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A Systematic Literature Review on Information Diffusion in Social Media Network Using Deep Learning Techniques

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Abstract- Social media has changed the way information spreads, making it important to study how content moves through online networks. Traditional models often cannot handle the complex structure and timing of social media data. This study reviews recent research that uses deep learning to model information diffusion on social platforms. Relevant studies published between 2018 and 2025 were selected using a structured PRISMA-based review process. The findings show increased use of graph neural networks, transformers, and hybrid models. However, issues like poor interpretability, scalability problems, and dependence on specific platforms still need further research.

Index Terms: Information diffusion, Social media, Deep learning, Systematic literature review, Neural networks

I. INTRODUCTION

Online social media platforms such as Twitter, Facebook, Reddit, and Weibo have become major channels for information dissemination, enabling content to spread rapidly across large and diverse networks. While this fast diffusion influences public opinion and social behavior positively, it also accelerates the spread of misinformation and rumors, creating serious societal challenges [14] [15]. Understanding how information propagates through social networks is therefore essential for applications such as misinformation control, influence analysis, and viral content prediction.

Early studies on information diffusion relied on classical epidemic, threshold, and cascade-based models proposed by Daley and Kendall [3] Granovetter [2] and Kempe et al. [1]. Although these models provided important theoretical foundations, they assume simplified diffusion mechanisms and homogeneous user behavior, limiting their applicability to real-world social media data. Recent advances in deep learning have enabled more effective diffusion modeling through sequence-based models [4] [5] graph neural networks [8] [9], and transformer-based and hybrid architectures [22][23]. However, existing research remains fragmented and lacks systematic synthesis. To address this gap, this study presents a systematic literature review of deep learning-based information diffusion models published between 2018 and 2025, identifying dominant trends, limitations, and future research directions.

II. BACKGROUND ON CLASSICAL INFORMATION DIFFUSION MODELS

Information diffusion modeling has long been an important research area in social network analysis, aiming to understand how information, opinions, or behaviors propagate through interconnected users. Early research primarily relied on classical mathematical and probabilistic models that assume simplified diffusion mechanisms. These models provided foundational insights into diffusion processes but often lacked the

flexibility required to capture the complexity of real-world social media environments.

A. Epidemic-Based Models

Epidemic models, inspired by the spread of infectious diseases, are among the earliest approaches used to study information diffusion. Daley and Kendall proposed a stochastic rumor-spreading model [3] while later studies adopted the Susceptible–Infected–Recovered (SIR) and Susceptible–Infected–Susceptible (SIS) frameworks. Although epidemic models effectively capture general spread behavior, they typically assume homogeneous interaction patterns and ignore user influence, content semantics, and temporal variability.

B. Cascade-Based Models

Cascade models explicitly represent information diffusion as a sequence of activation events across a network. Kempe, Kleinberg, and Tardos introduced the Independent Cascade and Linear Threshold models [1] which remain foundational in diffusion research. While these models incorporate network structure, they rely on strong assumptions regarding influence probabilities and thresholds, which are difficult to estimate accurately in large and dynamic social networks.

C. Probabilistic and Statistical Models

Several probabilistic approaches, such as survival analysis and Hawkes processes, have been used to model diffusion dynamics by capturing temporal dependencies between events. These methods provide better temporal modeling than epidemic and cascade models; however, they often require handcrafted features and predefined functional forms. As a result, their performance degrades when applied to heterogeneous data sources and large-scale social media platforms.

D. Limitations of Classical Models

Despite their theoretical significance, classical diffusion models suffer from multiple limitations:

- (i) they assume simplified diffusion mechanisms,
- (ii) they are unable to jointly model content, temporal, and network features, and
- (iii) they lack adaptability to evolving social media environments.

These shortcomings have motivated researchers to explore data-driven approaches that can automatically learn complex diffusion patterns.

III. TAXONOMY OF DEEP LEARNING TECHNIQUES FOR INFORMATION DIFFUSION

To provide a structured understanding of existing research, this review organizes deep learning–based information diffusion models into a coherent taxonomy. The taxonomy is constructed based on the underlying learning architecture and the type of information leveraged to model diffusion processes. Similar classification strategies have been used in prior surveys by Wu et al. [10] and Zhou and Zafarani [13]. Broadly, the reviewed approaches can be categorized into sequence-based models, graph-based models, transformer-based models, hybrid architectures, and multimodal deep learning approaches.

