaxation oscillation is significant in the phenomenon where the physical system tends to return to equilibrium after being disturbed. The process of relaxation oscillation is omnipresent as in a pneumatic hammer, the scratching noise of a knife on a plate, the waving of a flag in the wind, the periodic re-occurrence of epidemics and of economical crises, the beating of the heart etc. Such process is depicted as an ordinary linear differential equation of order 1 or 2. For instance

For instance, $D^1y(t) + Ay(t) = f(t)$ is a relaxation equation, where time is the independent variable and A is a positive constant and $D^1y(t) + Ay(t) = f(r)$ is an oscillation equation. Francesko Mainardi in 1995 came up with its fractional analogy. The process of relaxation oscillation in many branches of Physics and Biology [82] can better be explained by fractional relaxation oscillation (FRO) equation.

It is one of the simplest fractional order differential equations given as:

$$D^{\aleph}y(t) + Ay(t) = f(t) \quad t > 0; \quad y^{(k)}(0) = 0, \quad k = 0, 1, 2, \dots, n-1$$

where $n-1 < \aleph \leq n$

For $0 < \aleph \leq 1$ this equation is called fractional relaxation equation and for $1 < \aleph \leq 2$ it is fractional oscillation equation specifically. The first kind of system was tagged as ultraslow processes and latter as intermediate processes by [84] Mainardi.

The analytic solution of this equation in terms of Green's function [2] is given as

$$y(x) = \int_0^x G_2(x-\tau)f(\tau)d\tau$$

$$G_2(x) = x^{\aleph-1}E_{\aleph,\aleph}(-Ax^{\aleph})$$

Many methods have been employed to find the solution of this equation. In this chapter fractional DTM is implemented on general FRO equation and its particular forms employing Caputo's definition of fractional derivative. A comparison has been made with the analytic solution and the solution by cubic B-spline wavelet collocation method. The series solution obtained using DTM is compared with the existing results. Two examples are given to demonstrate the validity and applicability of the method.

Consider equation 1 equipped with the initial conditions $z(0) = 0, Z^1(0) = 0$
The differential transform (Section:1.5) of equation 2.1 can be written as,

$$Z(k+4) = \frac{\Gamma(\frac{k}{2}+1)[\Psi(k) - N Z(k)] - M \Gamma(\frac{k}{2}+2.5)Z(k+3)}{L \Gamma(\frac{k}{2}+3)}$$

Using inverse differential transform, the series solution can be obtained as:

$$z(x) = \sum_{k=0}^{\infty} Z(k) (x-x_0)^k$$

Numerical examples on FBTE

Example:

Consider the BT equation

with initial conditions $z^{(1)}(0) = 1$ and $'(0) = 1$ i.e. $L=1, M=1, N=1$ and $y(x)=1+x$ in generalized BT equation 2.1. Using the results of section 1.5, the fractional differential transform of the equation can be written as:

$$Z(k+4) = \frac{\Gamma(\frac{k}{2}+1)[\delta(k) + \delta(k-2) - Z(k)] - \Gamma(\frac{k}{2}+2.5)Z(k+3)}{\Gamma(\frac{k}{2}+3)}$$

The initial conditions imply

$$Z(0)=1, Z(1)=0, Z(2)=1, Z(3)=0$$

From equation 2.4 - we obtain

$$Z(k)=0 \text{ for } k \geq 3$$

Thus, the solution by inverse fractional differential transform is

$$z(x)=1+x$$

The solution obtained is exactly same as the analytic solution.

Example:

Consider the BT equation

$$z''(x) + 0.5z^{3/2}(x) + 0.5z(x) = 8$$

with initial conditions $z(0) = 0$ and $z'(0) = 0$ i.e. $L = 1, M = 0.5, N = 0.5$ and $\psi(x) = 8$ in generalized BT equation 2.1. The fractional differential transform 1.5 of the equation can be written as

The initial conditions imply
 $2(k) = 0$ for $k = 0, 1, 2, 3$

From equation 7 we obtain

Table 1:

Comparison of fractional DTM solution of BT equation with GTCM and analytic solution

height x	GTCM	Analytic solution	Fractional DTM
0	0	0	0
0.1	0.036485547	0.036487479	0.036487479
0.2	0.140634716	0.140639621	0.140639621
0.3	0.307476229	0.307484627	0.307484626
0.4	0.533271294	0.533284110	0.533284108
0.5	0.814735609	0.814756950	0.814756938
0.6	1.148805808	1.148837428	1.148837373
0.7	1.532521264	1.532565443	1.532565254
0.8	1.962974991	1.963029298	1.963028738
0.9	2.437455982	2.437334072	2.437332615
1.0	2.954070000	2.952584099	2.952580672

Thus the approximate solution can be given as

$$\begin{aligned} z(x) = & 4x^2 - 1.203604445x^{2.5} + 0.333333333x^3 - 0.085971745x^{3.5} - 0.145833333x^4 \\ & + 0.0716431216x^{4.5} - 0.023958333x^5 + 0.0067301113x^{5.5} - 0.000934500x^6 \\ & + 0.0002564803x^{6.5} - 0.000740702x^7 + 0.0095069366x^{7.5} - 0.427803803x^8 \end{aligned}$$

The same problem has been solved in by using Generalized Taylor Collocation Method (GTCM). The comparison is mentioned in Table 2.1 and it leaves no doubt in the capability of the fractional DTM to solve a fractional differential equation. The results of our calculations are in agreement with the analytical solution by Adomian decomposition method.

Implementation of method on fractional relaxation oscillation equation (FROE)

Consider equation 2 equipped with the general initial conditions. Applying fractional differential transform 1.5 to equation.2, it can be written as,

$$Y(k+1) = \frac{\Gamma(\aleph k + 1) (F(k) - AY(k))}{\Gamma(\aleph k + \aleph + 1)}$$

Using inverse differential transform, the series solution can be obtained as:

$$y(t) = \sum_{k=0}^{\infty} Y(k)(t - t_0)^{k\aleph}$$

It is to be noted that the initial conditions will give Y(k) for k=0,1,2,3,...,n-1 and the rest of them are to be obtained from the obtained recursive relation.

Numerical examples on FROE

To show the effectiveness of the method, two examples are discussed. The solution obtained by the fractional differential transform method has been compared with the analytic solution in both the examples.

Example

Consider the fractional relaxation oscillation equation

$$D^{1/2}y(x) + y(x) = 0$$

with initial condition $y(0) = 1$ ie. $A=1, f(x) = 0$ in generalized FRO equation. Using theorems in section 3, the fractional differential transform of the equation can be written as

The initial condition imply

$$Y(0) = 1$$

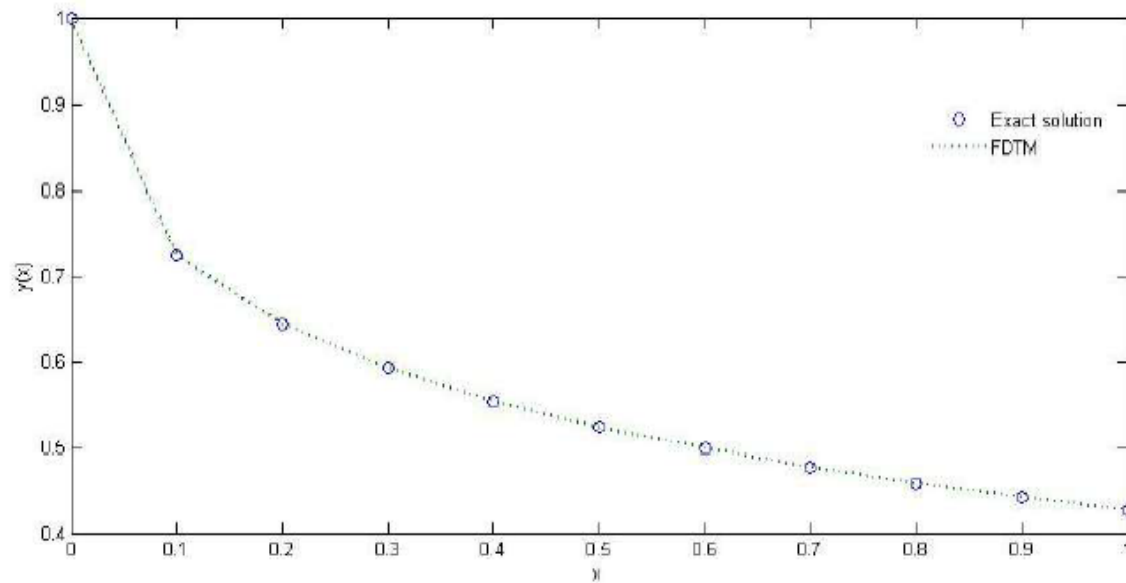


Fig. 1 Comparison of solutions obtained in example

And the approximate solution by inverse fractional differential transform is

$$y(x) = 1 - 1.12837916714x^{0.5} + 1x - 0.7522527780x^{1.5} + 0.4999999999x^2 - 0.3009011111x^{2.5} + 0.1666666665x^3 - 0.0859717459x^{3.5} + 0.0416666665x^4 - 0.0191048323x^{4.5} + 0.008333332x^5 - 0.0034736058x^{5.5} + 0.0013888888x^6 - 0.0005344008x^{6.5} + 0.0001984126x^7 - 0.0000712534x^{7.5} + 0.0000248015x^8 - 0.0000083827x^{8.5} + 0.0000027357x^9 - 0.00000088238549x^{9.5} + 0.00000028254315x^{10} - 0.000000086163217x^{10.5}$$

The table 2 shows the results from wavelet collocation method for J=5, analytic method, fractional DTM and the last column depicts the absolute error in the solution obtained by analytic method and fractional DTM. It's explicit that with fractional DTM the results are fairly near to the analytic solution.

Example

Consider another FRO equation

$$D^{3/2} y(x) + y(x) = 0$$

Solution of one dimensional fractional differential equation using Differential Transform Method

Table 2 Comparison of fractional DTM solution of FRO equation with existing solutions

x	Wavelet collocation method [86]	Analytic solution(A)	Fractional DTM(F)	Error(Ia-Fl)
0.0	1.0000000	1.0000000	1.0000000	0.0000e-000
0.1	0.7235784	0.7235784	0.7235784	1.3611e-013
0.2	0.6437882	0.6437882	0.6437882	9.9298e-013
0.3	0.5920184	0.5920184	0.5920184	1.8488e-012
0.4	0.5536062	0.5536062	0.5536062	2.2161e-012
0.5	0.5231565	0.5231565	0.5231565	3.9851e-011
0.6	0.4980245	0.4980245	0.4980245	2.3950e-010
0.7	0.4767027	0.4767027	0.4767027	1.0558e-009
0.8	0.4582460	0.4582460	0.4582460	3.8471e-009
0.9	0.4420214	0.4420214	0.4420213	1.2184e-008
1.0	0.4275835	0.4275835	0.4275835	3.4561e-008

with initial conditions $y(0) = 1$ and $y'(0) = 0$ i.e. $A = 1$, $f(x) = 0$ in generalized FRO equation. Using theorems in section 3, the fractional differential transform of the equation can be written as:

$$Y(k+1) = -\frac{\Gamma(1.5k+1)}{\Gamma(1.5k+2.5)}Y(k)$$

The initial conditions imply
 $Y(0) = 1$

The approximate solution is

$$\begin{aligned} y(x) = & 1 - 0.75225277806367508x^{1.5} + 0.16666666666666669x^3 - \\ & 0.019104832458760004x^{4.5} + 0.0013888888888888892x^6 - \\ & 7.1253454391645706e-5x^{7.5} + 2.7557319223985897e-6x^9 - \\ & 8.4037687620988591e-8x^{10.5} + 2.08767569878681e-9x^{12} - \\ & 4.3304444506789613e-11x^{13.5} + 7.6471637318198184e-13x^{15} - \\ & 1.1677471805518486e-14x^{16.5} + 1.561920696858623e-16x^{18} - \\ & 1.8497133837075119e-18x^{19.5} + 1.9572941063391266e-20x^{21} \end{aligned}$$

Table 3: is self-explanatory and strengthens the efficiency and applicability of fractional DTM.

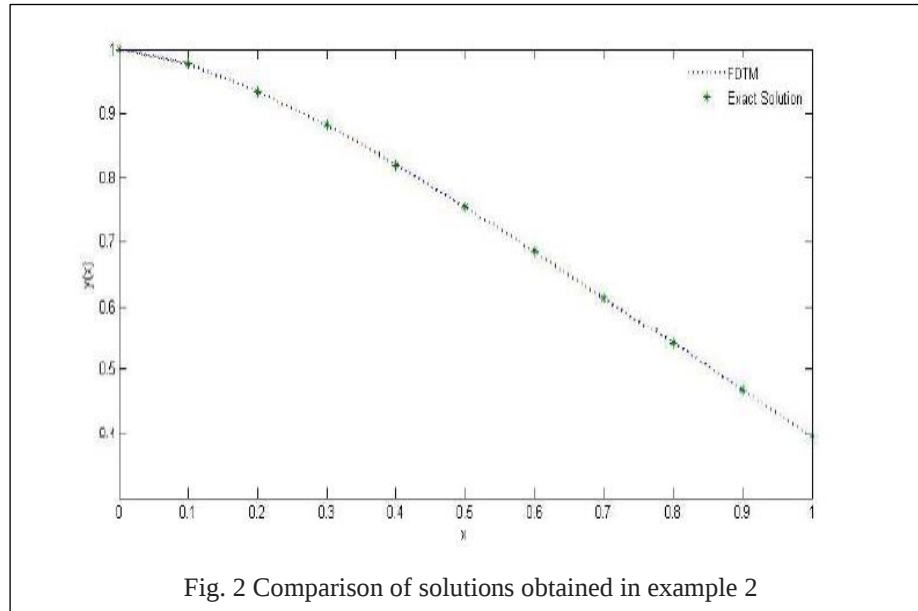


Table.3 Comparison of fractional DTM solution of FRO equation with existing solutions

x	Wavelet collocation method [86]	Analytic solution(A)	Fractional DTM(F)	Error(A-F)
0.0	1.0000000	1.0000000	1.0000000	0.0000e-000
0.1	0.9763777	0.9763777	0.9763777	0.0000e-000
0.2	0.9340362	0.9340362	0.9340362	0.0000e-000
0.3	0.8808084	0.8808084	0.8808084	1.1102e-016
0.4	0.8200563	0.8200563	0.8200563	0.0000e-000
0.5	0.7540488	0.7540488	0.7540488	0.0000e-000
0.6	0.6845298	0.6845298	0.6845298	0.0000e-000
0.7	0.6129215	0.6129215	0.6129215	0.0000e-000
0.8	0.5404169	0.5404169	0.5404169	1.1102e-016
0.9	0.4680306	0.4680306	0.4680306	0.0000e-000
1.0	0.3966293	0.3966293	0.3966293	0.0000e-000

Conclusion

Besides many applications of FBTE in viscoelasticity problems and of FROE in many realms of nature, these serve more like miniature fractional differential equations. Their solution by any method would lead to innovation in the bigger family of fractional differential equations. In this research paper, we have solved the two equations using fractional differential transform method and established it with two examples. The results are as good as the available analytic solutions.

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Topic

Wild Edible Plants (WEPs) of Dkhiah Village, Jaintia Hills District, Meghalaya

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Abstract

Wild edible plants play an important role in meeting food demand for the livelihoods among the rural community are rich in minerals compared to cultivated ones. India has failed to improve food security in various regions. There is a need to document the importance of WEP in rural economy as most rural people utilized wild plants for their livelihood. A large number of plants whose fruits, seed, tuber shoots etc. make an important contribution to the diet of the people particularly to those living near forest and other rural areas. They also provide other useful products viz. medicines, dyes, spices, gums, resins, fibers, etc. Many researchers have studied and documented the uses of wild edible plants among the tribal communities of Meghalaya including Jaintia hills. Scientists are interested in studying such plants and realized their importance in rural communities. The present study aims to study the awareness of WEPs, to document their availability and also to study their uses among the Jaintia tribes of Dkhiah Village.

Keywords: Wild Edible Plants (WEPs), North East Region (NER), vegetables, fruits, medicinal plants

Introduction

Wild edible plants (WEPs) are those plant species which grows in a diverse wild habitat such as a forest and covers uncultivated or undomesticated species which are not easily accessible. They are gathered or harvested from the wild and acts as affordable food and nutritional security for meeting the daily needs of the rural traditional community (Bhatia et al., 2018). Wild edible plants which play an important role in meeting food demand for the livelihoods among the rural community are rich in minerals compared to cultivated ones (Thakur et al., 2020).

Although India is a developing country and a land of rural villages, elevated rate of poverty persists among rural communities, despite the green revolution. Even though it has been reported that there is an increase in the per capita energy consumption and high economic growth, India has failed to improve food security in various regions including North East Region (NER) (Thakur et al., 2020). There is a need to document the importance of WEP in rural economy as most rural people utilized

wild plants for their livelihood (Sawian et al. 2007). Meghalaya is known for its heavy rainfall as well as biodiversity rich State in India in terms of vegetation and flora. The major type of forests in the state are classified on the basis of climatic, edaphic, topographic, vegetation type, etc as deciduous and evergreen tropical forest, sub-tropical semi evergreen forest and sub-tropical pine forest (Sawian et al., 2007).

The forest covers an area of 16,839 km² which accounts to 75.08% and the total area the tribal communities owned 90% belonging to the Khasi, Jaintia and the Garo tribes. Jaintia Hills District comprising of West Jaintia and East Jaintia whose occupants are mainly the Jaintias also known as Pnar or Synteng, or locally known as ka Ri Khasi Khadar Daloi (the land of 12 kingdoms). Agriculture is the main occupation of the tribal people and some are also engaged in hunting and gathering of wild edible plants and fruits (Phawa et al., 2019). A large number of plants whose fruits, seed, tuber shoots etc. make an important contribution to the diet of the people particularly to those living near forest and other rural areas. They also provide other useful products viz. medicines, dyes, spices, gums, resins, fibers, etc. (Kayang, 2007).

Many researchers have studied and documented the uses of wild edible plants among the tribal communities of Meghalaya including Jaintia hills. Scientists are interested in studying such plants and realized their importance in rural communities. The present study aims to study the awareness of WEPs, to document their availability and also to study their uses among the Jaintia tribes of Dkhiah Village.

Methodology

A field survey was conducted in the area of study to observe and study the wild edible plants in the village of Dkhiah. A questionnaire was prepared regarding the objective and used as a tool for the collection of information and documentation by direct personal interview with the local people of the village, and also useful information with local names and uses were gathered. Information regarding wild edible plants were recorded as according to the information gathered and also pictures were taken. For the purpose of this study both primary data and secondary data were used.

Dkhiah village is a medium village located in East Jaintia Hills District, Meghalaya in Khliehriat block which is 22 KM towards East from District headquarters Jowai, 8 KM from main Khliehriat and 62 KM from State capital Shillong. Dkhiah village is comprise of Dkhiah West and Dkhiah East. Dkhiah West geographical coordinates latitude and longitude are of 25.3510° N and 92.3666°E respectively. There are 161 households residing in the village, and it has a total population of 835 as per 2019 survey of the village profile. Dkhiah East geological co-ordination latitude and longitude are of 25.3639°N and 92.3618°E respectively. There are 255 households residing in the village and it has a population of 1482 as per 2020 survey of the village profile.

Results and Discussion

The number of wild edible plants recorded during the study area were 23 wild edible plants which belong to 17 families and are intensively used by the people of Dkhiah village as food. The edible plants are identified with the help of available published materials. These are arranged and listed in table 1 with their scientific name, family name, local name, habit, edible part and their uses. The used of this wild edible plants in Dkhiah village cooked as vegetables include seven species viz. *Crassocephalumcrepidiodes*, *Clerodendrumcolebrookianum*, *Dendrocalamushamiltonii*, *Dioscoreasp*, *Ficusoligodon*, *Plantagoerosa* and *Bidenspilosa*. Ten wild edible plants are eaten as raw which are *Centellaasiatica*, *Elaeagnus latifolia*, *Houttuniacordata*, *Lantanacamara*, *Myricaesculenta*, *Morusindica*, *Passifloraedulis*, *Physalisperuvina*, *Prunuspersica* and *Rubusellipticus* and six wild edible plants are eaten raw or cooked which are *Enseteventricosum*, *Fagopyrumdibotrys*, *Musa sp*, *Prunusnepalensis*, *Psidiumguajava*, and *Zanthoxylum khasianum*. The main parts of these plants that are used are leaves, fruits, seeds, flowers, stems, tubers, shoots, etc. These wild edible plants not only provide the Dkhiah people with food but also medicinal plants, fibers, fodders, etc. Wild edible plants have an important role to play in combating poverty as it provides free foods, medicines, fibers, etc. for the local people and also it provides fodder to many livestock.



Figure 1: Wild edible plants found in Dkhiah Village (a)*Centella asiatica*, (b)*Musa sp*, (c)*Clerodendrumcelebrookianum*, (d)*Fagopyrumdibotrys*, (e)*Zanthoxylum khasianum*, (f)*Rubus ellipticus*, (g)*Myrica esculenta*, (h)*Enseteventricosum*, (i)*Passifloraeduli*

Table 1: List of available wild edible plants found in Dkhiah Village

Sl. No.	Scientific name	Family	Local name	Habit	Edible part	Mode of utilization	References
1	<i>Bidens pilosa</i>	Asteraceae	Syrthit	Herb	Leave	Cooked as vegetable.	Bartolome et al. (2013); Hynniewta et al. (2019)
2	<i>Centella asiatica</i>	Apiaceae	Tynkhieh	Herb	Leave	It leaves can eaten raw or mix as salad.	Sawian et al. (2007); Thomas et al. (2012)
3	<i>Crassocephalumcrepidiodes</i>	Asteraceae	Phlangphylla	Herb	Leave	Young leave is cooked as vegetable	Hynniewta et al. (2019); Joshi (2014)
4	<i>Clerodendrumcolebrookianum</i>	Verbenaceae	Sla chiet	Shrub	Leave	Young leaves are cooked as vegetable	Phawa et al. (2019); Kalita et al. (2012)
5	<i>Dendrocalamushamiltonii</i>	Poaceae	Plung	Tree	Shoot	Cooked as vegetable and also for making pickles	Sawian et al. (2007); Kayang (2007)
6	<i>Dioscoreasp</i>	Dioscoreaceae	Salah kyrsu	Climber	Tuber	Cooked as vegetable	Phawa et al. (2019); Thomas et al. (2012)

7	<i>Ensete ventricosum</i>	Musaceae	Ladawsamen	Tree	Fruits, flower, stem	Fruit is consumed in raw, whereas flower and stem can be cooked as vegetables.	Biswas et al. (2020)
8	<i>Elaeagnus latifolia</i>	Elaeocarpaceae	Sohlyngi	Shrub	Fruits	Consumed raw and also making pickles.	Kayang (2007); Phawa et al. (2019); Sawian et al. (2007)
9	<i>Ficus oligodon</i>	Moraceae	Slacheit	Tree	Leave, fruits	Young leaves and fruits are cooked as vegetables	Phawa et al. (2019); Singh et al. (2012)
10	<i>Fagopyrum dibotrys</i>	Polygonaceae	Iaraiñ	Herb	Leave	Eaten raw or cooked as vegetable	Kayang (2007); Phawa et al. (2019); Sawian et al. (2007)
11	<i>Houttunia cordata</i>	Saururaceae	Myrdoh	Herb	Leave, root, stem	Can be eaten raw in the form of salad .	Kayang (2007); Phawa et al. (2019); Sawian et al. (2007); Singh et al. (2012)
12	<i>Lantana camara</i>	Verbenaceae	Syntudhari	Shrub	Fruit	Consumed as raw	Hynniewta et al. (2019); Sawian et al. (2007); Singh et al. (2007)

13	<i>Musa sp</i>	Musaceae	Ladaw	Tree	Fruit, flower, stem	Fruit is consumed raw, whereas flower and stem can be cooked as vegetable or boil for salad.	Phawa et al. (2019)
14	<i>Myrica esculenta</i>	Myricaceae	Sohphai	Tree	Fruit	The fruits is eaten crude and can also used for making pickles and it is also medicinal.	Kayang (2007); Phawa et al. (2019); Sawian et al. (2007); Singh et al. (2012)
15	<i>Morus indica</i>	Moraceae	Soh blade	Shrub	Fruit	It is a berry where it fruits is consumed.	Seal (2011); Ray et al. (2019)
16	<i>Passiflora edulis</i>	Passifloraceae	Sohbrap	Climber	Seed	It is a fruits where its seed is eaten.	Phawa et al. (2019); Kayang (2007); Thomas et al. (2012)

17	<i>Physalis peruvina</i>	Solanaceae	Sohsapdok	Shrub	Fruit	Fruit is consumed raw.	Ali et al. (2015); Hazarika et al. (2016)
18	<i>Prunus persica</i>	Rosaceae	Sohphohskui ñ	Shrub	Fruit	Fruit is consumed raw.	Babu et al. (2002); Dutta et al. (2020)
19	<i>Prunus nepalensis</i>	Rosaceae	Sohiong	Tree	Fruit	It fruits is eaten or boil and used as juice.	Kayang (2007); Sawian et al. (2007)
20	<i>Psidium guajava</i>	Lecythidaceae	Sapriam	Tree	Fruit	Fruit is consumed in raw form young leaves are medicinal.	Phawa et al. (2019); Sawian et al. (2007); Tiwari et al. (2017)
21	<i>Plantago erosa</i>	Plantagonaceae	Shkurblang	Herb	Leave	Cooked as vegetable.	Hynniewta et al. (2019); Sawian et al. (2007)
22	<i>Rubus ellipticus</i>	Rosaceae	Sohchieh	Shrub	Fruit	Berries are eaten raw when ripe.	Hynniewta et al. (2019); Kayang (2007); Phawa et al. (2019); Sawian et al. (2007); Tiwari et al. (2017)
23	<i>Zanthoxylum khasianum</i>	Rutacea	Iaiur	Tree	Leave, seeds	Young leaves and seeds are used as spice for flavoring.	Kayang (2007); Sawian et al. (2007);

Conclusion

The varied species of wild edible plants have contributed to help the local people in increasing their inexpensive nutritional food in their diet. But the continuous over-exploitation of wild edible plants, the present man's greed, short sighted, unplanned commercial and subsistence gathering activities like indiscriminate lumbering, charcoal burning, firewood collection, over grazing, mining, etc. have been causing considerable damage to wild edible plants of the area. Forests have been degenerated and degraded into barren and unproductive lands and resulted in the decline of these species. Management and maintenance of forest resources are necessary steps that should be taken up to protect and conserve such resources and further solutions need to be sought in such areas for improvement and controlled harvesting of forest resources and to understand their nutritional benefits and long-term sustenance for the future sustainability. Further investigation needs to be studied with regards to management, conservation, nutritional values and medicinal values of such wild edible plants.

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Topic

Space of Own's Own: A study on Sandra Cisneros's novels.

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For readers and writers of Chicana Literature, the 1980's signifies the emergence of powerful female voices which had been suppressed by previous decades of racism, poverty and gender marginalisation. Breaking a long and deep silence, writers such as Lorna Dee Cervantes, Denise Chavez, Gloria Anzaldua, Cherrie Moraga and Sandra Cisneros converted the unyielding forces of gender and ethnicity, which had, historically bound and muted them, into sources of personal and stylistic strengths.

Cisneros was born in Chicago, Illinois, in 1954, the only girl in a poor family of seven children. In spite of her poverty, her Mexican-American mother and Mexican father both knew the importance of education and sent her to a Catholic school in Chicago. Her mother even made sure that all the children in the family had library cards, and her father made them study hard so that they would not have to lead a hard life as he did. As a result of her upbringing, Cisneros is one of the first Hispanic-American writers, who achieved success, and had been lauded by literary scholars and critics for works which helped bring the perspective of Chicana women into the mainstream of literary feminism. As the writer herself had stated, she and other Chicana women must learn the art of "revising" themselves by learning to "accept [their] culture but without adapting [themselves] as women" (Aranda 81).

Cisneros has, in a tribute, acknowledged the importance of Virginia Woolf's belief that a room of one's own is a necessary precondition for writing. Cisneros's works covertly transform the terms of Woolf's vision, making room/space in the female literary tradition for a young working class Chicana who as Cisneros's herself stated "likes to tell stories" (109).

Cisneros short stories and poems suggest that our perceptions of space evolve out of complex and disjunctive interpretive processes. "Bread", one of the stories implies that spatial narratives help to sustain class structures. This interpretive disjunction also illustrates the impulse to produce 'charming' landscapes that erases labour and minimise capitalist exploitation by placing a landscape in a time frame different from that of its observers.

Space is not a transparent or irrelevant backdrop for history; the production of space is part of the production of history. Environmental Psychologist Cindi Katz, argues that "social power is reflected in and through the production and control of space" (88). Therefore, although the spatial is often equated

with the material and placed outside the social, Doreen Massey, a British Social Scientist and Geographer, argues that it can be more accurately conceptualised as “social relations stretched out” (2). Rather than assuming that time is boundless while places are defined by immobile boundaries, Massey argues that a trenchant conception of places imagines them as “articulated moments in networks of social relations and understanding” (154). Places are not frozen in time; rather, “places are processes too” (155). Conceptualising place as a process draws attention to ongoing contests over the production of space and the struggle to control its representation--to determine how social existence will be “spatially inscribed” (Soja, 46).

The way in which people use social space reflects their social relationships and their ethnicity. In general, each one of us occupies an infinitesimal space for an infinitesimal length of time. Our greatest intimacy is with the bodily sensations that mediate their relations with the world around them, because they feel, physically, what is going on, they have a sense of ‘interiority’ which seems to be just about the most indubitable indication of what is happening to them.

The domestic realm arouses a variety of responses in contemporary women writers. Tillie Olsen has most vividly described the difficulty of making space in a woman’s daily life for writing: “habits of years-- response to others, distractibility, responsibility, for daily matters -- stay with you, mark you, become you” (39). To be confined within male structures might be as great a disadvantage to the female artist as to be outside of them. To achieve the “freedom and fullness of expression” (80) that Woolf considered necessary to art, women must design new spaces appropriate to their dreams and needs. Preserving Woolf’s architecture, Cisneros enlarges and even reconstructs Woolf’s room to make space for her own voice and concerns. In one of her stories, “Elenita, Cards, Palm and Water”, for instance, Elenita, the witch predicted that Esperanza the protagonist will have a room of her own although she did not have one at present. This room becomes a precious asset in her life, because it is in this room that her creative genius blossoms. Consequently, she declares, “I like to tell stories...I put it down on paper and then the ghost does not ache so much” (101).

One of the most enduring themes of Cisneros’s works is the socialisation of females within Chicano society based on fixed roles in the family. She explores the dynamics of women’s lives within the precarious and male-dominated society, where the conditions of the females are predetermined by economic and social constraints. The interior world of females whose lives are tied to activities inside the house is contrasted with the external world of males who go to work and operate in society at large. She offers a feminine view of growing up in a Chicano neighbourhood in the face of socialisation process that keeps women married, at home, and immobile within the society.

Her particular focus on the silencing of women is signalled in the title story, *Woman Hollering Creek*. The creek called “La Gritona” (shouting woman) is reminiscent of popular folktales about “La Llorona” (weeping woman), a nameless tragic woman who drowned herself and her children. The creek, the border and the telenovelas define the mythic spaces given to Cleofilas, the protagonist of the story, in her fantasies to escape from a battering husband. The cultural scripts associated with each space offers her different escape fantasies. Cisneros creates a new destiny in a story that revises all three of these

cultural scripts, allowing Cleofilas a realistic escape with the help of Chicana feminist activists. Translating from “La Llorona”(a popular folktale about a woman who drowned her children and killed herself in protest against her husband’s infidelity), to “La Gritona”(the woman who silently bears all sufferings), to the English “Woman Hollering Creek”(the woman who yells), allows a greater set of possibilities for interpreting the cry of the restless spirit. Paradoxically, “La Llorona” a woman silenced in life, wails her grief in death. Cleofilas learns to decode a feminist message of survival in the haunted voice of the creek that hollers with the rage of a silenced woman which subscribes to Massey’s idea of space that it is “social relations stretched out”.

An erudite writer, Cisneros is aware of the dominant canon --revising and reinterpreting cultural texts--from which her works deliberately and self-consciously deviates. The blank page allows her the freedom and space to imagine new scripts for women’s lives. Her short stories and poems are about the maturing of a young Chicana and the development of a writer. It is also about a sense of community, culture and space. As a Chicana from a working class background, she acknowledges and refers to in her text to the linguistic cultural practices of those usually excluded from dominant literary discourses. As the daughter of the Mexican father and a Mexican-American mother, Cisneros grew up equally attuned to the vigour of maternal/paternal and linguistic/cultural backgrounds.

Cisneros’s sees her life, like a dream house, as a space with potential for creativity, autonomy and most importantly, self-definition. Not surprisingly, this self-definition is also a goal for Cisneros’s as a woman as well as an author. Cisneros relates her own attempt to redefine what it means to be a Chicana artist by merging dichotomous images of the female:

To me, la Virgen de Gaudalupe is also Coatlique, the creative/ destructive goddess...Most days, I too feel like the creative/destructive goddess Coatlique, especially the days I’m writing...I am the Coatlique-lupewhose square column of body I see in so many Indian women...I am obsessed with becoming a woman comfortable in my own skin. (43-46).

Cisneros’s short stories and poems depicts a community of women restricted in their movements within the barrio, confined to interior spaces and trapped in their domestic roles as daughters, wives and mothers. Her women are also shown trying various means of escape through the various spaces that they choose to inhabit. In fact, her women become aware of the freedom and space that is necessary to them for living their lives.

Talking about the concept of space and feminism, in a tribute to the “essential angel” of her own childhood, Cisneros has acknowledged the importance of Woolf’s belief that a room of one’s own is a necessary precondition for writing. By allowing Cisneros, her space and room of her own, her mother enabled her daughter to create her stories, career and direction of life. The domestic realm, with its traditional inhibitions, arouses a variety of responses in contemporary women writers. Esperanza the protagonist of *The House on Mango Street* boldly proclaims her intention to break these habits early: “I have

begun my own quiet war. Simple, sure..." (89). Gender roles, as well as class condition Esperanza's response to women's confinement to the household. Julian Olivares, a professor of Classical Language, is largely correct in his central premise that "Cisneros...inverts Bachelard's pronouncement on the poetics of space, for Cisneros the inside, the here, can be confinement and a source of anguish and alienation" (161). Illustrating how space and feminism are bound closely together, in story after story of the women in her community, Esperanza, the narrator recognises that space and a room--if not of one's own, can be stifling.

In *A Room of One's Own*, Virginia Woolf has extended her fertile meditations on the effects of economic deprivation on women's literature, and her pioneering efforts to reconstruct a female literary tradition. Tillie Olsen has uncovered a rich vein of writing by American working-class women, and has offered poignant personal testimony to the obstacles to writing posed by gender and class.

While feminist following Woolf's advice to "think back through our mother" have expanded the literary canon in the past two decades, many have ignored the questions of race, ethnicity and class in women's literature. Adrienne Rich laments the "white solipsism" of white feminist "not the consciously held belief that one race is inherently superior to the others, but a tunnel-vision which simply does not see non-white experience or existence as previous or significant" (306).

Confined by what Rich criticizes as the "faceless, raceless, classless category of 'all women' (13) women of colour in the United States have all too often felt themselves compelled to choose between ethnicity and womanhood. Mitsuye Yamada speaks for many when she observes: "I have thought of myself as a feminist first, but my ethnicity cannot be separated from feminism" (73). Sonia Saldivar Hull writes of the damaging "color blindness" and "ideological erasure" of contemporary white feminist "sisterhood" (204). Yvonne Yarbro-Bejarano points out that while a Chicana feminist perspective shares "with the feminist perspective an analysis of questions of gender and sexuality, there are important differences between a Chicanan perspective and the mainstream feminist one with regard to issues of race, culture and class" (140). Many women of colour reject the monolithic notion of a "woman's voice". Many Hispanas, Black women, Jewish women -- to name a few groups -- have felt an invitation to silence rather than speech to be requested -- if they are requested at all -- to speak about being 'women in distinction from speaking about being Hispana, Black, Jewish, working-class etc, women" (Lugones and Spelman, 574). Sandra Cisneros recalls sitting in a University of Iowa seminar at the age of twenty-two and suddenly realizing that she was "different from everybody" there:

It wasn't as if I didn't know who I was. I knew I was a Mexican woman. But I didn't think it had anything to do with why I felt so much imbalance in my life, where as it had everything to do with it! My race, my gender and my class! And it didn't make sense until that moment, sitting in that seminar. (Aranda 65)

Cisneros's *The House on Mango Street*, dedicated to the women in two languages "A las Mujeres / To the Women," both continues Woolf's meditations and alters the legacy of *A Room of One's Own* in important ways. Her series of vignettes is about the maturing of a young Chicana and the development of a writer, it is about the women she grows with, and it is also about a sense of community, culture and place. Esperanza, the young protagonist, yearns for "a space for myself to go, clean as paper before the poem", and for a house of her own.

Woolf suggested that twentieth century writers would be free to explore the space or relationships between women, who in the past had "not only [been] seen by the other sex, but seen only in relation to the other sex". The friendship between Esperanza and Sally in *Mango Street* recalls Clarissa's bond with another Sally in Woolf's novel *Mrs. Dalloway*. Esperanza's Sally, like Clarissa's bohemian friend represents danger and adventure. This is another concept of Space from the feminist's point of view because the relationship between the two girls is more central to Cisneros's plot than any heterosexual bond, so her characters seem to feel their friend's betrayal more keenly. In *Felicitous Space*, Judith Fryer dwells on the spaces women inhabit, or as those they imagine:

It is not only, then, as Virginia Woolf suggested, that women have had no space to themselves, not only that they have been forbidden spaces reserved for men. Trapped, as she has been at home, a home that in America has been "not, her retreat, but her battleground... her arena, her boundary, her sphere... [with] no other for her activities", woman has been unable to move. She has been denied in our culture, the possibility of dialectical movement between private spaces and open spaces (50).

Esperanza's dream of a house and space of her own -- "Not a man's house. Not a daddy's", is both solitary and communal, a refuge for herself and others. In Cisneros's reconstruction of Woolf's "room of one's own", Esperanza's "house of my own" simultaneously represents an escape from the barrio a rejection of the domestic drudgery of "home", a solitary space for her creativity, and a communal expression of women lives.

Cisneros in her works has been able to explore the issue of space in relation to gender and to class. In the process, she has also described female sexuality very positive terms, especially in her poetry. According to Deborah L Madsen, Cisneros refers to herself as 'wicked' for having "reappropriated, taken control of, her own sexuality and the articulation of it—a power forbidden to women under patriarchy" (119). Her works breaks the boundary between what is a socially acceptable way for women to act and speak and what is not. Using language and imagery which have a "boisterous humour" and "extrovert energy" and which are at times "deliberately shocking", Cisneros has, through her characters, been able to carve a place and space of her own.

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Topic**Problems and Prospects of Rural Marketing in Bihar****ICSRD:**

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Abstract:

Rural markets in Bihar are vast, geographically dispersed and diverse. With the implementation of so many rural developments programme and green revolution there have been significant improvement in rural sector. With perceived saturation in urban markets and growing income levels in rural areas. Rural markets have emerged as the new destination of marketers interested in improving their market share. The rural market with its large size and high potential provides greater opportunities to the producers of consumer goods. But there are many problems coming in the way of penetrating into rural market. In view of high potential and problems associated with rural marketing, the marketers should design proper rural marketing strategies in relation to the products, promotion, prices and distribution for exploiting the marketing potentiality in rural areas. The present study provides a comprehensive view of rural marketing in north Bihar. The study provides information related to the product and brand penetration for selected consumer durable and non-durable products. It also provides a picture of opportunities and challenges of rural marketing that the consumer products companies face when penetrating into rural market.

Keywords: - Rural Market, Products, Consumer, Challenges, Strategies

Introduction

Rural marketing is the process of developing, pricing promoting, distributing rural-specific goods and services, leading to exchange between urban and rural markets, which satisfies consumer demand and also achieves organizational objectives. Thus, rural marketing is a two-way marketing process that includes the flow of goods and services from rural to urban areas and the flow of goods and services from urban to rural areas, as well as the flow to goods and services within rural areas. In the context of Bihar rural marketing is a complex subject. For a business organization, rural marketing is beset with a number of problems. The success of rural market is as unpredictable as rain. It has always been difficult to gauge the rural market. Rural marketing is a time-consuming affair and requires considerable investments in terms of evolving appropriate strategies.

The peculiarities of the rural markets and rural consumers pose challenge to the marketers in reaching them effectively. There are a large number of small villages, many of which are not easily accessible because of all weather roads. Huge distribution costs are to be incurred to service such village markets directly. As rural consumers are far less homogeneous than their urban counterparts, it is not possible to merely extend urban products to rural markets. This problem is further aggravated if the regional variations in rural markets are considered. It implies that the rural markets are more segmented and require deeper analysis and understanding.

Where the rural market does offer a vast untapped potential, it should also be recognized that it is not that easy to operate in rural market because of several attendant problems. Rural marketing is thus a time-consuming affair and requires considerable investments in terms of evolving appropriate strategies with a view to tackle the problems.

Major problems Faced by rural marketing system in Bihar:

- **Vastness and uneven spread**

The number of villages in Bihar is more than 45 thousands. Again, the villages are not uniform in size. Nearly 50% of the villages have a population of less than 500 persons which account for 20% of the rural population. This type of distribution of population warrants appropriate strategies to decide the extend of coverage of rural market.

- **Lack of Proper Physical Communication Facilities**

Nearly fifty percent of the villages in Bihar do not have all weather roads. Physical communication of these villages is highly expensive. Even today most villages in the north parts of the state are inaccessible during the monsoon. Moreover, 30,000 villages in the state have no access to telephones. Local telecom companies are working with the Department of Telecommunications (DOT) to provide service in rural areas at local costs which could be a costly affair considering the underdeveloped infrastructure.

- **Low Growth Rate**

The slowdown in the economy is of serious concern to everyone in Government, industry and every other sector of the economy. Our GDP growth target for the eleventh Plan was 7.7%, rising to 8.1% in the subsequent one. Today we are at a 6% level, which is itself below the current Plan. Even more worrying is the fact that our growth rate has been trending down for the last 3 years. The sectoral components of this slowdown are very telling. Agricultural growth has dropped to 0.9% from an average of 3.9% in the 1980's and 3.3% in the 90's. Industrial growth too has slowed to below 6% from 6.6% in the last decade. We believe there is an urgent need to lift overall GDP growth sustainable by addressing a central issue - the slowdown in rural incomes.

- **Low Per Capita Income**

Even though about **33-35%** of gross domestic product is generated in the rural areas it is shared by **74%** of the population. Hence the per capita incomes are low compared to the urban areas. High costs in finance is a stumbling block while higher purchase is unheard of, the small town culture works against financing of products. The sprawling unorganized market offers prices that the organized industry finds difficult to match. Many existing product lines continue to be too expensive or irrelevant.

- **Low levels of literacy**

Literacy rate is low in rural areas as compared to urban areas. This again leads to problem of communication. Print medium becomes ineffective and to an extent irrelevant in rural areas since its reach is poor.

- **Transport**

Many rural areas are not connected by rail transport. Around 68% of the rural roads have been poorly surfaced, and many are totally destroyed or severely damaged by the monsoon and remain unserviceable leaving interior villages isolated. Though it would be desirable to connect all villages by all-weather roads, use of bullock carts is inevitable for many years.

- **Distribution problem**

Rural markets typically signify complex logistical challenges that directly translate into high distribution cost. Coupled with relatively slower growth of incremental demand and lack of adequate institutional mechanism for retail operations, margins are squeezed to the utmost. Infrastructure also poses a major problem when a marketer thinks of targeting the rural markets.

Prospects of Rural Marketing in Bihar

Many rural areas are not connected by rail transport. Around 68% of the rural roads have been poorly surfaced, and many are totally destroyed or severely damaged by the monsoon and remain unserviceable leaving interior villages isolated. Though it would be desirable to connect all villages by all-weather roads, use of bullock carts is inevitable for many years.

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Rural markets typically signify complex logistical challenges that directly translate into high distribution cost. Coupled with relatively slower growth of incremental demand and lack of adequate institutional mechanism for retail operations, margins are squeezed to the utmost. Infrastructure also poses a major problem when a marketer thinks of targeting the rural markets.