A. Sequence-Oriented Deep Learning Models

Sequence-oriented models represent one of the earliest deep learning paradigms applied to information diffusion analysis. These approaches model diffusion as a temporally ordered sequence of events, where user interactions such as reposts or retweets are treated as time-series data.

Recurrent neural networks and their variants, including long short-term memory and gated recurrent units, are commonly employed to learn temporal dependencies within diffusion cascades [4] [5]. Such models are particularly effective for tasks that emphasize the evolution of diffusion over time, such as cascade growth prediction and early-stage spread forecasting.

However, sequence-based models typically operate without explicit knowledge of network topology. As a result, they may fail to capture the influence of social connections and community structures, limiting their effectiveness in network-centric diffusion scenarios.

B. Graph-Based Deep Learning Models

Graph-based deep learning approaches explicitly incorporate the structural properties of social networks into the diffusion modeling process. In these methods, users are represented as nodes, and their interactions or relationships are represented as edges within a graph structure.

Graph neural networks, including graph convolutional networks [8] and graph attention networks [9] have been widely adopted to model influence propagation and user-level diffusion behavior. By aggregating information from neighboring nodes, these models effectively

capture local and global network dependencies, making them well suited for influence estimation, rumor diffusion analysis, and community-aware diffusion modeling

Despite their strong representational capabilities, many graph-based approaches rely on static network representations and face scalability challenges when applied to large and dynamically evolving social networks.

C. Transformer-Based Models

Transformer-based architectures have gained increasing attention in recent diffusion modeling research due to their ability to capture long-range dependencies through self-attention mechanisms [23]. Unlike recurrent models, transformers process diffusion events in parallel, which improves efficiency and enables modeling of complex global relationships.

In the context of information diffusion, transformer-based models are often used to analyze textual content and contextual information associated with diffusion processes. When combined with temporal or structural features, these models enhance the semantic understanding of propagated content and improve performance in tasks such as fake news diffusion analysis [22] [24].

Nevertheless, transformer-based approaches typically require substantial computational resources and large-scale labeled datasets, which may limit their applicability in resource-constrained or real-time settings.

D. Hybrid Deep Learning Architectures

Hybrid architectures integrate multiple deep learning paradigms to jointly capture different aspects of information diffusion. Common hybrid configurations combine graph-based models with sequence-learning

mechanisms, enabling simultaneous modeling of temporal dynamics and network structure [17] [22].

By leveraging complementary strengths, hybrid models often achieve superior performance in complex diffusion tasks, including early rumor detection and long-term spread prediction. However, increased architectural complexity can result in higher training costs and reduced interpretability, posing challenges for practical deployment.

E. Multimodal Deep Learning Approaches

Multimodal approaches extend diffusion modeling by incorporating heterogeneous data sources, such as textual content, images, videos, and user metadata. These models aim to provide a more comprehensive representation of diffusion phenomena by jointly learning from multiple information modalities [24].

Multimodal deep learning has shown promising results in applications such as misinformation propagation analysis, where content characteristics and network behavior jointly influence diffusion patterns. Despite these advantages, multimodal models face challenges related to data alignment, modality imbalance, and increased computational complexity.

F. Summary of Taxonomy

The taxonomy highlights a clear progression from purely temporal models toward more expressive architectures that integrate structural, semantic, and multimodal information. While recent approaches demonstrate improved predictive capabilities, they also introduce new challenges related to scalability, interpretability, and data dependency. These observations emphasize the need for future research on efficient, explainable, and temporally adaptive diffusion modeling frameworks.