Prospects of Rural Marketing in Bihar

The rural market of Bihar with its vast size and demand base offers great opportunities to marketers. Rural area of Bihar represents the heart of Bihar. Approximately 80% of people of Bihar lives in villages, generating more than half of the Annual income. The vast untapped potential of the rural

market is growing at a rapid pace. In terms of the number of people, the Indian rural market of North Bihar is almost twice as large as the entire market of the Bihar.

Rural area of Bihar, with a significant improvement in purchasing power, increasing brand consciousness, changing consumption pattern and rapid spread of communication network, presents a growing prospect for the multinational companies. The policies of the government largely favour rural development programme. This is clearly highlighted by the fact that the outlay for rural development of Bihar increase has increased from Rs. 8900 crores in the Ninth plan to Rs. 34400 crores, Rs. 89000 crore and Rs. 120000 crores in the Tenth, Eleventh and Twelfth plans respectively. These figures also prove that the rural market is emerging stronger with a gradual increase in disposable income of the rural folk. In addition, better procurement prices fixed for the various crops and better yield due to many research programmes have also contributed to the strengthening of the rural markets.

The rural market has been growing at 12-13% compared to 7-8% growth of its urban counterpart, over the last decade. Corporate are now earnestly looking towards rural markets because of the good market prospects it offers and also because the urban consumer markets are getting a bit too cluttered. The rural population is nearly 3 times that of the urban population. According to the NCAER, average rural household was expected to have 5 major consumer appliances by 2006, almost double of what it had 5 years ago.

The potential of rural market is immense. Research studies by organizations like NCAER and ORG-Marg have shown that rural markets of Bihar are growing at five times the rate of the urban markets. As a result of growing affluence, fueled by good monsoons and the increase in agricultural output. Rural area of Bihar has a large consuming class with 41% of State middle class and 58% of total disposable income.

The agriculture development programme of the government has helped to increase income in the agriculture sector. This, in turn, has created greater purchasing power in rural markets. Studies by NCAER provide evidence of the increased income of rural households. Households in the lower income groups have reduced while there is a strong growth in the number of households in upper middle- and higher-income households. Intensified competition in urban markets, with a wide variety of choices of brands increases costs and reduces market share. For examples, it is reported that there are around 86 branded cosmetic soaps in the urban market. So, there is no point for a new company to enter the urban market. The rural markets provide better opportunities. The automobile market brings this out clearly. Rajdoot motorcycle, Bajaj Scooters or Ambassador Cars find ready acceptance in rural markets as compared to urban markets where there is a proliferation of brands.

The growing reach of the electronic media has created a huge change in the lifestyle of rural consumers. It has provided exposure to various products and services, which were hitherto considered the domain of urban users. This has resulted in demand of various goods.

With the advancement of transport and communication system, mobility has increased. People from Rural areas are moving to urban areas and from urban areas to rural areas. Now, there is an enhanced interaction, interchange and intermigration between rural and urban people and thus developing a common culture. When mobility increases, rural people come in the close contact with the urban people. When they come in close contact with the urban

people, they feel inspired to proceed for fashion, comfort and other desirable things to urban life. The dividing line between rural and urban areas is gradually disappearing because of enhanced mobility.

Increased literacy and greater awareness in rural markets create new demands and discriminating buyers. It can be analysed more in the younger generation. In villages of Bihar today, this segment of buyers consumes a large variety of products, both durables and non-durables. There is a visible increase in the consumption and use of a variety of products which is easily observed.

In rural areas of Bihar, rural development programmes enhance scope for new income by generating new employment opportunities. This results in an increase in the purchasing power of the rural consumer. The green revolution and expectation revolution lead to the demand revolution in rural market. The demand revolution and increased purchasing power of the rural people give an excellent opportunity to the modern marketers to penetrate into rural markets.

With the increase in the capacity to spend, rural marketing is regarded as an excellent investment rather than wasteful expenditure realizing this fact.

The marketing boom in the rural areas is caused by such factors as increased discretionary income, marketable surplus of product like vegetables and eggs, rural development schemes, improved infrastructure, increased retailing and retailers, increased awareness with information explosion, expending T.V Network with satellite, liberalized Government policies for Rural development emphasis on Rural Markets by companies, new cadre of entrepreneurship, competitive, and creative sales promotion, packaging revolution and changing life styles in the rural areas.¹⁴

The growth rates of the FMCG market and durable market are higher in rural areas for many products. The rural market share will be more than 50 percent for products like toilet soaps, body talcum powder, cooking medium (oil), tea, cigarettes and hair oil.

Conclusion

Present study concluded that the Rural markets have emerged as the new destination of marketers interested in improving their market share. The rural market with its large size and high potential provides greater opportunities to the producers of consumer goods. But there are many problems coming in the way of penetrating into rural market. In view of high potential and problems associated with rural marketing, the marketers should design proper rural marketing strategies in relation to the products, promotion, prices and distribution for exploiting the marketing potentiality in rural areas. Thus looking at the challenges, which rural markets of Bihar offer to the marketers, it can be said that the future is very promising for those who can understand the dynamics of rural markets and exploit them to their best advantage.

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Topic

Certain Problems in Geometric Function Theory

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Abstract

The theory of conformal mappings on domains in the complex plane $\mathbb{C}$, is a very interesting branch of mathematics in geometric function theory. Of various types of regions in the complex plane, the simply connected regions are important for several reasons. Indeed, a large volume of research has been done and it still being done in the literature regarding simply connected region and functions defined on such region. The study of differential subordinations and criteria for univalence and the irapplications to various subclasses of univalent as well as multivalent functions is also under consideration. Using GFT and utilizing the theory of complex analysis we will try to find the connections with other branches of mathematics and applications in science and engineering. In this venture we will define several subclasses of univalent and multivalent functions with multiple properties.

Keywords: Geometric function, multivalent functions, GFT and Complex Analysis.

Introduction:

A single valued function $f(z)$ in a region $\mathbb{D}$ of the complex plane $\mathbb{C}$ is said to be one to one or univalent (Schlicht) in $\mathbb{D}$, if it never takes in $\mathbb{D}$ the same value more than once, that is, for any two distinct points z_1 and z_2 in $\mathbb{D}$, $f(z_1) \neq f(z_2)$. The function $f(z)$ is said to be locally univalent at a point $z_0 \in \mathbb{D}$, if it is univalent in some neighbourhood of z_0 . For an analytic function $f(z)$, the condition $f'(z_0) \neq 0$, is equivalent to local univalence at z_0 . The univalent function $f(z)$ is always a conformal mapping.

In this study, primarily concerned with the class of functions f analytics and univalent in the unit disk $U = \{z \in \mathbb{C} : |z| < 1\}$. The theorem states that if D is a simply concerned domain whose boundary consists of more than one point and Z_0 is a given point in D , then there exists a unique universal function f which maps D conformably on to the unit disk U and has the properties $f(Z_0) = 0$, $f'(Z_0) = 1$.

In view of the Riemann mapping theorem most of the geometric results concerning univalent analytic functions in arbitrary simply connected domain with more than one boundary point can be transformed to results about univalent analytic functions in the unit disc U . Thus for the study of geometric properties of function which are analytic and univalent in a simply connected domain D , it is enough to consider functions analytic and univalent in the open unit disc U .

In fact, if D is any simply connected region which is not the whole complex plane C , then the properties of analytic univalent functions on D can be obtained through the Riemann mapping function $\phi(z)$, which maps U conformally on to D .

Let $H(U)$ denote the class of functions defined and analytic (holomorphic or regular) in U . Let $\mathcal{A} = \{f \in H(U), f(0) = 0, \text{ and } f'(0) = 1\}$. Any function $f \in \mathcal{A}$ has a representation

$$f(z) = z + \sum_{n=2}^{\infty} a_n z^n \quad (1.1)$$

Let S denote the class of all functions in $\mathcal{A}$ which are univalent in U .

The Koebe function,

$$k(z) = \frac{z}{(1-z)^2} = z + 2z^2 + 3z^3 + \dots \quad (1.2)$$

which maps the open unit disc U on to the entire complex plane except for a slit along the negative real axis from $-\infty$ to $-\frac{1}{4}$, is a leading example of a function in S . It plays a very important role in the study of the class S . In fact, the Koebe function and its rotations $e^{i\alpha}k(e^{i\alpha}z)$, $\alpha \in \mathbb{R}$ are the only extremal functions for various extremal problems in the class S .

The study of the theory of univalent functions was initiated by Koebe

(1907). He discovered that the ranges of all functions in S contains a common disc $|w| \leq \frac{1}{4}$.

In 1916, Bieberbach proposed the famous Bieberbach conjecture, (now the De Branges theorem), that, if $f(z) = z + a_2 z^2 + a_3 z^3 + \dots \in S$, then $|a_n| \leq n$ for $n = 2, 3, \dots$. Equality occurs for each n , if and only if, f is the Koebe function or one of its rotations. For many years this famous problem stood as a challenge to many reserchers.

This conjecture was proved affirmatively by L. De Branges (1984).

For function $f(z)$ in the class S , it is well known that the following growth and distortion estimates hold.

Let $z = re^{i\theta}$ ($r < 1$), if $f \in S$, then,

$$\frac{r}{(1+r)^2} \leq |f(z)| \leq \frac{r}{(1-r)^2} \quad (1.3)$$

and

$$\frac{1-r}{(1+r)^3} \leq |f'(z)| \leq \frac{1+r}{(1-r)^3}. \quad (1.4)$$

Since $\frac{|z|}{(1+|z|)^2} \geq \frac{1}{4}$ for $z \in U$, it follows that for any function f in S , $f(U)$ contains a disc of radius $\frac{1}{4}$ and this result is known as the Covering theorem.

The inequalities (1.3) and (1.4) are sharp. Equality occurs at each extreme, if and only if, f is a suitable rotation of the Koebe function.

Detailed treatment of univalent functions are available in the standard texts of Pommerenke (1975), Duren (1983) and Goodman (1983). Certain aspects of the subject have also been covered in the books by Nehari (1952), Haymen (1958), Jenkins (1958), and Goluzin (1969). The exhaustive Bibliography of Schlicht functions by Bernardi (1983) contains a lot of references available in the

literature on the theory of univalent functions upto the year 1981. The book by Ruscheweyh (1982) gives a survey of all the results in Convolution theory for univalent functions.

Since the theory of univalent functions is so developed, it is almost impossible to touch all aspects of its developments in a brief introduction.

The purpose of this chapter is to give an introduction of some subclasses of univalent functions with known results which are either generalised or used in the sequel.

In order to make the thesis self contained some of the basic results are mentioned in the subsequent sections.

In this thesis, the numbering of definitions, theorems etc is done as follows:

Definition a.b.c denotes c^{th} definition in chapter a, section b. Same style is followed for Theorems, Corollaries and Lemmas.

The equations and inequations are numbered in sequencical order as $(p.q)$ where p denotes the chapter number and q denotes the number of equation / inequation.

1.2 BASIC DEFINITIONS AND PRELIMINARY RESULTS

There are various important subclasses of the class S . These classes are characterised in terms of functions with positive real parts. Hence at first the definition of the Caratheodory class of functions and its properties are stated.

Definition 1.2.1 (Carathedory, 1907). Let P denote the class of all functions

$P \in H(U)$ with $p(0) = 1$ and $\operatorname{Re} p(z) > 0$ in U . Every function $p(z)$ in the class P has an integral representation given in the following theorem.

Theorem 1.2.1 (Herglotz's representation). $p(z) = 1 + p_1 z + \dots \in P$, if and only if, there exists a real valued non decreasing function $m(t)$ such that

$$\int_0^{2\pi} dm(t) = 2 \text{ and } p(z) = \frac{1}{2} \int_0^{2\pi} \frac{1 + ze^{-it}}{1 - ze^{-it}} dm(t) \quad (1.5)$$

for all $z \in U$.

The following coefficient estimate holds for the class P .

Theorem 1.2.2. Let $p(z) = 1 + p_1 z + p_2 z^2 + \dots \in P$ then $|p_n| \leq 2$ for all $n \geq 1$. If $p \in P$ and $z = re^{i\theta}$ then,

$$\frac{1-r}{1+r} \leq |p(z)| \leq \frac{1+r}{1-r} \quad (1.6)$$

and

$$|p'(z)| \leq \frac{2}{(1-r)^2}. \quad (1.7)$$

The inequalities are sharp. Equality occurs if and only if $p(z) = q(e^{i\alpha} z)$ for some real α where $q(z) = \frac{1+z}{1-z}$.

A simple geometric argument shows that if $p \in P$, then

$$\left| p(z) - \left(\frac{1+r^2}{1-r^2} \right) \right| \leq \frac{2r}{1-r^2} \quad (1.8)$$

Now, the subordination principle which is used extensively in the thesis is defined here.

Definition 1.2.2 (Duren, 1983). Let $F(z) = a_0 + a_1 z + \dots \in H(U)$. A function $f \in H(U)$ is said to be subordinate to F in U if $f(0) = F(0)$ and $f(z) = F(w(z))$ for some holomorphic function w with $w(0) = 0$ and

$|w(z)| < 1$. It is denoted as $f \prec F$ (Note that the superordinate function F need not be univalent). If $f \prec F$, then the image under F of each disc $U_r = \{z \in \mathbb{C} : |z| = r < 1\}$ contains the image under f of the same disc. Using subordination the class P can be characterised as $p \in P$ if only $p(z) \prec \frac{1+z}{1-z}$ in U .

An order to the class P is introduced as,

Definition 1.2.3. $P(\rho)$ is the class of all functions $p_\rho \in H(U)$ with $p_\rho(0) = 1$ and $\operatorname{Re} p_\rho(z) > \rho$ ($0 \leq \rho < 1$) in U .

In particular, $P(0) = P$. Note that every function p_ρ in P_ρ is subordinate to the function $\frac{1 + (1 - 2\rho)z}{1 - z}$.

This class was studied by Libera and Livingston (1972). Using the subordination principle, a further generalisation of these classes was carried out by W. Janowski (1973).

Definition 1.2.4. Let $P(A, B)$ denote the class of all functions $p(z)$ of the form $p(z) = \frac{1 + Aw(z)}{1 + Bw(z)}$, $-1 \leq B < A \leq 1$, where $w(z) \in H(U)$, with $w(0) = 0$ and $|w(z)| < 1$ ($w(z)$ is a schartz function), $z \in U$.

Thus using the subordination principle, any function $p \in P(A, B)$, if and only if, $p(z) \prec \frac{1 + Az}{1 + Bz}$ in U . A distortion theorem for $p \in P(A, B)$ is stated below.

Theorem 1.2.3 (Janowski, 1973). If $p \in P(A, B)$ then

$$\frac{1 - Ar}{1 - Br} \leq \operatorname{Re} p(z) \leq \frac{1 + Ar}{1 + Br} \text{ for } |z| = r < 1. \quad (1.9)$$

A function $f \in H(U)$ is said to be convex if it maps U on to a convex domain, that is, the line segment joining any two points of $f(U)$ lies wholly in $f(U)$. The class of functions in S , which are convex in U is denoted as C . A necessary and sufficient condition for a function $f \in \mathcal{A}$ to be convex was given by Robertson (1936), as follows:

Definition 1.2.5. Let $f \in \mathcal{A}$. Then f is convex univalent if and only if

$$1 + \frac{zf''}{f'} \in P \quad (1.10)$$

A set E in the complex plane is said to be starlike with respect to a point $w_0 \in E$ if the line segment joining w_0 to every other point $w \in D$ lies entirely in E . That is, every point of E should be 'visible' from w_0 . If a function $f(z)$ maps U onto a domain, that is starlike with respect w_0 , then f is starlike with respect to the w_0 . Starlike with respect to the origin is usually called a starlike function. Let S^* denote the class of all functions starlike with respect to the origin. Robertson (1936) proved that a function $f \in \mathcal{A}$ is in S^* if and only if

$$\frac{zf'}{f} \in P. \quad (1.11)$$

Since a convex set is starlike with respect to each of its points, it is clear that any convex function is always a starlike function. Thus $C \subset S^*$.

The containment is proper, since the Koebe function $\frac{z}{(1-z)^2}$ is in S^* , but not in C .

Alexander's theorem reveals a close relationship between convex and starlike functions.

Theorem 1.2.4 (Alexander, 1915). Suppose $f \in \mathcal{A}$ with $f'(z) \neq 0$ in U . Then $f \in C$, if and only if, $F = zf' \in S^*$.

The next well known bigger subclass of S which contains S^* is the class of close to convex functions introduced by Kaplan (1952).

Definition 1.2.7. A function $f \in H(U)$ is said to be close to convex if there exists a convex univalent function g such that $\frac{f'}{g'} \in P$ for all $z \in U$.

The class of all close to convex functions f with $f(0) = f'(0) - 1 = 0$ is denoted by K . Kaplan himself showed that every close to convex function is univalent. The inclusion relation $C \subset S^* \subset K \subset S$ holds.

P.T. Mocanu (1969) had introduced a new class of functions called α -convex functions unifying the classes C and S^* , which is now called the class of Mocanu convex functions, and it is denoted by $M(\alpha)$.

Definition 1.2.8 (Mocanu, 1969). A function $f \in \mathcal{A}$ is called an α -convex function if $\frac{f(z)f'(z)}{z} \neq 0$ in U and for some non negative real number α ,

$$(1 - \alpha) \left(\frac{zf'(z)}{f(z)} \right) + \alpha \left(1 + \frac{zf''(z)}{f'(z)} \right) \in P, \quad z \in U \quad (1.12)$$

when $\alpha = 0$, this class is the same as S^* and when $\alpha = 1$, this class coincides with C .

Theorem 1.2.5 (Miller, Mocanu and Reade, 1973). All α convex functions are starlike.

The next bigger subclass of S was defined by I.E. Bazilevic (1955).

Definition 1.2.9 (Bazilevic, 1955). Let $g \in S^*$, $h \in P$ and let $\alpha > 0$ and β be any real number. Then the function f given by

$$f(z) = \{(\alpha + i\beta) \int_0^z g^\alpha(t)h(t)t^{i\beta-1}dt\}^{\frac{1}{\alpha+i\beta}}$$

is called a Bazilevic function of type (α, β) .

The class of all such functions is denoted by $B(\alpha, \beta)$. Every function in the class $B(\alpha, \beta)$ is single valued, analytic and univalent in U . Bazilevic proved that, a necessary and sufficient condition for a function $f \in \mathcal{A}$ to be in $B(\alpha, \beta)$ is

$$\frac{e^{i\lambda} f^{\alpha+i\beta-1}(z) f'(z)}{g^{\alpha}(z) z^{i\beta-1}} \in P, \text{ for all } z \in U \quad (1.13)$$

for some $g \in S^*$ and λ real.

For the various classes of functions defined earlier the following inclusion relation holds

$C \subset S^* \subset K \subset B(1, 0) \subset S$. Also $B(\alpha, \beta) \subset S$ for $\alpha > 0, \beta \in \mathbb{R}$. Next, convex function of order ρ and starlike function of order ρ are considered.

Definition 1.2.10 (Pinchuk, 1971). A function $f \in \mathcal{A}$ is said to be a convex univalent function of order ρ ($0 \leq \rho < 1$) if and only if,

$$1 + \frac{zf''}{f'} \in P(\rho), z \in U \quad (1.14)$$

The class of all such functions is denoted by $C(\rho)$. When $\rho = 0$, this class coincides with the class C .

Definition 1.2.11. A function $f \in \mathcal{A}$ is said to be a starlike univalent function of order ρ ($0 \leq \rho < 1$) if and only if, $\frac{zf'}{f} \in P(\rho)$ for all $z \in U$.

The class of all such functions is denoted by $S(\rho)$. Also $S^*(0) = S^*$. Alexander's theorem is true between $C(\rho)$ and $S(\rho)$.

Another important relationship between convexity and starlikeness is the following:

Theorem 1.2.6 (Marx, 1983). Let $f \in C$, then $f \in S^*(\frac{1}{2})$.

Further two more classes came into existence which generalises the classes $C, C(\rho)$ and $S^*, S^*(\rho)$ in the same way as the class $P(A, B)$ generalises the class P .

Definition 1.2.12 (Janowski, 1973). $C(A, B), -1 \leq B < A \leq 1$, denotes the class of all functions $f \in \mathcal{A}$ satisfying

$$1 + \frac{zf''}{f'} \in P(A, B). \quad (1.15)$$

Definition 1.2.13 (Janowski, 1973). $S^*(A, B)$, or $ST(A, B) - 1 \leq B < A \leq 1$ denotes the class of functions $f \in \mathcal{A}$ satisfying

$$\frac{zf'}{f} \in P(A, B). \quad (1.16)$$

Alexander's theorem holds good between $C(A, B)$ and $S^*(A, B)$.

Nevanlinna R. (1920) proved the following:

Theorem 1.2.7. *For every positive number $r \leq 2 - \sqrt{3}$, each function $f \in S$ maps the disc $|z| = r$, onto a convex domain. This is false for every $r > 2 - \sqrt{3}$.*

This is possibly the first result in the study of "radius problem" in the Geometric function theory. The number $r = 2 - \sqrt{3}$ is called the radius of convexity for the class S .

Grunsky (1933) proved that the radius of starlikeness of the class S is the least positive root of the equation $\log \left(\frac{1+r}{1-r} \right) = \frac{\pi}{2}$, which is 0.65579 approximately.

A natural generalisation of starlikeness leads to the class of spiral like functions.

A logarithmic spiral is a curve in the complex plane of the form $w = w_0 e^{\lambda t}$ ($-\infty < t < \infty$) where w_0 and λ are complex constants with $w_0 \neq 0$ and $\operatorname{Re}(\lambda) \neq 0$. If we take $\lambda = e^{i\alpha}$ with $-\frac{\pi}{2} < \alpha < \frac{\pi}{2}$ then, the curve is called an α -spiral curve.

For each α ($|\alpha| < \frac{\pi}{2}$) there is a unique α -spiral which joins a given point $w_0 \neq 0$ to the origin.

A domain D containing the origin is said to be an α -spiral like domain if for each point $w_0 \neq 0$ in D the arc of α -spiral from w_0 to the origin lies entirely in D . A function f analytic and univalent in the unit disc, with $f(0) = 0$, is said to be α -spiral if its range is α -spirallike. 0-spiral functions are simply the starlike functions.

A slight modification of the analytic condition for starlikeness characterises α -spiral functions.

Theorem 1.2.8. *Let $f \in H(U)$ and $|\alpha| < \frac{\pi}{2}$. Then, f is α -spiral in U , if and only if,*

$$\operatorname{Re} \left(e^{i\alpha} \frac{zf'(z)}{f(z)} \right) > 0, z \in U. \quad (1.17)$$

These functions were introduced and studied by Špaček (1932). Libera (1967) introduced an order ρ ($0 \leq \rho < 1$) to the class of α -spiral function and denoted such class by $S(\alpha, \rho)$, by changing the condition (1.17) to

$$\operatorname{Re} \left(e^{i\alpha} \frac{zf'(z)}{f(z)} \right) > \rho \cos \alpha, z \in U. \quad (1.18)$$

Definition 1.2.14. Let A_p denote the class of functions $f(z) = z^p + \sum_{k=p+1}^{\infty} a_k z^k$, ($p \geq 1$) which are analytic and p -valent in the unit disc U .

A sub class of the class of p -valent functions is given below:

Definition 1.2.15. Let $0 \leq \alpha < p$ and $|\lambda| \leq \frac{\pi}{2}$. $SP_\rho^\lambda(\alpha)$ denotes the class of function $f \in \mathcal{A}_p$ which satisfy

$$\frac{zf'(z)}{f(z)} \prec \frac{p(2(\rho - \alpha) \cos \lambda \exp(-i\lambda) - p)z}{1 - z}, z \in U \quad (1.19)$$

This class $SP_\rho^\lambda(\alpha)$ is a subclass of p -valent, λ -spiral function of order α . For $p = 1$ and $\lambda = 0$ the class $SP_\rho^\lambda(\alpha)$ reduces to the class of starlike functions of order α .

Definition 1.2.16 (Duren, 1983). The Hadamard product (or convolution) of two power series $f(z) = z + \sum_{n=2}^{\infty} a_n z^n$ and $g(z) = z + \sum_{n=2}^{\infty} b_n z^n$ is defined as the power series

$$(f * g)(z) = z + \sum_{n=2}^{\infty} a_n b_n z^n \quad (1.20)$$

In 1958, Pólya and Schöenberg (1958) conjectured that if $f(z)$ and $g(z)$ are convex then so is $(f * g)(z)$. Many Mathematicians attempted this problem and obtained partial results. Ruscheweyh and Sheil-small (1973) proved the following.

- (i) If f and $g \in C$ then $f * g \in C$
- (ii) If $f \in C$ and $g \in K$ then $f * g \in K$
- (iii) If f and $g \in S^*(\frac{1}{2})$ then $f * g \in S^*(\frac{1}{2})$

They also proved the conjecture of Wilf (1961) which states that, if ϕ and $\psi \in C$ and suppose $f \prec \psi$ then $\phi * f \prec \phi * \psi$. These results of Ruscheweyh and Sheil-Small paved the way for others to apply the convolution techniques successfully to various problems.

Theorem 1.2.9 (Ruscheweyh and Sheil-Small, 1973). Let $\phi(z)$ be a convex univalent function with $\phi(0) = 0$ and $g(z)$ be a starlike univalent function defined

on U . Then for an analytic function $F(z)$ in U with $F(0) = 1$, $\frac{\phi * Fg}{\phi * g}(U)$ is contained in the convex hull of $F(U)$.

Definition 1.2.17 (Ruscheweyh, 1975). $D^n f$ is the Ruscheweyh derivative of order n , defined as the convolution operator

$$D^n f(z) = \frac{z}{(1-z)^{n+1}} * f(z) \quad (1.21)$$

It is easy to derive the following relation:

$$z(D^n f(z))' = (n+1)D^{n+1}f(z) - nD^n f(z). \quad (1.22)$$

Goodman (1991a, 1991b) introduced the concepts of uniform starlikeness and uniform convexity for functions in $\mathcal{A}$. A function $f \in \mathcal{A}$ is said to be uniformly convex, if $f(z)$ is convex and has the property that for every circular arc γ contained in U , with centre ξ also in U , the arc $f(\gamma)$ is convex. Similary the function $f(z)$ is uniformly starlike, if $f(z)$ is starlike and has the property that for every circular arc γ contained in U , with centre ξ also in U , the arc $f(\gamma)$ is a starlike arc. The classes of functions consisting of uniformly convex and starlike functions are denoted by UCV and UST respectively. The following are analytic characterisation of UCV and UST obtained by Goodman.

Definition 1.2.17. The class of uniformly convex function consists of the functions $f \in \mathcal{A}$, satisfying for $z, \xi \in U$

$$\operatorname{Re} \left(1 + (z - \xi) \left\{ \frac{f''(z)}{f'(z)} \right\} \right) \geq 0. \quad (1.23)$$

Definition 1.2.18. The class of uniformly starlike functions consists of the functions $f \in \mathcal{A}$, satisfying for $z, \xi \in U$,

$$\operatorname{Re} \left(\frac{(z - \xi)f'(z)}{f(z) - f(\xi)} \right) \geq 0. \quad (1.24)$$

Rønning (1993 a), Ma and Minda (1992) independently obtained a one variable characterisation for the class UCV . Motivated by the failure of Alexander's type of result between the classes UCV and UST , Rønning introduced the class S_{par} of functions of the form $f(z) = zF'(z)$ with $F(z)$ in UCV . Rønning (1994) proved that $S_{par} \not\subset UST$. Merkes and Salamassi (1992) defined a subclass of UST . They showed that $\sqrt{2}f(\frac{z}{\sqrt{2}})$ is in UST wherever $f(z)$ is convex.

Ma and Minda (1992) obtained sharp growth, distortion, rotation and covering theorems and also sharp bounds on the second and third coefficients. Ma and Minda (1993) obtained sharp coefficient estimates for $n = 2, 3, 4, 5$ and 6. Also they found sharp bounds for the coefficients of inverse functions and obtained the extremal functions. They also found sharp estimates for $|\mu a_2^2 - a_3|$ for $-\infty < \mu < \infty$.

An order for UCV was introduced by Rønning. A function $f \in \mathcal{A}$ is uniformly convex of order α with $-1 < \alpha < 1$, if and only if $1 + z \frac{f''(z)}{f'(z)}$ lies with the parabolic region. $Re w - \alpha > |w - 1|$. In other words the function $f(z)$ is uniformly convex of order α if $1 + \frac{zf''(z)}{f'(z)} < 1 + \frac{2(1-\alpha)}{\pi^2} \left[\log \left(\frac{1+\sqrt{z}}{1-\sqrt{z}} \right) \right]^2$.

This class is denoted by $UCV(\alpha)$. The class of all analytic function $f \in \mathcal{A}$ for which $\frac{zf'(z)}{f(z)}$ lies in the parabolic region $Re w - \alpha > |w - 1|$ is denoted by $S_{par}(\alpha)$.

Goluzin (1935) considered the simple first order differential subordination $zp'(z) < h(z)$. If $h(z)$ is starlike then $p(z) < q(z) = \int_0^z \frac{h(t)}{t} dt$ and q is the best dominant.

Hallenbeck and Ruscheweyh (1975) considered the differential subordination $p(z) + \frac{zp'(z)}{\gamma} < h(z)$ whenever $\gamma \neq 0$ and $Re \gamma \geq 0$. They showed

$Q(z) \prec 1 + \frac{\lambda\mu}{\mu+n}z, Q(0) = 1$ and if $p \in H(U)$, $p(0) = 1$ and satisfies $Q(z)p^\alpha(z) \prec 1 + \lambda z, z \in U$ where

$$0 < \lambda \leq \frac{(\mu+n)\sin(\frac{\pi\alpha}{2})}{[\mu + (\mu+n)e^{i\frac{\pi\alpha}{2}}]}$$

then $\operatorname{Re}(p(z)) > 0$ in U .

Lemma 1.2.4 (Ravichandran and Shanmugam, 1995). Let $f \in \mathcal{A}$, $\frac{3}{4} < a < 3$ where a is any real number such that

$$R_a = \begin{cases} a - \frac{1}{2} & \text{if } \frac{3}{4} < a < \frac{3}{2} \\ \sqrt{2a-2} & \text{if } a > \frac{3}{2} \end{cases}$$

then $\left| \frac{zf'(z)}{f(z)} - a \right| < R_a$ implies $f \in S_{par}$.

Lemma 1.2.5 (Miller and Mocanu, 1981). Let $h(z)$ be convex univalent and $\gamma \neq 0$ $\operatorname{Re} \gamma \geq 0$. If $p(z) = z + p_n z^n + \dots$ $n \geq 2$ is analytic in U and

$$p(z) + z \frac{p'(z)}{\gamma} \prec h(z) \text{ with } h(0) = p(0), \text{ then}$$

$$p(z) \prec \frac{\gamma}{nz^{\frac{n-1}{n}}} \int_0^z h(t) t^{\frac{\gamma}{n-1}} dt. \quad (1.29)$$

Scope of Work

The present work, consisting of six chapters is devoted to the study of Certain subclasses of functions, univalent and analytic defined in U .

In Chapter2, radius problems of various classes are discussed. Let S_1, S_2 be two classes of functions. The maximal radius r , so that f satisfies the condition to be in the class S_2 wherever $f \in S_1$, for all z with $|z| < r$, is called as S_1 radius of S_2 . This rises timated for various classes S_1 and S_2 under

Concussion

Geometric functions theory is quite old and has become one of the most outstanding branches of complex analysis. This study involves finding the relationship between the analytical properties of $h(_)$ and the geometrical properties of the image domain $_ = h(_)$ where $_$ is the unit disc. Attempts to solve the numerous conjectures in geometric functions theory have result din enriching the classical geometric function theory in several directions. Geometric function theory primarily comprises of Univalent and Multivalent functions and plays a central role in the development of complex analysis. During the course of research, we studied univalent and multivalent functions in detail. The subclasses of these functions like starlike, convex, close to convex, spiral like, typical real functions defined on the unit disc $_ = \{ _ : | _ | < 1 \}$ and also on the punctured unit disc $_ * = \{ _ : 0 < | _ | < 1 \}$. We obtained several properties like coefficient estimates, distortion bounds, radius of star likeness, convexity and close to convex, extreme points, region of univalency, convex linear combination etc. We discussed different subclasses of univalent, multivalent and meromorphic functions that are holomorphic in nature. We have continued the investigation of several properties of holomorphic and univalent functions and study different subclasses of multivalently starlike, convex, close-to-convex, meromorphically star like, convex, close-to-convex functions with positive and negative coefficients in the unit disc.

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Abstract

E-learning/electronic learning facilitated and supported by Information Communication Technologies (ICT) impart needed knowledge and skills. Its uses have increased tremendously as the COVID-19 pandemic drastically affected the education sector and led to the closure of educational institutes and classes conducted through digital platforms. Since agriculture is the crucial sector that plays a vital role in the socioeconomic development of the country, digital platforms are considered to be a great resource and provide opportunities to many local communities/ farmers/ students/ teachers /researchers to acquire the relevant knowledge and skills in the agriculture sector in the field of agricultural and allied sectors. This study provides a comprehensive review of different digital learning platforms available in the field of agricultural and allied education in India which includes recent and prominent trends in education agricultural education portal and Massive open online courses (MOOCs) and other digital platforms like TELAgE by NAARM, PGDAEM by MANAGE.

Keywords: E-learning, MOOCs, Agricultural Education Portal, Digital Agriculture

Introduction

The COVID-19 pandemic has not only disrupted the global economy but also affected the education sector; classes were suspended to enforce social distancing which led to the closure of educational institutions resulting into the shift from physical learning to the digital sphere of learning. The pandemic had affected around 1.6 billion students and youths in more than 190 countries and continents. The closure of educational institutions had impacted 94 percent of the student population worldwide, of which 99 percent are in lower and lower-middle-class income countries (UNESCO, 2020). After switching the education to online, teachers and students focussed on knowing new technological advancements in education and learn new skills and competencies needed (Ramya, et al. 2021). Distance Education is a fast emerging, cost effective and flexible medium specially for whom that could not pursue a conventional system of learning. In the last two decades, many

universities offering distance learning in several countries have been established. The government of India is also encouraging distance learning to make the masses educated (Purnima, 2022). The concept of learning and teaching has undergone tremendous change with the advancement of technology. E-Learning is defined as gaining knowledge and skills using electronic technologies such as computers and smartphones through the internet. It creates a new opportunity to learn anywhere and anytime (Hamid, 2001). Major reasons for the adoption of e-learning include ease of use, flexibility, controllable environment, etc., even though it has many advantages, limitations such as self-isolation, network connectivity, etc., were also there. India is in the early stage of adopting e-learning and needed to focus on creating good quality content, multi-lingual and tutorial-like courses (Aggarwal, 2009). Students start to adopt e-learning systems in India; social media significantly contributed to the subject content. It is also understood that both teachers and students start to use these new tools for effective teaching-learning purposes (Khan et al., 2020). Apart from this, other huge significant changes in online education have emerged as the concept of Massive Open Online Courses (MOOCs) are a relatively new approach for providing high-quality education via the internet. This

allows a large number of learners to access high-quality educational resources at any time and from any location. Massive enrolling numbers, Open - no required credentials, Online - totally online A structured course is an online course that allows for limitless participation and open access over the web. The basic philosophy of MOOCs is 3A's i.e., Anyone, Anywhere, and Anytime. In India, different e-learning platforms were created which need to be well addressed and documented for giving awareness and proper utilization of it (Anonymous 2022a).

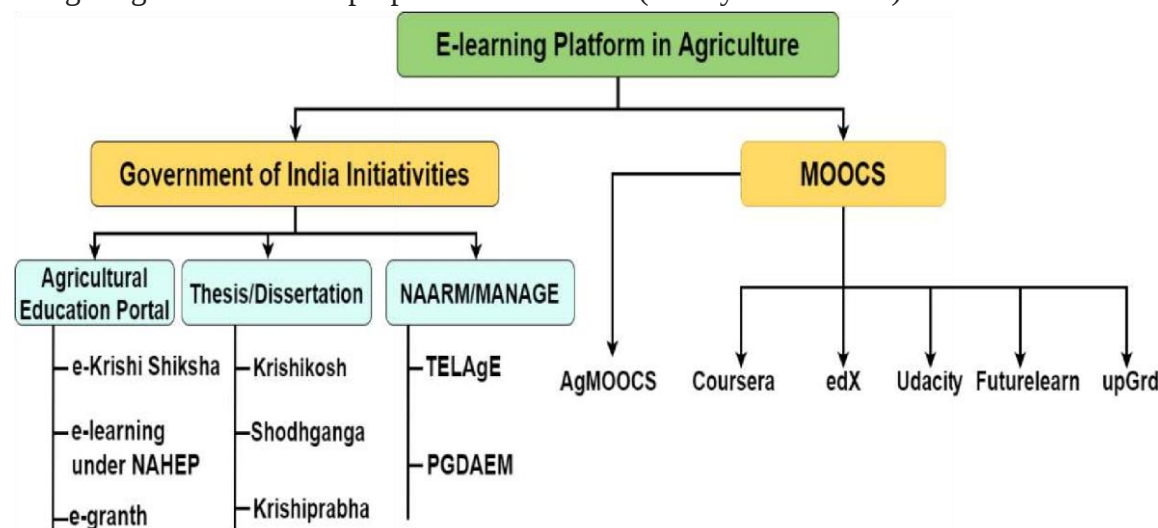


Figure. 1. Different agriculture e-learning platforms in India

Agriculture is a crucial sector and plays a vital role in the socio-economic development of the country and demands utmost attention in terms of capacity building and human resource development. Digital agriculture education has become an utmost importance due to the COVID pandemic. Different leading institutions have come up to address this challenge by launching a series of Digital Agriculture Education. The study aims to identify and document different digital learning platforms available in the field of agricultural and allied education in India.

Methodology

The present study used an exploratory research method to identify the different types of digital learning platforms related to agriculture and allied sectors available in India. The information was collected using large literature reviews, Google search, websites, and discussions with experts. The study is on e-learning platforms where courses are available in agriculture and allied activities Agricultural Education Portal by Government of India Initiatives and MOOCs and other digital platforms like TELAgE by NAARM, PGDAEM by MANAGE.

Results and Discussion

The exhaustive study of digital agriculture education on different e-learning platforms in India is done under two majors heads i.e., Government of India Initiatives and MOOCs. Government of India Initiatives

1. Agricultural Education Portal

The agricultural education portal by ICAR serves as the one-stop window for agriculture and allied sector education. The portal aims to strengthen and develop higher education in India. Under the interface of the courses, students can enroll in different subjects in UG, PG, and even Ph.D. programs which are offered by different universities and institutes colleges.

(Anonymous 2020a). Different E-learning platforms under agricultural education portals are discussed.

A. E-Krishi Shiksha

E-Krishi Shiksha is the major achievement of this portal and helps digital learning be more accessible to students of agriculture and allied sectors. It offers UG courses in Agricultural Engineering, Dairy Technology, Horticulture, Home Science, Fisheries Science, and Veterinary & Animal Husbandry where students can avail of all the courses.

The education division strives for maintaining and upgrade the quality and relevance of higher agricultural education and undertakes planning, development, coordination, and quality assurance in higher agricultural education in the country through partnership and efforts of the components of the

ICAR-Agricultural Universities (AUs) System. All of the e-course materials on this website were created with the financial assistance of NAIP. The course content is designed to help undergraduate students actively registered in Indian Agricultural Universities and is based on an ICAR-approved syllabus.

B. E-learning by NAHEP

The vision of the NAHEP project "Investments in ICAR Leadership in Agricultural Higher Education" funded by the World Bank for strengthening the agricultural education system in India led to the establishment of E-Learning/M-Learning systems for participating AUs is a major activity. This E-Learning activity includes the revision of existing UG e-courses. Development of e-courses for master's and Ph.D. courses; deployment of e-courses and study on E-Learning for inclusiveness of all students.

C. AgriDIKSHA under NAHEP

AgriDIKSHA, a virtual classroom is a method of synchronous online learning. This e-learning happens in real-time and provides the participants with an experience very close to a traditional face-to-face learning environment. Students can go through the lectures of their choice anytime as per their convenience and net availability.

It has different features like learning-optimized multi-stream video recording, simple online video editing, in-video Quizzes, automatic machine-generated transcripts and captions, easy video uploading and private sharing with students, interactive video playback in any browser, etc. Lectures can also be delivered along with recordings. It is highly useful for students to have interactive learning sessions in the comfort of their homes.

2. Massive Open Online Courses (MOOCS)

After the United States, India is ranked as the world's largest market for MOOCs. MOOCs were first started in India by IIT Bombay, Mumbai. It is considered to be the most recent and prominent trend and has witnessed tremendous growth with huge enrolment and thus globally bringing an educational revolution. MOOCs represent a learning phenomenon where learners access online educational multimedia materials, and get associated with enormous numbers of other learners via social engagement tools such as discussion forums (Liyanagunawardena et al., 2013). It aims at unlimited participation; completely free and open to anyone who has access to the Internet. It provides resources in terms of repositories, libraries, educational media files, e-books, etc. It also provides opportunities to interact create and share their contributions with teachers as well as among students.

This study detailed the characteristics of MOOCs along with various online platforms associated with agriculture and allied sectors. Many initiatives have been taken by the Indian government to provide and support the concept of open education such as agMOOCs, NPTEL, IITBX, SWAYAM, and agMOOCS by mooKIT.

A. agMOOCS

agMOOCS is an online platform designed and developed in IIT Kanpur in the year 2012, provides free access to numerous highquality basic as well as advanced courses in the agriculture domain. It can be accessed through a website and application, the session was conducted through recorded video lectures, slides and materials provided; quizzes are also conducted and certificates were given. The courses run in both English and Hindi languages (Anonymous 2019).

Table 1: Glimpses of agricultural and allied sector courses offered by agMOOCS

Sl. no.	Courses
1.	Basics of Information and Communication Technologies
2.	Integrated Pest Management (IPM)
3.	GIS in Agriculture: Fundamentals and Applications
4.	Weather Forecast in Agriculture and Agro-advisory
5.	Basic Crop Production Practices
6.	Basics of Entrepreneurship Development in Agriculture
7.	Agricultural Value Chain Management
8.	Nutrition, Therapeutics, and Health
9.	Fundamentals of Agricultural Extension
10.	Integrated Disease Management.
11.	Functional Foods: Concept, Technology and Health Benefits B. NPTEL.

National Programme on Technology Enhanced Learning, in 2003 launched jointly by the Indian Institutes of Technology and the Indian Institute of Science and funded by the Ministry of Human Resource Development, Government of India. It uses opensource technology for offering courses and offers a wide variety of agricultural and dairy courses, moreover, certificates were also provided (Ananth, 2011). The project's main purpose is to make free recorded lectures from its member institutions available online (Anonymous, 2022).

It aims to provide detailed and supplementary curricula to students enrolled; train young faculty in technology-enabled teaching learning processes and help them design curricula in their areas by adopting contents provided under the project as free and open educational resources; to enable Indian industry

to adopt the contents in their training and upgrade the skills of employees and contribute to a learning environment focused to specific employment opportunities; to set up a virtual technical university which will be able to provide quality engineering education to a large number (in hundreds of thousands every year) of students and industry professionals interested in career advancement and; to provide lifelong learning opportunities to everyone (Anonymous, 2022).

Table 2: Glimpses of agricultural and allied sector courses offered by NPTEL

Sl. no	Courses
1.	Instrumentation and Process Control in Food Industry
2.	Machine Learning in Crop and Soil Management
3.	Novel Technologies for Food Processing and Shelf-Life Extension
4.	Soil and Water Conservation Engineering
5.	Soil Science and Technology
6.	Architectural Acoustics
7.	Novel Technologies for Food Processing and Shelf-Life Extension
8.	Organic Farming for Sustainable Agricultural Production
9.	Thermal Operations in Food Process Engineering: Theory and Applications
10.	Thermal Processing of Foods
11.	Dairy and Food Process and Products Technology
12.	Farm Machinery

C. SWAYAM

SWAYAM (Study Webs of Active-learning for Young Aspiring Minds) is one of the World's biggest Massive Open Online Courses (MOOCs) integrated platforms developed by the Ministry of Human Resource Development (MHRD), Government of India. It aims to accomplish the three cardinal objectives of education policy: access, equity, and quality. Its coverage is from school level to post-graduate level intending to take the best teaching learning resources to all with no costs for students/researchers/faculties from remote/backward areas, working professionals, and college dropouts.

SWAYAM courses are divided into four quadrants: (1) video lectures, (2) specifically prepared reading material that may be downloaded/printed, (3) self-assessment exams via tests and quizzes, and (4) an online discussion forum for clarifying questions. The idea is to give equal opportunities as well as quality education to everyone through the digital mode to maximize its reach, bind online and offline education together and bridge the digital divide for students. This is accomplished through the use of an indigenously designed IT infrastructure that enables the hosting of all classroom-taught courses to be accessed by anybody, anywhere, at any time. All the courses are interactive and available free of cost to the residents of India (Anonymous, 2020b).

Table 3: Glimpses of agricultural and allied sector courses offered by SWAYAM

1	Economic Viability of Indian Agriculture
2	Nanotechnology in Agriculture
3	Animal Biotechnology
4	Indian Agricultural Development
5	Biochemistry
6	Vocational: Mushroom Production
7	Fermented Cheese Ice Cream and By-products Technology
8	Agricultural Policy: Formulation Components Process Implementation and Comparative Analysis
9	Plant Groups Food Microbiology and Food Safety Functional Foods and Nutraceuticals Fundamentals of Food Process Engineering Farm Machinery Food Microbiology Food Preservation Technology Food and Nutrition Irrigation and Drainage Plant Pathology and Soil Health Plant Design and Economics

	Introduction to Poultry Farming
10	Horticultural crop diseases and their control
11	Plant Cell Bioprocessing
12	Wildlife Conservation
13	Cooperatives and Farmer's Organizations
14	Economic Viability of Indian Agriculture

3.TELAgE by NAARM

Academy had a significant role in leading agricultural education towards digital mode since 2007 by way of providing capacity building in open source e-learning, developing e-courses for UG streams, and developing protocols and methodologies for digital education. Its initiative in the form of Technology Enhanced Learning in Agricultural Education (TELAge), an ICAR Education division-supported activity has paved the way for bringing MOOCs to a realistic mode. The initiatives of TELAgE were transformed into other digital learning projects, of which MOOCs are a prominent component, as well as the attention it has garnered among national and worldwide leaders. Different activities of TELAgE were depicted. With the available expertise and experience gained in nurturing e-Learning across NARES and with the availability of infrastructural facilities, a MOOC on Competency Enhancement through Micro Teaching Methodology was piloted during the year 2015.

4. PGDAEM – MANAGE

To increase the reach out, cover a large number of candidates and bridge the increasing gap between the challenges ahead and existing capabilities among extension functionaries in knowledge, Post Graduate Diploma in Agricultural Extension Management, PGDAEM-MOOCs has been launched by the National Institute of Agricultural Extension Management (MANAGE) in 2007, for graduates who aspire to enrich their knowledge in Agricultural Extension Management. It is intended to transform extension/development functionaries into vibrant and demand for skilled to achieve the desired changes in agriculture and allied sectors via distance learning programs for the extension personnel of Agriculture and allied activities of the Central/State/UT governments, SAUs, KVKs, as well as functionaries cooperating in Agri-business industries and Agri-enterprises, NGOs, Banks, and Cooperatives, among others. This program aims to equip the candidates enrolled with the latest tools and technologies for participatory decision-making, provide insight into various extension models and developments in agricultural extension and enhance their extension management competencies (Anonymous, 2022b).

Table 4: List of agricultural and allied courses offered by PGDAEM – MANAGE

Sl.no.	Courses
1	Introduction to Agriculture Extension Management
2	Communication of Agricultural Innovations
3	Principles and Practices of Extension Management
4	Participatory Approaches in Agricultural Extension
5	Research Methods in Agricultural Extension
6	Market-led Extension
7	Agri-Business and Entrepreneurship Development
8	Project Management in Agriculture Extension
9	Information and Communication Technologies for Agriculture
10	Sustainable Livelihood in Agriculture

Conclusion

In today's digital world, the creation and utilization of e-content is the need. The Government of India has taken many initiatives, especially during this pandemic time to support online education. MOOCs have enormous opportunities and have directed many people in to overcome unmet demand for higher education and make it easy to learn anytime and anywhere. Various digital platforms like MOOCs platforms that are being started in India for delivering online courses, MOOCs undoubtedly holds promise as the mode of knowledge acquisition and future capacity building, such activities help spread/share knowledge and wisdom on a wider reach.

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Topic

मैथिली लोक साहित्यक विस्तृत इतिहास: डॉ० राजाराम प्रसाद

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Abstract

साहित्यमे लोक शब्दक प्रयोग व्यापक रूपमे कएल गेल अछि। ऋग्वेदमे ‘लोक’ शब्दक अर्थ जन भेल अछि। संस्कृतसँ प्रभावित परिष्कृत वर्ग आ ऐहिसँ इतर वर्गक लोक अछि, जे वर्ग परिष्कृत वर्गसँ प्रभावित नहि भऽ अपन पुरातन स्थितिमे एहबाक प्रयास करैत रहल अछि ओकरा लोक कहल गेल अछि। आ एहि वर्ग द्वारा परिष्कृत साहित्यकें लोक साहित्यक संज्ञा देल गेल अछि।

साहित्य मनीषी डॉ० राजाराम प्रसादक जन्म 1854 ई० मे भेल अछि। इ अपन प्रारंभिक शिक्षा पैतृक गाम बसुली पिपरा बाजार सम्प्रति सुपौल जीला सऽ प्राप्त कयने छथि।

पिताक छोट संतानक रहलाक कारणेँ हिनका सब कियो एखनो धरि “बाउ” उपनाम सँ सम्बोधित करैत रहैत छनि।

डॉ० राजा राम प्रसाद 1982 ई० मे सहरसा कॉलेज सहरसाक मैथिली विभागमे अध्यापक रूपमे नियुक्त भेल अछि। अहि समयमे ई प्रो० मायानन्द मिश्र ओ प्रो० महेन्द्र झा, सदृश विख्यात विद्वानक मध्य अपन श्रमशीलता आ लगनशीलता सदृश व्यवहार कुशलताक कारणेँ मैथिली विभागमे लोकप्रिय शिक्षकक रूप प्रशंसित होमय लागलनि। आ ओतवहि नहि पटना विश्वविद्यालय पटनाक उपकुलपतिक पद पर सहो कार्यरत रहला। विश्वविद्यालयक प्रशासनिक काज करैत रहला सगंही पठन–पाठन ओ लेखनकें आत्मसात कयने छलथि डॉ० राजा राम प्रसाद अपन व्यस्तक जीवनमे मैथिलीक विभिन्न साहित्य संस्था, मैथिली पत्र–पत्रीका आ ओ आकाशवाणी दरभंगा सँ प्रसारित वार्ता आ कथा लेखनीय सँ जुड़ल छथि। ई अपन मधुरक्तवचन ओ व्यवहार कुशलतासँ सहजहि लोककें प्रकाशित कऽ लैत छथि।

हिनक प्रकाशित कृतित्वमे कथा–परिध (कथा–संग्रह) 1997, मैथिली लोक नाट्य आलोचना, 2010, मेघ लागल आकाश (कथा–संग्रह) 2011, साहित्य सरोरुह (आलोचना) 2012, मैथिली लोक साहित्यक विस्तृत इतिहास (आलोचना) 2019 एवं शेष युद्ध (विवरणात्मक इतिहास), 2020 आ साहित्य अकादेमी नई दिल्ली द्वारा प्रकाशित तेलगु भाषाक पोथी ‘हमर बाबुक मीत’ नाम सऽ मैथिली अनुवाद सहो कएने छथि।

हिनक अनुदित पेथि पढ़ला सऽ ज्ञात होइत अछि जे इ अनुवाद करबामे कतेक निपुण दक्ष छथिन।

19 वी0 शताब्दीक उत्तरार्द्धमे भारतमे जे नवोत्थानक लहिर उठल ओकर उद्देश्य छल समाजमे व्याप्त कुरीती, रूढ़िवादी परम्पराकें समाप्त कऽ एकटा नव सर्जनात्मक वातावरण तैयार करब। एहिक्रममे नव-शिक्षक प्रचार-प्रसार सँ समाजक विभिन्न वर्ग आ समुदायक लोक मैथिली साहित्यक सर्जन ओ प्रकाशनमे लागल ओहि क्रम मे करवता कथा, ओ विशेषकऽ आलोचनात्मक विषय वस्तु कें सर्व सुलभ बनेबाक प्रयास भेल। एहि शताब्दी मे अनेको मुधन्य विद्वान लोकनिक लेखनिय सहयोग सँ मैथिलीक-भण्डारक श्री वृद्धि भेल अछि। डा० राजाराम मैथिली-साहित्यक भण्डारकें श्री वृद्धि कऽ रहल छथि। ई लोक साहित्य पर विशेष रूप गहन अध्ययन कयलनि अछि। मैथिली लोक-साहित्य अत्यन्त समृद्ध अछि। एकर प्रसंगमे डा० रामदेव झा मैथिली लोक साहित्यक महत्वक अभिज्ञात।

कतोक शताब्दी पुर्वहि कविशेखराचार्य ज्योतिरीश्वर ओ महाकवि विद्यापतिक भऽ गेल छलनि से एतिहासिक तथ्य अछि।

विद्यापतिक समय सँ मैथिलीक अभिजात साहित्य ओ लोक साहित्य विशेषतः लोकगीतक मध्य अदान-प्रदान चलैत रहल अछि।

21म शताब्दी सँ पुर्वहु मैथिली लोकसाहित्य पर काज सक भेल अछि किन्तु ओ काज कभ छिट पुट ओ असंगठित, अप्रकाशित छल “ मैथिली लोक साहित्य क्षेत्रमे अन्वेषण कथनिहार लोक साहित्यक विभिन्न अयाक कें भरनिहार प्रमुख विद्वान लोकनि छथि।

डा० जयकान्त मिश्र, डॉ० ब्रजकिशोर वर्मा, मणिपदक, डॉ० पुर्णानन्द दास, प० राजेश्वर झा, डॉ० अणिमा सिंह, प्र० प्रफुल्ल कुमार मौन, डॉ० रामदेव झा, डॉ० प्रेम शंकर सिंह, प्र० राजाराम प्रसाद, डॉ० विशेश्वर मिश्र, डॉ० योगानन्द झा, श्री महेन्द्र मलंगिया आदि। हिनका सभक अन्वेषणात्मक पृष्टिक प्रतिफल थिक जे मैथिली लोक गाथा अपन पथ पर गतिमान अछि।

मैथिली लोकसाहित्यक विस्तृत इतिहास सँ सम्बन्धित रचना के द्वि प्रमुख मे विभक्त कयल गेल अछि पहिल ‘मैथिली लोक साहित्यक स्वरूप ओ-दोसर खण्डमे मैथिली लोक साहित्यक विविध आयाम मे गंगा देवीक लोक गथा, मैथिली लोकोक्ति, लोक विश्वास ओ अन्ध विश्वास जादु टोना ओ तंत्र-मंत्र, मैथिली सुक्ति आदि विषयक वस्तुतः चर्चा कयल गेल अछि। लोक साहित्यमे अकिजात्यवर्गक समान ओ संस्कृति, अपन रीती रिवाज रूढ़िगत विश्वास आदिक चित्रणक अधिक्तक अछि। एहि सभ कारणेँ ओहि वर्गक स्वरूप प्रभाव सेहो देखवा मे आवेत अछि। पुरुष पात्र पुत्र पिताक रूपमे विषेस उल्लेखनीय रहल अछि किन्तु स्त्री पात्रक सम्बन्धक पारिवारीक जीवनमे सासु, ससुर भाउज देओर, ननदि, पिता, माय, भाय तथा बहिन रूपके कोन तरहँ निर्वहन करबाक चाहि, ओहि सम्बन्धक निर्वहनमे पुरुष पात्र कोन तरहँ स्त्री पात्रकें पताडित करैत अछि तकर सजीव चित्रण लोक साहित्यमें देखबा मे आवेत अछि। लोक साहित्यमे दलित नारी स्वर सती मंजरि, चनने सुनयना, महासुन्दरी- सुहबी-दुहबी रणचण्डी लुरकी, योगिनी कोसा मालिन महादेवी को हरोस। वस्तुतः लोक साहित्यमे दलित स्वर मुखर भेल अछि।

लोक साहित्यक अनेको स्थल पर दलित स्वर भरल अछि दलित स्वर राजा सलहेस, ओ लोरिक विजय लोक नाट्य जे क्रमशः दुसाध ओ यादव सम्प्रदायक थीक जाहि मे दलित स्वर अत्याचार विरुद्ध प्रखर भेल अछि राजा सलहेसमे दलित स्वरक स्थल देखल जाए:-

“तोहर झाँटा नोचियोगे निराशी” एहि तरहक चित्रन भेल अछि। मैथिली लोक साहित्य रचनामे कथाओ आलोचना ग्रंथ सभ उपलब्ध अछि। और कथा साहित्यक विषय वस्तुओ भाषाक सम्बन्धमे सुरेन्द्र झा ‘सुभनक’ विचार देखन जाए चिन्हल जानल पात्रक चुनाव गाम परिसरक स्वभाव ओ संभावित घटनाक प्रभाव अपन अनुभवक आधार पर लेखन निपुणता सँ कयलनि अछि। चलित भाषा सुबोध शैली ओ समस्या समायिकता, कथाक जटिलताक जालमे ओझराइल नहि मनसिकता केँ चोरायल नहि कोनो बादके छुआयल नहि कथा मे विविधता अछि। ई सम्पूर्ण पोथी “लोकसाहित्यक विस्तृत इतिहास” मे लोक साहित्यके पाँच भाग होइत अछि जेकरा विस्तृत रूपमे दखोने छथि।

लोकगीत

लोकगथा

लोककथा

लाक नाट्य

लोक सुभाषित

“जाँहि तत्व विधा अर्थात पाँच विधासँ यथा: लोक गीत लोकगथा, लोक कथा, लोक-नाट्य, आ लोक-सुभाषितसँ मैथिली लोकसाहित्य कलेवर अति पुष्ट होइत अछि। ओहिमे लोक गीतक स्थान प्रमुख अछि। लोकजीवनक अनुभूति क्रम युग-युगसँ मैथिली लोक गीत मे प्रभावित होइत हमरा लोकनिक जीवन धाराकेँ प्राणवत बनौने चल आबि रहल अछि।

मैथिली लोक-गीतक विस्तार जन्मसँ लऽ कऽ खेत-खलियान, पावन-तिहार वक्तीगत अनुभूति लोको उत्सव एवं मृत्यु धरि स्पष्टतः देखल जाइछ।”¹ मैथिली लोक साहित्यक प्रमुख दोसर अंग थिक ‘लोकगाथा’ जे लोक साहित्यक अमूल्य निधि किन लोकगाथा के परम परम्पराह अत्यन्त पुरातन रहला केँ कारणेँ एकर लोकक जीवनमे तका विभिन्न सम्प्राय के प्रमुख स्थान भेटैत अछि। कियाकी मैथिली लोक गाथा-काव्य अत्यधिक समृद्ध अछि। एहिमे विभिन्न युगक इतिहास, समाज दर्शन, लोकजीवन एवं चरित्रक उत्कर्ष सहज रूपेँ अंकित भेटैत अछि जे लोक साहित्यके अक्षुण्णकेयने अछि।

मैथिली लोक साहित्य तेसर प्रमुख अंग थिक ‘लोक कथा’ जे लोक साहित्यमे अपन महत्वपूर्ण स्थान रखैत अछि।

मैथिली ‘लोक कथा’ एकर प्रचीन परम्पराह रहल अछि। एकर बिज वैदिकके कालसँ भेटैत अछि।

इ कथा सभ समान्यजन वा जन समुदाय के विच गतिमान नदि जका एक पिढ़िसँ दोसर पिढ़ि धरि संचित धरोहर जका प्रभाहि होइत आयल अछि। “ऐहने मौखिक परम्परामे प्रचलित ओ शिष्ट साहित्यिक कथासँ भिन्न कथा समुह लोककथा कहल जाइत अछि”² लोक साहित्यक चरिम प्रमुख अंग थिक ‘लोक नाट्य’ इ ऐकटा समाज वा जन-समुदायक विच मे मनोरणजनक विधा थिक जाहि म समय समय पर लोक साहित्यमे जिवन्त घटना के चित्रित करैत अछि जेकरा मे अभिनय, कला अंग संचालन, आवाभित्यंजन, वाचन, सकाषण कथोपकथन, कला प्रसंग आदि सऽ रोचक आ मनगर रूपमे घटना के प्रस्तुत कएल जाइत अछि।

लोक साहित्य केँ पाँचम आ अमतिम भाग थिक—“लोक सुभाषित” मैथिली लोक साहित्यक ओ विधा जाहिमे “दैनिक जीवनमे व्यवृत्त कहवि, बुझौअलि, नेना लोकनिक पहेली, लोरी, बाल गीत, शिशुगीत, बालखेलगीत, आदि इ सभ विधा लोक सुभाषितक अन्तर्गत अवेत अछि। लोक सुभाषित लोककवि लोककण्ठमे विराजीत आ रक्षित लोक साहित्य थिक।”³ जनता जनार्दन उक्तिक लोकक अभिव्यक्ति थिक लोकती परंपरा अत्यन्त प्राचीन अधिसत्य ई अछि जे लोक जहिया सँ वाणिक व्यवहार करब सिखलक तिहिऐ सँऽ लोकोक्तिक प्रयोग करय लागल लोक सुभाषित लोक साहित्यक सम्पदा प्रतीक थिक”⁴

कर्मणौव हि संसिद्धिमास्थिता जनकादयः।⁵

लोकसंग्रहमेवापि संपश्यन्कर्तुमर्हसि।।

मैथिली लोकसाहित्यक इतिहास अति समृद्ध आ विस्तृत रहल अछि। ई अत्यन्त गौरवमय गाथाक संग शताब्दी सँ गतिमान अछि। एकर व्यापकताक महासागरमे कतेको लोकसाहित्यक मर्मज्ञ विद्वान् लोकनि डुबकी लगौलनि। किनको मोती भेटलनि किनको नरमदेश्वर किनको लोकसंस्कृतिक प्रमाणिक धरोहरि किओ कंकड़-पत्थर लऽ अवतीर्ण भेला तऽ किओ छुछे डुबकी लगबैत रहला अछि। एहि लोक साहित्यक जगत केँ जानबाक लेल हमर मोनक लोक-जिज्ञासा बलवती भेल आ हम ओहि ओर प्रवृत्त भेलहुँ। इतह संदर्भमे जे ज्ञात भेल अछि ओ थिक जे लोक जे किछु कहिया देखलनि सुनलनि, सेचलनि-बिचारलनि वएह तऽ हुनक लोक-ज्ञान राशि थिक। लोकजीवनक ई महान तथ्य जतेक सरल आओर स्वाभाविक रूपमे लोकसाहित्यक समस्त विधामे प्रतिबिम्बित पाओल जाइत अछि ओहेन अन्यत्र नहि। अतएव लोकसाहित्य नहि मात्र साहित्यक मूल स्रोत थिक अपितु ओ लोकजीवन-जगतक संगहि लोक संस्कृतिक सत्यक प्रतिबिम्बक रूपमे प्रतिनिधित्व करैत अछि।”⁶

“प्रत्यक्षदर्शी लोकानां सर्वदर्शी भवेन्नरः”⁷

अर्थात् जे व्यक्ति लोककेँ स्वतः अपन चक्षुसँ देखल अछि वएह ओकरा सम्यक् रूपसँ जानि सकैत अछि। हमर धारणा रहल अछि जे ओहि लोकजीवनक सस्त शक्तिकेँ चिह्नबाक प्रयास करी। ओहि दिस अग्रसर भेलाक पश्चातहि जखन लोक जगतक परिदृश्यसँ परिचय कयल तखन ओकर वाह्य, आन्तरिक, संगहि लोकवाङ्मयक विशिष्ट रूप ओकर वैविध्यता समृद्धता आदिकेँ किंचित रूपेण परखबाक अल्प प्रयास कयल अछि। एहिमे समायल अछि मैथिली लोकसाहित्यक विविध-विधाक विस्तृत रूप विभिन्न आयाम। लोकसाहित्य, लोककथा, लोकनाट्य, लोक रंगमंच, लोकसंस्कृति, लोकगीतक प्रमुखता, लोकगाथा

पुरुष पात्र, लोकउपन्यास, लोकगाथा वैशिष्ट्य, लोकसाहित्यमे व्याप्त लोकोक्ति, लोक-विश्वास आ अन्ध-विश्वास, जादू-टोना ओ तंत्र-मंत्र लोक आस्था, लोककंठ, लोकसूक्ति आदि। लोकसाहित्य के इ सब विद्या मिल के लोक साहित्य समृद्ध ओ अक्षुण्य भंडार प्रदान करैत अछि।

निष्कर्ष:—

लोक साहित्यक दीर्घकालीन परम्परा ओ अपरिमित विस्तारमे विस्तृत-वास्तविक स्वरूपक असल साक्ष्य आ ऐहिमे लोक जीवनक व्यापक ओ छिड़ियायल समस्त संवेदना सभक संयोजित रूप अछि एक तरहँ इ कहला जाएजे डॉ० राजाराम प्रसाद एहिलोक साहित्यक-विस्तृत इतिहास के माध्यम सँ लोकजनक, लोक-जीवनक-बिखरल सुत्र सभक साधन जे कोनो राष्ट्रक वा कोनो साहित्यक वा भाषाकेँ आ सांस्कृतिक गरिकाकेँ समृद्ध करबामे अपन बहुमुल्य योगदान देने अछि।

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प्रकृति के गोद में खेलते आदिवासी जनजातियाँ जिनके साँवले पैरों में चाँदी की चमकती झनकती नुपूर, शालीनता व्यवहारों में, आँखों में चमकीली चमक, और श्रृंगार के नाम पर अनेक फूलों को ही आभूषण बनाकर धारण करना, सच में सुकुन और जिवन से भरी जिन्दगी है। जीवन को सार्थकता प्रदान करती तथा मन को आनंदित करती चित्रण हैं। भवानी मिश्र प्रकृति के आत्मजसौंदर्य और चिर यौवन—सुषमा को अपनी लेखनी से साकार कर सके है। चाहे सरसों के पीले फूल हों, या आँगन का पीपल, चाहे अनार के पेड़ हों या हरी बेल के पात, चाहे बेल कुतरती गिलहरी हो या फुदकती—सी चिड़िया—सबसे कवि का निजी लगाव हैं। उसने सन्नाटे के स्वर सुने है और शुन्य रात के निस्तब्ध प्रहारों में मसान की साँसें भी गिनी है। सतपुड़ा के ऊँघतें अनमने अनमने जंगलों में उसका मन विचरण करता करता रहता है, सावन के बादलो क साथ झूमता है, सजीले फागुन में बरबस गा उठता है। भारत की समूची प्रकृति अपनी प्राण—राशि उलीचकर सरस बनाती है इसलिए वह कभी खत्म न होती हरी दूर को और पलाश की आत्मीयता को जान सका है, मधुमास के बरसते अनाहूत आनन्द में नहा सका है। धुली दूब हल्के बादल, वर्षा को झड़ी का सौंदर्य उसे चूप नहीं रहने देता क्योंकि कठिन है बहुत कठिन है बैठे—बैठे सहना सौंदर्य का। शुरू से अंत मन तन—तन से प्रकृति के रंग से डूबा कवि अस्तान सौंदर्य के प्रकाश की आखिरी किरण तक पी लेने के लिए उत्सुक बना बैठा है क्योंकि आम की मुजरी के भौर कभी पुराने नहीं पड़ते। कवि का कथन स्वयं उस पर सटीक बैठता है कि हरे पन में बिंध्या के वनों से हम नहीं हैं। कवि प्रकृति के सर्वोत्तम गुणों को मानव चेता पर प्रतिबिम्बित होते देखना चाहता है।

हिन्दी जगत के सुप्रसिद्ध कवि जिन्हे सन् 1972 में साहित्य आकादमी पुरस्कार से सम्मानित किया जो एक हरे पौधों तक को अपना आलज मानते है, वे दूसरे कोई नहीं, अपने पं० भवानी प्रसाद मिश्र है। मिश्र जी कि कविताओं में सुकुन आनंद सतोष मानवीय एवं प्रकृति स्नेह ढूँढ़ने कि आवश्यकता नहीं पड़ता है। ये सभी उनके काव्य दर्शन में स्वतः ही विद्यमान है चाहे वह सतपुड़ा के घने जंगल है या आज कोई कविता जैसे तमाम कविताओं में हवा, पंक्षी पेड़ आदि को मानवीय चेतना से सम्पन्न रचा है।

आज को जायेगा तन से
हल्के बिल्कुल हल्के
मन से
हवा तब हल्की ही चलेगी
और पंक्षी तब
सबके सब
चुप रहेंगे
दो होंगे रास्ते
जानेवाले के वास्ते
नगर को छोड़ देगा वह
जाएगा वन से वन की पगंडियों से
गुजरेगा
तो बड़े-छोटे पेड़ पौधो
थोरे झुक जाएंगे
कामों मे लगे हुए लोग
उससे निकल जाने तक
रुक जायेंगे
देखते जानते रहें है वह लोग
उसे अपने- अपने बचपन से। 1

अब ये किसी के जाने गुजरने के दो रास्ते नगर और वन के मेसे वन के रास्ते का चयन भवानी प्रसाद मिश्र कि कवि कि अपनी पसन्द है जो उसके अंतरंग कि रुचि, प्रकृति ही नहीं मिट्टि कि गंध कि बात कह रही है।

कवि मानव-कृत प्रकृति के पक्ष में है। जो बांधती नदी विकृत नदि करती मुक्त

करती है , उदार बनाती है जिनमके ऋण, सत् सुरक्षित है। प्रकृति और मनुष्य दोनों के अन्तः सत्य का रास्ता है वही कवि भवानी के लिए पम है काम्य है मिश्र जी नई कविता के विशिष्ट कवि है वे विशिष्ट है तो इसलिए कि उन्होंने अट पटे विचित्र से अपने रचना संसार को बचाते हुए सहजपन में निष्ठा

रखी है कवि अपनी सम्पूर्ण रचनाओं में यदि प्रकृति रख मानव के प्रति आकर्षित रहा है तो कविता की सार्थकता के लिए विद्रोहात्मक रूप अपनाने का भी अग्रही रहा है जिसके कारण उनकी कविता सहज ही सरल भाव बोध संपृक्त हो सकी है सौंदर्य मानव का आदिम प्रकृति है । ज्ञान और चेतना के उदय काल से ही मानव सौंदर्य प्रेमी है। भले ही मानव सौंदर्य प्रेमी है अब इस सौंदर्य के अन्तर्गत के मानव एवं प्रकृति का सौंदर्य भी सामिल है। भवानी प्रसाद मिश्र की रचनाओं में सौंदर्य के दो रूपों के दर्शन मुख्य रूप से होते हैं एक प्रकृति सौंदर्य और दूसरा मानव सौंदर्य। प्रकृति सौंदर्य के चित्रण में कवि ने अपनी रचनाओं पर संस्कृत के महा कवि कालिदास, अंग्रेजी कवि वर्ड्सवर्थ शैली ब्राउनिंग और विश्व कवि रविन्द्र नाथ ठाकुर के प्रभाव को स्वीकार किया है यह सभी कवि सौंदर्य, राग और रंग के कवि हैं, किन्तु कवि कि सौंदर्य चेतना मुलतः आयातित भी नहीं है। वे स्वभावतः प्रकृति सौंदर्य के कवि हैं मिश्र जी का अंतस प्रकृति के विभिन्न रूपों पर रीझता है और पंत की तरह वे प्रकृति के छोटे बड़े उपादानों पर रीझते दिखाई देते हैं अपने इस सौंदर्यात्मक पिरिधि में वे उषा, संध्या, सेवा नर्मदा, विन्ध्य तथा सावन भादों के साथ राग मे राग मिलाकर गित गाते हैं। गीतफरोस में कई ऐसे गीत हैं जो प्रकृति चित्रण प्रकृति सौंदर्य कि दृष्टि से श्रेष्ठ हैं और जो यह सिद्ध करते हैं कि वे प्रकृति चित्रण के कुशल शिली हैं प्रकृति सौंदर्य कि प्रत्येक वस्तु कवि को आत्मीय प्रतीत होती है प्रकृति सौंदर्य का चित्रांकन करते हैं। सतपूड़ा के घने जंगल, सागर के लहरो पर तितली पाले, बालरूप का दृश्य है, जो कवि के अंतर मोहित कर लेते हैं। प्रकृति कि अनगिनत घटक दृश्यावलियां कवि कों मंत्र मुग्ध कर लेती हैं और तब वह आत्म विभोर को कह उठता है

सुरज की आंखों से आँखें
मिलाकर
रग-रग में सम गई,
निंद को हिलाकर
गति को प्रकाश
और मति को
ध्याण कर दे। 2

कवि पावस का गायक है और डॉ० कांति कुमार ने लिखा है कि जिस प्रकार काली दास को वसंत का, रविन्द्र नाथ को साहित्यों का एवं निराला को बादलों को कहा जाता है उसी प्रकार मिश्र जी को हम वर्षा का कवि कहते हैं वर्षा कि निश्चित रूपों एवं मुद्राओं को लेकर जितनी कविताएं मिश्र जी ने लिखी हैं, उतना संभवतः हिन्दी किसी के किसी कवि ने नहीं। यह सिद्ध है कि वर्षा के दिन सबकी आँखों में उत्कुलता प्राणों में प्रभाव और शरीर में रोमांच पैदा करते हैं झरोखों के साथ वर्षा के मेघ-कण कवि को बरसात अपनी ओर उत्कृष्ट कर लेते हैं और कवि को ऐसा लगता है मानों बादलो का जगर्न-तर्जन विवाहोत्सव की स्थिति हो और वारिस की सुखद अनुभूति जैसे कितना के पुत्र जन्म कि अतुलनिय प्रसन्ता है।

सुदूर में एक तान

वह था एक किसान
जिसने अपने धरती के छोटे से टुकड़े को
किया सुनहला, लगा धान
धन गर्जन था उसका विवाह
वर्षा थी उसका पुत्र जन्म 3

मिश्र जी का प्रकृतिक दृश्यों का यह चित्रांकण सुन्दर भव्य और सूक्ष्म है। उनकी प्रसिद्ध रचना सतपुड़ा के घने जंगल इस परम्परा के श्रेष्ठ रचनाओं में है जिसमें मध्य-प्रदेश का वन्य-क्षेत्र सूक्ष्म रूम में मूर्तिमान हो उठा है। वन्यजल कि भव्य दृश्यमाला कवि की तुलिका से यहां साकार हो उठी है।

सतपुड़ा के घने जंगल
नींद में डूबे हुए से
उंधत अनमने जंगल
झार उँचे और नीचे
चुप खड़े हैं आँख नीचे 4

उन्होंने बार-बार अपनी रचनाओं पर रवीन्द्रनाथ जैसे सौंदर्यवेत्ता कलाकारों के प्रभाव का उल्लेख किया है। उनके गितों में फुदकते बच्चों लजाती ग्राम-बंधुओं कपोत कंठी गुंदरियों और मैने मौन बने रहने वाले लाज भरे सौंदर्य के चित्रांकण का पूर्णतः अभाव है और हम यह कह सकते हैं कि इनके काव्यों में रेख्य चित्रण का अभाव है उदान्त प्रेम के मोहक चित्रक गित फरोस, चकित है दूख या यत्र तत्र थोड़ी बहुत मात्रा में हम पा लेते हैं परन्तु उसकी संख्या बहुत कम है।

प्रकृति सौंदर्य से लेकर मानव सौंदर्य तक के मोहक चित्रण कवि को रचना में भरे पड़े हैं।

और यही इनकी रचनाओं को विशिष्टता प्रदान करती है ज्ञान और चेतना के उदय काल से प्रकृति और मानव का चित्र स्थाई संबंध रहा है इसलिए काव्य साहित्य में प्रकृति प्रयोग का सर्वाधिक प्रयोग मिलता है। वृक्ष, नदि, नाले, सर, सरिताएं, फूल-फल, झील झरने, सूर्य-चन्द्रमा, तारं प्रकाश तथा अंधकार आदि प्रकृतिक के उपांगों को वर्णन विवरण काव्य सजन में जितनी मधुरता से किया गया, उतनी अधिकता से किसी अन्य बस्तु का नहीं आधुनिक कवि पं० भवानि प्रसाद मिश्र कि कविताओं में प्रकृति प्रतिक का बाहुल्य है जिसका एक उदाहरण निम्न कविता में देखा जा सकता है

फूल लाया हुआ कमल के,

क्या करू इनका?
पसारे आप ऑंचल
छोर दू
हो जाए जी हल्का 5

इसमें कमल कविता का प्रतिष्ठित है। कवि उन्हें आनसर से निकालकर लाया है और पाठको का ऑंचल उससे भर देना चाहता है भवानी प्रसाद मिश्र प्रकृतिको अपने हृदय से जोरे रहते हैं। प्रकृति से ही वे अपनी काव्य भाषा की सर्जनात्मक पहचान करते हैं। प्रकृति से रिस्ता रखना आदिम स्वभाव है वह प्रकृति की खेती करता है। प्रकृति को बनाता बिगारता है उसे कहीं अपने से अलग करता है या कहीं उससे स्वयं जुड़ता है यह सत्य है, कि प्रेम वातावरण को साफ सुंदर और स्वच्छ सुंदर बनाता है और सर्जन कि ओर भी ले जाता है इसलिए मिश्र जी बादल से आह्वान करते हैं कि तुम इस सस्त्र सज्जित स्वर्थ पिड़ित समाज का विनास करो ताकि पुनः सर्जन हो। वस्तुतः नवसृजित प्रकृति को सार्वभौम प्रेम की आवश्यकता है उसे पानी कि बुन्द भी चाहिए, सुर्य कि रोशनी भी चाहिए शिशु का कोमल स्पर्श भी। यानि प्रकृति उपादन एक साथ हिविधवंस और सुजन दोनों कर सकते हैं अपनी रचना में भवानी जी ने प्रगति के विविध रंगों को उभारा है फिर भी उनके प्रगति चित्रण में कुछ स्वास उपादन विशेष रूप से सक्रीय नजर आते हैं। ये हैं धरती, नही (नर्मदा) फुल कमल आसमान सुर्य वृक्ष तारें और बरसात एक तरफ धरती वृक्ष, नदी ओर फुल को रख दिजिए। तथा दूसरी तरफ आसमान तारें बरसात और सुर्य को कैसा सुन्दर संतुलन है धरती और वृक्ष का नदी फुल का जा सम्बन्ध है क्या कुछ वैसा ही सम्बन्ध आसमान तथा तारे और बरसात तथा सुर्य का नहीं है?

मिश्र जी के यहां कविता और प्रकृति में द्वन्दात्मक संबंध है, वे प्रकृति के सहारे कविता

तक पहुंचते हैं और कविता के साथ प्रकृति तक है बुनी हुई रस्सी जिसके लिए मिश्र जी को साहित्य आकादमी पुरस्कार से सम्मानित किया गया का ये पंक्तियां अवलोकनिय हैं।

रात के खिड़की के बाहर
ऑखे गड़ाये रख कर जब-जब ताका है मैने
प्रायः देर सवेर
तब-तब भीतर झोंका है मैने
उमड़ता कहा है इसके बाद
जाने कितने दिनों तक
मेरे भीतर बाहर काव्य सा 6

अतएव यह स्पष्ट है कि मिश्र जी का काव्य पूर्णतः प्रकृति तत्व से अनुपणित है। वे अपनी राचनाओं में प्रकृति उपादनो के माध्यम से जीवन जगत के विविध पहलुओं को निहारते हैं। वस्तुतः प्रमी ही सच्चा देश भक्त होता है। भवानि प्रसाद मिश्रा उस कसौटी पर खरे उतरते हैं मिश्र जी तो कोई बात बिना प्रकृति के कहते ही नहीं। या यूँ कहें कि व जिस कविता के वस्तु विवेक को रचते चलते हैं उसे बिना किसी प्रकृति आश्रम के पूर्ण ही नहीं कर पाते भवानी जी कि कविताओं को पढ़ते हुए यह अद्भूत ढंग से लगा कि प्रकृति और स्त्री के बिना क्या कोई कविता पूर्ण नहीं हाती। शायद यह प्रश्न शायद जीवन के समरूप पर व्यापक कार्य में थी महत्वपूर्ण है। जो भी हो भवानी जी प्रकृति का पद-पद पर विनियोग करतें हैं। कवि मिश्र जी बार-बार अपने अनुभव और कथन के प्रारूप को मूर्त रूप देने के लिए प्रकृति को चुनतें हैं इनकी कविताओं को में प्रकृति को खोजना नहीं पड़ता वे विचार से विचार, दर्शन से दर्शन, दुख से दुख, सुख से सुख और अपनी शब्द शस्त्र को ऐन्द्रिक बनाने के फेर में नहीं परतें। बरी आसानी से प्रकृति के बीच रहते हैं उसे अपना सहचार्य बनाते हैं यह खुलापन, हल्कापन और सादापन उनके प्रकृतिक संबोधन का महत्वपूर्ण हिस्सा है भवानि जी कि प्रकृतिक चेतना अलग-अलग नहीं है वे शब्द धरती मनुष्य और प्रेम सबको प्रकृति कि भाषा में सुनते और गाते हैं यहां तक जब भी वे अपनी ओर अपने समर्थ कि छोटी-बड़ी समस्या से निजात पाना चाहते हैं तो प्रकृति उन्हें शब्द प्रदान करती है निरर्थकता कि निराश को दूर कर आशा और विश्वास कालिन सूर्य का दर्शन कराती है। उनके बहुते से संकलनों कि सैकड़ों कविताओं से यह बात प्रमाणित कि जा सकती है। पर सब उदाहरण ना तो काम्य है, ना अपेक्षित है। उनकी दूसरा संपक में प्रकाशित बड़ी कविता सतपूड़ा के घने जंगल में ही पर्याप्त है यह कविता शुद्ध रूप से प्रकृति कि कविता है आलम्बन के रूप में प्रकृति का इतना सहज विकुंड और पारदर्शी बहते जल के प्रभाव सा निर्मल प्रकृति काव्य रूप प्रायः हिन्दी की आधुनिक कविता में एक दुर्लभ संयोग है प्रकृति और सुंदरदा के साथ-साथ मार्मिकता उत्साहवद्यर्मिता और जीवनतः के अविकल अनुवाद कि मिश्र जी कि कविता प्रयोगवादी दौर में भी काली दास जैसे बड़े क्लैसिक कविताओं कि याद दिलाई है प्रकृति से रिस्ता रखना का आदिम स्वभाव है कवि प्रकृति से संवाद कि स्थितियों में फूल-पतियों से चेतन्य संवाद के छनों में जो अनुभूतियां प्राप्त करता है उन्हें मानवीय आशयों में गूँथकर सामाजिक आयामों में सबके लिए सुलभ बना देता है। इतना ही नहीं प्रकृति के प्रति अति मधुरता और मुग्धता के व्यवहारों तक कवि कि संबंधता है प्रकृति के प्रति उनकी संबेदनशीलता के आयाम भी कवि कि कविताओं में खुलतें हैं। वह भाई -बुधुओं से मिलते समय कुशलक्षेम पुछने भांति दी नदी, पहाड़, पेड़-पौधा और घास से भी मिलने पर कुशलक्षेम पूछना नहीं भूलते

कुशल प्रश्न पूछता रहता हु
नदी से पहार से
पेड़ से पौधे से , घास से। 7

फिर मानवादी प्रकृति वादी होने के कारण मिश्र जी पेरो के कटने छटने कि दोहड़ी पिड़ा से विहाल हो उठतें हैं प्रकृति के अस्तित्व के साथ खिलवार करने से मनुष्य ने स्वयं अपनी तो हानी कि है, प्रकृति को भी बोना और खण्डित किया है। इतना ही नहीं उनकी जड़ों तक को काटकर उनके विकसित रूपों को बोंसों पद्धति बोना बनाकर अपने घरों के भीतर कैद कर लिया है।

बरगद, पिपल आम तक अवरुद्ध विकास पेड़ों को कमरों में सजा लिया है भवानी प्रसाद मिश्र इस प्रकार कि प्रकृति से छेड़खानी के सख्त विरोधि है।

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Topic

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भारत एक विशाल देश है। इसकी सीमायें अनेक देशों की सीमाओं से जुड़ी हैं, विशालता के दृष्टिकोण से भारत की गणना विश्व के प्रमुख देशों में की जाती है। प्राचीन काल में भारत को सोने की चड़िया भी कहा जाता था। यहां की खनिज सम्पदा व प्राकृतिक वातावरण से विदेशी भी दंग रह जाते हैं। किसी भी राष्ट्र के विकास में वहाँ के राजनैतिक, धार्मिक, आर्थिक व सांस्कृतिक पहलुओं का गहरा प्रभाव पड़ता है। किसी भी राष्ट्र के अतीत की ज्ञांकी वहाँ के इतिहास में झलकती है। इतिहास एक ऐसा दर्पण है, जिसके समक्ष खड़े होकर हम अतीत की सभी घटनाओं (राजनैतिक, धार्मिक, सामाजिक, नैतिक, सांस्कृतिक व आर्थिक) को अच्छी तरह देख सकते हैं।

हिमालय के दक्षिण ढाल पर उत्तर में तिब्बत वर्तमान समय में चीन का अभिन्न अंग तथा दक्षिण में भारत के मध्य स्थित हैं। विश्व का एक मात्र हिन्दू राष्ट्र नेपाल भारतीय सम्बन्धों की दृष्टि से महत्वपूर्ण है। पूर्व से पश्चिम की ओर 500 मील तथा दक्षिण से उत्तर की ओर 90 से 150 मील के विस्तार से इस भू-भाग का क्षेत्रफल 54,5,63 वर्गमील हैं। युक्त यदि हम नेपाल को भारत के विस्तृत और सर्वाधिक उपजाऊ गंगा प्रदेश का प्रवेश द्वार कहें तो कई अतिशयोक्ति नहीं होगी। नेपाल और भारत के मध्य कोई ऐसी प्राकृतिक सीमा विभाजक रेखा नहीं है जिससे यह पता चलता हो कि भारत नेपाल अलग-अलग देश हैं, बल्कि ऐसा लगता है कि भारत के विशाल आँगन में ही नेपाल बसा हो। निकटतम पड़ोसी होने के नाते दोनों राष्ट्रों के हित परस्पर बंधे हैं। भारत और चीन जैसी दो विशाल चट्टानों के बीच उगने वाले नेपाल रूपी सुकोमल पौधे के राजनैतिक चिन्तन मनन की मौलिकता को ध्यान में रखते हुए भारत और नेपाल के मधुर सम्बन्धों से दोनों देश फलीभूत हुए हैं। मानवता की कसौटी पर सदैव खरा उतरने वाला नेपाल राष्ट्र सदा भारत से राजनैतिक, व्यापारिक, औद्योगिक, शैक्षिक, धार्मिक, सांस्कृतिक व आर्थिक पहलुओं को प्राथमिकता देता रहा है, जो उसकी एकता, अखण्डता, सद्भावना, परोपकारिता आदि उदारवादी बातों का परिचायक है।

देश की आजादी से पहले कई बार ऐसे अवसर आये हैं कि भारत नेपाल सम्बन्धों में तनाव देखने को मिला,

क्योंकि नेपाल ने अपने विकास हेतु कई देशों से सम्पर्क बनाना उचित समझा। भारत नेपाल सम्बन्धों को दृष्टिगत रखते हुए भारत सरकार ने समय-समय पर उदारवादो, गांधीवादी नीति का ही परिचय दिया है। जबकि कभी-कभी नेपाल ने इस नीति का खुला विरोध भी किया है।

हाल में नेपाल दक्षिण एशिया की क्षेत्रीय राजनीति में एक महत्वपूर्ण राज्य के रूप में उभर कर आया है। इसकी सामरिक स्थिति ने न केवल भारत व चीन वरन् अमरीका, इंग्लैण्ड, जर्मनी, जापान, रूस जैसे देशों का ध्यान अपनी ओर आकर्षित किया है। भारत के लिए नेपाल का प्रमुख महत्व इस कारण है कि यह न्यूनाधिक एक बफर क्षेत्र के रूप में उत्तर में साम्यवादी चीन तथा दक्षिण में भारत के बीच बसा हुआ है। इसे भारत का उत्तरी प्रवेश द्वार कहा जा सकता है। नेपाल का क्षेत्रफल लगभग 54 वर्गमील है और जनसंख्या लगभग 2 करोड़ 90 लाख है। यह आकार में भारत के बिहार (झारखण्ड सहित) या उत्तर-प्रदेश से भी छोटा है। भारत इससे आकार में 22 गुना और जनसंख्या की दृष्टि से 54 गुना बड़ा है। चीन इससे क्षेत्रफल में 75 गुना और आबादी में 70 गुना बड़ा है। इसका 83 प्रतिशत भाग पर्वतीय है और 17 प्रतिशत भू-भाग मैदानी है। तिब्बत पर चीन के आधिपत्य तथा सिक्किम के भारत में विलय के बाद इसका महत्व और ज्यादा बढ़ गया है। 1962 में चीन के सैनिक आक्रमण के बाद से नेपाल भारतीय विदेश नीति के लिए एक विशेष महत्व का विषय बन गया है।