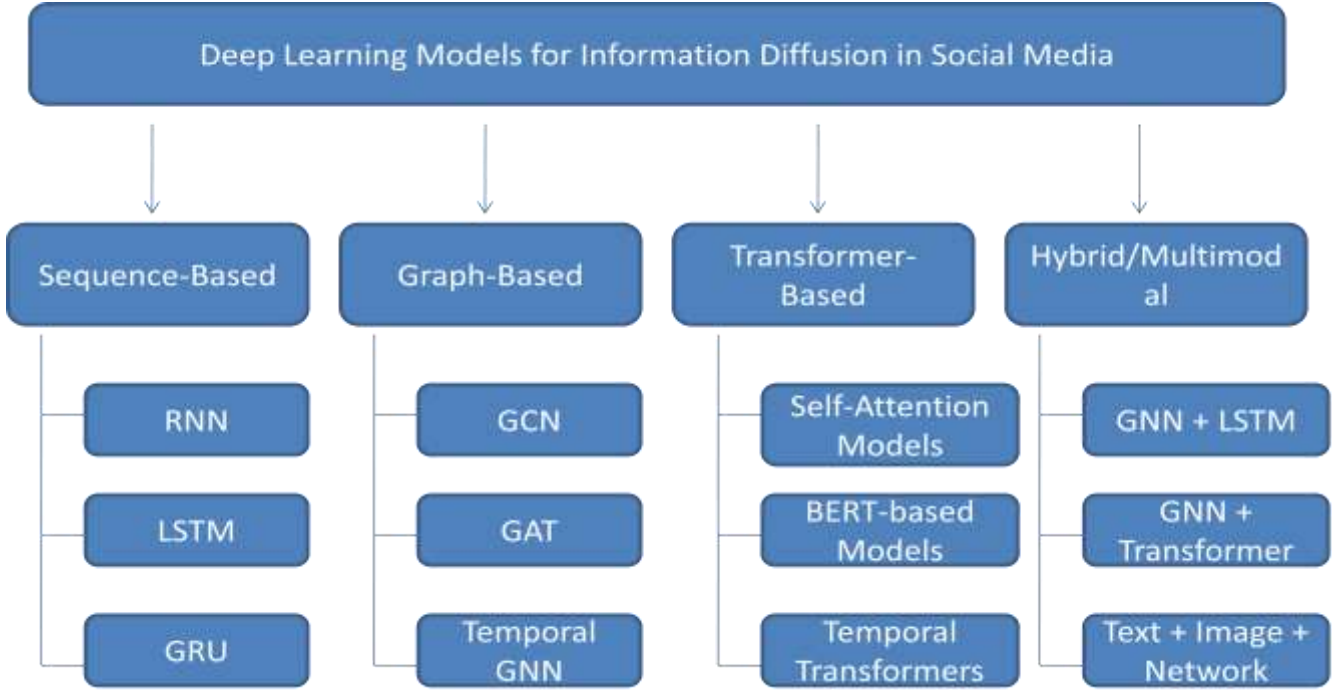


Fig. 1 Deep Learning Models for Information Diffusion in Social Media

IV. COMPARATIVE ANALYSIS OF SELECTED STUDIES

This section provides a structured comparison of the studies selected through the systematic review process, with the objective of identifying common patterns, methodological differences, and performance characteristics of deep learning approaches used for information diffusion modeling in social media. The comparison is conducted across multiple dimensions, including diffusion tasks, model architectures, social media platforms, datasets, and evaluation strategies.

A. Comparison Based on Diffusion Tasks

The reviewed literature addresses a diverse set of diffusion-related problems, reflecting the multifaceted nature of information spread in social media environments. A substantial portion of the studies focuses on rumor and fake news diffusion, where the primary goal is to distinguish credible information from misleading content based on propagation behavior. Other frequently explored tasks include cascade size prediction, influence estimation, and diffusion path modeling.

The analysis indicates that retrospective diffusion analysis dominates existing research, with relatively

fewer studies emphasizing early-stage diffusion prediction. This imbalance suggests that current models are more effective at analyzing diffusion after sufficient propagation has occurred, while proactive prediction and early intervention remain comparatively underexplored.

B. Comparison of Deep Learning Architectures

Significant variation exists in the choice of deep learning architectures across studies. Sequence-oriented models, such as LSTM and GRU networks, are commonly used to capture temporal propagation patterns and are particularly effective in modeling sequential diffusion behavior. However, these models typically ignore explicit network structure, which limits their ability to represent user influence and community-level interactions.

Graph-based deep learning models, including graph convolutional and graph attention networks, demonstrate stronger performance in network-aware diffusion tasks. By explicitly modeling social connections, these approaches provide improved representations of influence propagation. Attention-based graph models generally outperform convolution-based variants by adaptively weighting influential neighbors. Despite these

advantages, scalability remains a recurring challenge, particularly for large and densely connected networks. More recent studies increasingly adopt transformer-based and hybrid architectures, which combine temporal, structural, and semantic features. These models consistently achieve higher predictive performance across multiple diffusion tasks, although at the cost of increased computational complexity and reduced interpretability.