भारत विदेश मंत्रालय की रिपोर्ट 1983-84 के अनुसार 1983 के उत्तरार्द्ध में कुछ ऐसी छिटपुट घटनायें हो गयीं जिससे यह लगा कि भारत नेपाल सम्बन्धों को धक्का पहुँच रहा है। लेकिन धीरे-धीरे इन मन-मुटावों को दूर किया गया है। दोनों देशों ने दृढ़ता का परिचय दिया और दोनों देश पुनः एकता के सूत्र में बंध गये।

भारत के पड़ोसी देशों में भारतीय विदेश नीति की महत्वपूर्ण भूमिका रही है क्योंकि विदेश नीति को आधार मानते हुए हमारे पड़ोसी देशों से जो सम्बन्ध हैं, विदेश नीति उन सब में मौलिकता प्रदान करती है। भारतीय विदेशी नीति गुट निरपेक्षता पंचशील आदि सिद्धान्तों का प्रतिपादन करती है जिसका औचित्य है कि सभी देशों से एकता, मित्रता व सद्भावना के सम्बन्ध स्थापित हो सकें।

भारत में राजनैतिक उथल-पुथल से कांग्रेस सरकार सत्ता में नहीं रही, राजनैतिक दाव-पेंच से कई राजनीतिक पार्टियाँ मिल-जुल कर जनता दल सरकार के रूप में उभर कर सामने आई, यहीं से भारत नेपाल सम्बन्धों का एक नया दौर आरम्भ हुआ। क्योंकि इससे पहले भारत नेपाल सम्बन्धों में कुछ तनाव की स्थिति पैदा हो गयी थी। वर्ष 1990 में भारतीय प्रधानमंत्री श्री. वी. पी. सिंह ने नेपाल प्रधानमंत्री श्री. के. पी. भट्टराई की भारत यात्रा का हार्दिक स्वागत किया था, विदाई के समय उनको डॉक्टर ऑफ लॉ की मानद उपाधि से सम्मानित किया तथा उन्हें अगाध मैत्री उपहार स्वरूप दो हेलीकाप्टर भेंट किये।

मैत्री सम्बन्धों की शृंखला को आगे बढ़ाते हुए भारतीय प्रधानमंत्री माननीय चन्द्रशेखर जी नेपाल यात्रा से भारत नेपाल सम्बन्धी में नवीन चेतना का उदय हुआ।

वर्ष 1991 में नेपाली प्रधानमंत्री श्री. जी.पी. कोइराला की भारत यात्रा उल्लेखनीय है। भारतीय प्रधानमंत्री श्री. पी. वी. नरसिंहा राव ने नेपाली प्रधानमंत्री की यात्रा का भव्य स्वागत किया। श्री. कोइराला के साथ एक उच्च स्तरीय दल भारत आया। कई महत्वपूर्ण सन्धियों पर हस्ताक्षर किये गये। इस प्रकार बाजपेयी के काल में भी भारत-नेपाल सम्बन्ध मधुर बने रहे। भविष्य में भी भारत-नेपाल सम्बन्धों में नवीन चेतना का उदय होता रहेगा जिससे दोनों देश फलीभूत होंगे।

आशा ही नहीं बल्कि पूर्ण विश्वास है कि भारत-नेपाल सम्बन्धों की शृंखला युग-युग तक स्नेह व जागरूकता का प्रेरक बनी रहेगी जो भारतीय व नेपाली नागरिकों के लिए सुपथगामी सिद्ध होगी। जिससे निःशस्त्रीकरण का तथा अन्तर्राष्ट्रीय सम्बन्धों में विशेष बल मिल सकेगा और भारत-नेपाल सम्बन्ध प्रेरणा का स्रोत बनकर उन्नति-शील रहेगा।

वर्तमान में भी भारतीय प्रधानमंत्री डॉ. मनमोहन सिंह जी भारत-नेपाल सम्बन्धों में समय-समय सुझाव देते रहे हैं। साथ ही भारत-नेपाल के मध्य जो भी परियोजनायें चल रही हैं, उसे भारत सरकार शीघ्र पूरा करने को वचनबद्ध है, जिससे पता चलता है कि भविष्य में भारत-नेपाल सम्बन्ध मधुर होंगे।

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Topic

“कलचुरी युगीन छत्तीसगढ़ में ग्राम व्यवस्था”
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बोध सारांश

छत्तीसगढ़ (दक्षिण कोसल) के इतिहास में कलचुरी शासन का अत्यंत महत्वपूर्ण स्थान है। त्रिपुरी के कलचुरियों की एक शाखा दक्षिण कोसल में आकर राज्य करने लगी। कालांतर में तुम्माण को राजधानी बनाकर कलिंगराज एवं कमलराज ने छत्तीसगढ़ में स्वतंत्र कलचुरी राज्य की स्थापना की। कलचुरी काल में गढ़ों का विशेष महत्व था। छत्तीसगढ़ में कुल 36 गढ़ थे, रतनपुर राज्य में 18 गढ़ और रायपुर राज्य में 18 गढ़।⁽⁵⁾ इसलिए इस क्षेत्र का नामकरण छत्तीसगढ़ रखा गया। गढ़ क्षेत्र में आने वाले गाँवों में जो प्रमुख गाँव होता था वही गढ़पति का निवास होता था और गढ़ का नामकरण उसी गाँव के नामकरण पर होता था। प्रशासनिक इकाई के रूप में गढ़ बरहों में विभाजित थी। बरहों का शाब्दिक अर्थ – बारह गाँव का समूह। कलचुरी कालीन छत्तीसगढ़ में गाँव का मुखिया गौटिया कहलाता था। ग्रामों में सुव्यवस्था बनाये रखने के लिए पंचायत होती थी। गौटिया किसानों के बीच सम्पर्क का कार्य करता था। गाँव वालों और किसानों से निर्धारित मात्रा में कर वसूल करने का कार्य गौटिया का होता था। लगान वसूल कर दाऊ तक भेजने का कार्य गौटिया द्वारा किया जाता था।⁽¹⁵⁾ जो गौटिया किसानों के दुःख सुख में साथ देता था वह गाँव में अधिक सम्मान पाता था।

छत्तीसगढ़ (दक्षिण कोसल) के इतिहास में कलचुरी शासन का अत्यंत महत्वपूर्ण स्थान है। त्रिपुरी के कलचुरियों की एक शाखा दक्षिण कोसल में आकर राज्य करने लगी। कालांतर में तुम्माण को राजधानी बनाकर कलिंगराज एवं कमलराज ने छत्तीसगढ़ में स्वतंत्र कलचुरी राज्य की स्थापना की।⁽¹⁾ रत्नराज ने मणिपुर नामक गाँव को राजधानी बनाकर रतनपुर राज्य की स्थापना किया। रतनपुर अनेक वर्षों तक छत्तीसगढ़ में हैहयवंशियों की राजधानी रही। तत्पश्चात् रत्नदेव का बेटा पृथ्वीदेव प्रथम 1065 ई में सिंहासन पर बैठा, उसके ताम्रपत्र में उसे सकलकोषलाधिपति कहा गया है।⁽²⁾ 1090 ई में जाजल्लदेव शासक हुए, उनका शासन उपलब्धिमय रहा। जाजल्लदेव का पुत्र रत्नदेव द्वितीय के नाम से सिंहासन पर बैठा, उसने अपने साम्राज्य का विस्तार दूर दूर तक किया। फिर कमषः पृथ्वीदेव द्वितीय, जाजल्लदेव द्वितीय, जगद्देव, रत्नदेव तृतीय, प्रतापमल्ल, बाहरसाय और अंतिम शासक रघुनाथराव हुए।⁽³⁾ कालान्तर में छत्तीसगढ़ में कलचुरी राज्य दो

षाखा में विभाजित हो गई, रतनपुर और रायपुर। रघुनाथराव के समय मराठा आक्रमण हुए और छत्तीसगढ़ का प्रशासन भोसले शासक के अधीन आ गया।(4)

छत्तीसगढ़ में संपूर्ण कलचुरी राज्य दो राजधानियों में बँटा था— उत्तरी राज्य का मुख्यालय रतनपुर और दक्षिण क्षेत्र का मुख्यालय रायपुर। कलचुरी प्रशासन गढ़ों में विभाजित थे। कलचुरी काल में गढ़ों का विशेष महत्व था। छत्तीसगढ़ में कुल 36 गढ़ थे, रतनपुर राज्य में 18 गढ़ और रायपुर राज्य में 18 गढ़।(5) इसलिए इस क्षेत्र का नामकरण छत्तीसगढ़ रखा गया। 112 वर्ष पूर्व प्रकाशित लेख “ मिर्जापुर से नागपुर की यात्रा वर्णन ” में इसका स्पष्ट उल्लेख मिलता है।(6)

रतनपुर, खरौद, विजयपुर, मारो, कोटगढ़, नवागढ़, सोँधी, औखर, पडरभट्टा, सेमरिया, चोंपा, लाफा, छुरी, केन्डा, मातीन, अपरोड़ा, पेंड्रा, कुरकुटी कंडी रतनपुर राज्य में एवं रायपुर, पाटन, सिमगा, लवन, सिंगारपुर, अमेरा, दुर्ग, सारधा, सिरसा, मोहंदी, खल्लारी, सिरपुर, फिंगेष्वर, राजिम, सिंघनगढ़, सुअरमार, टेंगनागढ़, अकलतरा रायपुर राज्य के अधीन थे।(7)

मूलषब्द ताम्रपत्र, सकलकोषलाधिपति

- 1 तिवारी पुष्पा— कलचुरी युगीन समाज एवं संस्कृति लोकहित प्रकाशन दिल्ली—93 प्रसं 2007 पृ 26
- 2 मिश्र प्रभुलाल एवं मिश्र रमेशनाथ— मध्ययुगीन छत्तीसगढ़ में राजपूत राज्यों की क्षेत्रीय प्रशासनिक व्यवस्था प्रथम संस्करण 2009 श्रीराम प्रिंटर्स अवन्तीबाई चौक रायपुर छ. ग. पृ 6
- 3 बेहार रामकुमार— छत्तीसगढ़ इतिहास के प्रमुख प्रकरण 2002 पृ 17
- 4 मिश्रा रमेशनाथ एवं झा लक्ष्मीधर— छत्तीसगढ़ का राजनीतिक एवं सांस्कृतिक इतिहास सेन्टल बुक हाउस रायपुर पृ 14
- 5 वाल्यानी एवं साहसी — छत्तीसगढ़ का राजनीतिक एवं सांस्कृतिक इतिहास दिव्या प्रकाशन कांकर प्र. सं 2007 पृ 45
- 6 मिश्र प्रभुलाल एवं मिश्र रमेशनाथ— पूर्वोक्त पृ 8
- 7 गुप्त प्यारेलाल— प्राचीन छत्तीसगढ़ 1973 पृ. 242

गढ़ों पर आधारित शासन व्यवस्था पर विषयसंघीय जानकारी रतनपुर के कवि गोपालमिश्र ने अपने ग्रंथ “ खूब तमाषा ” में लिखा है।

परजा के अमनैक गाढ़ प्रति बसै छत्तीस जात

परजा देइ साहेब की अमनैको समयात

कोई जानि चलि अपने बढ़त बढ़त चलि जाही

सो पुनि पाँच पचास गाँव के ठाकुर एक कहाही

ठाकुर पाँच पचास ठीकते बड़े बड़े उमरावै
 ते उमरावै पचास पाँच ते राजा एक कहावै
 राजा पाँच पचास में उपर बड़े एक जो छाजा
 सो देखे सो खूब तमाषा ते राजन पर राजा।⁽⁸⁾

उपरोक्त पंक्तियों में कवि ने कलचुरी कालीन प्रशासनिक इकाई का सम्यक चित्रण किया है। गाँवों में सभी जातियाँ निवास करती थी, आज भी छत्तीसगढ़ के गाँवों में ये विशेषता देखने मिलती है।⁽⁸⁾कलचुरी कालीन गढ़ों के अधीन सामान्यतः 84 गाँव होते थे। इसी कारण इसे गढ़चौरासी भी कहा जाता था।

छत्तीसगढ़ गाढ़े जहाँ बड़े गढ़ोई जान।

सवा स्वामिन को रहे सके ऐड़ को मानि।।⁽⁹⁾

रतनपुर राज्य		रायपुर राज्य	
गढ़ों के नाम	गाँवों की संख्या	गढ़ों के नाम	गाँवों की संख्या
1 रतनपुर	360	1 रायपुर	640
2 मारो	354	2 पाटन	152
3 विजयपुर	326	3 सिमगा	84
4 खरौद	145	4 सिंगारपुर	स्पष्ट नहीं
5 कोटगढ़	84	5 लवन	252
6 नवागढ़	84	6 अमेरा	84
7 सोनठी	84	7 दुर्ग	84
8 ओखर	32	8 सारदा	अज्ञात
9 पंडरभट्टा	जिसमें मुंगेली सहित 324गाँव	9 सिरसा	84
10 सेमरिया	84	10 मोहदी	84
11 चांपा (मदनपुर)	153	11 खल्लारी	84
12 लाफा	200	12 सिरपुर	84
13 छुरी	220	13 फिंगेष्वर	84
14 कैंदा	84	14 राजिम	84

15 मातिन	84	15 सिंघनगढ़	84
16 उपरोरा	84	16 सूअरमार	84
17 पेंडा	84	17 टेंगनागढ़	84
18 कुरकुट्टी (अब यह बघेलखंड रीवा में हैं)	02 गढ़ 700 गाँव	18 अकलतरा	84

उपरोक्त सूची अनुसार छत्तीसगढ़ में कुल गाँवों की संख्या रतनपुर में 2677 एवं रायपुर में 1136 थी।⁽¹⁰⁾

मूलषब्द — परजा, अमनैक, उमरावै, गढ़ोई

8 सिंहदेव जीतमित्र प्रसाद—दक्षिण कोसल का सांस्कृतिक इतिहास छत्तीसगढ़ राज्य हिंदीग्रंथ अकादमी रायपुर 2007 पृ 14

9 पाण्डेय ऋशिराज— छत्तीसगढ़ दक्षिण कोसल के कलचुरी छत्तीसगढ़ राज्य हिंदीग्रंथ अकादमी रायपुर पृ 78

10 मिश्र प्रभुलाल एवं मिश्र रमेशनाथ— पूर्वोक्त पृ 10

गढ़ क्षेत्र में आने वाले गाँवों में जो प्रमुख गाँव होता था वही गढ़पति का निवास होता था और गढ़ का नामकरण उसी गाँव के नामकरण पर होता था। कर वसूली और अन्य प्रशासनिक कार्य के लिए गढ़चौरासी का अधिकारी राजा के प्रति जिम्मेदार होता था। गढ़प्रमुख राजा का विष्वासपात्र होता था। गढ़प्रमुख यदि ब्राह्मण होता तो उसे दीवान कहा जाता था और क्षत्रिय होने पर ठाकुर कहा जाता था। गढ़पति गढ़ का सर्वेसर्वा होता था, उस पर केवल राजा का नियंत्रण होता था। आंतरिक मामलों में वह पूर्ण स्वतंत्र था। निर्धारित खजाने राजकोश में जमा करना उसका दायित्व होता था।⁽¹¹⁾ गढ़ व्यवस्था के बारे में चिषम ने लिखा है—“ सारा राज्य छोटे छोटे करद राज्यों में बँटा हुआ था, जो अधिकांशतः स्वतंत्र ही थे।⁽¹²⁾

गढ़ अनेक जमींदारियों में बँटी हुई थी। कालान्तर में जमींदारी एवं मालगुजारी व्यवस्था ग्रामीण कृषक एवं राजा के लिए अभिश्राप हुआ। हैहयवंशी शासन की गौरव के पतन में जमींदारी एवं मालगुजारी व्यवस्था दोषपूर्ण सिद्ध हुआ।⁽¹³⁾

प्रशासनिक इकाई के रूप में गढ़ बरहों में विभाजित थी। बरहों का शाब्दिक अर्थ — बारह गाँव का समूह। आगे चलकर बरहों तालुकका कहलाए। बरहों का प्रमुख अधिकारी दाऊ कहलाता था, बरहों में राजस्व वसूली व अन्य प्रशासनिक कार्य दाऊ के द्वारा किया जाता था। बरहों के प्रमुख दाऊ द्वारा अपने रिस्तेदार को गौटिया ग्राम प्रमुख का पद दिया जाता था।⁽¹⁴⁾

कलचुरी प्रशासन में सबसे छोटी इकाई ग्राम थी। कलचुरी कालीन छत्तीसगढ़ में गाँव का मुखिया गौटिया कहलाता था। ग्रामों में सुव्यवस्था बनाय रखने के लिए पंचायत होती थी। गौटिया किसानों के बीच सम्पर्क का कार्य करता था। गाँव वालों और किसानों से निर्धारित मात्रा में कर वसूल करने का कार्य गौटिया का होता था। लगान वसूल कर दारु तक भेजने का कार्य गौटिया द्वारा किया जाता था।⁽¹⁵⁾ जो गौटिया किसानों के दुःख सुख में साथ देता था वह गाँव में अधिक सम्मान पाता था। किसानों के मध्य भूमि बँटवारा का अधिकार गौटिया का था। इसके अलावा गाँव में आने वाले अधिकारियों कर्मचारियों की आवभगत के खर्च के लिए सेराडोली नामक अतिरिक्त भूमि रखता था। सेराडोली की जुताई बोवाई गाँव के किसानों द्वारा निःशुल्क किया जाता था।⁽¹⁶⁾

गाँव में विभिन्न जाति वर्ग के मानने वाले निवास करते थे। सबके साथ समन्वय और न्याय करना गौटिया का मुख्य कर्तव्य होता था। वह गाँव के आंतरिक मामलों में अंतिम निर्णय देता था। साथ ही पशुओं की गणना का हिसाब भी गौटिया द्वारा किया जाता था। गाँव में निर्माण कार्य जैसे तालाब खुदवाना, बगीचा लगवाना, त्योहार का आयोजन आदि गौटिया के द्वारा किए जाते थे। भूमिहीन कृषकों को आवास भूमि उपलब्ध कराने का कार्य गौटिया करता था।⁽¹⁷⁾ वह गाँव में पटेल की सहायता से अपराधों को रोकने का कार्य करता था। अपराध के लिए जुर्माना लिया जाता था, जुर्माने को दण्ड कहा जाता था। जुर्माने की रकम राजा के द्वारा नियुक्त दानग्रहिता के पास जाता था। पंचायत की फैसला अंतिम होता था जिसकी अपील राजा को छोड़ कही नहीं होती थी। इसे 'सहाभ्यत्तरासिद्धि' कहा जाता था। पंचायत संबंधी परम्पराओं का पालन बड़ी सख्ती से किये जाने का उल्लेख अभिलेखों में मिलता है। पंचों को पंच परमेश्वर एवं पंचायतों को पंचजल कहा जाता था। ग्राम पंचायत झगड़ों के निपटारे के साथ साथ अन्य कार्य भी करती थी।⁽¹⁸⁾

मूलषब्द—गढ़पति, गढ़चौरासी, गौटिया, सेराडोली

11 डिस्ट्रिक्ट गजेटियर बिलासपुर 1910 पृ 103

12 रायबहादुर हीरालाल— इन्सिक्पुस इन सी. पी. एंड बरार 1932 पृ. 10

13 जे. बी. बेगलर — आर्कैलाजिकल सर्वे आफ इंडिया 1875

14 सर रिचर्ड टेम्पल— रिपोर्ट ऑन दी जमींदारी एंड पेटचीफटेंस ऑफ सी पी अप टू 1863

15 चिषम सेटलमेंट रिपोर्ट पृ 29

16 ए. कनिंघम — आर्कैलाजिकल सर्वे आफ इंडिया 1878

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18 पाण्डेय ऋशिराज— छत्तीसगढ़ दक्षिण कोसल के कलचुरी छत्तीसगढ़ राज्य हिंदीग्रंथ अकादमी रायपुर पृ 78

गौटिया के आय के साधन में कृषि योग्य भूमि का 1/8 भाग निःशुल्क दिया जाता था। गाँव का 1/16 भाग भूमि भी दान आदि कार्यों के लिए दी जाती थी। अनाज की खरीदी करने वाले व्यापारियों से प्रतिमाह एक काठा धान की वसूली गौटिया करते थे। गौटिया अपनी आय से संतुष्ट होते थे,

वे किसानों से मनमाना राजस्व वसूल नहीं करते थे।⁽¹⁹⁾ यही कारण है कि आज भी गाँव में पहले के लोकप्रिय गौटिया का नाम श्रद्धा और आदर से लिया जाता है। श्रीमती कौशिल्या साहू से साक्षात्कार में प्राप्त जानकारी के अनुसार “ छिपली ग्राम (तहसील नगरी जिला धमतरी छ.ग.) के गौटिया स्व. श्री बल्दूराम साहू ग्रामीणों के लिए मसीहा थे। उन्होंने जनकल्याण के लिए अनेक कार्य स्वयं की सम्पत्ति से करायें थे जिसकी गवाह आज भी गाँव में स्थित अन्नभंडार एवं तालाब के रूप में देखने को मिलता है। उनकी न्याय आज भी गाँव में कहानी के रूप में सुनी जाती है।”⁽²⁰⁾

कलचुरी काल में तुरतुरिया गाँव बौद्ध शिक्षा का प्रमुख केन्द्र थे, परन्तु गाँवों तक शिक्षा का प्रसार कम था। परिवार संयुक्त होता था। प्रतिवर्ष गाँवों में मेला का आयोजन होता था, ग्रामीण आवश्यकतानुसार घरेलू उपयोग की वस्तुएँ खरीदी करते थे।⁽²¹⁾ गाँव में भूमि के नापजोख हलों की संख्या पर होता था अर्थात् एक हल का मतलब एक बैल जोड़ी से जोती गई भूमि। वह सामान्यतः 5 एकड़ होते थे।⁽²²⁾ विविध जातिय संस्कृति का अनोखा संगम छत्तीसगढ़ के ग्रामों में देखने को मिलता है। समन्वयादी धार्मिक उदारता का परिचय आज भी गाँवों में मिलता मिलता है। समाज में ऊँच नीच छुआछूत की भावना प्रबल नहीं था, न ही जाति के अनुसार व्यवसाय करने की बाध्यता थी। खल्लवाटिका में देवपाल मोची द्वारा विष्णुमंदिर का निर्माण करवाना इसका ऐतिहासिक प्रमाण है।⁽²³⁾

ग्रामीण समाज में स्त्री एवं पुरुष में किसी प्रकार का भेदभाव नहीं था। स्त्रियों को सम्मानजनक स्थान प्राप्त था, सभी धार्मिक कार्य स्त्रियों द्वारा किए जाते थे, पर्दाप्रथा नहीं थी परन्तु बालविवाह ग्रामों में आम थी।⁽²⁴⁾ विधवाओं का जीवन सामान्य था किन्तु कहीं कहीं गाँवों में सती चौरा देखने मिलता है जो इस बात को प्रमाणिक करता है कि सतीप्रथा प्रचलित थी पर बहुतायत नहीं।⁽²⁵⁾ पतिहारिण की मूर्ति इस तथ्य को सिद्ध करता है कि नारियाँ समूह में पानी भरने जाती थी।⁽²⁶⁾ कलचुरी काल में छत्तीसगढ़ में बाल विवाह प्रचलित थी, जो यदा—कदा आज भी देखने को मिलता है। विधवा विवाह प्रचलित थी। कन्या जन्म शुभ माना जाता था।⁽²⁷⁾

कलचुरी कालीन स्त्री अपने शरीर में गोदना द्वारा श्रृंगार करती थी। ग्रामीण महिलाओं में गोदना आवश्यक था। ऐसी मान्यता थी कि मृत्यु पश्चात् यही निशानी साथ जाता है। गोदना नारी देह के लिए अंलकरण के रूप में सौन्दर्य प्रसाधन तो थी ही, यह जादू—टोना के रूप में अदृश्य विनाशो शक्तियों से जीवन का रक्षक भी माना जाता रहा। ददा देथे चूरा पैरी, टूट फूट जाथे। दाई देथे कारी गोदना, माटी संग मिल जाथे। इसका महत्व उपरोक्त कथन से स्पष्ट होता है।⁽²⁸⁾

छत्तीसगढ़ के ग्रामीण जीवन में परम्परा, रीतिरिवाज और धर्म का सम्मिश्रण है। ग्रामीण महिलाओं में सरलता और उदारता के साथ यहां अंध विश्वासों का ताना बाना भी रहा है। कृषक परिवारों का जीवन रूढ़िवादी होने के साथ धर्म भीरु भी होता है। इसलिए देवताओं को प्रसन्न करने के लिए नारियां व्रत एवं पूजा करती हैं।⁽²⁹⁾

मूलषब्द— गोदना, चूरा, धर्मभीरु

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 - 20 जैन बालचंद – उत्कीर्ण लेख 1961
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 - 29 उपरोक्त

निष्कर्ष

निष्कर्षतः हम कह सकते हैं कि छत्तीसगढ़ में ग्राम व्यवस्था कलचुरी काल में श्रेष्ठ थी। यह इत्तेफाक ही है कि प्राचीन व्यवस्था इतने लंबे समय जोवित रही जबकि राजनीतिक क्षेत्र में कई उठापटक देखने को मिला। सबसे बड़ी बात तो यह है कि उपरोक्त ग्राम व्यवस्था मराठा और ब्रिटिश शासनकाल तक बनी रही। मेरे विचार से यह एक सांमतवादी व्यवस्था की प्रतिछाया के रूप में स्थापित थी। इसमें सामन्ती व्यवस्था उस सीमा तक स्थापित थी, जहाँ ग्राम प्रमुख शांति और युद्ध के समय सहायता के लिए तत्पर रहता था। किसान गौंटिया के नियंत्रण में था, गौंटिया दारु के नियंत्रण एवं दारु दीवान के नियंत्रण में। दीवान सीधे राजा के नियंत्रण में रहते थे। छत्तीसगढ़ में ग्राम व्यवस्था क्लिष्ट नहीं थी और धर्म ने भी इस व्यवस्था को मान्यता दे दी, जैसे गौंटिया, दारु एवं दीवान सर्वमान्य हो गये। राजनीतिक और सामाजिक रूप से इस व्यवस्था को स्वीकार कर लिए गए, जो मुखिया शांति के समय किसानों से लगान वसूल करता था वही युद्ध के समय उनका नेतृत्व भी करता था। वही ग्राम को आपदा से बचाता था तो ग्रामीणों को न्याय भी प्रदान करता था। पैतृक उत्तराधिकार के कारण कहीं कहीं इसका वीभत्स स्वरूप भी देखने को मिला है। किसानों के परिश्रम से ही इस प्रदेश को ' धान का कटोरा ' की पदवी मिला। गाँव वैभव और समृद्धि का प्रतीक था। गाँवों में रीतिरिवाज, परम्परा एवं प्रथाओं को समाज रूपी दर्पण में देखा जाता था। निश्चित रूप से छत्तीसगढ़ में ग्राम्य जीवन सामाजिक संस्कृति की वाहक रही है।

स्रोत संदर्भ ग्रंथ

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सारांश

पलायन की समस्या वैश्विक है। प्राचीन काल से लोग एक-दूसरे जगह जाते रहे हैं। जब से सृष्टि की रचना हुई तब से लोग एक जगह से दूसरे जगह की ओर पलायन करते रहे हैं। विश्व के लगभग सभी देशों में प्रवासी लोग रहते हैं। भारत उन देशों में से एक विशेष है क्योंकि यहां पलायन का अर्थ रोजगार, आधारभूत संरचना, जीवन रक्षक, स्वास्थ्य व्यवस्था, शोषण अत्याचार से मुक्ति, और पारिवारिक सकून आदि है। वास्तव में पलायन अभाव को दर्शाता है जो अपने पिछड़े क्षेत्र से उन्नत क्षेत्र की ओर जाने को विवश करता है। वर्तमान परिवेश में पलायन का अर्थ दो स्तरों से देखा जा सकता है

(क) आकर्षण तथा (ख) विकर्षण। पलायनकर्ता जब सामाजिक एवं आर्थिक स्थिति में सुधार के लिए पलायन करता है तो वह उसका आकर्षण है जो स्वेच्छा से पलायन के तैयार है एवं दबाव मुक्त है। दूसरी ओर यदि पलायन पीछे शोषण, भेदभाव, आत्याचार, मुख्यमरी एवं विकास के मार्ग अवरुद्ध हो तो ये पलायन विकर्षण है जो न चाहते हुए भी वे पलायन करने के लिए विवश है। भारत में पलायन का मुख्य उद्देश्य आर्थिक एवं सामाजिक स्थिति है और पलायनकर्ता ग्रामीण क्षेत्रों से नगरों-शहरों की ओर जाते हैं जिसके ग्रामीण अर्थव्यवस्था पर प्रतिकूल प्रभाव पड़ा है जबकि नगरों-शहरों के विकास में अमूल-परिवर्तन हुआ है तथा जनसंख्या का दबाव पड़ा है।

परिचय

“नेपाल के भूतपूर्व प्रधानमंत्री श्री मातृका प्रसाद कोईराला के अनुसार – थारु शब्द की उत्पत्ति स्थविर शब्द से है। वे कहते हैं कि मेरी अपनी धारणा में स्थविर शब्द से ही थारु शब्द की उत्पत्ति हुई है, क्योंकि थारुओं के अपने उच्चारण में शुद्ध ‘थारु’ या थोर ही उत्त्वारित होता है।” (कोईराला, 1967)

“मानव भूगोल शास्त्री ‘बलवीर सिंह नेगी’ के अवध गजेटियर के आधार पर कहते हैं कि सम्भावना है कि थारु शब्द की उत्पत्ति ‘तरारु या ‘नम’ से हुई हो जिसका अभिप्राय होता है, दलदलीय भूमि पर निवास करे वालो तराई सामान्यतः पहाड़ के नीचे का सीढ़ीनुमा भू-भाग या पहाड़ की घाटी कहा जाता है।” (नेगी,)

“शम्भुनाथ मिश्र का कहना है कि थारु शब्द के विश्लेषण से ऐसी प्रतीत होता है कि इनकी उत्पत्ति के बारे में अनेको अध्ययन किया गया है कि लेकिन एक मत के बारे में कह सकते हैं कि राजस्थान की ‘थार’ मरुभूमि से आने कारण ये थारु कहलाए।” (मिश्र, 1985) थारुओं के उत्पत्ति एवं नामाकरण सम्बन्धी कुछ अटकलों किंवदंतियों एवं मान्यताओं के आधार पर अन्य विद्वानों ने कहा है कि थारुओं के वाचिक परम्परा के अनुसार राजपूताना के थार क्षेत्र से आकार यहां बसने के कारण वे थारु कहलाए। अत्यधिक दारु पीने के कारण स्थानीय राजाओं ने इनका नामकरण थारु कर दिया। दूसरी ओर कुछ विद्वानों का मत है कि मैदानी क्षेत्र से तराई क्षेत्र में आकर स्थिर होने से स्थारु या थारु कहा गया। वही अधिकांश राजा थारु स्वयं राणा प्रताप का वंश मानती एवं बताती है कि मुस्लिम आक्रम से क्षेत्रीय राजाओं के मारे जाने पर रानियाँ अपने नौकरों के साथ जंगल में आकर रहने लगी उन्हीं की सेवा करने लगी। वही अधिकांश थारु अपने मूल स्थान चित्तौड़गढ़ से जोड़ते हैं, उनका कहना है कि इनके पूर्वज चित्तौड़गढ़ में रहते थे और वहां से आकर यह बसे। वे पृथ्वीराज चौहान के वंशज

है तथा वे रणथम्भौर – चित्तौड़गढ़ से भागकर जंगलों और पहाड़ों में आ बसे। एक अन्य मान्यता है कि गौतम बुद्ध के मरने के बाद उनका धर्म-संघ दो शाखाओं में बंट गया – महासंघवादी तथा स्थविरवादी। गौतम बुद्ध के वंशज शाक्यों ने स्थविर वादी शाखा को स्वीकार किया जो शाक्यवंशी ही धार्मिक दृष्टि से स्थविरवादी बने और कालान्तर में थारु कहलाये।

एक अन्य मत है कि हस्तिनापुर के महाभारत में पराजित राजपूतों ने भय ने थरथराते हुए जंगलों में शरण ली अतः वे थारु कहे जाने लगे। एक अन्य मतानुसार थारु शब्द अथर्ववेद या अथर्व ध्वनि से सम्बन्धित है। अथर्वा से अथरु और फिर थारु शब्द विकसित हुआ।

प्रस्तुत शोध अध्ययन के उद्देश्य

किसी भी अनुसन्धान कार्य के लिए निम्न तत्व या बिन्दु मुख्य हैं:-

(क) अनुसन्धान के उद्देश्य, तथा

(ख) अनुसन्धान में प्रयुक्त विधि।

अनुसन्धान के उद्देश्य इस तथ्य से अनुशासित होता है कि चयनित शोध समस्या किस प्रकृति की है एवं वह कितनी प्रासंगिक है। इस प्रकार शोध अध्ययन के उद्देश्य में चयनित शोध समस्या का स्वरूप समाहित होता है; जिसके शोध के मूल तत्व को नजर अन्दाज नहीं

किया जा सके। इसलिए शोध कार्य करने से पहले उद्देश्य का निर्माण किया जाता है ताकि अध्ययन की रूप रेखा तैयार हो सके। अतः प्रस्तुत शोध निम्नलिखित उद्देश्यों से परिचलित है :-

1. थारु जनजाति के पारंपरिक संस्कृति को समझने का प्रयास किया गया है।
2. औपचारिक शिक्षा की स्थिति एवं प्रभाव को ज्ञात किया गया है।
3. थारु जनजाति के जीवन स्तर में आ रहे परिवर्तन को समझने का प्रयास किया गया है।
4. प्रवजन के कारणों को जानने का प्रयास किया गया है।

प्रस्तुत शोध की परिकल्पनाएं:

किसी भी सामाजिक भूगोल के अध्ययन के लिए घटनाओं एवं प्रक्रियाओं का वैज्ञानिक विश्लेषण किया जाता है। जिसके लिए पूर्व ज्ञान के आधार पर सामान्य अनुमान अपेक्षित है। जिसके लिए पूर्व ज्ञान का निर्माण किया जाता है। जो शोध अध्ययन के विषय-वस्तु को रेखांकित करता हो। परिकल्पना शोध अध्ययन के उद्देश्यों को निर्धारित करता है। अध्ययन क्षेत्र को सीमित करता है, अध्ययन को उचित दिशा प्रदान करता है, अध्ययन में निश्चितता लाता है। इस प्रकार शोध अध्ययन के लिए परिकल्पना का निर्माण अनिवार्य पूर्व शर्त है। इसलिए उपरोक्त तथ्य के अनुरूप प्रस्तुत शोध को पूर्ण करने हेतु परिकल्पना का निर्माण किया गया है, जो निम्नवत है :-

(क) पारंपरिक स्वरूप एवं संस्कृति में विघटन के कारण थारुओं की स्थिति में गिरावट आयी है।

(ख) अशिक्षा के कारण इनकी आर्थिक एवं सामाजिक स्थिति निम्न बनी हुई है।

(ग) थारु समाज में शिक्षा के अभाव के कारण रोजगार की उपलब्धता का अभाव है।

(घ) औपचारिक शिक्षा एवं आय के अभाव के कारण उनके जीवन स्तर में अपेक्षित सुधार नहीं हुआ है।

(ङ) थारुओं के बढ़ते प्रवजन दर ने उनकी संस्कृति पर विघटनकारी प्रभाव को बढ़ाया है।

उपर्युक्त परिकल्पनाओं के आधार पर ही प्रस्तुत शोध अध्ययन को पूर्ण किया गया है।

शोध-प्रविधि

- प्रस्तुत अध्ययन को अन्तः-अनुशासनात्मक आगम पद्धति से किया गया है जिसमें तथ्यों के विश्लेषण में वस्तुनिष्ठता बनाए रखने का पूर्ण प्रयास किया गया है।

- इस अध्ययन हेतु स्तरित एवं उद्देश्यपूर्ण दैव निदर्शन प्रणाली का उपयोग किया गया है। इसके लिए कुछ द्वितीयक आँकड़े भी इकट्ठे किए गए हैं जिनमें चयनित चारों प्रखण्डों में थारुओं के औपचारिक शिक्षा की स्थिति, कृषि याग्य भूमि की स्थिति, जनसंख्या इत्यादि हैं। सघन रूप से प्राथमिक आँकड़ों का संकलन साक्षात्कार-अनुसूची के माध्यम से किया गया है।

अध्ययन का महत्व

वर्तमान समय में सामाजिक-आर्थिक अनुसन्धान के क्षेत्र में मानव भूगोल के सामाजिक एवं सैद्धांतिक महत्व की तुलना में इसे वस्तु परक-व्यावसायिक दिशा देने का प्रयास किया जा रहा है जो समय की मांग है। थारु जनजाति के सांस्कृतिक, सामाजिक एवं आर्थिक दृष्टिकोण का परीक्षण करना है जो प्रवजन एवं शिक्षा से प्रभावित है। थारु जनजाति को संस्कृति का चित्रण आदिकाल से चला आ रहा है, लेकिन स्थानीय क्रिया-कलापों से इनके रहन-सहन प्रभावित हुआ है। गैर थारु समाज के साथ-मिलने-जुलने एवं आचार-व्यवहार को आत्मसात् करने से थारु समाज के संस्कृति पर नकारात्मक प्रभाव पड़ा है इसलिए थारु समाज के संस्कृति, सामाजिक एवं आर्थिक स्थिति का विश्लेषण करना अपने-आप में महत्व रखता है। इसलिए थारु समाज के अध्ययन करना आज की परिस्थिति के लिए प्रासंगिक है। इस अध्ययन के कुछ महत्व को निम्न रूप से समझा जा सकता है :-

- बिहार क जनजातियों के सामाजिक-आर्थिक विकास की स्थिति क्या है?
- थारु जनजाति के संस्कृति के महत्व को जानना एवं शिक्षा का प्रभाव एवं प्रवजन से कैसे प्रभावित हुआ है।
- थारु जनजाति के जीवन पर पर्यावरणीय प्रवृत्तियों का सीधा सम्बन्ध है तथा इनके संस्कृति पर प्रकृति का सीधा असर है इसलिए इनके पर्यावरणीय सम्बन्ध एवं संस्कृति का अध्ययन महत्वपूर्ण है।
- भौगोलिक विशेषताएँ से परिपूर्ण तराई क्षेत्र में निवास करने वाली जाति का विकास कैसे प्रभावित होता है यह एक महत्वपूर्ण विषय है।
- तराई क्षेत्र एवं थारु जनजाति के समस्याओं का जानना प्रासंगिक है।
- थारु जनजाति के विकास योजना का लाभ एवं प्रशासनिक व्यवस्था को समझना ताकि थारुओं के विकास में योगदान को जान सके।

अतः थारुओं के पिछड़ापन के लिए कौन-कौन से उत्तरदायी कारक हैं, इनके विकास में कौन-कौन बाधक हैं, संस्कृति के प्रभावित करने वाले तत्व कौन से हैं, आदि समस्याओं की जानकारी अध्ययनों के द्वारा ही मिल सकता है। इसलिए थारु जनजाति का समग्र अध्ययन करना एक महत्वपूर्ण विषय है।

तालिका-1

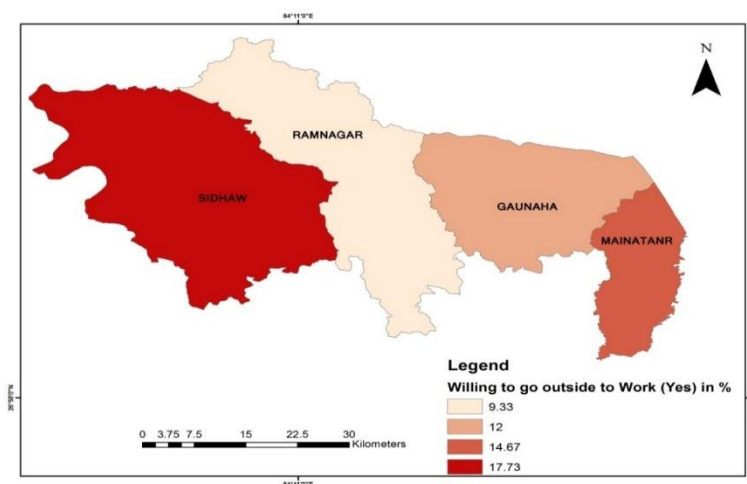
उत्तरदाताओं के परिवार में बेरोजगार सदस्य के गणना का अध्ययन

क्र.सं.	प्रखण्ड	बाहर काम करने की स्थिति				बाहर काम करने वाले सदस्य की संख्या					कुल	
		हाँ		नहीं		1	2	3	4	4 से अधिक	आ०	%
		आ०	%	आ०	%							
1	सिधाव	13	17.73	62	82.67	3	6	4	-	-	13	17.33
2	गौनाहा	9	12.0	66	88.0	1	2	6	-	-	9	12.0
3	रामनगर	7	9.33	68	91.67	-	4	3	-	-	7	9.33
4	मैनाटाड़	11	14.67	64	85.33	4	6	1	-	-	4	14.67
	समग्र	40	13.33	260	86.67	8	18	14	-	-	40	13.33

स्त्रोत-क्षेत्रीय सर्वेक्षण, मार्च, 2021

मानचित्र-1

चयनित प्रखण्ड के जिले से बाहर जाने को तैयार रहने वालों की स्थिति



उक्त तालिकामें उत्तरदाताओं के परिवार के सदस्य का प्रवजन की स्थिति तथा बाहर काम पर जाने वाले सदस्य की संख्या से सम्बन्धित तथ्यों का अध्ययन को प्रदर्शित किया गया है। समग्र के 13.33 प्रतिशत उत्तरदाताओं के पारिवारिक सदस्य काम के लिए अपने घर से बाहर जाते हैं। अगर प्रखण्ड को देखें

तो सिधाव में 17.33 प्रतिशत, गौनाहा के 12.00 प्रतिशत उत्तरदाता, रामनगर में 9.33 प्रतिशत तथा मैनाटाड़ प्रखण्ड के 14.67 प्रतिशत उत्तरदाता के परिवार के सदस्य काम तलाशने के लिए बाहर जाते हैं अर्थात् प्रवासी हैं। दूसरी ओर बाहर जाने वाले सदस्य की संख्या के अध्ययन से स्पष्ट है कि समग्र के 8 उत्तरदाता के परिवार के 1 सदस्य बाहर जाते हैं जबकि 2 सदस्य बाहर जाने वाले 18 उत्तरदाता हैं तथा 14 उत्तरदाता के परिवार के 3 सदस्य बाहर काम करने जाते हैं। अतः उपरोक्त विश्लेषण थारूओं परिवार का स्पष्ट चित्रण करता है।

तालिका-2

क्र. सं.	प्रखण्ड	अवधि का वितरण										कुल	
		1—2 माह		3—4 माह		5—6 माह		7—8 माह		लागू नहीं			
		आ०	%	आ०	%	आ०	%	आ०	%	आ०	%	आ०	%
1	सिधाव	7	9.33	2	2.67	3	4.00	1	1.33	62	82.67	75	100.0
2	गौनाहा	1	1.33	4	5.33	4	5.33	-	-	66	88.0	75	100.0
3	रामनगर	-	-	3	4.0	4	5.33	-	-	68	90.67	75	100.0
4	मैनाटाड़	2	2.61	1	1.33	16	8.00	2	2.67	64	85.33	75	100.0
	समग्र	10	3.33	10	3.33	17	5.67	3	1.00	20	86.67	300	100.0

उत्तरदाताओं के परिवार के सदस्य का बाहर जाने की अवधि का अध्ययन

उत्तरदाताओं के परिवार के सदस्य जो बाहर काम करने जाते हैं उनके प्रवजन अवधि का अध्ययन उपरोक्त तालिका-2 में दिखाया गया है। तालिका विश्लेषण से दृष्टिगत है कि समग्र के 3.33 प्रतिशत उत्तरदाता का अपने पारिवारिक सदस्य 1-2 माह के लिए बाहर जाते हैं, इसी तरह 3-4 माह, 5-6 माह तथा 7-8 माह के लिए बाहर जाने वाले पारिवारिक सदस्य से सम्बन्धित उत्तरदाताओं की संख्या क्रमानुसार 3.33 प्रतिशत, 5.67 प्रतिशत तथा 1.00 प्रतिशत है जो निर्दिष्ट अवधि के लिए प्रवजन करते हैं। अतः उपरोक्त अंकों के विश्लेषण से ज्ञात है कि थारु उत्तरदाताओं के प्रवजन की स्थिति है थारु समुदाय में भी है।

निष्कर्ष

भारत में कुल आबादी का 8.6 प्रतिशत आबादी आदिवासी समुदाय का है जो देश में अपनी मजबूत स्थिरता को प्रकट करता है। भारत में लगभग 700 जनजाति समूह हैं जिनमें से एक थारु आदिवासी समुदाय है। थारु समुदाय सम्पूर्ण देश में लगभग 15500 वर्ग किलोमीटर क्षेत्र में फैला हुआ है। बिहार राज्य में थारु जनजाति प्राचीन काल से निवास करती आ रही है। बिहार के पश्चिमी चम्पारण जिला के मुख्यतः चार प्रखण्ड में (सिधाव, गौनाहा, रामनगर एवं मैनाटाड़) थारु का निवास स्थान और ये प्रखण्ड थारु बहुल प्रखण्ड हैं। करीब 40 पंचायत में फैला थारु जनजाति काफी पिछड़े हुए हैं। पश्चिम चम्पारण जिला में करीब 43931 जनजाति परिवार हैं जो विकास के मुख्यधारा से बहुत दूर खड़े हैं। फिर भी थारु समुदाय अपने भौगोलिक परिवेश में रहकर खुशी से जीवनयापन कर रहे हैं। थारु जनजाति के संस्कृति और प्राचीन परम्परा उनके विशेषता हैं जो भौगोलिक दशाओं से प्रभावित हैं।

अध्ययन का निष्कर्ष निम्नलिखित है:-

- थारु जनजाति बिहार के तराई क्षेत्र में निवास करते हैं।
- थरुहट क्षेत्र के कुछ भाग वन्य आरक्षित क्षेत्र के रूप में घोषित है जिसके कारण उनको जंगल की स्वतंत्रता समाप्त हो गयी है।
- थारु जनजाति के कला एवं संस्कृति बहुत समृद्धि है और थारु आज भी अपन संस्कृति-कला अक्षरशः अक्षुण्ण रखे हुए हैं।
- थारु जनजाति में लोकतांत्रिक व्यवस्था कई सैकड़ों वर्षों से जारी है जब अन्य समुदाय में इसकी जानकारी नहीं था।
- थारु समुदाय के जमीन को गैर थारुओं में कब्जा कर लिया है। इसके कारण अधिकांश थारु परिवार भूमिहीन हैं आर पिछड़े हैं।
- थारुओं के बीच रोजगार के अवसर नहीं है, जिसके कारण वे रोजगार है तथा कुछ थारु युवा वर्ग पलायन करते हैं कि राज्यों से बाहर बहुत कम है। या हम यह कह सकते हैं कि थारुओं का प्रवर्जन सिर्फ अपने जिला के अन्दर है। इसका मुख्य कारण वे अपने पर्यावरणीय वातावरण एवं संस्कृति को नहीं छोड़ना चाहते हैं।

सुझाव

थारु समुदाय के विकास के लिए निम्नलिखित सुझाव को अपनाया जा सकता है:—

- थारु समाजों के बीच उनके आवश्यकता अनुरूप योजना बनाना चाहिए, क्योंकि योजना थारु के लिए है तो बन्द कोठरी में क्यों बनेगी?
- विकास योजना बनाने से थारु समाज के सामाजिक सांस्कृतिक पक्ष का सूक्ष्म अवलोकन करते हुए योजना बनाया जाना चाहिए ताकि थारुओं के लोक-जीवन एवं संस्कृति को प्रभावित नहीं कर सके।
- किसी भी योजना लागू करने से पहले थारुओं को प्रोत्साहन करना चाहिए ताकि वे अधिक-अधिक लाभ उठा सकें।
- अशिक्षा एवं अज्ञानता किसी समाज के लिए बहुत बड़ी समस्या एवं कमजोरी है। अतः शिक्षा की गुणवत्ता को एवं महत्व को थारुओं के बीच समझाया जाना चाहिए ताकि शिक्षा का महत्व को समझ सकें।
- कृषि जीवनदायी नहीं होकर व्यवसायीकरण करने के लिए कृषि प्रोत्साहन नीति लागू करना चाहिए ताकि थारु समाज उन्नत कृषि कर सकें।

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Topic

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षोध आलेख

संताली साँवहेँत् रेयाक् ओनोरोम साहित्य दो संताली पारसी ते साँवहेँत् को मेताक् काना आर अंग्रेजी पारसी तेदो लेटरेचर (स्पजमतंजनतम) को मेताक् काना। नोवा साबाद दो लेटर से आखोर ते बेनाव आकाना। चाहे ओना दो थुती तेयाक् से ओल तेयाक् ताहेँन। साँवहेँत् रेयाक् साबाद माने दो “साँव-साँव ते हेच् आकान मेताक् में होड़ को होते ते, होड़ को लागित् आर होड़ कोवाक् काना। आयमा आकिलमान को दो संताली साँवहेँत् रेयाक् ओनोरोम नोडका को सोदोर आकादा:—

- अजयनाथ झा ए ओलेत् काना—“साहित्य षब्द और अर्थ के समन्वित सौन्दर्य से निर्मित ऐसा लोक मंगलकारी रचना है जो रचनाकार के भावों विचारों या आदर्शों को पाठक या समाज तक सम्प्रेषित करती है”। 1
- मेताक् में “साँवहेँत् दो साबाद आर माने रेयाक् मिलाव मोनोंज ते बेनावाकान नोडकान मानवाँ पोरहो तेयाक् ओनोल काना ओका दो ओनोलियावाक् ढाव को बिचार को से नामुना को पाढवा से सोमाज हाबिच् ए कोलेत् काना”।
- हरिहर हाँसदाक् ए ओलेत् काना— “मोने-ओन्तोर रेयाक् आयकाव अनाटकार से दिल-हुदिस बेस ओकोच् ते रोड़ से ओल सोदोर गे साँवहेँत् दो”। 2
- बाबुलाल मुर्मू ‘आदिवासी’ दोय ओलेत् काना—“साँवहेँत् दो भागे साबाद आर मानेवानाक् ढाव हुदिस बिचार आर गाण्डोन ते पेरेच् आकान होड़ पोरहो तेयाक् मोज आर सोरोस ओनोल काना”। 3
- नारायण सोरेन ‘तोड़े सुताम’ ए ओलेत् काना—“ साहित्य दो काथा रेयाक् कोथो दो बाङ काना, जियोन रेयाक् काथा काना। जियोन कुकली गे साहित्य रेयाक् आत्मा दो”। 4
- “साँवहेँत् दो सोमाज रेयाक् आरसी काना, जियोन रेयाक् उमुल काना”। 5
- साँवहेँत् दो साँवता रेयाक् आरसी काना”। 6 काथाय स्पजमतंजनतम पे जीम उपततवत वी वबपमजलएसाहित्य समाज का दर्पण है।

सारी गे साँवहेँत् दो काथा रेयाक् कोथो दो बाङ काना, जियोन रेयाक् काथा काना, साँवहेँत् दो बोहोक् हाताङ रेयाक् जिनिस दो बाङ काना बिचकोम मोने ओन्तोर रेयाक् जिनिस काना। साँवहेँत्

दो जियोन रेयाक् आरसी काना, पारसी रेयाक् बानबासी दो बाड। आर जियोन रेयाक् आरसी कान ते ओका साहित्य जियोन रेयाक् पारसी ते ओल आकाना। ओना दो उनाक् गे दामानाक् काना सोमालोचक सारहाव भाशा दो बाड बिचकोम जियोन जोजावाक् भाश ते ओल आकान साहित्य गे आसोल रे जियोन रेयाक् आरसी दो। साँवहेत् दो सोमाज रेयाक् आरसी काना ओका रे सोमाज रेयाक् मिमित् मुठान जेल जामोक् कान से मानवाँ जिबोन रेयाक् चितार ताहेन काना। साँवहेत् रूपी आरसी रे सोमाज रेयाक् मिमित् मुठान से मानवाँ जिबोन रेयाक् चितार आरसीक् काना।

साँवहेत् आर सोमाज दो मित एटागिच् रे टेहाड आकान रे जोड़ाव मेनाक्आ। सामाज रेयाक् मिमित् कामी ते साँवहेत् दो खाटी गे एलाडोक् काना। साँवहेत् आर सोमाज आर साँवहेत् दो गाहिर ते आरी-बाँदी लेखान मित् खान्दरी काथा नोवा रे सोदोरोक् काना, जे साँवहेत् होते ते गे सोमाज ओका रे सोमाज रेयाक् आरसी काना, ओना नोवा हों काना जे सोमाज, साँवहेत् रेयाक् आरसी काना। साँवहेत् होते ते गे सोमाज बेनाक् काना आर सोमाज होत ते गे साँवहेत् हों बेनाक् काना। साँवहेत् रे ओका को मेनाक्आ, ओना को सोमाज रेहों मेनाक्आ। साँवहेत् रे सोमाज रेयाक् ओका मठान जेल जामोक् काना, ओना सोमाज रे साँवहेत् रेयाक् ओना मुठान जेल जामोक् काना।

साँवहेत् बेगोर ते सोमाज आर सोमाज बेगोर ते साँवहेत् बे पुराव गया। साँवहेत् बेगोर ते सोमाज दो गुँगड़ा गया आर सोमज बेगोर ते साँवहेत् दा सादा कागोच् काना। बानार गे लाहान्ती लागित् मित् एटागिच् रे टेहाड मेनाक्आ।

साँवहेत् होते त मोने रेयाक् काथा रोड़ ओड़ोकोक्, काथा ओड़ोकोक्आ, चाहे ओना दो ओनोल, काहनी सेरेज से आर जाहाँ लेकाते सोदोरोक्। साँवहेत् दो होडाक् आडाड काना। उनी जात रेन होड़ कोवाक् जात चारित रेयाक् आरसी काना, लाहान्ती डाहार रे लाहाक् लागित् दाड़े काना। उनीयाक् मेनजोडाक् पुराव लागित् मित् सापाप (जिनिस) काना। साँवहेत् रेयाक् मोतलोब दो नोवा दो बाड काना जे जाहानाक् गेम ओल केदा, ओना जोतो गे साँवहेत् काना। साँवहेत् दो ओना कुन्दाव गाडहाव को मेताक्आ, ओका रे जाहाँ सारीयाक्, भागेयाक् आर मोजजाक् सोदोर आकान।

ओकोयाक् पारसी पाड़हाव रे मोज आयकाव ओका रे मोने ओन्तोर एलाड, आविल ओचोय रेन गुन ताहेन कान। बोंगा-भूत रेयाक् काहनी ते ओक्ते, सोमोय जुग रे पासेच् एलाड होय लेन गया। मेनखान निताक् ओनकानाक् रे उनाक् मोने बाबोन लागाव एदा।

मानवाँ जियोन रे साँवहेत् रेयाक् आडी जासती मोहोत मेनाक्आ। चदाक् जे साँवहेत् गे मानावाँक् बाडीच्आक् दोय चाबायेत् काना आर मोज डाहार रेय गाते इदियिदी काना। साँवहेत् सोमाज रेयाक् आरसी काना। सोमाज दो साँवहेत् खोन गे आकिल बिदयाय जामेत् काना। जुग हिसाब ते साँवहेत् रेयाक् सिरजाव दो होय इदि आकाना— बे ओलाक् आर ओलाक्।

साँवहेत् गे मानवाँ जिबोन मुसकील खोन दो आवसान ए बेनाव एदा। साँवहेत् बेगोर ते मानवाँ जिबोन बे पुराव गया आर ओपोरोम बानुक्आ। जिबोन रे साँवहेत् रेयाक् आडी माराड ढाय मेनाक्आ। साँवहेत् होते ते गे मानवाँ जिबोन कुसी-रासका ते पेरेजोक् काना आर साँवहेत् होते ते गे मानवाँ नापाय ए

रोड़ा, आँजजोमाय आर सिखनात ए जामेत् काना। मोंजज गालमाराव लागित् गुन,साँवहेत् पाड़हाव काते गे मानवाँ भितरी रे हिजुक् काना। “चेत् लेका ओड़ाक् रेयाक् रेहेत्, लातार रे बेनाक् काना आर लातार रेहेत् बो केटेचे एत काना, ओना रेहेत् रेगे पुराव ओडाक् टेहाड ताहेन काना। ओनका लेकाते मानवाँ जिबोन हों साँवहेत् रे केटेच् ताहेन काना”।

होडाक् बारफाई लागित् गे साँवहेत् रेयाक् सिरजाव होयोक् काना। साँवहेत् पाड़हाव काते गे साँवहेतिया कोवाक् हुदिस-बुदिस बोन बाडाय दाड़ेयाक् काना। साँवहेत् रे कुसी-रासका खोन एहाप् काते आकिल-बिदया जाम हाबिच् साँवहेत् रेयाक् गोडो सोपोहोत ताहेन काना। साँवहेत् होते ते सोमाज दो आयमा आरी (संस्कार),नागाम रेयाक् काथा ए जामेत् काना।

साँवहेत् होते ते मानवाँ आच्आक् जिबोन लाड़हाई रे जितकारोक् रेयाक् ए तोलासेत् काना से जितार जाम लागित् मोने चेतोन ताहेन कान ताया। जात रेयाक् हिरखा-ढाव एमान बाड़ीच् आरी चाबाय लागित् साँवहेत् रेयाक् आडी गोडो मेनाक्आ। साँवहेत् दो मोंज कामी सेच् ए उसकुरेत् बोना आर बाड़ीच् कामी सेच् ए टेकाव दारामेत् बोना।

साँवहेत् दो मानवाँ जिबोन रेयाक् हासो-कोश्टो, रेगेच्-नाचार सोदोर रेयाक् रेहेत् काना। साँवहेत् होते ते आपनारतेत् से निजतेत् एटाक् होडाक् दुक तेम मोजाक्, ओनाय चेत् ओचोयेत् बोना आर साँवहेत् होते ते सोमाज रेन रेंगेच्-नाचार हाडाक् आडाड बोन आँजजोम दाड़ेयाक् काना।” साँवहेत् गे मानवाँ जिबोन रेयाक् ओक्ता ओना रेयाक् उमुले तेत् काना”।

साँवहेत् दो जिबोन रेयाक् सारीयाक् ए आटकार ओचो बोन लागित् मित् लाटु जिनिस काना। साँवहेत् होते तेगे मानवाँ ओन्तोर मोने तेय रापुदोक् काना, तोबे मोने राड़ेच् रेयाक् आयकाव होंय जामेत् काना आर ओनका लेकाते रापुत मोने रे दाड़ेय सिरजावेत् काना।

साँवहेत् रेदो कुसी-रासका, उकु दानाड मेनाक्आ। आद खोन लाय आगु आकात आर नाहॉक् काहनी को ढेरकाय ते कुसी-रासका से मोने बाहलाव (मनोरंजन) काहनी को गे मेनाक्आ आर ओनका ते पाटुवा कोवाक् तेताड मोने रे दुलाड रासा ते पुरुनोक् कान ताकोवा। ओना छाडा जिबोन रेयाक् एटकेटोड़े रे हुदिस-बिचारेदा आर ओना रेयाक् होर होंय सुटीक जाम एदा। साँवहेतिया दो आकोय सिरजावा ओना दो आच्आक् आटकार लेकाते आर आच् रेन पात्र कोवाक् रोड़ ते आच् निज ए रोड़ेत् काना।

ओनाते साँवहेत् दो जातियारी पारसी रेयाक् माराड धोन काना। तिरे जुगे दिसा जामोक् एनेम काना। साँवहेत् दो जुग-जापाक् खोन बांजचाव दोहोवाकान संताल सोमाज रेयाक् बापोती धोन काना। होड़ होपोनाक् दामान आरी-चाली रेयाक् सोम्पोत काना। जानाम खोन मोरोन हाबिच्, होबोर खोन कोबोर हाबिच्, होड़-होपोनाक् हाँस-रासका, रिज-रोड़, राक्-रेंगेच्, लेगचार, आचार,-बिचार, सुज-बुज, रोड़-लान्दा, सुक-दुक,

हारखेत-सासेत, आस-बिस्वास, राय-रीत, आरी-चाली, बुद-आकिल एमान दो साँवहेत् ते आरसी तानाक् ते लेका साफा-साफी जेल जामोक्आ। ओना ते साँवहेत् दो सोमाज रेयाक् आरसी काना।

आबोवाक् पुरीखा रे ओना साँवहेत् गे सारीयाक् होयोक्आ ओका रे चेतान दोरजा रेयाक् हुदिस, खुलासा मोने रेयाक् ढाव, सिरजाव रेयाक् आत्मा जिवोन रेयाक् सारीयाक् रेयाक् मारसाल ताहेन। ओना ते नावाँ चेतना, नावाँ उदगाव, नावाँ बिस्वास आर नावाँ होर उदुक्आक् जामोक्आ।

ओना तेगे साँवहत् दो साँवता रेयाक् आरसी सुमुड दो बाड काना, साँवता रेनाक् दियाड़ाबाती हों काना आर जातियारी पारसी रेयाक् माराड धोन काना। मानवाँ जिवात ए ताहेन लागित् दो साँवहेत् जिवात दोहोय जारुड काना। ओना ते लाटु-लाटु आकिलमान होड कोको रोड आकादा-

“जे मित् जाताक् पारसी आर साँवहेत् गे ओना जात दो जिवेत् ए दोहो दाड़ेयाक्आ आर तिस हाबिच् ओनकोवाक् पारसी बाड जोगावोक्आ, उन हाबिच् ओना जात रेन दो बाड को लाहा दाड़ेयाक्आ”। चेदाक् जे पारसी रेयाक् जिवी दाड़े साँवहेत् काना। एटाक् पारसी साँवहेत् लेका संताली साँवहेत् हों बार हाटिज रे मेनाक्आ।

संदर्भ ग्रंथ सूची:-

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Topic

विपश्यना ध्यान का आत्म-विश्वास
स्तर पर पड़ने वाले प्रभाव का अध्ययन

ICSRD:

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सारांश

प्रस्तुत शोध कार्य में विपश्यना ध्यान का आत्म विश्वास स्तर पर पड़ने वाले प्रभाव का अध्ययन किया गया। इस अध्ययन में 18 से 25 वर्ष आयु वर्ग के 50 पुरुषों का चयन कोठा प्रतिचयन विधिद्वारा चयन किया गया। अध्ययन में प्रायोगिक नियंत्रित समूह अभिकल्प का प्रयोग किया गया। चयनित प्रयोज्यों को दो महीने तक विपश्यना ध्यान का अभ्यास 45 मिनट तक करवाया गया। प्राप्त आँकड़ों का सांख्यिकीय विश्लेषण टी-परीक्षण द्वारा किया गया। प्राप्त परिणाम प्रदर्शित करते हैं कि विपश्यना ध्यान का आत्म विश्वास स्तर में 0.01 स्तर पर सार्थक प्रभाव पड़ा।

परिचय

मानव जीवन की असफलताओं का कारण सामाजिक, पारिवारिक रूप से व्यक्तिगत होता है, जिसमें आत्म-विश्वास की कमी प्रमुख कारक है।

आत्म-विश्वास की न्यून मात्रा से मनुष्य कई मानसिक रोगों से ग्रस्त हो जाता है, जिसका परिणाम आत्म हत्या, पागलपन, अपराध भाव, आत्म हीनता एवं असुरक्षा की भावना आदि होता है।

प्रो० रानडे (1968) के अनुसार, “आत्म-विश्वास के रूप में ईश्वर ने मनुष्य को एक महान शक्ति दिया है, इस शक्ति के बल पर ही मनुष्य अनेक अद्भुत कार्य कर सकता है।”

दुनियाँ का वर्तमान दौर विनाशिता, विध्वंशता से गुजर रहा है। चारों ओर शारीरिक, मानसिक अस्वस्थता से ग्रस्त लोगों को देखा जा सकता है। आज के विश्व की मुख्य विडम्बना है कि विज्ञान और तकनीकी की आश्चर्यजनक प्रगति के बाद भी करोड़ों लोग बुरी तरह अभाव ग्रस्त हैं।

मनुष्य के अहं पर आघात विभिन्न नकारात्मक चिन्तन की उत्पत्ति का आधार है जिसे ‘आत्म-विश्वास’ रूपी औशधि के द्वारा दूर किया जा सकता है।

वासवन्ना (1975) के अनुसार, “आत्म-विश्वास का अर्थ है, किसी भी परिस्थिति में आये अवरोधों का सामना प्रभवी ढंग से करना और को ठीक से समझना।” आत्म-विश्वास जीवन की पतवार है, जिसके सहारे जीवन रूपी नौका कठिनाईयों के मझधार से निकल पाने में सक्षम होती है एवं अगणित

उलझनों, समस्याओं में भी विष्वास की अमोघ शक्ति की प्रेरणा देती है एवं बल का संचार करती है। आत्म-विष्वास विकसित करने की अनक विधियाँ प्रचलित हैं पर विभिन्न कारणों से आज सार्थकसिद्ध नहीं हो पा रही है।

आत्म-विष्वास विकसित करने की कई आध्यात्मिक साधनाएँ बतायी गयी है। उन्हीं साधनाओं में से एक है – “विपश्यना ध्यान”

ध्यान एक ऐसी प्रक्रिया है जिसकी आवश्यकता हमारे जीवन के प्रत्येक क्षेत्र में होती है क्योंकि तदनुसार ही उस क्षेत्र में सफलता मिलती है। ध्यान की प्रक्रियाओं में ध्याता, ध्यये और ध्यान तीनों एक हो जाते हैं।

Sittu Sayagi U Bakhin (1983) के अनुसार “Vipasane means insight. It is a system of self-transformation by self-observation.”

विपश्यना क्या है, तो कहा जा सकता है कि “सजगतापूर्वक अपने ध्यानों को देखना ही विपश्यना है।” विपश्यना ध्यान का अभ्यास दो महीने तक करवाया गया तथा उसका प्रभाव आत्म-विष्वास पर देखा गया।

षोध-विधि (Research Methodology): -

1. षोध अभिकल्प (Research Design)- प्रस्तुत अध्ययन में नियंत्रित प्रयोगात्मक द्विसमूह षोध अभिकल्प (Control Experimental two group research design)का प्रयोग किया गया है।
2. प्रतिदर्श एवं प्रति चयन-प्रस्तुत अध्ययन में कोटा प्रतिचयन विधि से प्रतिदर्शों का चुनाव किया गया।
3. परिकल्पना-विपश्यना ध्यान का अभ्यास 18-25 वर्ष आयु वर्ग के पुरुषों के आत्म-विष्वास स्तर में वृद्धि करता है।
4. चरों का विवरण (Description of Variables)-
 - * स्वतंत्र चर (Independent Variable)- विपश्यना ध्यान
 - * वीश्रित चर (Dependent Variable)- आत्म विष्वास
 - * अन्य चर (Other Variable)- आयु , लिंग, षैक्षणिक योग्यता।
5. प्रस्तुत उपकरण (Tool to be used)-आत्म विष्वास के मापने हेतु Agnihotri's Self Confidence Inventory (ASCI) का प्रयोग किया। इससे किषोरों एवं वयस्कों का आत्मविष्वास मापा जाता है। इसका विष्वसनीयता गुणांक अर्द्ध-विच्छेद विधि से .91 तथा परीक्षण-पुनर्परीक्षण विधि से .78 है तथा वैधता गुणांक .81 हुआ जो .01 पर सार्थक है। इस परीक्षण को

प्रयोज्यों के विषयना ध्यान के अभ्यास के पूर्व तथा पश्चात प्राप्त आँकड़ों के मध्यमान के अंतर की सार्थकता को ज्ञात करने हेतु paired t -test का उपयोग किया गया।

परिणाम (Result)

उपकल्पना— विषयना ध्यान का अभ्यास 18–25 वर्ष आयु वर्ग के पुरुषों के आत्म–विषयान स्तर में वृद्धि करता है।

Table: -

Group	Pre/Post Test	N	M	SD	SE _D	r	t-Value	Significance Level
Experimented	Pre	30	21.27	3.92	.89	.11	5.57	P < 0.01
	Post	30	16.30	2.49				
Control	Pre	20	20.50	4.31	1.28	.33	1.00	P < 0.05
	Post	20	19.30	2.62				

df-29(Exp. Group)

df-19(Con. Group)

विवेचना (Interpretation)-

उपरोक्त परिणाम सारणी से ज्ञात होता है कि प्रायोगिक समूह का t-Value 5.57 है। यह 29 df पर दिये गये मान 2.76 से अधिक है। इसलिए 0.01 सार्थकता स्तर पर सार्थक है। नियंत्रिक समूह का t-Value 1.00 है जो कि 19 df पर दिये गए मान 2.09 से कम है। इसलिये 0.05 सार्थकता स्तर पर भी सार्थक नहीं है। अतः प्रायोगिक समूह 18–25 वर्ष आयु वर्ग पुरुषों के आत्म–विषयान स्तर में सार्थक वृद्धि हुयी है। इससे ज्ञात होता है कि विषयना ध्यान का आत्म–विषयान पर सार्थक प्रभाव पड़ता है। जिसका कारण विषयना से प्राप्त उर्जा है, जो व्यक्ति में सकारात्मक चिन्तन एवं प्रेरणा उत्पन्न करती है और व्यक्ति को आत्म–विषयानी बनाती है। एम0 एस0 चेरी वकले (2003) के अनुसार “Meditation may put a positive spin emotion , as well as immune system.”

जॉन फेबर (2003) के अनुसार, जो व्यक्ति ध्यान करते हैं उनके मस्तिष्क में बाँया फ्रंटल रिजन में 50 प्रतिशत अधिक वैद्युतिय क्रियाएँ होती हैं, मस्तिष्क का यह भाग सकारात्मक संवेग तथा चिन्ता की कमी से जुड़ा होता है।

Khare (2000) ने पाया कि तनाव एवं जीवन की दबावपूर्ण स्थिति को ध्यान से दूर किया जा सकता है, तथा पूर्ण मानसिक एवं शारीरिक विश्राम की प्राप्ति संभव है। उन्होंने एक अध्ययन में ध्यान के दौरान

α -EEG पर पड़ने वाले प्रभाव को देखा, जिसमें अल्फा तरंगों में वृद्धि थी, जो कि पूरे Cerebral hemispheres में समान रूप से थी। इसके साथ-साथ ध्यान करने वाले अभ्यासियों के धड़कन दर में सार्थक कमी हुई।

निष्कर्षतः इस शोध में यह पाया गया कि ध्यान द्वारा आत्म विश्वास, सेंस ऑफ वेल-विइंग इंपैथी, क्रियेटिव फंक्शन में सुधार, अल्फा तरंगों में वृद्धि, मानसिक एकाग्रता में वृद्धि, तनाव एवं दबाव पूर्ण स्थिति में सुधार होता है। इस प्रकार ध्यान द्वारा पूर्ण स्वास्थ्य एवं बेल् विंग की प्राप्ति होती है, जो कि मानसिक स्वास्थ्य के द्योतक है।

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Topic

“गोराचाँद टडवाक जियोन चरित आर कामी कासनी” जोग हाटिज -गोराचाँद टुडूवाक ओनोडहें रे भाबना रासा

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बोतोलो

जोमाक् जुँवाक् रे चेत् लेका रासा ताहेंन खान सेबेल बुझाक्आ, ठीक ओनका गेँ साँवहेंत् रहे । रासा रेयाक् ज़रुड़ पाड़ाक् काना । एन्ते साँवहेंत् रे रासा बाङ ताहेंन खान ओना रये । अक् जाहांन ओकाज गेँ बाङ ताहेंन काना । संताली साँवहेंत् रेहों रासा रेयाक् बेवहार दो मेनाक् गया । ओका दो संताली साँवहेंत् चेतान सेच् सेपेज राकाब रे आड़ी माराङ गोड़ोय एमोक् काना ।

गोराचाँद टुडू हों आड़ी आयमा ओनोडहें कोय ओल सोदोराकादा । ओनोडहें पुथी रूप रेदा एकेन बारया गेँ छापावाकान ताया बाखरा आर चाँद माला । बारया रे आड़ी आयमा ओनोडहें मने । अक् आर जोतो ओनोडहें रे आपान-आपिन रासा मने । अक् । ओना ओनोडहें को मुद खोन भाबना रासा मेनाक् ओनोडहें हों आयमा मेनाक्आ । नुई ओल ओनोडहें रेदो सोमाज लागित् भाबना दिसाम लागित् भाबना आर आसोकायते संताल हुल रे को मायांम गोहायेना परिवार रेन होड़ कोवाक् भाबना जेल जामोक् काना । उनी ओल ओनोडहें आर ओना रे मेनाक् भाबना रासा रेयाक् आरीबांदी दो लातार रे ओल मेनाक्आ ।

“गोराचाँद टुडूवाक ओनोडहें रे भाबना रासा”

भाबना रोस/रासा—

जुरीपारी किनाक् बेगारोक् गाते दुलाड़ तोल माया तोपागोक् से आपनार सोर ताहेंन होड़ सागाई तोपाक् कातये सांगिओक् सेय लेमेज गितीलोक् ते उनी से उनको दिसा आर उयहार रे मोन खाटोक् ते बेकुसी आर भाबना आइकावक्आ । ओनकानाक् ढेव गेँ जाहांन ओनोडहें से सेरेज एमान रे जामाके काना ओना दो भाबना रोस/राससा को मेताक् काना । मानोतान गोराचाँद टुडू हों नोंकानाक् ओनोडहें दो आड़ी आयमा गेय ओलाकादा । मा नाहांक् पारतुल लके ते ओनोडहें रयेक् नोआ काली बोन जले ताया—

हाय—हाय सिदो कान्हू हों,
हाय—हाय संताल रे संताल, हाय—हाय बाबेन जानाम,
हाय—हाय होड़ रे होड़ दो बाङ,
हाय हाय हाय हाय हाय!!

चौद माला पृ.62

हाय— हाय तिनाक् भाबना हाय—हाय तिनाक् दुखाली, हाय—हाय सिदो—कान्हू हों, हाय—हाय आर पासेच् बाबेन जानाम, आर पासेच् बाबेन ओमोना आर पासेच् मानवाँ ताला बाबेन रूवाड़ा। आबेनाक् कामी आबेनाक् कासनी, बापुड़िच् होड़ को ओवार काते आयुर काते ओका उपकार कामी बेन कामी केदा ओना दो पासेच् आर ओहो ले हिड़ीज लेया। आबेनाक् उयहार, आबेनाक् दिसा घाने—घाने बिरबाँव लेका घुरलाव बाड़ाय काना। मेनके तहेज आबेन ओकार मनोक् बेना आर ओकारेले जाम बेना। एन्ते आलेयाक् बुझाव रे पासेच् आबेन दा एकेन मानमी दो बाङ बिचकोम मानवाँ मुठान रे देव गे बेन ताहेकाना। आबेनाक् जोनोम हों पासेच् ओनका गे होय लेना आर

ओनकानाक् कामी जुतुम गे होय लेना। आबेन दो मानवाँ भालाई आर ओवार जुतुम गे नोआ धारती रेबेन कोल ओचो लेना। आबेन बाबन ताहेन खान होनाङ तिनाक् संताल को चो गायुर —टापुर आवा टापा पोरजाताक् गाबोल रे हारखेतोक् कान आर सासेतोक् कान को ताहेकाना। होड़ होपोन दो दिनाम गे दुख रेयाक् लोलो सुनुम रेको तोपोक् कान ताहेना। जुमी जागा ओन धोन सानाम को सिबाड़ ओचोक् कान ताहेना। आकोवाक् मान आर इज्जत बाको सांबड़ाव दाड़ियाक् कान ताहेना। मालजाल, मिहूँ मरे मेम टाका पोयसा मा को सिबाड़ ओचोक् कान ताहेन गे साँव—साँव ते बाहु—बिटो होपाने एरा आरे मिसएरावाक् इज्जत हों सिबाड़ोक् कान ताको ताहेना। नोंकानाक् ओक्ते रे सिदो—कान्हू आबेनाक् जोनोम दो देव बाराग गे ताहेकाना। आबेन बेन जानामने ते होड़ होपोन हारखेत सासेत आर गांजोन खोन ओवार केत् कोआ। मेनखान तेहेज दो बानुक् बेना आर बाले बाड़ाया आबेन दा संताल आर संताल रने कान रेहों बेन गापा रेयाक् दिन आर मानवाँ रूप रे आले ताला रे बेन ओमोन दाड़ेयाक् चो बाङ चा, सामानी भाबना रये 1क् काथा काना। सारो तेहेज आबेन ले दिसायेत् बेन खान भाबना तेले हरिभोङ उतारोक् काना आर हाय—हायोक् कानाले।

ओनोड़हें दो नोंकानाक् आयमा ढरे भाबनावानाक् ओनोड़हेंय ओलाकादा। मा नाहांक् आरहों मित् काली बोन जेला—

जोनोम रे जेरेत्
बिजोन बाती हों चो,
खियाक् कान रोसमे—रोसोम,

जिबोन बाती गालावक् हिलोक्, मारसाल पुरीसकालोक् मा,
चिंङाल ठाँई जुते तालोम मा।

चाँद माला पृ.21

मानवाँ जिबोन बाबोतमे हुदिसोक् खान खाटीगेम हाहाड़ाक्आ, खाटीगेम भाबनाआ आर नोते मोने—मोने तेहोंम लान्दा जोडा। मेनेक् मानवाँ जियोन दो सारी
गे बार दिन रेयाक् कान गया। जोखोन जोनाम होयोक् काना तोखोन गे लिखोन हों ताहेंन काना। मानवाँ ति दिन नोआ धारती बागीयाक् होयोक् गया।
ओनाते नोआ रे मोन दुकूक् लेकान जाहांन काथा दो बानुक्आ। मेनखान नोआ सोंसार से धारती माया रये इक् झाली काना। माया रेयाक् झाली खोन
ओडोकाक् आडी आलगा दो बानुक्आ। मायाजाला रे पाड़ाव काते धारती रेयाक् सुख बाड बागीयाक् लेका बोन बुझावेत् काना। नोंकानाक् ओक्ते रे तिनर
बिदाक् ओक्ते हिजुक् कान ताबोना उन जाखेच् पुराव बाने हासनिसास उतारोक् काना। पुराव बोन हेमेड मयोक् उतारोक् काना। आबो लागित् धारती
बाड बागीयाक् रये इक् साना ताहेंनकान ताबोना। मनेखान चेत्एम मने धारती रेयाक् सानाम सुख मिच्छा गया। सानाम दो आवडीयाक् गया आरे ओक्ते
साँवते सानाम गे बागीयाक् होयोक् ताबोना आर नोआ गे धारती रये इक् सारीयाक् दो काना। चेत् लेका दिवहा से लालटेन रेयाक् बाती बाय—बायते
मित् सेच् खोन खियाव चालाक्आ ठीक ओनका गे

नोआ जिबोन हों मित् लेकाने बाती कान गया। आर नोआ हों ओनका गे रोसमे—रोसमे ते काम चालाक् काना आर मित् दिन लो खियाक् उतारोक्आ।
आर जिबोन बाती गालावक् हिलोक् दो जिबोन रेयाक् मारसाल पुरीसकाल उतारोक्आ आर चिंङाल ठाँई सेटेर उतारोक्आ। दार रेयाक् साकाम खोन
छाडाव जुरोक् हों भाबना रेयाक् काथा काना, दारे रेयाक् डार चागात् जुरूक् हों भाबना रये इक् काथा बारया मिलवाकिन छापाडावक् हों भाबना रयोक्
काथा काना। नोंका गे मित् टेन जिबोन नोआ पुरी रेयाक् सागाई तोपाक् काते हानापुरी ते जायजुग लागित् चालाव जोड हों भाबना रेयाक् काथा कान
गये ।। खाटी गे ओनोडहिया दो नाकानाक् जिनीस आयाक् मोने रेय आटकारकेत् ते होड होंय आटकार ओचोयते कोआ। मा नाहांक् आरहों मित्टेन
नोंकानाक् ओनोडहें बोन रेला लेगे—

मारटेल बाजालाक् पाहिल आपाम,

षेव हों इनागे,

मित् टचे, बिहायेन

बाहेरने मानवाँ आखड़ा खोन,

बोलोयेने दोसारिच्,

काल कोपाले कोके केदये ।
फेर बाय रूवाड़ लने । बिरबांटा ।

बाखरा पृ. 30

पासेच् सारीगे नोआ दो बाजालाक् मार्टेल साँव पाहिल आर मुचात् उतार जापाम कान ताया । एन्ते मानोतान गोराचौद टुडू ओलाक् बाखरा पुथी साकाम न. 30 लेकाते बाजाल दो संताल हुल रेन मित्तेन बिरबांटा कानाय ओकोय दो पाकुड़ रेयाक् लाड़हाई रे फाद चाक्लाविच् ए ताहेकाना । फाद दो आड़ी मौज ते सिखनात कातेय दोहोवाकात् को ताहेना । सानाम लेकानाक् खाण्डा फिरी चाक्लाव को बाडाय कान ताहेना । नोंकान ओक्ते रे बाजाल दो पाकुड़ रे अंग्रेज फाद साँव तापाम होयोक् कान ताकोआ । अंग्रेज पाल्टोन दो सोरकार रेन कानाको ओनाते ओनको ठने दो सानाम लेकानाक् सापाप् मेनाक्आ । ओना ओक्ते रेयाक् तिनाक् नाहांक् तेत् सापाप् ताहेकाना सानाम दो अंग्रेज फाद ठेच् ताहेकाना । एन रेहों संताल बिरबांटा दो आक् सार, कापी तारवाड़े भुजाली बोरलोड तके १ लाड़हाई कान ताहेन गये । निरीक् आर रिकीड लाड़हाई को लाड़हाई काना । काथाय ओना लाड़हाई रेदो अंग्रेज फाद आयुरिच् दो सर जॉन मार्टेल ए ताहेकाना । ओकोय दो संताल फाद बोटोर त' मित् जिन्दा रे मार्टेला टॉवर पाकुड़ धनुशपूजा रये बेनाव ओचो लते । उनी मार्टेल ठचे ग' लाड़हाई जाखेच् बाजाल दोय साप् ओचोयेना आर सिउडो तेय चालान केदेया । मने केयेम नुई दो मानवाँ आखड़ा खोन मेरोम भीडी लेका को तियाक् बेगार केदेया आर पासेच् ओक्ते रेगे जिबोन रेयाक् मुचात दाना होय जोम केदा एन्ते नोंकान दिलगारिया बिरबांटा आर आय हेच् रूवाड़ लेना आर बाड दो उनीयाक् सारी काथा जाम लेन एकेन उनी दिसा रे भाबना आर उयहार गे जामोक् काना ।

ओनोड़हिया दो नोंकानाक् ओनोड़हे आड़ी मौज तये ओलाकादा आर साबाद रये 1क् गाथाव हां आड़ी नापाय गते 1या । मा नाहांक् आरहों नोआटाक् काली बोन जेल लगे —

घाल काहिल षाम रोकोड़ ओतरे,
ओहोय षेश निसास ए सांहेद रे,
हिन दो आच् आक् कोट लाटू काते,
बोहोक् जिरावताये बालिसादेया ।

चौद माला पृ. 67

सारी गे मेनाको दुलाड़ आर भाबना रेयाक् दो जाहांन सीमा बाड ताहेना । ओना दो पांयेड़ काते आड़े टोंबाव कातअे । से तोदोक गया । आर ओका—ओका दो दुष्मान को रेहों दुलाड़ हिजुक् गया मेनखान तेहेज मा ओने ओनकानाक् घोटना कान ओका दो गाते—गाते की बैरीयाकाना । एन्ते बाडाय गयाबोन

दुलाड़ आर भाबना दा मामो—हातोमे बोयहा काना। जाहां टेन दुलाड़ ताहेंना ओण्डे गे दाया हों ताहेंना आर जाहां टेन दाया ताहेंना ओण्डे गे भाबना हों ताहेंन काना। मेन केयाम नोको दो सुपुर—सुपुर गे को ताहेंन काना। नोकोवाक् दो आड़ी जोपोक् सागाई मेनाक्आ।

हिन आर षाम परगना दो मारे गाते कानाकिन। हिन दो अंग्रेज सोरकार रने कांमियो होड़ ए ताहेंकाना आर परगाना दो होड़ होपोन रेन लासेर टंगे तेच् बुदगारिया आयुर होड़। होड़ हापौनाक् आंस आर विष्वास दो षाम परगाना रें ताहेंकान ताकोआ। षाम परगना दो इना ओक्ते सानाम लेकाते लासेर होड़ ए ताहेंकाना। ओकाटाक् घाट रे तायोम बाय ताहेंन कान ताहेंना। षाम परगानावाक् उपरूम दो आकिलमान होड़ रूप रे ताहेंकाना। चुर—चुर बाडाय साना, आंजोम मुचात काते रोड़ आर उनीयाक् रोड़ हों आड़ी सुझ बुझ बुझान्तर ताहेकाना। षाम परगना रे नोंकानाक् गुण पुन जेल तगे होड़ होपोन दो को विष्वास लेना। उनको रे पातियाव ताहेंकाना बाङ मा परगना दोय आयुर पारोम दाड़ियाबोन गये। परगना दो होड़ होपोनाक् दुख, बिपात राक्, होमोर बोर—बोतोर आड़ी आयमा ढेरे मुष्किलाक् को अंग्रेज सोरकार टेन ए इदियेत् ताहेंना। आर नोंका—नोंका तेगें हिन साहेब टेन घाने—घुड़ी हिजुक् सेनोक् हिजुक् सेनाके इयाते षाम परगना आर हिन साहेबाक् गाते दो होय लने। हिन साहेब हों खाजना—बाजना उठाव से होड़ होपोन हिरीय हिजुक् खान षाम परगना साँव दोय आपाम कान ताहेंन गया। नुकिन बानार ताला आड़ी मोंज गाते होय लेना। मेनखान तेहेज दो काडा भेडा बेने बाइरी कानाकिन। मित् एटागिच् विरोध रंकिन तापाम काना। हिन जुदि अंग्रेज पाल्टोन ए आयुरेत् को खान परगना दो संताल फ़ाद रेन चालावा कानाय। बानार गे मोती झारना दासना रे आमने—सामने किन लाड़हाई काना। नोंकानाक् लाड़हाई दो नागाम रे आड़ी कोमे गें होयोक् काना से लाड़हाई रे नांकोनाक् घोटना दो होयोक् काना आर तहेज ओना घाटामार लाड़हाई रेगें संताल फ़ाद रेन दिहरी षाम परगना दोय घाल आकाना। घाल तेय काहिलाकाना आर हासो जालातेय गके राड काना। मेनखान सेदाय रेन मारे आर तेहेज रने दुष्मान हिन साहेबाक् मेंत् दो घालाकान परगना रे पाड़ाक् काना आर षाम परगना टेन सेन काते आयाक् कोट ए तोत एदा आर उनीस बालिसाय काना। आर मुचात सांहेत लाहा रे दाक् ए जुवाय काना। नोआ दो परगना आर हिन ताला रये त्क् दुलाड़ रेयाक् नमुना गे ताहेंकाना। मेनखान तेहेज ओना दुलाड़ दा जायजुग लागित् तापोक बेगारोक् कान ताकिना आर ओना इयाते बानार गे तेहेज मुचात धाव भाबना पेरेच् मेंत् दाक् जोरोय तुलुच् किन बेगते, आपामेना आर जायजुग लागित् दुलाड़ सिकड़ी तोपागोक् कान ताकिना। मेनखान ओना लाहारें हिन साहेब दो आच् दाड़ियाक् भोर परगना सेवावाय रेयाक् ए कुरुमुटू केदा।