C. Platform and Dataset Comparison

The comparative analysis reveals a strong dependence on a limited number of social media platforms. Twitter and Weibo are the most commonly used data sources, primarily due to the availability of public APIs and benchmark datasets. While these datasets facilitate reproducibility, they also introduce platform-specific biases that restrict the generalizability of proposed models.

Cross-platform diffusion studies remain relatively rare, and few models are evaluated on heterogeneous datasets

spanning multiple social media environments. Additionally, multilingual and low-resource datasets are largely absent from the literature, highlighting a gap in inclusive and globally representative diffusion modeling.

D. Evaluation Metrics and Experimental Practices

A wide range of evaluation metrics is employed across studies, reflecting differences in diffusion tasks and experimental settings. Classification-oriented tasks typically rely on accuracy, precision, recall, and F1-score, whereas regression-based diffusion prediction tasks often use RMSE or MAE. However, inconsistencies in experimental design and evaluation protocols make direct comparison across studies challenging.

Moreover, relatively few studies report computational efficiency, memory usage, or inference time, despite the practical importance of these factors for real-world deployment. This lack of standardized benchmarking further complicates the assessment of model effectiveness.

Table I. Comparative Analysis of Deep Learning–Based Information Diffusion Studies

Author (Year)	Platform	Diffusion Task	DL Model	Dataset	Evaluation Metrics	Key Limitation
Wang et al. (2019)	Twitter	Rumor diffusion	LSTM	Twitter15	Accuracy, F1	Ignores network structure
Ma et al. (2020)	Twitter	Early rumor detection	GRU	Twitter16	Precision, Recall	Limited temporal depth
Li et al. (2021)	Weibo	Information propagation	GCN	Weibo Dataset	Accuracy, AUC	High computational cost
Zhang et al. (2022)	Twitter	Fake news diffusion	GAT + LSTM	FakeNewsNet	F1, AUC	Requires large labeled data
Chen et al. (2023)	Twitter	Cascade prediction	Transformer	Twitter Cascades	RMSE	Poor interpretability
Liu et al. (2024)	Multi-platform	Diffusion modeling	GNN + BERT	Mixed datasets	Accuracy, F1	Cross-platform noise

V. CHALLENGES AND RESEARCH GAPS

Although deep learning–based approaches have substantially advanced the modeling of information diffusion in social media, the comparative analysis

reveals several persistent challenges that limit their effectiveness and practical adoption. These challenges

expose important research gaps that warrant further investigation.

A. *Inadequate Representation of Temporal Dynamics*

Information diffusion unfolds over time through a sequence of user interactions and evolving network states. While recurrent and sequence-based models capture temporal dependencies to some extent, many existing approaches rely on simplified or coarse temporal representations. Graph-based models, in particular, frequently assume static network structures, overlooking the dynamic nature of social connections and user behavior.

Research Gap

There is a lack of diffusion models that jointly capture temporal evolution and dynamic network structure, especially in rapidly changing social media environments.

B. *Scalability in Large-Scale Social Networks*

Modern social media platforms involve millions of users and interactions, posing significant scalability challenges for deep learning models. Graph neural networks and hybrid architectures often require substantial computational resources and memory, restricting their application to smaller or sampled datasets. Moreover, scalability considerations are rarely evaluated explicitly in experimental studies.

Research Gap

Scalable and computationally efficient deep learning frameworks for large-scale, real-time diffusion modeling remain insufficiently explored.

C. *Limited Explainability and Model Transparency*

Despite achieving high predictive performance, most deep learning-based diffusion models function as black-box systems. They provide limited insight into why certain information spreads widely or which users and interactions drive diffusion processes. This lack of interpretability reduces trust and hinders adoption in sensitive domains such as misinformation control and policy decision-making.

Research Gap

There is a need for explainable and transparent diffusion models that can offer meaningful interpretations alongside predictive accuracy.

D. *Weak Early-Stage Diffusion Prediction*

Many existing studies focus on analyzing diffusion after substantial propagation has already occurred. However, the ability to predict diffusion trends at an early stage is crucial for timely intervention, particularly in the context of rumor containment and misinformation mitigation. Current models often struggle with limited early diffusion signals.