आरहों नोंकानाक् मित्टेन ओनोडहें बोन जेल लेगे—

हाय—हाय सिदो कान्हू हो,

हाय—हाय संताल होपोन गे,

हाय—हाय होरोक् आबेन कान, हाय—हाय दोसार फ़ासी फ़ाद।

चौद माला पृ.— 62

संताल परगना आर संताल जाति लागित् सिदो-कान्हू दो ओका उपकार किन कामीयाकादा ओना दो नागाम रेयाक् आखोर रे ओल मने 1क्आ। उनकिनाक् आयरु तेगे संताल होपोन दो का'साधिन आकाना। गुलाम से गोबोल रेयाक् सोना सिकड़ी खोन ओडोक् काते साधिन रेयाक् हाये को सांहेत दाड़ियाक् काना। नोआ खोन लाहारे संताल होपोन दा'तिनाक् मष्किल आर कोचलोन रे को ताहेंकाना ओकोय गे बाङ को बाडाया। आकोवाक् सुख-दुख लाय लागित् आको लागित् हों बाको ताहेंकाना। आकोवाक् दुख आकोवाक् बिपात आर आकोवाक् जाला आकोवाक् हासो ओकोय ठेन को लाय सोदोरा। एन्त उनकोवाक् सुख आर दुख आंजोम लागित् ओकोय हों बाको ताहेंकाना। उनकोवाक् सुख आर दुख आंजोम लागित् सेरमा पुरी खोन पासेच् माराङ ठाकर दो मानवाँ रूप रे सिदो-कान्हू धारती तये कोल लेत् किना। धारती रे हेच् काते उनकिन दो संताल होपोन कोवाक् सुख दुख राक् होमोर आर बोर बोटोर आंजोम किन आंजोम केत् ताकोआ। सारीगे होड़ दो दुख बिपात रेयाक् माया जालात' को जालजालाक् कान ताहेंना। होड़ होपोनाक् दुख बिपात आंजोम काते ओनको ओवार का'लागित् रुखियाको लागित् लाहासेच् किन ताड़ाम केदा। जाहां र' गे जारुड़ पाड़ाक् ओण्डे गेकिन जापामने। आर होड़ होपोनाक् सुख आर दुख किन लाय ताला केदा। मेनखान अंग्रेज सोरकार ओनकानाक् कामी रे थाड़ागान हों एसेर बाङ पाड़ावात् कोआ। सानामाक् कामी आकोवाक् हुदिस आर बुदिस लेकाते मोज गके 1 मते 1वात् कान ताहेंना। एन्त' ओनको दो सानामाक् कामी गे महाजाने दोरोगा एमान ठेन को जिम्मा चाबावाकात् ताहेंना आर नोते सुदखोर महाजोन को दो अंग्रज सोरकाराक् उमुल रे बुगीत' को लुट जोङ कान ताहेंना। नोकोवाक् नोंकानाक् कामी रे जाहांय गे आकोट को जानामेत ताहेंना। उनको दो बिन दुसी तेको चालान ओचोक् कान ताहेंना आर चालान काते घुरिया बाको रूवाड़ हिजुक् कान ताहेंना। नोंकानाक् हालोत जेलते खिजलावेन सिदो कान्हू दो होड़ होपोन तालारे ढारवाक् किन आसेन कदा आर होड़ होपोन किन जागवार केत् कोआ आर हुल लागित् सेंगले की जुंडियादा। हुल सेंगेल दो जोलेना आर सेरमा टुंगाव दोहगांव राकाप् एना। ओना रके 1'झापसावेन सानाम सुदखोर महाजोन काटबिजा दारोगा आर होड़ होपोन रेन बैरी दो को लो तोरोच् चाबायेना। सानाम गे होड़ होपोनाक् सेंगल सार तके 1 तुज सुमार ओचोयेना। लाड़हाई रे हाराव काते हों होड़-होपोन को जितावेना आर लाड़हाई रेयाक् फोल दो को जाम केत् गया। नोआ लागित् दाड़े रूप रे सिदो-कान्हू दो पासी बाबेर माला होरोक् होयेन ताकिना।

मेनखान तेहेज आड़ी हुदिस आर भाबना रेयाक् काथा काना। डिज डाबुर मायांम आतु कात' हजार-हजार जीवि आलाय काते जामकान साधिनतेत हुल रेयाक् जो बाय-बाय ते लिलामोक् एहोप् आकाना। आरहों मित् धाव नोंका आटकारोक् काना पासेच् सिदो कान्हू लाड़हाई काते आका जुमी जायगा जाति धोरोम मान इज्जत आन कानुन किन बेनाव केदा ओना दो होड़ होपोन बाको बांचाव दाड़ियाक् काना। सामाज रुखिया बाको दाहो दाड़ियाक् काथा आर ओका जुतुम ते हुल रे मायांम आतु लेन ओना दो आवड़ीयागोक् काना। नोआ दो सामानी हुदिस भाबना आर चिंता रये 1क् काथा। नोंकानाक् घोटना को जेल काते ग' ओनोड़हिया दोय मेनेदा जे होड़ होपाने दो आरहों मित् धोम दोहड़ा ते सिदो कान्हू पासी बाबेर को होरोक् आकिन काना। आर आरी बांधी तायोम नोआ काथा दो जोथात गे आटकारोक् काना।

भाबना दो एकेन बारया जुरीपारीकिन बापागोक् जालाते दो बाङ मिलवा माया रापुदोक् जाला ते दाँबाङ बिचकोम ओना छाडा काते आङी आयमा घोटना को घाटाव काते हों भाबना दो जामोक् गया। ओनोङहिया दा नोंकानाक् घोटना को रेयाक् उमुल पांजा काते आङी नापाय ते भाबना रासा ते पेरचे, आकान ओनोङहंकोय ओलाकादा। मा नाहाक् आरहों ओनोङहें रेयाक् मित् काली बोन आंजोम लेग-

ओना रियोत रे हुल रे,
तिनाक् चो,
सोहागा सिन्दुर मेटावेना,
टुवारेनाको सोना मिरू,
भाई बेगारेनाको,
मिसराको तिनाक् चो,
मिलवा मोहे मोसोत एना,
कुआंरी को रे तिनाक् चो।

बाखरा पृ.-10

सारीगे हुल दो हुलेना आर हुडिज हुल दो बाङ बिचकोम एषिया रये। माराङ संताल हुल। नांकोनाक् लाङहाई आङी उत्तर जोवि लोकसान एना। तानाक् बुसाक् मापाक् गोपोच् होयेना। एन्ते लाङहाई दो कोम सोम दो बाङ ताहेंकाना। ब्रिटीष सोरकार विरुद्ध रेयाक् लाङहाई ताहेंकाना। नोंकानाक् नागाम ओल रं जाहांय हुलगारिया को आलायाकान उनको दो आकांलागित दो बाङ बिचको नाहाक् पिङही बाखरा को हुल आकादा। नाहाक् पिङही बाखरा को आलायाकाना। हुदिस आर गांडोन रेयाक् काथा दो नोआ गे जे नोंकान सोरकार विरुद्ध रे लाङहाई लागित को चेमोता लदे। से नोंकान सोरकार विरुद्ध रे सापाप् को तुल लेदा ओकोयाक् जुतुम आंजाम तेगं दुनिया रेन होङ बातौर पाङावाको कान ताहेंना। मने खान संताल बिरबांटा दो निफिकीर बिना लाजाव-बोतोर सापाप् को तुल केदा आर हुल सेंगेल को जुल केदा।

नोंकानाक् कामी रं नेंडंलोकसान दो बाङ होयाकाना। तानाक् बुसाक् होङ को गोच् आकाना। हजार होङाक् ओङाक् उजाडेना, हजार होङाक् सिन्दुर मेटावेना, हजार होङाक् टोडोर रापुत् एना। आयमा होङ को रांडीयने, आयमा होङ को कांडायेना, आयमा होङ को गुर लोटोमेना। आयमा ढरे कुआंरी कुडीयाक् मोनं रापुत् छितीर-बितीरेना। एन्ते उनको दो आना हुल रे आको रेन दुलाङिया को आत् केत् कोआ। आकोरेन मिलवा ओना हुल रेको बोंगा तालायेना आर ओनका लेकाते उनकोवाक् कुकमू दामदासेर चाबायेना। ओकोय सेलते, दो पासेच् नोआ जोनोम रे

साँवते गुजुक् आर जिवादोक् रेयाक् कुकमू को साजाव लेदा। मने'क् मित्‌टने हुल हेच् एना आर सानामाक् मित् रिपीत रे छितीर—बितीर चाबायनो आर नौकानाक् घोटना दो नागाम रे आड़ी कोम गे घाटाक् काना आर घाटाव तायोम सिज चाँदो इपील को ताहेंन भोर तिसहो बाङ मेटाव रुवाङोक् काना।

खाटी गे नोआ हुल संताल हापोन को लागित् गोरोबानाक् काथा काना। मेनाखान ओना खोन जास्ती भाबना हों काथा काना।

झारतेत्

चेतान रे ओलाकान ओनोड़हें को दो ओना रेयाक् आरीबांधी को ते बाडायोक् काना जे गोराचाँद टुडूवाक् ओनोड़हें रे भाबना रासा रेयाक् बेवहार दो आड़ी मोज होयाकाना। नुई दो नोकानाक् ओल रेन गाखुड़ ओनोलिया ताहेंकाना। पाड़हाविच् दो पाड़हावकाते खाटी गे भाबना जानामाया आर मोने—मोने ते मेत्‌दाक् जोरोक् ताया। नुयाक् ओनोड़हें रे आको साबाद रेयाक् बेवहार मेनाक्‌आ, ओना रये ाक् दो चेत् जोबाब गे बानुक्‌आ। नुई दो आयाक् ओनोड़हें रे जुरी आखोर सेजाड़े साबाद रेयाक् बेवहार आड़ी मोज ते होय आकाना। ओका दो ओनोड़हें रेयाक् दारजा आड़ी चेतान दारजा हाबिच् ए बाड़हावेत् काना। नोकांत मेन गानोक्‌आ, नई दो भाबना रासा ओलोक्‌इच् गाखुड़ ओनोड़हिया कानाय आर नुयाक् ओनोड़हें रदे ते भाबना रासा रेयाक् झलक आड़ी नापाय ते जले ओरोमाके काना।

गोक्‌डो पुथी

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आधुनिक मैथिली साहित्यक जनक, कवीश्वर चन्दा झाकेँ मानल जाइत छनि, जनिक सत्प्रयाससँ तत्कालीन संस्कृतक पण्डितगण, मैथिलीमे लिखब प्रारंभ कएलनि।

महाकवि लालदास, मुन्सी रघुनन्दन दास, म.म.परमेश्वर मिश्र, पं.त्रिलोचन झा, श्री बल्लभ झा, म.म.मरलीधर झा, पं.गणनाथ झा, पं.विन्ध्यनाथ झा आदि मैथिली मे रचना कए साहित्य भंडारकेँ भरैत गेलोह।

प्राचीन मिथिला, पुरुष प्रधान छल। स्त्रीगणक विशेषता छलनि, असूर्यम्पस्या भए घरक गृहस्थीकेँ सफलताक संगं चलायब। गिरथानि, मैयाँ कहएबामे गौरवक अनुभूति करैत छलीह।

आरम्भिक लखेकगण स्त्री- शिक्षाक सती-सावित्री, जगज्जनी जानकीक महिमे मंडित करबामे व्यस्त रहथि। प्राचीन मिथिलामे जँ मैत्रेयी, गार्गी, भारती, लखिमा सन विदुषी छलीह तँ आधुनिक युगक पूर्वार्द्धमे शून्य छल। जँ नहि रहैत तँ प्रो.हरिमोहन झा सनक सशक्त लखेक 'क कन्यादान' क नायिका बुच्ची दाइ चुप्प किए रहलीह! आ 'सी.सी.मिश्राकेँ कोबर घरसँ भागय किएक पड़लनि!

हम एतय एहि व्यापक विषय सभके विराम दैत, 'आधुनिक मैथिली कवितामे नारी- विमर्श' विषय पर ध्यान केन्द्रित

करए चाहैत छी। विमर्श, असगर वा एक पक्षीय नहि भए सकैछ, तँ 'आधुनिक मैथिली कवितामे नारी' क प्रसंग ध्यानाकर्षित करी।

आधुनिक कालसँ पूर्व, मैथिली साहित्यमे गीत एवं नाटकक प्राधान्य रहल। कवीश्वर चन्दा झा, सर्वप्रथम मैथिली साहित्यक प्रवाहमे प्रवल मोड़ अनलनि। इएह सबसँ पहिने मैथिली मे पद्यवद्ध 'मिथिली भाषा रामायण' रचि आधुनिक मैथिली कविता' क प्रणेता भेलोह। तत्पश्चात् रमा (सीता) के प्रधानता दैत, रमेश्वर-चरित मिथिली रामायण, पद्यवद्ध रचि, महाकवि लालदास,ई प्रणामित कएलनि जे नारी(सीता) भगवान राम 'क शक्तिस्वरूपा छलथिन, ओएह रामक प्रेरणा श्रोत भलेथिन।

मिथिला भाषा रामायण मे कवीश्वर चन्दा झा, अनुसूयाक प्रसंग नारीक आदर्श देखबैत सीतासँ कहैत छथिन्ह-

“महलनि अनसूया हम वृद्धा पति सगं करी तपस्या
अहँ जानकी सभलोकक जननी शिव-विधि-प्रभृति नमस्या”
एहिसँ बेसी स्फुट चित्रण महाकवि लालदासक ‘रमेस्वर-चरित रामायण’ मे अनुसूया-सीताक संवाद अधि-
“सुरती रहथु पति वा धनहीन। स्त्रीकें चाहिअ रहक अधीन॥
नारी परम देवता सहै। अखय स्वर्ग सखुदाता सहै॥
स्वामी जखन रहथि सनन्तुष्ट। देख देवगण सखु परिपुष्टि॥
पति सेवा थिक कर्म प्रधान। दुहु लोकक सुख लाभ महान॥
पति क्रोधी रोगी रह क्रूर। वृद्ध दरिद्र॥

लम्पट वंचक सठ अज्ञान। थिक तथापि पति देव समान॥ पतिक दोष मन मे नहि धरय। पति प्रतिकूल कदपि नकरय॥

पति अनुमति बिनु अनत न जाय। कलह कुटिल सँ सतत डेराय॥”

ओ एहन यगु छल, जाहि समयक समाज पुरुष प्रधान छल। स्त्री लोकनिक हेतु बहुतो विधि निषेधक चर्चा रहैत छल। किन्तु समयक गतिकें केयो रोक नहि सकैत अछि। स्त्री समाजकें तँ सहो पुरुष समाजसँ किछु अपेक्षा रहैत छैके।

मिथिलामे खास क’ पूर्वमे तँ विदुषी लोकनिक चर्चा होइत छल, किन्तु स्त्री मध्य घोर अशिक्षा छल। पुरुषो मध्य अग्रंजी शिक्षाक घोर अभाव छल, जकर चर्चा प्रोफेसर हरिमोहन झा, तार कोना पठाओल गले ‘क उल्लखे,अपन ‘कन्यादान उपन्यासमे कय चुकल छथि। किछु स्त्री विमर्स,कविवर सीताराम झा ‘क कवितामे सहो भेल अधि,यद्यपि ओ ‘लोकलक्षण मध्य स्त्रीक वाहय एवं आन्तरिक गुणे धरि सीमित रहलाह। जेना-

“केश छता जकाँ, माथ हता जँका
आँखि खन्ता जकाँ दाँत फारे बुझू।

बोल रोड़ा जकाँ, चालि घोड़ा जकाँ
पेट मोरा जकाँ वा वखारे बुझू।
छुति नहि लाज सँ, सगं कथ पाज सँ
नित्य सत्काजसँ उधारे बुझू।
राक्षसी ढंग ता सँ तगंटा, संखिनी सगं टास संहारे बुझू"

पुनः -

“यदपि अपन घर भरल-पुरल चाउर ओ चूड़ा।
तदपि जीह पनिछान्हि देखि आनक घर गूड़ा।।
खन चिन्नी खन चकू चाखि चट चटनी चाटथि।
चाहथि चिकन चहटगर से जिहलाहि कहाबथि।।”

यात्रीजी सस्कृतक विद्वान रहैत, आचार-विचार, आहार-व्यवहार मे पूर्णतः आधुनिक भ'गेलाह । प्राचीन परंपरावादी कविक कविताके दिशा बदलि, यथार्थवादी - प्रगतिवादी कविता 'क रचना करय लगलाह। यात्रीजी बड़ संवेदनशील कवि रहथि। मिथिला मध्य वाल- विवाह, बूढ़-विवाह सन कुप्रथा, हिनक हृदयकेँ झकझोड़ि देलक। एहि कुप्रथाक कारणे मिथिलाक वाल-विधवा' क व्यथाक चित्रण निम्न पद्यांशसँ-

“भुस्सा आगि जकाँ नहू नहू
जइँ छी मने मन हमहूँ
फटै छी कुसियार पोर जकाँ
चतैक पछबा मे ठोर जकाँ
काते रहै जनु घैल छुतहर”

वाल-विधवाक एहसँ स्पष्ट चित्र, यात्रीजी 'क लखेनी एहि रूपेँ उजागर करैत अछि-

“लगे अछि चारू दिस अन्हार जकाँ
नहि बुझि पड़ै क्यो चिन्हार जकाँ
विषसन अवस्था पहाड़ सन जीवन
संसार मे हमर के अछि अपन
कानी त चपु कैनिहार क्यो नहि
रुसी त बौसिनिहार क्यो नहि”
यात्रीजी 'कें ट्रेनक प्रतीक्षामे, दुरगमनियाँ कनियाँपर ध्यान आकृष्ट होइत छनि-
“जुनि आबउ मेल ट्रेन भरि राति”
“माथ पर उत्तगुं खोपा
तपोवनि स्टाइल मे बान्हल
आ ताहि मे लपेटल चम्पाफूलक माला
गए नूनू
ककर ककर प्राण लबेही तौ आइ?’
दोसर दिशि कवि यात्रीकें स्कूटर वाहिनी राधिका पर ध्यान जाइत छनि-
“भउँह बशे पिजौल
मर्मभेदी दाकुसन कजरैल आँखिक कोर
अनावृत मुक्तोदरी, आवर्त दारुण नाभि
रडल बीसो नखक उज्जर पीठ
हरित बसना आइ काल्हुक राधिका

देवि स्कूटर वाहिनी, घुरि जाउ सध्याकाल

कोनो होटल मध्य बाट तकैत छथि बाँके बिहारी लाल"

समग्रतः कहि सकैत छी जे 'यात्रीजी',अपन समग्र रचना मे

नारी 'क वाह्य सौन्दर्यक संगहि ओकर चितक हाहाकार, वेदना, समाजमे पसरल ओकरा पर अनीति सभक चित्रक उजागर विभिन्न कविताक माध्यमसँ कयल अछि।

मैथिलीक सिद्धहस्त कवि आरसी प्रसाद सिंह,'मिलनातुर'

कवितामे नारीक चित्रण कयल अछि-

“दीप जरैत रहि गेल राति भरि

सगुन उचारैत राति भरि,

हम रहि गलेहुँ आँखि सँ अपनके

बाट बोहारैत राति भरि"

परदेशी पतिक लेल उन्मन नारी भावनाकें चित्रण आरसी बाबू'क पद्यमे-

सपथ थिक हमर आब चलि आउ अपने

मिलल प्रेम पाती,घरकि गेल छाती

कि एखनो लागल अछि शनिक साढे साती।

न लायब जँ साड़ी,पढत क्यो न गारी

कहत लोक एतबे, केहन छथि अनाड़ी

मगर जँ अहाँ तँ फाटलो पटम्बर

करब हम गुजर,आब चलि आऊ अपने ।

आब यात्रीजी 'क समकालीन एवं परवर्ती कविक कविता दिशि ध्यान आकर्षित करैत छी-

सरसकवि पं.ईशनाथ झा 'क कृषक कन्या' शीर्षक कवितामे कृषक कन्याक अद्भुत रूपक वर्णन कएल अछि- “अति गौर वदन-अज्ञात मदन-पट पहिर हरित-ई कृषक सुता-मुग्धा ललिता-चलि के झटपट-उठबए कहि तट पटबैत गीत की गाबि रहल अछि-

सुतालित गीत मनोहर?"

मैथिलीक दधीचि कवि समुनजी, मैथिल रीति नीतिक नारीक वेदनाकें चित्रित करैत, लोकक हृदयकें उद्वेलित कए दैत छथि। 'आह्वान' शीर्षक कविताक पंक्ति-

"घर-घर गौरी करथि तपस्या

पूजि तुषारी प्रात

वर वौराह उमाक देखि कें

होइछ डर आघात।

मुदित किन्तु हिमवन्त

विकल मन मैन स्नहे स्रोत

जनमि जनक-जननीक मैथिली

घर-घर करथि इजोत।।"

सिद्धस्त कवि समुनजी मिथिलामे प्रचलित तुषारी पावनीक मनोरम वर्णनक संग-संग, दिन-दुखियाक चित्कारक वर्णन करैत, करुणाक रसधार प्रवाहित करैत छथि-

“पति परलोक बसल घर उजरल

जिन्तित चित्र अधीर।

मास-माससँ जकर कमासतु

सतु ज्वर गलित शरीर।।

जकर अन्नपूर्णा भसिएले
कौशिकीक मझधार।
जीवन तट पर एक शब्द
सनुइछ जे हाहाकार।।
ओहि अनाथ विधवाक अश्रुहिक
सगरो उमड़ल बाढ़ि।
करुण क्रन्दने कविता कनइछ
कौशिकीक तट ठाढ़ि।।"

समुनजी'क पयस्विनी 'क पद्यांश-
“मलिन वसन घर-द्वारि बहारथि
बाढनि हाथहि नित्य।
जेना कोनो आयलि छथि
वेतन-भोगिनि कोनहु भृत्य ।”
“सपू हाथ किछु-किछु सदिखन
फटकैत अन्न भरि पूर।
बिच-बिच गनु गनु सोहर लगनी
गबड़त बिनु धूनि-सूर।।"

मैथिली काव्य जगतमे स्व.काशीकान्त मिश्र 'मधुप' क गीत, मिथिला'क घर-घरमे महिला लोकनि मक्तु कण्ठे गबैत आबि रहल छथिन। धीयाकें सासुर जएबाक काल, कुलवधू 'क रूपमे केना रहबाक छह, एकर उपदेश गीतक माध्यमसँ एना –

"ससुरामे जा'क धीया ! रहिय 'सम्हारि क'

बजिहह नहूँ-नहूँ मनसँ विचारि क'

सासुकें प्रणाम क नित उठि भोरे मे

मन्द मुसुकान ल'क सदि खन ठोरे मे"

आजुक युवती'क, धर्मक नामपर मेला देखय जएबा काल लटक-चटक पर कविचूडामणि 'मधुप' चिंतन करैत छथि देवदर्शनक नामपर मेला घुमै लेल जे वालिका जाइत छथि, ओ गहना देखएबाक नामपर अगं उधार करैत छथि। कविकें रहल नहि गेलनि, ओ एहिपर गीत रचना रचलन्हि-

“हम जेबै विदेसर भोर, रँगि के ठोर, पहिरकए काड़ा।

झनकाय झनाझन छाड़ा ।".....

तत्पश्चात मणिपदम्, यात्री, आदि अनेको आधुनिक कविताक माध्यमसँ नारी 'क कारुणिक स्थितिक चित्रण कएने छथि। यात्रीजी, गरीब घरक कनियाकें सौराठ सभासँ बुढ़बा वर सगं भसिएबाक एवं कनियाँ माए 'क पतिसँ आक्रोशक चित्रण, एहि पंक्ति 'क द्वारा कएल-

"ई की कैल उठाक' ल आनल

कमलक कौंढी लले टेड कोकनल

बेटी कें बेचलहुँ मरुआ दोबर

बूढ़ बकलेला सँ भरलहुँ कोबर।"

राजकमलजी कें कोसिकन्हाक नारीक दिसी ध्यानाकर्षित भलेनि। हुनक कविताक पंक्ति-

“मनुआकें धार कोशीक कात

घटवाहिक सुन्दरी गजगामिनी भीड़

खिल-खिल हँसी, मोहक मंदिर मुस्कान

ग्राम्याके अधर पर जयदेवक पदगान।"

निष्कर्ष, जहियासँ कविताक अस्तित्व अछि तहिये सँ नारी विमर्श कवि लोकनि करैत आबि रहल छथि। कखनो रूप सौन्दर्यक मोहक चित्र उपस्थित कएल तँ कखनो हुनक भाव सौन्दर्यक । समयक सगं परिवर्तन अनैत नारी 'क पीड़ा, मनोव्यथा, चित्तक हाहाकार सभक दर्शन करौलनि। नारी कोनो रूपमे बुच्चीदाइ, स्कूटवाहिनी , मुक्तोदरी, गमाँरू काँकोड़केशी, निरीह आदि किएक नहि रहथु, कविकेँ अपना दिश आकृष्ट करैत रहलीह आ करैते रहतीह। नारी बिनु कविता कल्पना मात्रे। नारी बिनु कविता-कामिनी धार सखायले रहि जाएत।

आधुनिक कविताक क्षेत्रमे कवियित्री' लोकनिक योगदान सेहो कम नहि। एहिमे अग्रणी रहथि सेफालिका वर्मा निरजा रेणु, उषा किरण खाँ आदि। स्वांतःसखाय कवियित्री लोकनि, कविता रचैत गेलीह, जाहिमे किछु, प्रकाशितो भले तँ किछु पाण्डुलिपि घरेमे रहि गलेनि। डिजिटल युगु मे फेसबुक' क माध्यमसँ अनेको समूह मचान, नव मिथिला- नव मैथिली आदि बनल। नव मिथिला- नव मैथिली सँ 'वाची' पत्रिकाक प्रकाशन होमय लागल। ई मैथिली लेखिकाक रचनाक लेल प्रेरणावर्द्धक भले ।

कामनी'क हम लड़ब'कविताक माध्यम सँ स्त्री समाजकेँ आह्वान करैत छथि-

"हम लड़ब

अन्त-अन्त घरि

जामे धरि दुनियाँक

सम्पूर्ण स्त्री

एक नहि भऽ जती

अन्यायक विरुद्ध

मानव शृंखला नहि बनेती।"

. प्रगतिवादी विचारधाराक कवियित्री दीपा मिश्र'क कविता संग्रह 'योनिक आत्मबोध' कविता संग्रह 'क किछु पद्यांश-

'हमर युद्ध मात्र हमरासँ'-
"प्रश्न पुछल गेल
सबटा रोष पुरुषक प्रति किएक?
हमरा ककरो प्रति रोष नै
हमर युद्ध त' हमरा स्वयंसँ अछि
हम रोज लड़ैत छी
कियाक त' शब्द छोड़ि
हमरा लग कोनो अस्त्र नै"
'चलू बाँटी'
कमला कोसी
लखनदेइक धार सन
बहैत मैथिल स्त्रीक जीवन
समयक ताप झेलतै
कहुखन सखु जाइत अछि
त' कहुखन गादि भेल
अपन विवशताक संग
ताकैत रहैत अछि
जे कहिया तक '

कवियित्री लोकनिक कवितामे स्वयकं सगं-सगं स्त्री समाजक वास्तविक स्थितिक चित्रणक सगं, स्त्री समाजकें अपन उचित अधिकारक लेल सचेष्ट एवं जागृत करबाक आह्वान देखबामे अबैत अछि। आबक यगु यथार्थवादी यगु अछि। आबक स्त्री वेचारी नहि । स्त्रीकें सहन करैत-करैत देह निःसन भ'गले छैक। आजुक स्त्री, सीता जकाँ ने सहतीह आने पतिकें परित्यागे करतीह ।ओ पुरुषक रक्षाक लेल, कोनो हदतक जएतीह, सगंहि अपन उचित अधिकारक लेल सधंर्षरत रहतीह । इएह आधुनिक यगुक प्रगतिवादी कवियित्रीक कविताक रचनामे झलकैत अछि।

Topic

“वर्तमान समय में गाँधीवाद की प्रासंगिकता”

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सारांश:

गाँधी दर्शन के प्रमुख बिन्दु - सत्य, अहिंसा और प्रेम हैं और इस प्रमुख विचारों के द्वारा राजनीतिक, धार्मिक, और आर्थिक विचारों पर अपना विचार व्यक्त किया है। यह तीन प्रमुख विचार तत्व जल, प्रकाश, वायु की भाँति सम्पूर्ण गाँधी विचार धारा को पल्लवित कर रहे हैं। प्रमुख आलेख द्वारा मैं वर्तमान विश्व समाज में गाँधीवाद की प्रासंगिकता अवलोकन किया है।

प्रमुख शब्द- गाँधीजी के विचार राजनीतिक क्षेत्र में, गाँधीजी के विचार सामाजिक क्षेत्र में, गाँधीजी के विचार आर्थिक क्षेत्र में, गाँधीजी के विचार मध्य निषेध के संबंध में, गाँधीजी के विचार शिक्षा क्षेत्र पर, गाँधीजी के विचार मानव अधिकार के क्षेत्र में, गाँधीजी के विचार विश्व शांति क्षेत्र में।

प्रस्तावना- वर्तमान अस्थिरता के दौर में जहाँ एक ओर सांप्रदायिक संघर्ष चल रहा है एवं दूसरी ओर रूसिया और यूक्रेन एवं गाजा और इजराइल के मध्य भीषण युद्ध अभितक चल रही है। कभी धर्म के नाम पर आतंकवाद घटनाएँ समाज को झकझोरते हैं। आज सम्पूर्ण विश्व बाज़ारवाद के दौड़ में शामिल हो चुका है। लालच की परिणती युद्ध की सीमा तक चली जाती है। ऐसे में गाँधीवाद की प्रासंगिकता पहले से कहीं अधिक हो जाती है। तो क्या गाँधीवाद को अपनाने के लिए हमें टोपी या धोती पहने की जरूरत है या फिर ब्रह्मचर्य अपनाने या फिर धृणा करने की आवश्यकता है ? नहीं, इनमें से कुछ भी करने की आवश्यकता नहीं है। बल्कि धृणा को दूर करने के लिए गाँधीवाद को अपनाने की जरूरत है।

अब प्रश्न यह उठता है की यह गाँधीवाद क्या है? किसी भी शोषण का अहिंसक प्रतिरोध, सबसे पहले दूसरों की सेवा, संवय से पहले त्याग, झूठ के स्थान पर सच, बजाय देश और समाज की चिंता करना आदि विचारों को समग्र रूप से गाँधीवाद की संज्ञा दी जाती है। गाँधीवादी विचार व्यापक रूप से प्राचीन भारतीय दर्शन से प्रेरणा पाते हैं और इन विचारों की प्रासंगिकता अभी भी बरकरार है। आज के दौर में जब समाज में कल्याणकारी आदर्शों का स्थान असत्य, अवसरवाद, धोखा, चालाकी, लालच व स्वार्थपरता जैसे संकीर्ण विचारों द्वारा लायी जा रहा है तो समाज सहिष्णुता, प्रेम, मानवता, भाईचारे जैसे उत्तम आदर्शों को विस्तृत करता जा रहा है। विश्व शक्तियाँ शस्त्र एकत्र करने की स्पर्धा में लगी हुई हैं लेकिन एक छोटे से वायरस को हराने में लाचार साबित होती है। ऐसे में विश्व शांति की पुनःस्थापना के लिए मानवीय मूल्यों को पुनः प्रतिष्ठित करने के लिए आज गाँधीवाद नए स्वरूप में पहले से कहीं अधिक प्रासंगिक हो उठा है।

गाँधीवाद की प्रासंगिकता

महात्मा गाँधी धर्म और नैतिकता में अटूट विश्वास रखते थे। उनके लिए धर्म, प्रथाओं व आडंबरों की सीमा में बंधा हुआ नहीं वरन् आचरण की एक विधि थी। गाँधी जी के अनुसार-धर्म विहीन राजनीति मृत्युजाल है, धर्म व राजनीति का यह अस्तित्व

हिं समाज की बहतरी के लिए नींव तैयार करता है। गाँधी जी साधन व साध्य दोनों की शुद्धता पर बल देते थे। उनके अनुसार साधन व साध्य के मध्य बीज व पेड़ के जैसा संबंध है एवं दूषित बीज होने की दशा में स्वस्थ पेड़ की उम्मीद करना अकल्पनीय है।

महात्मा गाँधी का उद्देश्य किसी नए दर्शन का विकास करना नहीं था। किन्तु ऐसा कोई पहलू नहीं जिसपर उन्होंने विचार नहीं किया हो, चाहे वह राजनीतिक पहलू हो या सामाजिक, धार्मिक, हो या आर्थिक। सबसे महत्वपूर्ण बात यह है कि इनके सभी पहलुओं का आधार एक ही है, वह है-नैतिकता। जिस मनुष्य में विनय, सौजन्य, शांति, दया, दूसरों के मत-चाहे वे भ्रांतिपूर्ण ही क्यों न हों- के प्रति आदर, कम को समझने की शक्ति, परीनंदर्शिता, त्रिकालबाधित सत्य के प्रति दृढ़ भक्ति भाव, कार्य करने की निश्चयात्मक बुद्धि आदि गुण होते हैं, उन्हें महापुरुष कहा जाता है और इसे ही महापुरुष हैं- महात्मा गाँधी।

“गाँधीवादी विचारधारा महात्मा गाँधी द्वारा अपनाई और विकसित की गई उन धार्मिक- सामाजिक विचारों का समूह है जो उन्होंने पहली बार 1893 से 1914 तक दक्षिण अफ्रीका में तथा उसके बाद फिर भारत में अपनाई गई थी।”¹ गाँधीवादी विचारधारा न केवल राजनीतिक, नैतिक और धार्मिक है, बल्कि पारंपरिक और आधुनिक तथा सरल एवं जटिल भी है। यह कई पश्चिमी प्रभावों का प्रतीक भी है, जिनको गाँधीजी ने उजागर किया था, लेकिन यह प्राचीन भारतीय संस्कृति में निहित है तथा सारभौमिक नैतिक और धार्मिक सिद्धांतों का पालन करता है। गाँधीजी ने इन विचारधाराओं को विभिन्न प्रेरणादायक स्रोतों जैसे- भगवद् गीता, जैन धर्म, बौद्ध धर्म, बाइबिल, गोपाल कृष्ण गोखले, टॉलस्टॉय, जॉन रस्कन आदि से विकसित किया। टॉलस्टॉय की पुस्तक ‘द किंगडम ऑफ गॉड इज विदिन यू’ का महात्मा गाँधी पर गहरा प्रभाव था। गाँधीजी ने रस्कन की पुस्तक ‘अंटू द सि लास्ट’ से सर्वोदय के सिद्धांत को ग्रहण किया और उसे जीवन में उतारा।

गाँधीजी ने आजादी की लड़ाई के साथ-साथ छुआछूत उन्मूलन, हिन्दु-मुस्लिम एकता, चरखा और खादी को बढ़ावा, ग्राम स्वराज का प्रचार, प्राथमिक चिकित्सा को बढ़ावा और परंपरागत चिकित्सा ज्ञान के उपयोग सहित तमाम दूसरे उद्देश्यों पर कार्य करना निरंतर जारी रखा। सत्य के साथ गाँधीजी के प्रयोगों ने उनके इस विश्वास को पक्का कर दिया था कि सदा विजय होती है और सहि रास्ता सत्य की रास्ता ही है। आज मानवता की मुक्ति का रास्ता अपनाने से ही है। गाँधी जी सत्य को ईश्वर का पर्याय मानते थे। गाँधीजी का मत था कि सत्य सदैव विजयी होता है और अगर मनुष्य का संघर्ष सत्य के लिए है तो हिंसा का लेश मात्र उपयोग किए बिना भी वह अपनी सफलता सुनिश्चित कर सकता है।

गाँधीजी के विचार राजनीतिक क्षेत्र में - पूरा विश्व वर्तमान राजनीति में भ्रष्टाचार, अपराध और अनैतिकता का साम्राज्य चारों ओर फैल चुका है। पूरे विश्व में नेताओं की छवि धूमिल हुई है और साधारण जनता का मोह भंग हो चुका है। महात्मा गाँधीजी की कथनी-करनी तथा विचारों में पारदर्शिता थी। परंतु आज के नेतागण केवल सत्ता और वोटों को ही राजनीति करना जानते हैं, उनकी कथनी-करनी और विचारों में कोई मेल नहीं है। वर्तमान के नेताओं ने राजनीति का अर्थ ही बदल दिया है, ‘राज करने की नीति’ इसके लिए वे साम, दाम, दण्ड भेद सभी का प्रयोग करते हैं। गाँधी जी के बाद संभवतः ऐसा कोई नेता नहीं है जिसकी एक पुकार पूरी जनता उसके पीछे चल दे।

वर्तमान पूरे विश्व के नेता स्वार्थी, लोभी हो चुके हैं। राजनीति का अपराधीकरण आज कोई नेता बात नहीं है। सभी प्रमुख पार्टियाँ ऐसा न करने के खिलाफ जरूर हैं परंतु प्रत्यक्ष रूप से वे चुनाव के समय टिकट अपराधी प्रवृत्ति के लोगों को अवश्य देती हैं। चुनाव के समय बिहार तथा अन्य स्थानों पर उभरती हिंसा तथा बूथों को बंदूकों के दम पर लूट लेना, लोगों के स्वतंत्र चुनाव अधिकारी का हनन साधारण बात हो गई है। सभी पार्टियाँ इसको रोकना चाहती हैं किन्तु इसके लिए ठोस नियम तथा इसके पालन की आवश्यकता है। सत्ता में आने के

लिए सांसदों की खरीद-फरोख्त बड़े पैमाने पर हो रही है। ऐसे समय में गाँधी विचारधारा ही हमें उचित मार्ग दे सकते हैं। वर्तमान पूरा विश्व में महात्मा गाँधी विचार धारा अधिक प्रासंगिक हो गयी है।

गाँधीजी के विचार सामाजिक क्षेत्र में- राष्ट्रपिता महात्मा गाँधी नारीस्वतंत्रता के समर्थक थे। संभवतः इसीलिए उन्होंने स्वतंत्रता संग्राम में नारी सहभागिता को महत्वपूर्ण माना और उन्हें घर की चार दीवारी से निकालकर उपयुक्त वातावरण प्रदान किया। उन्होंने भारत देश की नारी शक्ति को स्वतंत्रता आंदोलन की शक्ति बनाया और उस शक्ति का प्रयोग सामाजिक सुधारों को क्रियान्वित करने में किया।

वर्तमान पूरे समाज और परिवार में स्त्री-पुरुष की समानता को स्वीकारा है जिसके कारण आज की नारी पुरुष के साथ कंधे से कंधा मिलाकर प्रत्येक क्षेत्र में अपना बहुमूल्य योगदान दे रही है परंतु अब भी मानसिक रूप से गाँधी जी विचारों को हम अपने जीवन में लागू नहीं कर पाये हैं। जिसके कारण अधिकांश परिवारों में अभी भी पुत्र और पुत्री के कारण लड़कियों को शिक्षा के अधिकार से वंचित कर उन्हें कर्तव्य व सेवा का पाठ पढ़ाकर परंपरागत तथा रूढ़िगत शृंखलाओं में बाँध दिया जाता है, जो सर्वथा अनुचित है। आज के समय कुछ परिमाणों में हमने समाज और परिवार में स्त्री-पुरुष की समानता को स्वीकारा है, जिसके कारण आज की नारी पुरुष के साथ कंधे के साथ कंधे से कंधा मिलाकर प्रत्येक क्षेत्र में अपना बहुमूल्य योगदान दे रही है परंतु अब भी मानसिक रूप से गाँधी जी के विचारों को हम अपने जीवन में लागू नहीं कर पाये हैं। जिसके कारण अधिकांश परिवारों में अभी भी पुत्र और पुत्री के भेद के कारण लड़कियों को शिक्षा के अधिकार से वंचित कर उन्हें कर्तव्य व सेवा का पाठ पढ़ाकर परंपरागत तथा रूढ़िगत शृंखलाओं में बाँध दिया जाता है, जो सर्वथा अनुचित है। आज हमारे देश में सांप्रदायिकता की आग चारों ओर फैली हुई है, इसके लिए भी नेताओं की स्वार्थपरता, भड़काऊ भाषण ही जिम्मेदार है। एक भीड़ को धार्मिक उन्माद का रूप दे देना आज अत्यन्त सरल हो गया है। मानव संवेदना तथा भावना शून्य हो गया है जिसके कारण एक वर्ग को दूसरे के प्रति भड़काना आसान हो गया है।

महात्मा गाँधीजी ने कहा था-“ मैं ऐसे भारत के निर्माण के लिए सतत् प्रयत्नशील रहूँगा जिसमें सभी संप्रदायों का मेल-जोल होगा। उसमें स्त्रियों को वही अधिकार दिए जायेंगे जो पुरुषों को प्राप्त हैं।”² वर्तमान में भारतीय संविधान और आजकी भारत सरकार की नीतियाँ स्वयं ही गाँधीजी के विचारों की प्रमाणिकता को सिद्ध कर रही हैं कि वे आज के संदर्भ में कितने प्रासंगिक हैं।

गाँधीजी के विचार आर्थिक क्षेत्र में- राष्ट्रपिता महात्मा गाँधीजी के विचार इस दृष्टि से भी प्रासंगिक हैं कि उन्होंने मानवीय भावनाओं का यंत्रीकरण कर दिया है। मशीनों के कारण व्यक्ति भावनाओं और अनुभूतियों, संवेदना से विहीन होता जा रहा है। दिनों-दिन भारत में बेरोजगारी का संकट बढ़त ही जरा है। मशीन का प्रयोग उचित है जहाँ अत्यधिक कार्य है परंतु हमारा देश में जहाँ एक ओर जनसंख्या अधिक और कार्य के अवसर कम। शिक्षा रोजगारपरक न होने के कारण आज का युवा वर्ग शिक्षा समाप्तिके पश्चात् रोजगार न मिलने पर अपने भविष्य के प्रति चिंतित व दिग्भ्रमित हैं, इसे जहाँ एक ओर युवा पीढ़ी का नाश हो रहा है, वहीं दूसरी ओर अपराधों का की संख्या में निरंतर बढ़ोतरी इसका ही परिणाम है, अतः भारतीय अर्थ व्यवस्था में गाँधीजी के विचार प्रासंगिक हो जाता है।³

गाँधीजी के विचार मद्य निषेध क्षेत्र में- विश्व के गाँधीवादी दृष्टिकोण में मद्य निषेध का गौरवपूर्ण स्थान है। गाँधी के लिए “ शराब एक बुराई से अधिक एक बीमारी है” (संग इंडिया)। “मैं शराब को चोरी और शायद वेश्यावृत्ति से भी अधिक निंदनीय मानता हूँ।” (महात्मा गाँधी, किसी भी कीमत पर निषेध)।⁴

गाँधीजी ने कहा है कि कई साम्राज्य उनके शासकों की शराब पीने की आदत के कारण नष्ट हो गए थे। यह राक्षसी बुराई निरसंदेह रोमन साम्राज्य के पतन में सहायक कारकों में से एक थी (एमकेगाँधी, यंग इंडिया)।

गाँधीजी के विचार शिक्षा के क्षेत्र में- भारत में अभी तक कोई भी ऐसा प्रयास नहीं किया जा रहा है कि हमारी अपनी भाषाओं में उत्तम शिक्षा प्रदान की जाये। यह हमारी शिक्षा की सबसे बड़ी असफलता है। रूस और चाइना बिना किसी अंग्रेजी के विज्ञान में बहुत उन्नति की है। स्वतंत्रता के 75 वर्षों बाद भी हिन्दी को राष्ट्रीय भाषा के रूप में अपने अस्तित्व के लिए संघर्ष करना पड़ रहा है, हिन्दी के साथ अपने ही देश में परायों जैसा व्यवहार किया जा रहा है। यह कहाँ तक उचित है? महात्मा गाँधी द्वारा निर्धारित बेसिक शिक्षा की नीति को यदि आज स्वीकार किया जाये तो एक ओर श्रम के प्रति लोगों के मन में आदर का भाव ही नहीं जागृत हो सकेगा।

गाँधीजी के विचार मानव-अधिकार के क्षेत्र में- पूरे भारत में आज के सरकार ने कई सकारात्मक कदम उठाये हैं। सभी बच्चों को प्राथमिक शिक्षा पूर्णतः निशुल्क दी जा रही है और अगर वे आगे पढ़ने में रुचि रखते हैं तो कई सरकारी, गैर-सरकारी संस्थाएँ उत्तम शिक्षा के लिए छात्रवृत्ति सहायता दे रही हैं, जिससे वे बिना किसी व्यवधान के अपने सपनों को पूरा कर सकें। बालश्रम को रोकने के लिए संविधान में चौदह वर्ष से कम आयु के बालकों से काम लेने पर दंड का प्रावधान है। श्रमिकों के लिए कई कानून बनाए गए हैं, उनके काम के घंटों में कटौती, पूरी मजदूरी बोनस के साथ ही काम करते हुए आकस्मिक दुर्घटना होने पर सरकार कंपनी से उन्हें पूरा मुआवजा दिलवाती है जो उनका हक है।

गाँधीजी ने कर्तव्य एवं अधिकारों के पारस्परिक संबंध के आधार पर नैतिक न्याय की अवधारणा प्रस्तुत की है उनके अनुसार कर्तव्यों का सही पालन ही अधिकारों का सही स्रोत है।⁵

गाँधीजी के विचार विश्व शांति के क्षेत्र में- गाँधीजी के विचारधारा आज विश्व के अनेक समस्याओं के समाधान में सबसे अधिक कारगर और सहायक सिद्ध हो रहा है। आज पूरा विश्व तीसरे विश्व युद्ध के कगार पर खड़ा है, परमाणु तथा जैविक हथियारों का बढ़ता प्रयोग मानवता के लिए खतरा बन गया है। विज्ञान के प्रयोग ने हमारे जीवन को सुखमय अवश्य बनाया है परंतु इसके दुष्प्रभाव को भी नकारा नहीं जा सकता है। यंत्रों के अत्यधिक प्रयोग के कारण मानवीय भावनाओं भी यंत्रीकरण हो गया है।

राष्ट्रपिता महात्मा गाँधीजी के मानना था कि केवल मस्तिष्क, केवल शरीर और केवल भौतिक दृष्टि से ही विकास करना पर्याप्त नहीं, इसके स्थान पर दया, प्रेम, सेवा और जीवन के नैतिक मूल्यों को महत्व देना होगा।⁵

आज पूरे विश्व में गाँधी-दर्शन की प्रासंगिकता सभी क्षेत्रों में बढ़ी है, “ गाँधीजी स्वयं शांति के मूर्तिमान रूप थे। उनके लिए व्यक्ति के जीवन और सम्पूर्ण समाज के संदर्भ में अत्यधिक आनंद शांति में निहित था।”⁶

राष्ट्रपिता महात्मा गाँधीजी ने कहा है कि “शांति सीधे गाँव के व्यक्ति से परम्भ हो, उनका अटल विश्वास था जिस राष्ट्र का आधार शांति है उसी के पास विश्व में शांति स्थापित करने की शक्ति हो सकती है।”⁷ गाँधीजी द्वारा संचालित आंदोलन स्वयं ही विश्व शांति क्षेत्र में एक बड़ा अद्भुतपूर्व कदम था। गाँधीजी कभी भी ब्रिटिश साम्राज्य के लिए हिंसा के प्रयोग को उचित नहीं माना और हृदय परिवर्तन पर बल दिया।

निष्कर्षतः यह कहा जा सकता है कि आज सम्पूर्ण विश्व बजरवाद के दौड़ में शामिल हो चुका है। लालच की परिणति युद्ध की सीमा तक चली जा रही है। ऐसे में गाँधीवाद की प्रासंगिकता पहले से कहीं अधिक हो जाती है।

सहायक ग्रंथ और पत्रिकाएं :-

1. सत्य का प्रयोग (आत्मकथा)-महात्मा गाँधी।
2. 'समय:संदर्भ और गाँधी'-शंकर दयाल सिंह।
3. 'मेरे सपनों का भारत'- गाँधीजी।
4. 'आज का भारत'- ऐ. के. सिंह।
5. 'गाँधी व्यक्तित्व विचार और प्रभाव'- प्रस्तावना उद्धृत (संपादक) काका कालेलकर।
6. पत्रिका:- युगवाणी।
7. 'विश्व शांति और महात्मा गाँधी'- कुमारी निवेदिता शर्मा

Topic

Prevention of Corruption Act in The Scenario of Mizoram

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ABSTRACT:

In the tranquil state of Mizoram, where we have peacefully enjoyed statehood for thirty-eight years, corruption has deeply infiltrated political, civil, and social spheres. Despite being morally detested, it has become ingrained within our systems, accepted as a harsh reality.