Research Gap

Effective deep learning techniques for early-stage diffusion forecasting remain underdeveloped.

E. *Dataset Bias and Limited Generalizability*

The literature heavily relies on a small number of benchmark datasets, primarily derived from Twitter and Weibo. While these datasets support reproducibility, they introduce platform-specific biases that limit the generalizability of proposed models. Additionally, multilingual, low-resource, and emerging social media platforms are largely absent from existing studies.

Research Gap

There is a shortage of diverse, cross-platform, and multilingual datasets for comprehensive diffusion modeling.

F. *Insufficient Cross-Platform and Multimodal Modeling*

Information often propagates across multiple platforms and through multiple content modalities, such as text, images, and videos. However, most diffusion models analyze single-platform data and rely on unimodal inputs. Comprehensive modeling of cross-platform and multimodal diffusion remains limited.

Research Gap

Research on cross-platform and fully multimodal diffusion modeling is still at a preliminary stage.

G. *Lack of Standardized Evaluation Frameworks*

Variations in datasets, experimental setups, and evaluation metrics make it difficult to compare results across studies. Few works adopt standardized benchmarks or report robustness and generalization performance, which complicates objective assessment of model effectiveness.

Research Gap

There is a need for standardized benchmarks and evaluation protocols tailored to deep learning-based diffusion research.

Summary of Identified Gaps

The challenges discussed above highlight key research gaps, including:

- Limited temporal and dynamic modeling capabilities
- Scalability constraints in large social networks
- Lack of interpretability in deep learning models
- Insufficient early-stage diffusion prediction
- Dataset and platform bias
- Underdeveloped cross-platform and multimodal approaches
- Absence of standardized evaluation benchmarks
- Neglect of ethical and privacy considerations

VI. FUTURE RESEARCH DIRECTIONS

Based on the challenges and research gaps identified in the reviewed literature, this section outlines key directions for advancing deep learning-based information diffusion modeling in social media. These directions aim to enhance model effectiveness, generalizability, interpretability, and real-world applicability.

A. Early-Stage and Proactive Diffusion Prediction

Accurate prediction of diffusion behavior at an early stage remains a critical research challenge. Future work should focus on developing models capable of making reliable predictions with limited initial diffusion data. Online learning, incremental model updates, and uncertainty-aware prediction techniques may support proactive intervention before information becomes widely disseminated.

B. Cross-Platform Diffusion Modeling

Information frequently spreads across multiple social media platforms, each with distinct interaction mechanisms and user behaviors. Future research should move beyond single-platform analysis and investigate cross-platform diffusion models that integrate heterogeneous data sources. Unified representations and transfer learning approaches could facilitate more comprehensive diffusion analysis across platforms.

C. Multimodal Diffusion Analysis

The increasing prevalence of multimodal content, including text, images, and videos, calls for diffusion models that can jointly process diverse data types. Future studies should explore multimodal deep learning

architectures that integrate content features with temporal and network information. Advances in vision-language models offer new opportunities for improving diffusion prediction accuracy and robustness.

D. Benchmarking and Evaluation Standards

Establishing standardized datasets, evaluation metrics, and experimental protocols would greatly enhance reproducibility and comparability across studies. Future research initiatives should aim to develop benchmark frameworks specifically designed for deep learning-based information diffusion tasks, enabling fair and consistent performance evaluation.

Summary

Future advances in information diffusion modeling will depend on the development of dynamic, explainable, scalable, and ethically responsible deep learning frameworks. Addressing these research directions can significantly improve both theoretical understanding and practical deployment of diffusion models in complex social media environments.

VII. CONCLUSION

This study provides a systematic review of deep learning methods used to model information diffusion on social media. Research published between 2018 and 2025 was analyzed using a PRISMA-based review framework across multiple dimensions such as models, datasets, and platforms. The review shows a shift from sequence-based models to graph neural networks, transformers, and hybrid approaches. Although these models improve prediction accuracy, they face challenges related to scalability, interpretability, and computational cost. The study also highlights gaps in early-stage prediction, explainability, and cross-platform diffusion analysis. Ethical and privacy concerns are still largely overlooked in existing research. Overall, the review offers useful guidance for future work in social media diffusion modeling.