The Special Court established under the PC Act²³, has become increasingly active and functional, instilling faith among the populace that such egregious offenses will be duly punished by law. However, it is undeniable that the Act's implementation still falls short in rooting out corruption, owing to staff shortages, lack of awareness, and insufficient sensitization efforts.

With many steps yet to take and thousands of untested offenses, the Prevention of Corruption Act has emerged as one of the most crucial, potent, and indispensable laws in operation within the state of Mizoram.

KEYWORDS: Perceived Politicalization, Transparency and Integrity, Harsh Reality, Dodgin Mindset, Judicial Efficacy

INTRODUCTION

The Prevention of Corruption Act²⁴ was instituted to combat corruption and other misconducts within the government and public sector enterprises in India. Under the PCA of 1988, the Central Government possesses the authority to appoint judges for investigating and adjudicating cases involving the following offenses:

- Offenses punishable as per the provisions of the act.
- Conspiracy or attempt to commit the offenses outlined in the act.

²³The Prevention of Corruption Act, 1988 (Act 49 of 1988)

²⁴ *Supra* note 1 at 1.

This paper will concentrate on the context of the Prevention of Corruption Act, 1988 within the state of Mizoram, discussing matters concerning the credibility of the Act, the established Court under it, its limitations, and proposing suggestions while conducting a critical examination.

LITERATURE REVIEW:

Lectures on Prevention of Corruption Act²⁵: This publication offers a comprehensive examination of the Prevention of Corruption Act, 1988, catering to legal practitioners, scholars, policymakers, and those interested in addressing corruption in India. Sra and Kaur meticulously analyze the Act's provisions, scope, and implications, providing clear insights into the legal framework governing corrupt practices, bribery, and abuse of power. Through real-life case studies and practical examples, the authors illustrate the Act's application across various contexts, while also delving into landmark judicial decisions and legal precedents to elucidate interpretation and enforcement.

In addition to legal analysis, the authors offer critical perspectives on the policy dimensions of corruption prevention. They scrutinize the roles of regulatory bodies, law enforcement agencies, and anti-corruption measures in combatting corrupt practices, exploring the intricate interplay between law, governance, and ethics. Given the evolving nature of corruption and governance challenges in India, this book remains timely and relevant, addressing contemporary obstacles and emerging trends to provide readers with up-to-date insights into corruption prevention efforts.

Designed as an educational resource, this book simplifies complex legal concepts for a wide audience. Structured chapters, summaries, and discussion questions facilitate learning and knowledge dissemination in both academic and professional settings. In summary, this publication serves as an indispensable resource for understanding, interpreting, and applying the Prevention of Corruption Act, 1988, offering thorough legal analysis, practical insights, critical policy perspectives, and pedagogical value.

This publication indeed offers a thorough examination of the Prevention of Corruption Act, 1988, providing valuable insights into its legal framework, practical application, and policy dimensions. However, one potential criticism lies in the depth of analysis regarding the Act's effectiveness in addressing systemic corruption challenges in India. While the authors offer a comprehensive understanding of the Act itself, there may be room for a more critical evaluation of its limitations and shortcomings in practice. Additionally, while the book addresses contemporary challenges and emerging trends, it may benefit from further exploration of alternative approaches or reforms necessary to enhance the Act's efficacy in combating corruption. Despite this potential critique, the book remains an invaluable resource for legal practitioners, scholars, and policymakers seeking to navigate the complexities of anti-corruption laws in India.

²⁵Baljinder S. Sra and Paramjeet Kaur, *Lectures on Prevention of Corruption Act*(Singla Law Agency, Candigarh, January 1, 2021)

1. **Anti Corruption -Law, Practice And Procedure**²⁶: This book thoroughly explores how the Prevention of Corruption Act, 1988 has evolved over time. It's a one-stop guide for legal experts, courts, and law enforcement. Instead of searching multiple places, readers can find all they need to know about each section of the Act in this book.

The book dives into the nitty-gritty of how authorities catch public servants involved in bribery. It also covers investigations into disproportionate assets, highlighting the crucial roles of investigators and prosecutors.

Additionally, it offers a clear look at the legal side of criminal investigations, prosecutions, and appeals. It carefully documents important Supreme Court rulings since 1988, making comparisons with the previous Act from 1947. It even explains the 2018 Amendment Act and penalty charts for better understanding.

Furthermore, it extensively covers Supreme Court judgments related to the Prevention of Corruption Act, making legal principles and case laws easy to understand. By including Supreme Court guidelines, it ensures readers have all the necessary legal insights.

In short, this book is a concise guide to anti-corruption laws, making legal matters easy to grasp. It's a valuable resource for anyone involved in fighting corruption, with additional acts and sections for quick reference..

2. **Treatise on the Prevention of Corruption Act, 1988**²⁷: This article offers a comprehensive dive into the Prevention of Corruption Act (PCA), 1988, providing readers with a thorough understanding of its legislative history, practical application, and evolving legal framework. Authored by an expert in the field, it serves as an essential resource for legal professionals, law enforcement agencies, and stakeholders working to combat corruption in India.

From tracing the historical development of each section of the PCA to offering practical guidance for legal practitioners, the treatise covers a wide array of topics. It delves into investigative techniques, prosecution strategies, and legal defenses, equipping readers with valuable knowledge and tools to navigate anti-corruption laws effectively.

One of its key strengths lies in its in-depth analysis of investigative techniques and prosecutorial practices, shedding light on both challenges and best practices in criminal investigations and prosecutions under the PCA. Additionally, the treatise thoroughly compiles and analyzes important case laws and legal principles elucidated by the Supreme Court, providing a comprehensive understanding of judicial interpretations and precedents.

Furthermore, the article keeps readers updated on legislative changes, incorporating amendments introduced by the Prevention of Corruption (Amendment) Act, 2018, and outlining penalties for offenses under the PCA. Overall, "Treatise on the Prevention of Corruption Act, 1988" is an authoritative resource that offers practical insights and analysis for all stakeholders engaged in the fight against corruption in India..

²⁶ Dr. A.K.Gautam, *Anti Corruption -Law, Practice And Procedure*(Mohan Law House, 2022)

²⁷ Dharam Chand Jain, "Treatise on the Prevention of Corruption Act, 1988" available at: https://www.unafei.or.jp/publications/pdf/RS_No77/No77_12PA_Jain.pdf (last visited on February 14, 2024)

METHODOLOGY

In this paper, the researchers employ a doctrinal legal research methodology, a proven and time-tested approach in the field of legal scholarship. This methodology serves as the crucible within which the researchers acquire, dissects, and comprehends the legally relevant information necessary for the expedition. It represents the scientific and systematic approach adopted to unravel the intricacies of harmonious construction and its application within the intricate web of statutes.

The methodology encompassed a multifaceted approach:

- a. **Comprehensive Literature Review:** We undertook a thorough analysis of statutory provisions, judicial precedents, case law, and academic literature pertinent to the doctrine of harmonious construction. This constituted the cornerstone of our research, facilitating adept navigation of the legal landscape.
- b. **Legal Analysis and Interpretation:** This task included carefully analyzing and interpreting statutes, court rulings, and legal principles. Thus, We aimed to uncover the subtle intricacies and nuances inherent in harmonious construction.

This methodology represents a rigorous and scientific means of acquiring knowledge, interpreting it, and presenting this research in a coherent and structured manner.

WHAT IS PC ACT?

Initially, instances of bribery and corruption involving public servants were handled under the Indian Penal Code²⁸. However, as time passed, it became apparent that the existing laws were inadequate to effectively address the escalating issues of bribery and corruption. This realization prompted the

²⁸ The Indian Penal Code, 1860 (Act 45 of 1860) The Indian Penal Code has been extended to Berar by the Berar Laws Act, 1941 (4 of 1941) and has been declared in force in—
Sonthal Parganas, by the Sonthal Parganas Settlement Regulation 1872 (3 of 1872) s. 2;
Panth Piploda, by the Panth Piploda Laws Regulation, 1929 (1 of 1929), s. 2 and the Sch.;
Khondmals District, by the Khondmals Laws Regulation, 1936 (4 of 1936), s. 3 and the Sch; and
Angul District, by the Angul Laws Regulation, 1936 (5 of 1936), s. 3 and the Sch.

introduction of the PC Act²⁹ during the 1940s. The enactment of this specialized legislation represented a significant response to the evolving demands of the legal landscape, aimed at combating and eliminating bribery and corruption in India.

The 1947 Act underwent two amendments: first by the *Criminal Law Amendment Act, 1952*,³⁰ and later by the *Anti-Corruption Laws (Amendment) Act*³¹, both influenced by the recommendations of the Santhanam Committee³². Serving as a precursor, the 1947 Act paved the way for the Prevention of Corruption Act³³ which came in force on 9th September 1988. This new legislation aimed to enhance the effectiveness of anti-corruption laws by broadening their scope and bolstering provisions, thereby strengthening the overall statute.

The Prevention of Corruption Act, 1988, stands as a pivotal law in India, designed to combat corruption and promote accountability among public officials. Below is an overview of its historical context:

Enactment: The Prevention of Corruption Act, 1988, stands as a significant legislative achievement in India's ongoing fight against corruption, having been enacted by the Parliament and receiving presidential assent on September 9, 1988. This landmark legislation was introduced during the tenure of the then Prime Minister, Rajiv Gandhi, who led the Indian National Congress party in forming the government. The Speaker of the House at that time was Rabi Ray, who presided over the Lok Sabha, the lower house of Parliament.

It has been declared under s. 3 (a) of the Scheduled Districts Act, 1874 (14 of 1874), to be in force in the following Scheduled Districts, namely: the United Provinces Tarai Districts, see Gazette of India, 1876, Pt. I, p. 505; the Districts of Hazaribagh, Lohardaga [now called the Ranchi District, see Calcutta Gazette, 1899, Pt. I, p. 44] and Manbhum and Pargana Dhalbhum and the Kolhan in the District of Singhbhum—see Gazette of India, 1881, Pt. I, p. 504.

It has been extended under s. 5 of the same Act to the Lushai Hills—see Gazette of India, 1898, Pt. II, p. 345.

The Act has been extended to Goa, Daman and Diu by Reg. 12 of 1962, s. 3 and Sch; to Dadra and Nagar Haveli by Reg. 6 of 1963, s. 2 and Sch. I.; to Pondicherry by Reg. 7 of 1963, s. 3 and Sch. I and to Lakshadweep by Reg. 8 of 1965, s. 3 and Sch

²⁹*Supra* note 1 at 1.

³⁰ The Criminal Law Amendment Act, 1952 (Act 46 of 1952)

³¹ The Anti-Corruption Laws (Amendment) Act, 1964 (Act 40 of 1964)

³² The Santhanam Committee was established in 1962 by the Government of India to examine corruption in government departments and recommend measures to address it. The committee was chaired by K. Santhanam, a former editor of the Indian Express and the Hindustan Times. The committee's other members included four other MPs and two senior officers

³³*Supra* note 1 at 1.

This Act was conceived against the backdrop of increasing public outcry and demand for stronger measures to address corruption, which had become a pressing issue affecting various sectors of Indian society. The decision to replace the outdated Prevention of Corruption Act of 1947 underscored the government's commitment to modernizing the legal framework for combating corruption and ensuring accountability among public officials.

Under the leadership of Prime Minister Rajiv Gandhi and with the support of the ruling Indian National Congress party, the Prevention of Corruption Act, 1988, was passed with the aim of strengthening anti-corruption measures and upholding the principles of transparency and integrity in governance. This legislative milestone reflected the government's resolve to uphold the rule of law and promote ethical standards in public service, thereby contributing to the overall well-being and development of the nation.

Coming into Force: The Prevention of Corruption Act, 1988, officially came into effect on September 9, 1988, coinciding with the day it received presidential assent. This pivotal legislation replaced the antiquated Prevention of Corruption Act, 1947, and ushered in a new era in India's anti-corruption efforts. With the support of President R. Venkataraman, who granted assent, this Act introduced a range of novel provisions aimed at fortifying the legal apparatus to combat corruption across various sectors of Indian society.

The enactment of the Prevention of Corruption Act, 1988, represented a significant step forward in the country's ongoing battle against corruption. Its introduction was a response to the growing recognition that the previous legislation was inadequate in addressing the evolving challenges posed by corrupt practices. By modernizing and strengthening the legal framework, this Act signaled the government's commitment to rooting out corruption and promoting transparency and accountability in public service.

The replacement of the outdated 1947 Act with the comprehensive provisions of the 1988 Act marked a watershed moment in India's legislative history. Under the leadership of Prime Minister Rajiv Gandhi and with the backing of the ruling Indian National Congress party, this legislation underscored the nation's resolve to combat corruption at all levels. Through the combined efforts of Parliament, the President, and various stakeholders, the Prevention of Corruption Act, 1988, laid the foundation for a more robust and effective framework to combat corruption and uphold the integrity of public institutions.

Historical Context: The backdrop to the enactment of the Prevention of Corruption Act, 1988, was the growing acknowledgment of corruption as a deeply entrenched and pervasive issue across various sectors of Indian society. This legislation emerged as a response to this pressing concern, aiming to provide a robust legal framework to combat corruption effectively. Recognizing the need for a comprehensive anti-corruption law, there was a collective push to address the shortcomings and gaps in the existing legal structures. The objective was to bring the legislation in line with global standards and best practices in the fight against corruption.

The Prevention of Corruption Act, 1988, holds significant importance in the nation's anti-corruption efforts, serving as a critical instrument in the battle against this scourge. Its role in curbing corruption cannot be overstated, as its effectiveness directly impacts the success of anti-corruption initiatives. Therefore, a thorough evaluation of the Act's efficacy is imperative. This involves identifying any deficiencies or loopholes within the legislation and undertaking necessary reforms to strengthen it. This process may include revising or eliminating harsh provisions while introducing new measures to enhance its effectiveness.

In essence, the Prevention of Corruption Act, 1988, represents a pivotal milestone in India's ongoing endeavour to combat corruption. Its enactment underscores the government's commitment to promoting transparency, accountability, and integrity in public service. By continually reviewing and refining this legislation, we can strive towards a more robust legal framework that effectively addresses the challenges posed by corruption and upholds the principles of good governance.

KEY OBJECTIVES:

In *State of M.P. v. Ram Singh*³⁴, the Supreme Court held,

“The Prevention of Corruption Act, 1947 was enacted which was amended from time to time. In the year 1988 a new Act on the subject being Act No.49 of 1988 was enacted with the object of dealing with the circumstances, contingencies and shortcomings which were noticed in the working and implementation of 1947 Act. The law relating to prevention of corruption was essentially made to deal with the public servants, as understood in the common parlance but specifically defined in the Act. The Act was intended to make effective provision for the prevention of bribe and corruption rampant amongst the public servants. It is a social legislation defined to curb illegal activities of the public servants and is designed to be liberally construed so as to advance its object.”

IMPORTANT PROVISIONS& PENALTIES

Section 7:*Public Servant taking gratification other than legal remuneration in respect of an official act: Public servant taking gratification other than legal remuneration in respect of an official act: Whoever, being, or expecting to be a public servant, accepts or obtains or agrees to accept or attempts to obtain from any person, for himself or for any other person, any gratification whatever, other than legal remuneration, as a motive or reward for doing or forbearing to do any official act or for showing or forbearing to show, in the exercise of his official functions, favour or disfavour to any person or for rendering or attempting to render any service or disservice to any person, with the Central Government or any State Government or Parliament or the*

³⁴ *State of M.P. v. Ram Singh*, (2000) 5 SCC 88

Legislature of any State or with any local authority, corporation or Government company referred to in clause (c) of section 2, or with any public servant, whether named or otherwise, shall be punishable with imprisonment for a term which shall be not less than six months but which may extend to five years and shall also be liable to fine.

Section 7 defines the offense as the act of a public servant accepting or obtaining, or agreeing to accept, any gratification other than legal remuneration as a motive or reward for doing or forbearing to do any official act or for showing favor or disfavor to any person in the exercise of official functions. This includes both positive acts (performing an official duty) and negative acts (abstaining from performing an official duty).

The provision applies to a wide range of public servants, including government officials, employees of government-owned corporations, and individuals performing public duties. It covers both active solicitation of bribes by public servants and passive acceptance of bribes offered by others.

By criminalizing the acceptance of gratification other than legal remuneration, Section 7 aims to deter public servants from engaging in corrupt practices that undermine the principles of transparency, integrity, and accountability in public administration. It seeks to maintain the public's trust in governmental institutions and ensure fair and impartial delivery of services.

In ***Satwant Singh Sawhney v. Ram Singh Ex. A. Constable***³⁵, the Supreme Court of India extensively analyzed the scope of Section 7 of the Prevention of Corruption Act, 1988. The case involved a police constable who accepted an illegal gratification to not register a criminal case against the accused. The constable argued that he had merely delayed the registration of the case and had not refused to register it.

The Supreme Court rejected the constable's argument and held that the offense under Section 7 is committed not only when a public servant refuses to perform his duty but also when he delays the performance of his duty. The court emphasized that the section aims to maintain the purity of public services and prevent any action by public servants that could be influenced by bribery or corruption.

Section 8: *Taking gratification, in order, by corrupt or illegal means, to influence public servant: Taking gratification, in order, by corrupt or illegal means, to influence public servant: Whoever accepts or obtains or agrees to accept or attempts to obtain from any person, for himself or for any other person, any gratification whatever as a motive or reward for inducing, by corrupt or illegal means, any public servant, whether named or otherwise, to do or to forbear to do any official act, or in the exercise of the official functions of such public servant to show favour or disfavour to any person, or to render or attempt to render any service or disservice to any person, with the Central Government or any State Government or Parliament or the Legislature of any State or with any local authority, corporation or Government company referred to in clause (c) of section 2, or with any public servant, whether named*

³⁵Satwant Singh Sawhney v. Ram Singh Ex. A. Constable., AIR 1967 SC 1836

or otherwise, shall be punishable with imprisonment for a term which shall be not less than six months but which may extend to five years and shall also be liable to fine.

Section 8 criminalizes the act of any person taking gratification, other than legal remuneration, with the intention of inducing or rewarding a public servant to exercise his official functions improperly. This improper exercise of official functions could include showing favor or disfavor to any person, rendering a service or disservice, or performing or abstaining from an official act.

The provision applies not only to individuals who directly offer bribes but also to those who facilitate or participate in the process of offering bribes to public servants. It covers a wide range of scenarios where gratification is given or promised as an inducement or reward for influencing the actions of a public servant in violation of their official duties.

It aims to deter individuals from attempting to unduly influence public officials through bribery, extortion, or other unlawful means. By penalizing the act of offering gratification with corrupt intentions, the provision seeks to uphold the integrity and impartiality of public administration, ensuring that public servants perform their duties without being swayed by undue influence or personal gain.

Section 9: *Taking gratification, for exercise of personal influence with public servant:* Section 9 deals with the offense of obtaining gratification for exercising personal influence over a public servant, thereby inducing them to act in a certain manner.

It addresses the offense of obtaining gratification for exercising personal influence over a public servant as follows:

- a. **Obtaining Gratification:** Similar to Section 8, this refers to receiving any form of benefit, whether monetary or non-monetary, in exchange for a specific action or favor.
- b. **Exercise of Personal Influence:** This involves using one's personal connections, relationships, or position of authority to influence a public servant's actions or decisions. It could include exerting pressure, making requests, or offering inducements based on personal connections rather than the merit of the matter at hand.
- c. **Public Servant's Action:** The gratification is obtained with the aim of inducing the public servant to act in a certain manner, whether it involves performing an official duty, making a decision, or refraining from taking action.

Section 10: *Punishment for abetment by public servant of offences defined in section 8 or 9:* Section 10 imposes penalties on public servants who aid, abet, or facilitate the commission of offenses under Sections 8 and 9 of the Act.

This provision aims to hold public servants accountable if they assist, encourage, or facilitate the commission of bribery or the exercise of personal influence over other public servants in the following ways and punishment:

- a. **Abetment by Public Servant:** Public servants are individuals holding a position in government or associated with governmental functions. Section 10 targets instances where these individuals actively contribute to or facilitate acts of bribery (Section 8) or the exercise of personal influence (Section 9).
- b. **Aid, Encourage, or Facilitate:** Abetment can take various forms, including providing assistance, encouragement, support, or facilitating the commission of the offense. This could involve actively participating in the corrupt scheme, knowingly turning a blind eye to corrupt practices, or providing resources to enable the offense.
- c. **Penalties:** Public servants found guilty of abetting offenses under Sections 8 and 9 are subject to the same penalties as those prescribed for the principal offenders. These penalties may include imprisonment, fines, or both, depending on the severity of the offense and other relevant factors.

Section 13: Criminal misconduct by a public servant: Section 13 provides various forms of criminal misconduct by public servants, encompassing acts such as misuse of office, obtaining valuable things without consideration, and possession of disproportionate assets.

The key aspects covered under Section 13:

- a. **Misuse of Office:** Public servants are entrusted with the responsibility of serving the public interest and upholding the rule of law. Misuse of office occurs when a public servant utilizes their official position or powers for personal gain or to benefit others improperly. This could include using official resources for personal purposes, abusing authority to favor certain individuals or entities, or engaging in nepotism or favoritism in decision-making processes.
- b. **Obtaining Valuable Things Without Consideration:** This form of misconduct involves public servants obtaining valuable items, gifts, or benefits without providing legitimate consideration in return. Such benefits could be in the form of money, goods, services, or other advantages, and they are obtained without any valid justification or lawful entitlement.
- c. **Possession of Disproportionate Assets:** Public servants are expected to maintain transparency and accountability in their financial affairs. Possession of disproportionate assets refers to the situation where a public servant is found to possess assets, whether movable or immovable, that are significantly disproportionate to their known sources of income or legitimate earnings. This indicates potential corruption or illicit enrichment through abuse of office or other unlawful means.

Section 15: Punishment for attempt: Section 15 of the Act stipulates penalties for attempts to commit offenses under the Prevention of Corruption Act, 1988, even if such attempts are unsuccessful.

It addresses the concept of punishment for attempts to commit offenses under the Act, emphasizing that individuals can be penalized even if their attempts are unsuccessful. This provision recognizes that corruption poses a significant threat to the integrity of public institutions and aims to deter individuals from engaging in corrupt activities by imposing penalties for attempts to commit such offenses.

Attempted corruption, even if unsuccessful, is considered a serious offense because it reflects an intention to undermine the rule of law and the principles of transparency and accountability. By penalizing attempts, Section 15 reinforces the message that the mere intent to engage in corrupt practices is unacceptable and warrants legal consequences. This helps to create a deterrent effect, discouraging individuals from pursuing corrupt activities and promoting a culture of compliance with anti-corruption laws.

Section 17A: Punishment for contravention of section 12A: Section 17A specifies penalties for individuals who fail to furnish information about their assets as required under Section 12A of the Prevention of Corruption Act, 1988.

Section 17A serves as a crucial mechanism to enforce the requirement for public servants to disclose their assets and liabilities. Under Section 12A, public servants are mandated to furnish information about their assets, as well as those of their spouses and dependent family members. Failure to comply with this disclosure requirement leads to penalties specified in Section 17A. These penalties may include imprisonment for a term which may extend to six months, or with fine, or with both. By imposing such penalties, Section 17A emphasizes the importance of transparency and accountability in public service. It aims to prevent public servants from illicitly accumulating wealth or engaging in corrupt practices without detection by ensuring that their financial interests are properly disclosed and scrutinized.

Section 19: Presumption as to offences under sections 7, 10, 11 and 13: Section 19 establishes certain presumptions regarding the commission of offenses under Sections 7, 10, 11, and 13 of the Prevention of Corruption Act, 1988.

Section 19 of the Prevention of Corruption Act, 1988, establishes legal presumptions regarding certain offenses covered under the Act, including bribery, abetment, and criminal misconduct by public servants. These presumptions apply to offenses outlined in Sections 7, 10, 11, and 13, encompassing various forms of corruption. By shifting the burden of proof onto the accused in specific circumstances, Section 19 ensures that those engaged in corrupt activities face accountability.

For example, if a public servant possesses assets disproportionate to their known sources of income (as per Section 13), the law presumes their involvement in criminal misconduct unless proven otherwise. Similarly, if a public servant accepts gratification other than legal remuneration (as per Section 10), there is a presumption of guilt unless rebutted. These presumptions expedite legal proceedings and hold corrupt individuals accountable, aiding

in the effective enforcement of anti-corruption laws. By making it more challenging for those involved in corrupt activities to evade justice, Section 19 contributes significantly to maintaining integrity within public service and upholding the rule of law.

Section 20: Presumption where public servant accepts gratification other than legal remuneration: Section 20 of the Act creates a presumption of guilt when a public servant is found to possess assets disproportionate to their known sources of income.

Section 20 of the Prevention of Corruption Act, 1988, is a significant provision that addresses the issue of public servants possessing disproportionate assets. This section establishes a crucial legal presumption: if a public servant is found to possess assets exceeding their known sources of income, it presumes guilt. This presumption shifts the burden of proof onto the public servant, requiring them to demonstrate that their wealth is acquired through lawful means and not from corrupt activities. Essentially, Section 20 underscores the expectation that public servants should not accumulate wealth beyond what their legitimate income permits. It aims to dissuade public servants from engaging in corruption and accumulating assets disproportionate to their income, thus upholding the integrity of public institutions.

Enforcing Section 20 necessitates thorough investigation and examination of public servants' financial records to determine if their assets align with their income sources. Prosecutions under this provision are vital for holding accountable those who abuse their positions for personal gain, eroding public trust. By establishing a presumption of guilt in cases of disproportionate assets, Section 20 aids in the effective enforcement of anti-corruption laws and acts as a deterrent against corruption within public service. It underscores the importance of public servants adhering to the highest standards of integrity and transparency, ensuring they are answerable for any unlawfully acquired wealth.

REGULAR CASES IN MIZORAM

The Regular Cases³⁶ registered under the PC Act³⁷ by the Anti-Corruption Bureau, Government of Mizoram since 2013 till today on their website³⁸ are amounting to 52 cases so far.

Such cases registered under the PC Act, 1988 can be summarize into the followings-

1. **Nature of Cases:** The cases registered under the Prevention of Corruption Act by the Anti-Corruption Bureau of Mizoram since 2013 exhibit a common thread of allegations concerning misappropriation, embezzlement, and other forms of corruption. These cases typically involve accusations against government officials and individuals associated with them, suggesting breaches of public trust and fiduciary responsibility.

³⁶Anti Corruption Bureau, Government of Mizoram, available at: <https://acb.mizoram.gov.in/page/regular-case> (last visited on February 17, 2024)

³⁷*Supra* note 1 at 1.

³⁸<https://acb.mizoram.gov.in/page/regular-case>

2. **Types of Offenses:** The offenses encompass a broad spectrum of illegal activities, including misappropriation of government funds, forgery, cheating, abuse of official position, possession of disproportionate assets, and involvement in criminal conspiracy. Such offenses undermine the integrity of public institutions and erode public confidence in governmental processes.
3. **Scope of Misconduct:** The misconduct documented in these cases transcends various government departments and agencies. Allegations have been levelled against individuals within the District Administration, Education Department, Police, Excise & Narcotics Department, Autonomous District Councils, among others. This indicates the pervasive nature of corruption across different sectors of governance.
4. **Monetary Involvement:** The amounts involved in these corruption cases vary significantly, ranging from a few lakhs to crores of rupees. This wide range underscores the magnitude of corruption and financial irregularities plaguing the state. Such substantial monetary involvement highlights the urgent need for stringent measures to combat corruption effectively.

For eg:-The recent case of *Central Bureau of Investigation v. Zosangzuala*³⁹ relates to misappropriation of public money (Government of India) by accused (i) Shri Zosangzuala, Assistant Director (ii) Smt. Lalnunziri, Programme Executive and (iii) Smt. Judy H. Lalmuanpuii, LDC of All India Radio, Aizawl Station, Mizoram during January 2012 to June 2012 amounting to ₹ 10,58,319/- out of sanction amounting to ₹ 86.73 lacs received by the AIR, Aizawl Station resulting wrongful loss to the Government of India and corresponding wrongful gain for themselves.

5. **Variety of Allegations:** The allegations brought forth in these cases are diverse and multifaceted. They include the misuse of public funds, manipulation of contracts, fraudulent appointments, illegal land transactions, and the diversion of government grants. These allegations collectively reflect the complex web of corruption and malfeasance prevalent within Mizoram's governmental apparatus.

In the case of *CBI v. Zosangzuala*⁴⁰ the A-1 Shri Zosangzuala was Assistant Director (Programme)-Head of Programming, the A-2 Smt. Lalnunziri, Programme Executive and (iii) the A-3 Smt. Judy H. Lalmuanpuii, LDC- Programme Secretary (PSY) were posted at All India Radio Aizawl Station Aizawl during the period January 2012 to June 2012 while Shri D.R. Lalropuia was Deputy Director (Engr) was functioning as the Head of All India radio Aizawl Station. It was also proved that they entered into criminal conspiracy with each other and in furtherance thereto created false and fabricated record showing bogus persons as casually for various programmes in AIR Aizawl Station sanctioned amount of ₹ 10,58,319/-.

6. **Officials Implicated:** Government officials at different levels of authority find themselves embroiled in these corruption scandals. Bureaucrats, engineers, teachers, law enforcement personnel, and elected representatives are among those implicated. The involvement of individuals holding positions of public trust underscores the urgent need for robust anti-corruption measures and stringent enforcement of accountability mechanisms.

³⁹Central Bureau of Investigation v. Zosangzuala, S.R. (PCA) No. 11 of 2014

⁴⁰ Supra note 1. at 15.

In comparison to corruption cases handled in other states of India, the cases in Mizoram appear to be relatively small in scale, both in terms of the number of cases and the monetary values involved. Additionally, the nature of offenses alleged in these cases generally tends to be less severe compared to those seen in other regions. However, despite the relatively lower magnitude, the cases still represent significant breaches of trust and integrity within the governmental system. List of corruption cases registered by the ACB from 2013 to 2022 are:

1. ACB P.S. Case No. 1/2013 Dt.30/1/2013 U/S 409/468/474/477A I.P.C. R/W 13(1)(c)/13(1)(d) P.C Act, 1988 R/W 13(2) of PC Act, 1988 is registered against the then BDO Bungtlang 'S' for misappropriation of Govt. money during the year 2007-2008 to the tune of Rs 18,44,826/- under IWDP-III Project, Lawngtlai District.
2. ACB P.S. Case No.3/2013 Dt.31.7.2013 U/S 409/477A I.P.C. R/W 13(1)(c)(d)&13(2) P.C Act, 1988 is registered against one retired Store Keeper, FCS&CA on the alleged misappropriation of 6095.58 Qtls. of Govt. Grade 'A' and BPL/AAY rice valued of Rs.53,45,210.00
3. ACB P.S. Case No.3/2013 Dt.31.7.2013 U/S 409/477A I.P.C. R/W 13(1)(c)(d)&13(2) P.C Act, 1988 is registered against one retired Store Keeper, FCS&CA on the alleged misappropriation of 6095.58 Qtls. of Govt. Grade 'A' and BPL/AAY rice valued of Rs.53,45,210.00
4. 11.9.2013: ACB P.S. Case No.4/2013 Dt.9.9.2013 U/S 409/465/467/477A I.P.C. R/W 13(1)(c)(d)&13(2) P.C Act, 1988 is registered against one LDC -cum- Cashier, Office of District Education Officer, Lunglei for misappropriation of Government money amounting to Rs.9,27,253.00
5. ACB P.S. Case No.5/2013 Dt.16.9.2013 U/S 409 I.P.C. R/W 13(1)(c)(d)&13(2) P.C Act, 1988 is registered against one retired S.I(M) of 2nd IR Bn. Hqrs., Khawzawl on the alleged misappropriation of Professional Tax amounting to Rs.18,84,815.00 deducted from the salary of 2nd IR Bn. staff.
6. ACB P.S. Case No.6/2013 Dt.17.10.2013 U/S 420/468/477A/409/109/120-B I.P.C. R/W 13(1)(d)/13(2) P.C Act, 1988 was registered against the then Director, DM&R, the then Assistant, DM&R, LDC cum Store in-charge, DM&R and the Supplier of silpauline to the Govt. for alleged misappropriation of of Rs.35,85,000.00 regarding payment of bill for supply of silpauline
7. ACB P.S. Case No7/2013 Dt.18.10.2013 U/S 109/120-B/420/467/468/34 I.P.C. R/W 13(1)(d)/13(2) P.C Act, 1988 was registered against two Surveyor, one Constable of Police, one Constable of Excise & Narcotics, one Medical Officer and four civilians for allegedly committing the offences of forgery, cheating and abuse of official position in claiming Compensation in the proposed construction of railway (Broad Gauge) line between Sairang to Bairabi.
8. ACB P.S. Case No.1/2014 Dt.16.4.2014 U/S 420/120B/34 I.P.C. R/W 13(1)(d)(i)(ii)(iii)/13(2) P.C. Act was registered against 12(twelve) persons for their alleged commission of the offences of cheating, conspiracy and abuse of official position regarding claim of compensation by using fake LSCs/Passes in the ongoing construction of Kaladan Multi Modal Transit Transport Project Road.
9. ACB P.S. Case No.2/2014 Dt.22.4.2014 U/S 409 I.P.C. R/W 13(1)(d)(i)(ii) R/W 13(2) P.C. Act 1988 was registered for alleged misappropriation of Rs.6.75 lakhs of Government money during 2006 against the then Executive Engineer, PWD Kawrthah Division.

10. ACB P.S. Case No.3/2014 Dt.13.8.2014 U/S 409/471/477A I.P.C R/W13(1)(c)/13(1)(d)(i)(ii)/13(2) P.C. Act, 1988 was registered against Principal, Govt. Saiha College for alleged misappropriation of Government money amounting to Rs.20,25,680.00 during 2007 – 2012.
11. ACB P.S. Case No.4/2014 Dt.14.8.2014 U/S 409I.P.C. R/W 13(1)(c)(d)(i)(ii)&13(2) P.C Act, 1988 was registered against 6(six) persons for execution of works not commensurate with the amount sanctioned for implementation of works under MPLADS (RS) fund during 2011 – 2012.
12. ACB P.S. Case No.5/2014 Dt.27.8.2014 U/S 13(1)(d)(ii)/13(1)(e)&13(2) P.C Act, 1988 was registered against former Minister of Mizoram for alleged possession of assets disproportionate to his known source of income during 1999 – 2008.
13. ACB P.S. Case No. 6/2014 Dt.23.9.2014 U/S 406/120B/34 IPC R/W 13(1)(c)&13(2) P.C Act, 1988 was registered against 10 (ten) Khamrang Watershed Committee Members for their alleged misappropriation of public fund amounting to Rs. 16,26,537.00 during 2007 – 2012.
14. ACB P.S. Case No.7/2014 Dt.30.9.2014 U/S 420/466/468/471 IPC was registered against 36(thirty six) Govt. Servants working under Chakma Autonomous District Council (CADC) office, Chawngte who had allegedly dishonestly applied for their jobs using fake Educational Certificates during 2000 – 2012.
15. ACB P.S. Case No.8/2014 Dt.11.11.2014 U/S 409/477A/177 IPC R/w 13(1)(c)/13(1)(d)(i)(ii)&13(2) PC Act, 1988 was registered against the then Inspector of FCS&CA, Tlabung for misappropriation of 125 bags of rice from Tlabung Supply Godown.
16. ACB P.S. Case No.9/2014 Dt.17.12.2014 U/S 409/177 IPC R/w 13(1)(c)(d)(i)(ii)(iii)&13(2) PC Act, 1988 was registered against the then SI (M) of 2nd I.R Bn, Khawzawl for misappropriation of Rs. 9,55,913/- (Rupees nine lakhs fifty five thousand nine hundred thirteen) only
17. ACB P.S. case No.1/2015 Dt.10.3.2015 U/S 468/471/420 I.P.C R/W 13(1)(d)(i)(ii)(iii)&13(2) P.C. Act, 1988 was registered against H. Lalsiamliana S/o H. Biaksanga (L) Surveyor-1, Directorate of Land Revenue & Settlement Department for his illegal possession of many plots of lands under suspicious circumstances by abusing his official position.
18. ACB P.S. Case No.2/2015 Dt.19.5.2015 U/S 409/420/468/471/477A I.P.C. R/W 13(1)(d)&13(2) P.C. Act, 1988 was registered against 7 (seven) officials of LADC for their misappropriation of Govt. Money in the appointment of teaching and non teaching staff under LADC(Lai Autonomous District Council)
19. ACB P.S. Case No.3/2015 Dt.25.5.2015 U/S120B/409/420/477A/34 I.P.C. R/W 13(1)(c)(d) &13(2) P.C. Act, 1988 was registered against 16 (sixteen) officials of Mizoram P&E and PWD for their misappropriation of Govt. money on the construction of Kau- Tlabung and Tuipang Mini Hydel Project.
20. ACB P.S. Case No.4/2015 Dt.11.9.2015 U/S 409/477A I.P.C. R/W 13(1)(c)(d)&13(2) P.C. Act, 1988 was registered against the then Cashier, 2nd I.R. Bn. Hqrs., Khawzawl for his misappropriation of Medical Re-imbursement Bill amounting to Rs.1,37,100/- and falsification of account.
21. ACB P.S. Case No.5/2015 Dt.28.10.2015 U/S 120B/409/477A I.P.C. R/W 13(1)(c)(d)&13(2) P.C. Act, 1988 was registered against 6 (six) officials of CADC for their misappropriation of public fund amounting to Rs.10,83,906/- (Rupees ten lakhs eighty three thousand nine hundred six) only.

22. ACB P.S. Case No.6/2015 Dt.3.12.2015 U/S 120B/420/468/471 I.P.C. R/W 13(1)(c)(d)(e)&13(2) P.C. Act, 1988 was registered against the then Deputy Manager (Marketing), MAMCO for his commission of cheating and misappropriation amounting to Rs.268 Lakhs by abusing his official position.
23. ACB P.S. Case No.1/2016 Dt.8.3.2016 U/S 120B/420 I.P.C. R/W 13(1)(d)(ii)&13(2) P.C. Act, 1988 was registered against 7 (seven) persons of Ramhlun Sports complex for their commission of cheating and criminal conspiracy by selling and allotting plots of land illegally at Ramhlun Sports Complex area, Aizawl.
24. ACB P.S. Case No.2/2016 Dt.2.6.2016 U/S 120B/406/468 I.P.C. R/W 13(1)(c)(d)(ii)&13(2) P.C. Act, 1988 was registered against 7 (seven) members of Raichhawkzau Watershed Committee for their commission of criminal conspiracy, criminal breach of trust and criminal misconduct of the fund meant for the development of Raichhawkzau Watershed Project ACB P.S. Case No.3/2016 Dt.28.7.2016 U/S 120B/420 I.P.C. was registered against one person of Pangkhua Village Lawngtlai District for commission of criminal conspiracy and cheating of public fund meant for student scholarship.
25. ACB P.S. Case No.4/2016 Dt.28.7.2016 U/S 120B/409 I.P.C. R/W 13(1)(c)/13(1)(d) R/W 13(2) P.C. Act, 1988 was registered against - Ex VCP and Ex VC Vice President of Saizawh 'E', Lawngtlai District for commission of criminal conspiracy, criminal breach of trust and misappropriation of public fund without public interest.
26. ACB P.S. Case No.5/2016 Dt.10.8.2016 U/S 13(1) (d) R/W 13(2) P.C. Act, 1988 was registered against 2 (two) officials of NLUP Implementing Board for their commission's of misuse of official power and criminal misconduct.
27. ACB P.S. Case No.1/2017 Dt.31.1.2017 U/S 409 IPC R/w 13(1)(c)(d) R/W 13(2) P.C. Act, 1988 was registered against JE, Sinlung Hills Development Council (SHDC) for the commissions of criminal misconduct and misappropriation of Public Fund for the year 2012-2014.
28. ACB P.S. Case No.2/2017 Dt.19.4.2017 U/S 120B/468/471/420 IPC R/W 13(1)(c)(d)/13(2)&15 P.C. Act, 1988 was registered against the following 13 (thirteen) persons of Hindi school Teacher and Principals for their misappropriation of Government money amounting to Rs.27,80,100.00 (Rupees twenty seven lakhs eighty thousand one hundred) only through the commissions of criminal conspiracy, forgery, cheating etc.
29. ACB P.S. Case No.3/2017 Dt.7.7.2017 U/S 109/ 120B/468/471/420 IPC R/W 13(1)(c)(d)&13(2) P.C. Act, 1988 against the following 20 (twenty) persons of officials of Taxation Department, Mizo Carbon Product (MCP) staff, Supplier, Transporter for misappropriation of Government money amounting to Rs.1376.47 Lakhs (Rupees Ten thousand three hundred seventy six lakhs and forty seven thousand) only through the commission of abetment, cheating, criminal conspiracy, forgery etc.
30. ACB P.S. Case No.4/2017 Dt.10.10.2017 U/S 409/ 471/477A IPC R/W 13(1)(c)(d)&13(2) P.C. Act, 1988 was registered against the then SE, PHED, Champhai and member secretary, Landslide Committee for his misappropriation of Govt. money amounting to Rs.9,85,040/- (Rupees nine lakhs eight five thousand and forty), falsification of account and criminal breach of trust.

31. ACB P.S. Case No.5/2017 Dt.17.10. 2017 U/S 409 IPC R/W 13(1) (c)(d) & 13(2) P.C. Act, 1988 was registered against Asst. Engineer, LAD, MADC for misappropriation of Government money amounting to Rs.1,31,925.60 and criminal misconduct.
32. ACB P.S. Case No.No.1/2018 Dt.5.2.2018 U/S120B/468/471/420 IPC R/W 13(1)(c)(d)&13(2) P.C. Act, 1988 was registered against the then Director, Labour Employment & Industrial Training Department, Govt. of Mizoram & Secretary, Mizoram for misappropriation of Government money amounting to Rs.19,00,00,000/- falsification of account and criminal breach of trust.
33. ACB P.S. Case No.2/2018 Dt.9.2.2018 U/S120B/409/420/34 IPC R/W 13(1)(c)(d)&13(2) P.C. Act, 1988 was registered against the then VLA, BDO Office Thingdawl and Ex- VCP, Bualpui North for their misappropriation of Government money amounting to Rs.1,09,076/- & 69,938/- respectively.
34. ACB P.S. Case No.No.3/2018 Dt.3.4.2018 U/S120B/409 IPC R/W 13(1)(c)(d)&13(2) P.C. Act, 1988 was registered against 6 (six) officials of MADC for their misappropriation of CSS fund of Rs.32,82,900.00 under RKVY by way of diversion, works not executed and some beneficiaries are either unknown or some given partly.
35. ACB P.S. Case No.4/2018 Dt.20.4.2018 U/S120B/409 IPC R/W 13(1)(c)(d)&13(2) P.C. Act, 1988 was registered against 13(thirteen) officials of CADC for their misappropriation of Government money amounting to Rs.1,14,20,300.00.
36. ACB P.S. Case No.5/2018 Dt.22.5.2018 U/S 120B/477A/420 IPC R/W 13(1)(d)&13(2) P.C. Act, 1988 was registered against 3 (three) officials of Excise & Narcotics Department, Mizoram for their misappropriation of Government money amounting to Rs.1,73,48,365.00.
37. ACB P.S. Case No.No.6/2018 Dt.27.7.2018 U/S 120B/409/ 468/471 IPC R/W 13(1)(c)&13(2) P.C. Act, 1988 was registered against the then officials of AH & Vety Department for their misappropriation of Govt money amounting to Rs 10,39,489 ACB P.S .
38. ACB P.S. Case No.7/2018 Dt.24.9.2018 U/S 13(1)(c)/13(1)(d) & 13(2) P.C. Act, 1988 R/W 468/471/406/420 IPC was registered against one of the staff of Law & Judicial, Govt. of Mizoram for misappropriation of Government money amounting to Rs.1.43 Crore (Rupees One Crore and forty three lakhs) only under the head of professional services (Law & Judicial Department)
39. ACB P.S. Case No.1/2019 Dt.29.3.2019 U/s 13(1)(c)&13(2) P.C. Act, R/W /409 IPC was registered against the then Chief Executive Member (CEM), Chakma Autonomous District Council (CADC) for abuse of his official position and misappropriation of Government money amounting to Rs.1,79,03,773 /-(Rupees One Crore and seventy nine lakhs seven hundred and seventy three) only during his tenure as CEM, CADC
40. ACB P.S. No.2/2019 Dt.24.9.2019 U/S 13(1)(c)(d)/13(2) P.C. Act, R/W120B/477A/420 IPC was registered against the then Chief Executive Member (CEM) and 6 (six) other officials of Chakma Autonomous District Council, (CADC) for their abuse of official positions and misappropriation of huge amount of Government money amounting to Rs.1442.86 lakhs (Rupees one thousand four hundred and forty two lakhs and eighty six thousand) only during 2008- 2016.

41. ACB P.S. Case No.1/2021 Dt.02.03.2021 U/S 120B/406/409/420 IPC R/W 13(1)(a)(b) &13(2) P.C. Act, 1988 was registered against the then Chief Executive Member (CEM) and 7 (seven) other officials of Chakma Autonomous District Council (CADC) for their alleged criminal conspiracy, cheating, misappropriation of public money amounting to Rs. 4,65.45 lakhs (Rupees four hundred and sixty five lakhs and forty five thousand) only during the year 2017 - 2018.
42. ACB P.S. Case No.2/2021 Dt.14.04.2021 U/S 120B/409/420 IPC R/W 13(1)(a)(b) &13(2) P.C. Act, 1988 was registered against 2 (two) former Chief Executive Member (CEM) and 1(one) other official of Chakma Autonomous District Council (CADC) for their alleged criminal conspiracy, cheating and misappropriation of public money for the construction of CADC Session Hall located in Kamalanagar, Chawngte amounting to Rs. 49,41,000.00 (Rupees forty nine lakhs forty one thousand) only during the year 2010 to 2015.
43. ACB P.S. Case No.3/2021 Dt.14.04.2021 U/S 120B IPC R/W 13(1)(a) & 13(2) P.C. Act, 1988 was registered against the then Chairman and Chief Executive Member (CEM) of Chakma Autonomous District Council (CADC) for their alleged criminal conspiracy and misappropriation of public money under CADC amounting to Rs. 37,80,900 (Rupees thirty seven lakhs eighty thousand nine hundred) only during the year 2018.
44. ACB P.S. Case No.4/2021 Dt.22.10.2021 U/S 120B/409 IPC R/W 13(1)(a)(b) & 13(2) P.C. Act, 1988 was registered against the then Chief Executive Member (CEM) and 2 (two) other officials of Chakma Autonomous District Council (CADC) for their alleged criminal conspiracy, criminal breach of trust and misappropriation of public money amounting to Rs 17,35,183 (Rupees seventeen lakhs thirty five thousand one hundred eighty three) only during the year 2013 to 2018.
45. ACB P.S. Case No.1/2022 Dt.28.02.2022 U/S 409 IPC R/W 13(1)(a)(b) & 13(2) P.C. Act (Amend), 2018 was registered against one Junior Engineer (JE), MPWD for alleged criminal breach of trust and criminal misconduct by way of demanding and receiving money from the contractors of the work construction and maintenance of Rabung to Aiduzawl road under PMGSY amounting to Rs. 20,00,000/- (Rupees Twenty lakhs) only during the year 2019 to 2020.
46. ACB P.S. Case No.2/2022 Dt.05.05.2022 U/S 409/468/471/420 IPC R/W 13(1)(a)(b) & 13(2) P.C. Act (Amend), 2018 was registered against the then Principal, District Institute of Education Training (DIET), Kolasib, Mizoram for alleged criminal misconduct, cheating, criminal breach of trust and misappropriation of public money amounting to Rs. 47,35,048.43/- (Rupees forty seven lakhs thirty five thousand forty eight and forty three paise) only during 2013 to 2018.
47. ACB P.S. Case No.3/2022 Dt.05.05.2022 U/S 409 IPC R/W 13(1)(a)(b) & 13(2) P.C. Act (Amend), 2018 was registered against one official of GAD (Civil Aviation Wing), Mizoram for alleged criminal misconduct and misappropriation of public money amounting to Rs. 1,02,98,020/- (Rupees One crore two lakhs ninety eight thousand twenty) only during 2019.
48. ACB P.S. Case No.4/2022 Dt.26.05.2022 U/S 409/120B/34 IPC R/W 11/13(1)(a)(b) & 13(2) P.C. Act, 1988 was registered against fifteen (15) persons viz. LADC officials, Mizoram PWD officials, Sub-Contractors and other civilians for their alleged criminal breach of trust, criminal

conspiracy and misappropriation of public money amounting to Rs. 15,00,000/- (Rupees fifteen lakhs) only on the construction of Lawngtlai by-pass road during 2019 to 2020.

49. ACB P.S. Case No. 5/2022 Dt.05.07.2022 U/S 11/13(2) P.C. Act, 1988 was registered against – (1) Ex -President, N. Vanlaiphai Village Council– cum- Chairman, N. Vanlaiphai College Managing Board and (2) Ex- Vice President, N. Vanlaiphai Village Council -cum- Treasurer, N. Vanlaiphai College Managing Board for allegation of obtaining undue advantage without consideration by mismanagement of N. Vanlaiphai College Managing Board fund.
50. ACB P.S. Case No. 6/2022 Dt.14.07.2022 U/S 420/34 IPC R/W 11/13(1)(a) & 13(2) P.C. Act, 1988 was registered against officials of UDPA Department and contractor for alleged construction of RCC floor at ChawlhmunTlangveng, Aizawl amounting to Rs. Rs 6,80,000/- (Rupees six lakhs eighty thousand) only during 2019 to 2020 unlike the specification of the Plan & estimate.
51. ACB P.S. Case No. 7/2022 Dt.14.07.2022 U/S 11/13(1)(a) &13(2) P.C. Act, 1988 was registered against the then Tourism Minister, Mizoram and the then Director, Tourism Department, Mizoram for alleged mismanagement of Public Fund amounting to Rs. 67,49,000/- (Rupees sixty seven lakhs forty nine thousand) only during the year 2018 to 2019.

Based on the data provided, it can be inferred that there has been a progressive increase in legal awareness among the populace over the years, leading to a growing aversion towards corruption. The rising number of filed cases suggests a heightened expectation of justice being served and a collective desire to eradicate the scourge of corruption from society. This trend reflects a positive shift in societal values, with individuals becoming more proactive in holding wrongdoers accountable and seeking redress through legal means. Ultimately, this evolving legal consciousness serves as a powerful catalyst in the ongoing efforts to combat corruption and uphold the principles of transparency, accountability, and fairness in governance.

CONVICTION

Examining the rate of conviction becomes paramount as it serves as a critical metric for assessing the efficacy and reliability of the anti-corruption agency's efforts, as well as the judicial system's handling of corruption cases. This scrutiny allows for a comprehensive evaluation of the effectiveness of anti-corruption measures and the overall performance of law enforcement agencies tasked with combating corrupt practices. A high rate of conviction would indicate the successful prosecution of offenders and the delivery of justice, thereby instilling public confidence in the anti-corruption mechanisms in place. Conversely, a low rate of conviction could signal shortcomings in investigative processes, legal procedures, or the strength of evidence presented in court.

The rate of conviction also reflects the judiciary's ability to adjudicate corruption cases effectively within its jurisdiction. It underscores the judiciary's role in upholding the rule of law, ensuring fair trials, and holding perpetrators of corruption accountable for their actions. A high rate of conviction

demonstrates the judiciary's commitment to combating corruption and administering justice impartially, reinforcing public trust in the legal system. Conversely, a low rate of conviction may raise questions about the judiciary's capacity to handle complex corruption cases or the adequacy of legal safeguards to prevent undue influence or manipulation of judicial proceedings.

Moreover, analyzing the rate of conviction provides insights into the broader societal attitudes towards corruption and the rule of law. A high rate of conviction may indicate a strong societal intolerance towards corrupt practices, with individuals and communities actively supporting efforts to eradicate corruption from the fabric of society. Conversely, a low rate of conviction could reflect deep-rooted systemic challenges, such as corruption within law enforcement agencies, judicial inefficiencies, or societal acceptance of corrupt behavior. Understanding these dynamics is crucial for formulating targeted strategies to strengthen anti-corruption measures and foster a culture of integrity and accountability.

In short, scrutinizing the rate of conviction in corruption cases offers valuable insights into the effectiveness of anti-corruption efforts, the performance of law enforcement agencies and the judiciary, and societal attitudes towards corruption. It serves as a barometer for assessing the health of governance systems and the rule of law, highlighting areas for improvement and guiding policy interventions aimed at enhancing transparency, accountability, and integrity in public administration.

Many of the cases mentioned above have resulted in convictions by the Special Court under the Prevention of Corruption Act, 1998. Below are brief details of the convicted cases:

- 1) On 27.6.2018, Mr. K. Rokunga, Sub - Inspector, Food Civil Supplies & Consumer Affairs Department was sentenced to undergo Rigorous Imprisonment for a period of 1 (one) year and to pay a fine of Rs.10,000/- by ShriThang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB P.S. Case No.2/2011 Dt.12.8.2011 U/S 409 IPC R/W 13(1)(c)&(d)/13(2) P.C. Act, 1988
- 2) On 7.8.2018, Mr.Sapmawia, Ex-VCP, Kanhmun was sentenced to undergo Rigorous Imprisonment for a period of 1 (one) year and to pay a fine of Rs.20,000/- by Shri Thang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB P.S. Case No.12/2012 Dt.22.11.2012 U/S 406/468/477A.I.P.C R/W13(1)(c)(d)&13(2) P.C. Act 1988
- 3) On 26.9.2018, Mr.Vanlalruata, Store Keeper (Rtd), FCS&CA of KhawzawlVengthar was sentenced to undergo Rigorous Imprisonment for a period of 4 (four) years and to pay a fine of Rs.2,00,000/- by ShriThang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB PS Case No. 3/2013 Dt.31.7.2013 U/S 409/477A I.P.C. R/W 13(1)(c)(d)&13(2) P.C Act 1988
- 4) On 31.10.2018, Mr. C. Huallianthanga, Ex-VCP (43 yrs) S/o C. Lalchungnunga (L) of Saizawh 'E', Lawngtlai District was sentenced to undergo Rigorous Imprisonment for a period of 3 (three) years and to pay a fine of Rs.50,000/- by Shri Thang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB PS Case No.4/2016 Dt.28.7.2016 U/S 120B/409 I.P.C. R/W 13(1)(c)/13(1)(d) R/W 13(2) P.C. Act, 1988

- 5) On 14.11.2018, SI(M) R. Vanlaltana (Rtd) was sentenced to undergo Rigorous Imprisonment for a period of 4 (four) years and to pay a fine of Rs.50,000/- by Shri Thang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB PS Case No.5/2013 Dt.16.9.2013 U/S 409 I.P.C. R/W 13(1)(c)(d)&13(2) P.C Act, 1988.
- 6) On 26.03.2019, Mr. R. Lalsangluaia, MCS was sentenced to undergo Rigorous Imprisonment for a period of 4 (four) years and to pay a fine of Rs.1,00,000/- by Shri Thang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB PS Case 1/2013 Dt.30/1/2013 U/S 409/468/474/477A I.P.C. R/W 13(1)(c)/13(1)(d) P.C Act, 1988 R/W 13(2) of PC Act, 1988
- 7) On 27.05.2019, Mr. Rodney Lalrinawma, IAS the then Deputy Commissioner, Mamit was sentenced to undergo Rigorous Imprisonment for a period of 3 (three) years and to pay a fine of Rs.5,00,000/- by Shri Thang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB PS Case No..2/2013 Dt.31.5.2013 U/S 409/468/477A I.P.C. R/W 13(1)(c) & 13(1)(d) R/W 13(2) P.C Act, 1988
- 8) On 08.05.2019, Mrs. LalrempuiiFanai, the then Director, SIRD was sentenced to undergo Rigorous Imprisonment for a period of 5 (five) years and to pay a fine of Rs.5,00,000/- by Shri Thang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB PS Case No. 4/2009 Dt.9.12.09 U/S 13(2)/13(1)(c)(d) P.C. Act R/W 109/409/198/120‘B’ I.P.C
- 9) On 29.10.2019, SI (M) Sumeona was sentenced to undergo Rigorous Imprisonment for a period of 3 (three) years and 6 (six) months and to pay a fine of Rs.30,000/- by Shri Thang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB PS Case No.9/2014 Dt.17.12.2014 U/S 409/177 IPC R/w 13(1)I(d)(i)(ii)(iii)&13(2) PC Act, 1988
- 10) On 28.11.2019, Mr. Lalnuntluanga VLAA, BDO Office, Thingdawl and Mr. H. Lalrinchhana, Ex VCP, Bualpui North were sentenced to undergo Rigorous Imprisonment for a period of 1(one) month and to pay a fine of Rs.25,000/- each by Shri Thang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB PS Case No.2/2018 Dt.9.2.2018 U/S120B/409/420/34 IPC R/W 13(1)(c)(d)&13(2) P.C. Act, 1988
- 11) On 28.02.2020, the following persons of Watershed Committee, Khamrang, Kolasib were sentenced to undergo Simple Imprisonment for a period of 1(one) month and to pay a fine of Rs.10,000/- each by Shri Thang Lianmang Guite, Special Judge, PC Act, Mizoram in connection with ACB PS Case No.6/2014 Dt.23.9.2014 U/S 406/120B/34 IPC R/W 13(1)(c)&13(2) P.C Act, 1988.
 - (i) Lalmuansanga, Chairman S/o Thangbuaia (L)
 - (ii) C.Ramchangliana, Secretary, S/o C.Bukchhuaka (L)
 - (iii)Pahlira, Treasurer, S/o Vawmphunga (L)
 - (iv)Pahinga, Member, S/o Zawngkhawnga (L)
 - (v) Zohmuna, Member, s/o Lianmangthanga
 - (vi)K.Lalenga, Member s/o Lalruaia (L)
 - (vii) Chhuanawma, Member S/o T.Nghilhlova(L)

- (viii) Lalngheta, Member, S/o Aikunga
 - (ix) Ralkapthanga, Member (Former Chairman) S/o Hawla (L)
 - (x) Lalthangkunga, Member S/o Bianga (L)
- 12) On 15.02.2021, Mr. P.C. Lalthlamuana, Director, DM&R (Rtd), Mr. R. Vanlalhmua, LDC, DM&R and Mrs. Lalhmingliani were convicted and sentenced to undergo Rigorous Imprisonment for a period of 2 (two) years and to pay a fine of Rs. 10,000/- each and Mrs. ThanzamiTochhawng, Prop Floria Glamour was convicted and sentenced to undergo Rigorous Imprisonment for a period of 1 (one) year and to pay a fine of Rs. 10,000/- by Shri Vanlalenmawia, Special Judge for the PC Act, Mizoram in connection with ACB PS Case No. 6/2013 Dt.17.10.2013 U/S 420/468/477A/409/109/120-B I.P.C. R/W 13(1)(d)/13(2) P.C Act, 1988
- 13) On 06.04.2021, R. Zatawna S/o Darkhuma (L) of Chanmari, Aizawl was convicted and sentenced to undergo Rigorous Imprisonment for a period of 2 (two) years and to pay a fine of Rs. 20,000/- by Shri Vanlalenmawia, Special Judge for the PC Act, Mizoram in connection with ACB P.S. Case No.2/2014 Dt.22.4.2014 U/S 409 I.P.C. R/W 13(1)(d)(i)(ii) R/W 13(2) P.C. Act 1988
- 14) On 08.06.2021, Lalnunzira, Saikhawthlir, Mamit District and K. Lawmawma, Saikhawthlir, Mamit District were convicted and sentenced to undergo Simple Imprisonment for a period of 1 year and 6 months and to pay a fine of Rs. 26,000/- each by Shri Vanlalenmawia, Special Judge for the PC Act, Mizoram in connection with ACB P.S. Case No.2/2016 Dt 2.6.2016 U/S 120B/406/468 IPC R/w 13(1)(c)(d)(ii) & 13(2) PC Act 1988.
- 15) On 24.06.2022, the following persons were convicted and sentenced as given below by Shri Vanlalenmawia, Special Judge for the PC Act, Mizoram in connection with ACB P.S. Case No.3/2015 Dt.25.5.2015 U/S 120B/409/420/477A/34 IPC R/W 13(1)(c)(d)&13(2) P.C. Act, 1988 -
- (i) Er. Laldawngliana to undergo Rigorous Imprisonment for a period of 6 (six) years and to pay a fine of Rs. 3,63,000/-
 - (ii) Swopan Kumar Roy to undergo Rigorous Imprisonment for a period of 3 (three) years and to pay a fine of Rs. 3,63,000/-
- 16) On 25.07.2022, the following 13 (thirteen) persons were convicted and sentenced to undergo Simple Imprisonment for a period of 1 year and to pay a fine of Rs. 10,000/- each by Shri Vanlalenmawia, Special Judge for the PC Act, Mizoram in connection with ACB PS Case No.4/2018 Dt.20.4.2018 U/S 120B/409 IPC R/W 13(1)(c)(d)&13(2) P.C. Act, 1988 -
- (i) Adi Kanta Tongchongya, Ex – MDC, CADC
 - (ii) Susen Chakma, Ex – MDC, CADC
 - (iii) Taranisen Chakma, Ex – MDC, CADC
 - (iv) Chitra Kumar Chakma, Ex – MDC, CADC
 - (v) Ajay Kumar Chakma, Ex – MDC, CADC
 - (vi) Mohan Chakma, Ex – MDC, CADC
 - (vii) Sushil Kumar Chakma, Ex – MDC, CADC

- (viii) Parimal Chakma, Ex – MDC, CADC
- (ix) Amar Smiri Chakma, Ex – MDC, CADC
- (x) Amit Kumar Chakma, Ex – MDC, CADC
- (xi) Dr. Buddha Dhan Chakma, Ex– CEM, CADC
- (xii) Buddha Lila Chakma, MDC, CADC
- (xiii) Buban Kumar Chakma, MDC, CADC

Beyond the above, there have been many other convictions by Dr. HTC Lalrinchhana, Special Judge, PC Act, 1988 as such:

- a. On 08-02-2023 the following were convicted- C Vanlalchhuana, Saiaithanga, C Rokhumi, Lalduhawma and PC Lalthazovi, all residents of Aizawl, and K Lalrawna of Champhai town received compensation amounting to over ₹ 2 crore for land submerged by water due to the construction of a 60 MW hydroelectric project on Tuirial river near Saipum village in Kolasib district near the Assam border.

These six people were convicted by judge HTC Lalrinchhana of the special court (Prevention of Corruption Act) for receiving government compensation through fictitious claims by forging fake land passes and authority letters.

- b. On 17-03-2023, the Special Judge PC Act, 1988, has in the case of *State of Mizoram v Rongura*⁴¹, convicted the A- 1 Mr. Rongura u/s 120B/420/477A of IPC⁴² and section 13 (2) r/w section 13 (1) (a) (c) & (d) of the Prevention of Corruption Act, 1988; The A-3 Mr. Suakngura u/s 120B/477A/420 of IPC⁴³ and u/s 13 (2) r/w 13 (1) (a) (c) & (d) of the Prevention of Corruption Act, 1988 due to misappropriation of Government money amounting to ₹ 176 lakhs (Rupees One hundred and seventy six lakhs) approximately by the Office of the Superintendent of Excise & Narcotics Office, Serchhip.
- c. In the case of *Zosangzuala&Ors*⁴⁴, the Special Judge, PC Act, 1988 has convicted three persons in the case which relates to misappropriation of public money (Government of India) by accused (i) Shri Zosangzuala, Assistant Director (ii) Smt. Lalnunziri, Programmme Executive and (iii) Smt. Judy H.Lalmuanpuui, LDC of All India Radio, Aizawl Station, Mizoram during January 2012 to June 2012 amounting to ₹ 10,58,319/- out of sanction amounting to ₹ 86.73 lacs received by the AIR, Aizawl Station resulting wrongful loss to the Government of India and corresponding wrongful gain for themselves.

⁴¹*State of Mizoram v. Rongura*, S.R. (PCA) No. 01 of 2020

⁴²*Supra* note 1 at 6.

⁴³*Supra* note 1 at 6.

⁴⁴*Central Bureau of Investigation v. Zosangzuala*, S.R. (PCA) No. 11 of 2014

- d. On 15-03-2024 Dr. HTC Lalrinchhana⁴⁵ has, in the case of *State of Mizoram v. Budha Lila Chakma*⁴⁶ convicted Smt. Sujata Chakma⁴⁷ u/s 409/420 r/w 120 B IPC⁴⁸ and section 13 (2) r/w 13 (1)(c) & (d) of Prevention of Corruption Act, 1988 r/w 120B IPC⁴⁹ due to misappropriation and embezzlement of public money in the construction of the Chakma Autonomous District Council's Session Hall.

DRAWBACKS

The drawbacks in addressing corruption in Mizoram are multifaceted and require attention for effective mitigation. Firstly, there is a notable lack of reinforcement for the Anti-Corruption Bureau (ACB), the agency specifically established to investigate corruption cases. This neglect hampers the bureau's ability to carry out thorough investigations and undermines its effectiveness in combating corruption. Insufficient resources, including funding, personnel, and training, contribute to the ACB's limited capacity to handle the growing number of corruption complaints effectively.

Secondly, the Special Court established under the Prevention of Corruption Act, 1988, requires upgrading, particularly in terms of staffing. The court, including its Public Prosecutors, needs to be adequately equipped and trained to handle corruption cases efficiently and expeditiously. Lack of training and focus among Public Prosecutors can lead to delays in legal proceedings, weakening the prosecution's case and diminishing the prospects of securing convictions. Strengthening the Special Court through enhanced staffing and training initiatives is essential for ensuring timely and effective adjudication of corruption cases.

Thirdly, the Mizoram Lokayukta, entrusted with the responsibility of addressing corruption and maladministration, requires reform and restructuring. Despite its mandate, the Lokayukta has been functioning at a slow pace and with limited effectiveness. This sluggishness undermines public confidence in the institution and its ability to hold public officials accountable for corrupt practices. Reforms are needed to enhance the Lokayukta's investigative powers, streamline its processes, and bolster its independence to effectively fulfill its mandate. Without meaningful reforms, the Mizoram Lokayukta may continue to operate ineffectively, failing to serve as a credible deterrent against corruption in the state.

⁴⁵ Special Judge, The Prevention of Corruption Act, 1988

⁴⁶ *State of Mizoram vs. Budha Lila Chakma*, S.R. (PCA) No. 02 of 2023

⁴⁷ Wife of the A-1 Mr. Budha Lila Chakma

⁴⁸ *Supra* note 1 at 6.

⁴⁹ *Supra* note 1 at 6.

CONCLUSION

Despite the diligent efforts of the courts functioning under the Prevention of Corruption Act, 1988, to combat the pervasive issue of corruption, the state of Mizoram continues to grapple with deep-rooted systemic challenges. While convictions have been secured against several offenders, the scourge of corruption persists, largely unabated. Despite the commendable strides made in holding individuals accountable for their illicit actions, there remains a considerable portion of wrongdoers who operate with impunity, evading detection and eluding the grasp of justice.

Moreover, “The state government is also often reluctant to make swift decisions over the tussle administration of Autonomous District Councils due to plebiscite (Dodging mindset) and freebie form of governance. Judicial efficacy is therefore a clarion calling to mitigate (If possible ‘eradicate’) corruption and embezzlement in the District Council administration.”⁵⁰

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Topic

Ayurveda in Historical Perspective: A Study of Its Foundations and Relevance

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Introduction

Preservation of the body is an intensive need of the living being, and as such, the desire for health is one of the basic characteristics of human beings. It is natural, because of the above, that man began to contemplate modes and measures to maintain his material frame in a possible condition by preventing illnesses and counteracting them if they appeared. For this, the medical system is evolved. In India, this medical system is called āyurveda.

Ayurveda: Science of Longevity

Ayurveda (Sanskrit: āyu—life; veda—knowledge of) or ayurvedic medicine is a form of alternative medicine. In Sanskrit, the words āyus, meaning "longevity", and veda, meaning "related to knowledge" or "science". Thus, the meaning of ayurveda is "the complete knowledge for long life". It is a native to India and south asia.

The Caraka samhitā states that the term ‘Āyurveda’ is derived from two words, āyus and veda. Many Ayurvedic commentators define āyus as ‘life’, but Caraka expands upon this definition, telling us that āyus is the ‘. . . **combination of the body, senseorgans, mind and soul**’, the factor (dhāri) responsible for preventing decay and death, which sustains (jīvita) the body over time (nityaga), and guides the process of rebirth (anubandha). The second part of the word is veda and can be translated as ‘knowledge’ or ‘science’, but more specifically suggests a deeply profound knowledge that emanates from a divine source, and hence ayurveda is known as the ‘divine science of life’.

'Beneficial, non-beneficial, happy and unhappy are four kinds of living in human being. Knowing whatever is pleasant or unpleasant; and beneficial or harmful for the living being is Ayurveda approach to Holistic Medicine. How various materials, their qualities and activities affect life favorably or unfavorably with quantitative and qualitative knowledge is also a part of Ayurveda.'¹

Ashtang Ayurveda: Eight Sections of Ayurveda

Traditional Ayurveda speaks of eight sections, known as Astanga Ayurveda:

1- Shalya Chikitsa: This part of the āyurveda deals with removal of foreign bodies including abnormal fetus, application of instruments, alkali, cautery and diagnosis of surgical diseases. It also describes the Surgery / surgical treatment and Midwifery More than 2,000 years ago, sophisticated methods of surgery were known. The main text related to surgery is Suśruta Saṁhita. Apart from this Bhojtantra, Bhālukitantra, kapilatantra and Gautamatantra are related with this section.

2- Shālākya (Otology, Rhinology, Dentistry, Oropharyngology and Ophthalmology): This section deals with the diagnosis and treatment of Eyes, ears, Nose, Throat, Nape of the neck, cervical problems, Head, teeth, mouth etc. Shālākya means probe or blunt instruments, used for diagnosis of nose, ear throat, eye and disease of head. Shālākya is a branch dealing with cause, pathology, symptoms, complications and treatment of diseases of organs above the clavicle or collar bone. Major samhita related to this branch were written during the Buddha era around 500 to 600 BC, e.g. Videha Tantra, Chakshushya Tantra, Katyayana Tantra and Nimi Tantra. Sushruta reveals approximately 72 eye diseases, surgical procedures for all eye disorders (e.g., cataracts, eyelid diseases), and for diseases of the ears, nose, and throat.

3- Kāyācikitsā (Internal medicine): Kaya means body, mind and Agni and chikitsa means treatment procedures. This part is related to the soul, mind, and body. Kayachikitsa is the treatment of physical and psychological diseases. Psychosomatic theory recognizes that the mind can create illness in the body and vice versa. The seven body constitutions and seven mental constitutions were delineated here: Vayu (air/energy), Pitta (fire), Kapha (water), Vayu/Pitta, Vayu/Kapha, Pitta/Kapha, and a combination of all three (tridosha). Although finding the cause of an illness is still a mystery to modern science, it was the main goal of Ayurveda. Six stages of the development of disease were known, including aggravation, accumulation, overflow, relocation, a buildup in a new site, and manifestation into a recognisable disease. Pañcakarma and all other allied methods for purification are part of Kāyācikitsā, which deals with diagnosis and treatment, management of the bodily ailments. The main treatises of Kāyācikitsā are carakasamhita, Kharnādassamhita, viśvāmitrasamhita, Aṣṭāṅga Hridaya.

4- Bhūtavidyā (Psychopathology / Psychology / Microbiology): This section deals in diagnosis, treatment, and management of the Psychological, Psychogenic, somatopsychic, and Psychosomatic disorders. This branch deals with various diseases which are caused by viruses and bacteria as well as with treatment of various disorders caused by the evil effects of planets. Mainly concerned with psychological diseases, their etiology, symptoms and details of different treatment procedures.

5- Kaumaryabhritya (paediatrics, gynaecology& obstetrics)

In this branch prenatal and postnatal care of the baby and mother are discussed. Topics include methods of conception; choosing the child's gender, intelligence, and constitution; and childhood diseases and midwifery.

6- Agad Tantra (Vishagara-vairodh Tantra).(Toxicology, Medical jurisprudence)

In this section, the treatment of poison and toxins is given. These topics include air and water pollution, toxins in animals, minerals, vegetables, and epidemics; as well as keys for recognizing these anomalies and their antidotes. The main treatises of this tantra are Kāśyapasaṃhitā, ālambāyanasaṃhitā, Uśanaḥsaṃhitā, etc.

7- Rasayana Tantra (Science of rejuvenation)- this section deals with maintaining longevity, Intellectual behavior, rejuvenation of the body, and narrates about the maintenance of General Health Conditions. Prevention and longevity are discussed in this branch of Āyurveda. Charak says that in order to develop longevity, ethics and virtuous living must be embraced

8- Vajeeakaran Tantra: (Science of Aphrodisiac / Maintenance of Vigour):- This section deals with promoting sexual power, strengthening the body, vigour, etc. This section deals with two aspects: infertility (for those hoping to conceive) and spiritual development (for those eager to transmute sexual energy into spiritual energy).

Development of Ayurveda in Ancient India

The history of medicine in India begins from prehistoric times. Preservation of health has been an instinctive necessity of mankind from the very beginning of creation. That is why Carakahas said āyurveda (the science of life) as beginningless and eternal.² Suśruta, going a step further, says that the creator has delivered it even before creation.³ Evidently with the idea that the creature would need it urgently. There was never any break in continuity of this tradition which was come down to man in present time. The 'śāśvata' word denotes this idea.

Vedic age-(2000-1000 B.C)

In this age, the sages were deeply thoughtful to know about nature and its miracles. With the worship of nature, they studied nature with their keen observation and discovered many things beneficial for maintaining their health and alleviating diseases. At that time, mantras combined with drugs were the approach towards the health problems.

²carakasamhita,Su,30.25

³Suśrutasamhita,Su,1.6

Rigveda. (about 2000 B.C.)-

The time period of ṛgveda is much advanced. Many plants were defined with their names and forms which were governed by King of medicine Soma. The miraculous feats of the twin Aśvins in medicine and surgery definitely present the picture of a physician who is skilled in the arts both medical and surgical. The Vedic seer has clear idea about two types of disease-innate and exogenous- and as such a hymn says that the physician is he who tackles both.

Atharvaveda(about 1500 B.C.)

Atharvaveda mentions quite a large number of plants and other substances used as drug. It also recorded various types of Disease-syndromes which were defined by that time and were also given specific names. Specific treatments were also formulated for these diseases. The concept of Tridoṣa-Vāta, Pitta, and Kapha-which is the scientific basis of āyurveda was much more clarified than in the ṛgvedic age. Here Vāyu with its types is described at many places. Pitta is also explicitly mentioned with its igneous character, and Kapha is indicated by the word ‘Balāsa’.

Brāhmaṇas and Upaniṣads (1500-1000 B.C)

The period of Brāhmaṇas and Upaniṣada contributed considerably to the classification of concepts and facts. The physiological processes such as digestion, metabolism and circulation have been known. On the basis of color, different types of vessels were recognized. The period of Upaniṣada was an age of intellectual ferment when different types of concepts and doctrines were being discussed and formulated.

Thus in the vedic age, the ground was fully prepared for rational medicine, which was busy in its make-up to the stage shortly.

Bṛhat Trayi

Bṛhat Trayi literally means “the great three” or “major trio” of Ayurvedic literature. These works are treated as the core foundational texts of Ayurveda and also called Vṛddha Trayi, meaning the older or classical triad. It consists of Charaka Saṃhitā, SuśrutaSaṃhitā, and AṣṭāṅgaHṛdaya.

Charaka Saṃhitā

The Charaka Saṃhitā is generally considered the oldest or among the oldest of the great Ayurvedic compendia. Its roots lie in earlier material associated with Agniveśa, later revised by Charaka, so the text reached its classical form through a redactional process rather than a single act of authorship. Scholarly discussions commonly place its development in the broad range of the late first millennium BCE to the early first millennium CE, though exact dating remains debated. In academic writing, it is safest to say that it reflects a long tradition that was substantially systematised before the early centuries CE. It is especially valued for its treatment of internal medicine, preventive health, diagnosis, dietetics, and principles of life and disease. The text is known for its analytical depth and philosophical

tone, making it central to the theoretical foundation of Ayurveda. In academic study, it is often treated as the primary source for understanding Ayurvedic concepts of physiology, pathology, and clinical reasoning

SuśrutaSaṃhitā

The SuśrutaSaṃhitā is traditionally attributed to Suśruta. It is especially famous for its extensive material on surgery, anatomy, wound management, fractures, dislocations, and surgical instruments. The work is significant because it preserves one of the earliest systematic traditions of operative medicine in South Asia.

SuśrutaSaṃhitā is the major classical text of surgery and surgical theory. Like the Charaka tradition, it is also the result of layered composition and redaction rather than a single fixed moment. Scholarly treatments usually place its formation in the early centuries BCE to early centuries CE, with later redactional activity continuing afterward. Because of this, it should be described as an ancient text whose core tradition is very old, even though the transmitted version is later. Its inclusion in the Brhat Trayi shows that classical Ayurveda was not restricted to herbal therapy alone but included a wide range of medical and surgical knowledge.

AṣṭāṅgaHṛdaya

The AṣṭāṅgaHṛdaya is attributed to Vāgbhaṭa. It is a more concise and elegant compilation that presents Ayurvedic doctrine in a highly teachable form. Because of its compact structure and metrical style, it became widely used in pedagogy and commentary traditions. In many later curricula, it served as an accessible bridge between dense classical theory and practical learning. Some traditions also associate Vāgbhaṭa with the AṣṭāṅgaSaṃgraha, though the Hṛdaya is generally the more widely cited of the two in the Brhat Trayi context

After Brhat Trayi

At one time, it was believed that those who read and fully understood the contents of Vriddha Trayi and the Brhat Trayi, were good practitioners of Ayurveda. The story of the legendary Ayurvedaic practitioner Vagbhata lived during the time of the epic Mahabharata and was the chief physician of king Yudhishthir. Most believe that the author of the Ashtanga Samgraha was born before 200 AD and is properly known as Vagbhata the 1st. Another man named Vagbhata (who was born about 100 BC) recomposed the , including the writings of Charak, Sushruta, under a new title Astang Hridaya.

Living sometime after Vagbhata was another legendary Ayurvedic physician known as Vangsen. Myths place him in ancient Bengal, where he wrote a classic Ayurvedic book, simply called Vangsen. The book is written in easy and understandable language and adds many new chapters to the previous texts.

After Vangsen, a scholar by the name of Madhavacharya composed the book Madhav Nidan. He is thought to have been the prime minister for the king of Vijay Nagar (a state which existed in southern India before Independence). Madhav Nidan is widely considered the best Ayurvedic book for disease diagnosis. (Although it understandably does not contain the description of some modern diseases.)

After Madhav Nidan, the next in line of famous Ayurvedic books Bhav Prakash was written during the time that the Portuguese first came to India in 1498 by a man named Bhav Mishra of Madras (now known as Chennai). The period in which he wrote can be pinpointed so accurately because in the Bhav Prakash, he described the symptoms of a disease called "Phirang" [Gonorrhoea and Syphilis], which was introduced to the subcontinent through contact with the Europeans. ("Phirangi" was the word used to describe Europeans in India.) Bhav Mishra's other contribution to Ayurvedic medicine was the introduction of pulse examination/pulse diagnosis. His reputation as an excellent Ayurvedic doctor lives on because he began and introduced so many effective methods of controlling and curing diseases. Many writers after Bhav Mishra contributed to Ayurvedic literature. Among them Sharangdhar, Cakra Dutta, Vaidya Vinod, Vaidya Vamanotsava, Bhaisajya Ratnawali, and the great Lolimb Raj, who wrote the Vaidya Jeevan in verse form. The first lines of the verses of the Vaidya Jeevan are addressed to the author's "beloved," while the rest of the verse contains information about curing a disease. About 200 years ago, Pranacharya Shri Sadanand Sharma wrote the Ras Tarangini, which was the "base book" for modernising Ayurveda's practices. In this book, advances in chemistry areas are included. The book describes the use of many chemical substances as medicine and their successful uses. Upon considering the advice of this book, Ayurvedic practitioners began to process the traditional herbs in a new manner. Ras Tarangini mentions "Shankhadrav", which is a medicine used internally and externally in many disease conditions. Shankhadrav-based herbal medicine, invented by an Indian physician is well appreciated by the National Innovation Foundation, Ahmedabad, India.

Scientific evidence of Ayurveda

As a traditional medicine, many ayurveda products have not been tested in rigorous scientific studies and clinical trials. In India, research in ayurveda is largely undertaken by the statutory body of the Central Government, the Central Council for Research in Ayurveda and Siddha (CCRAS), through a national network of research institutes. A systematic review of ayurveda treatments for rheumatoid arthritis concluded that there was insufficient evidence, as most of the trials were not done properly, and the one high-quality trial showed no benefits. A review of ayurveda and cardiovascular disease concluded that while the herbal evidence is not yet convincing, the spices are appropriate, some herbs are promising, and yoga is also a promising complementary treatment.

Some Ayurvedic products, mainly herbs used for phytotherapy, have been tested with promising results. Studies suggest that Turmeric and its derivative curcumin are antioxidants. *Tinospora cordifolia* has been tested. Among the medhya rasayanas (intellect rejuvenation), two varieties of *Salvia* have been tested in small trials; one trial provided evidence that *Salvia lavandulifolia* (Spanish sage) may improve word recall in young adults, and another provided evidence that *Salvia officinalis* (Common sage) may improve symptoms in Alzheimer's patients. In some cases, ayurvedic medicine may provide clues to therapeutic compounds. For example, derivatives of snake venom have various therapeutic properties. Many plants used as rasayana (rejuvenation) medications are potent antioxidants. Neem appears to have beneficial pharmacological properties.

Mitra & Ranges (2003) hold that cardamom and cinnamon stimulate digestive enzymes that breaks down polymeric macromolecules in the human body. Research suggests that T. arjuna is useful in alleviating the pain of angina pectoris and in treating heart failure and coronary artery disease. T. arjuna may also be useful in treating hypercholesterolemia.⁴

Relevance of Ayurveda in Modern Medical world

There is a keen interest all over the world to find out nontoxic and effective remedies from herbal and other natural sources for the treatment of diseases. ayurveda specially its classical work carakasamhita is the repository of such herbal and natural products which are used uninterruptedly for thousands of years to justify their nontoxic nature and therapeutic efficiency.

Modern medical research has made phenomenal progress, but it is not multi-faceted and multi-dimensional. Specialization in the diseases afflicting different parts/organ of the body is increasing as a result of which the individual as a whole is losing its identity. Ayurveda considers different parts of the human body as physiologically interconnected. Therefore, in addition to the afflicted part or organ, the entire body is examined, and the individual as a whole is treated.

The individual is composed of five consecutive layers called Koshas. For a good health, the harmonious and disharmonious states of these five koshas are responsible respectively. Ayurveda emphasis upon the psycho-somatic concepts of diseases, so it deals with all the koshas, while modern medical research is mostly confined to the anna-maya- kosha.

Ayurveda places great emphasis upon preservation and promotion of positive health, which is the primary objective of Ayurveda.

Modern scientific research generally aims at finding out a microbe as the cause of different diseases, locating them and developing anti-microbial drugs. These drugs are very effective and instant, but over time the body becomes used to them, and some genetic changes take place. Then new anti-microbial drugs are required to be developed.

Ayurveda also described microbes as causative factors of several ailments, but the primary are the distribution of rasa and doshas and datus (tissue elements), which make the body's immunity strong, so the microbe can not be able to grow and multiply and make the person ill. Instead of using antimicrobial drugs, the body's immunity to fight, to arrest the growth and to destroy them is required to develop.

For some metabolic diseases, modern medical science provides palliative therapies, which give temporary relief, but after a span of time they become a cause of steroids, and the patient succumbs to the adverse effects, which are more painful than the original. But in Ayurveda, there are lots of herbal and natural products for such diseases. According to Ayurvedic principles, the actions of these natural therapies may be slow, but their effects are stable.

Conclusion-

Ayurveda teaches two main principles: Preservation of health - how to maintain health and what to do to keep the human body healthy and fit to avoid sickness. Ayurveda's methods, medicine, and tactics for the management of diseases and ailments to cure and procure a

⁴ <http://en.wikipedia.org/wiki/Ayurveda>

return to normal health is the main goal. The holistic approach to man is the message of āyurveda, the medicine of India, to the modern world, which is troubled now with divisions and diversities and it's inclined to multichotomy rather than synthesis. In this context, the basic motive of Āyurveda is to keep the healthy person healthy and to cure illnesses with holistic approach.

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