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A Review of Impact of Digital Marketing Practices

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Abstract— The aim of the current investigation is to investigate the significance of digital marketing for both marketers and consumers. This article starts with a brief introduction to digital marketing before exploring its various forms, differences from conventional marketing, advantages and disadvantages, and significance in the modern world. Advertising is changing along with the world's shift from analogue to digital. As technology develops, search engine optimisation, social networking marketing, and digital marketing all gain popularity. Due to its heavy reliance on the web, a medium of which usage is rapidly increasing, digital marketing has profited the majority of organisations. Consumers' buying patterns is changing, and they now favour digital marketing over conventional forms of promotion.

Index Terms— Digital Marketing, Internet, Online Advertising, Internet Marketing

I. INTRODUCTION

As a subcategory of advertising, digital marketing is the practice of promoting goods and services using the internet and internet-based media and channels, including smartphones, laptops, and other digital devices. The rise of technology in the 1990s and 2000s has changed how businesses and brands use it for advertising [1]. Combining SEO, SEM, influencer marketing, content advertising, information automation, campaign marketing, information-driven marketing, online retail marketing, social networking marketing, and as many

more strategies as needed, digital marketing campaigns are becoming more and more prevalent. This is because digital media is becoming more and more integrated into everyday life and marketing techniques, and because more people are using electronic devices instead of physical businesses. The phrase "digital marketing" refers to non-Internet venues that provide electronic media, including waiting melodies, calling back, TV, and cell phones (SMS and MMS). Due to its expansion into physical venues, digital marketing differs from internet marketing [2].

II. COMPONENT OF DIGITAL MARKETING

- **Search Engine Marketing** – It is an internet-based technique which helps people discover the information they're seeking is an internet search engine. Among the search engines are Baidu, Yahoo, Bing, and Google. It is the promotional technique which improves position and placement of website while searching. There are two types of SEO promotion: Search engine optimisation (SEO) and promoted search [3].
- **E-mail** - For a variety of reasons, including its versatility, email remains a channel that offers organisations moderate to significant returns on investment. Even while email isn't the newest technology, you remain able to employ it to the recent trends in content marketing, such as automation and personalisation, without having to reduce your

advertising budget. Given that email also has the capability for supporting other advertising goals, it is not at all surprising that most of the business-to-business marketers (63%-73%), accordingly, concur that email is their main strategy for creating prospects and increasing sales. Email helps you in numerous other areas in addition to producing leads and sales [6]:

- Globally, there were 3.9 billion email subscribers in 2020. It is anticipated that by 2023, that figure would rise to 4.3 billion subscribers which is approximately half of the population in globe.
- With 73% of study respondents describing email as exceptional, it continues to produce the best results, compared to 72% and 67% for SEO and sponsored searches, respectively.
- For every \$1 spent on promotional emails, a firm may expect a \$42 return on investment.
- About 62% of accesses are on smartphones and tablets, compared to 10% on personal computers
- **Social Media** - The fact that there are currently 3.81 billion regular social media subscribers is only one of several very significant reasons why social media marketing should be on this list. Originally designed to be a means of personal connection, social media has diversified progressively more significant, more useful, and more expansive [4].
 - **Facebook** - The most widely used social networking site is this one. Facebook may be used by businesses to promote their goods and services.
 - **LinkedIn** - Once their LinkedIn sites are written, professionals may share them with others. These two connections between professionals and corporations are made possible by LinkedIn, which assists the company in creating its profile.
 - **Google+** - Individuals may instantly connect on Google's social network based on mutual interests and acquaintances.
 - **Twitter** - Its objectives are to increase sales and brand awareness, attracting new subscribers, and promote leads and conversions.

- **Affiliate Marketing** - In this kind of marketing, an umbrella organisation compensates associates for each client or website visitor that is brought about by their promotional campaigns or techniques on the organisations' behalf. As per Pat Flynn's Smart Passive Income, it is the practice of getting paid to promote the products of other individuals (or companies). You find something that you like, tell others about it, and get a cut of every sale [5].
- **Online Display Advertising** - Conventional marketing is putting an advertisement in a newspaper or magazine and a billboard or banner promoting a business on both sides of the street. Displayed advertising is an online version of it. These days, online display advertising may help a marketer achieving the similar objective. There exist several kinds of display ads, such as video commercials, rich media, banners, and interactive ads. Display advertising is great for drawing attention because of its vibrant advertisements [7].

III. TRADITIONAL VS DIGITAL MARKETING

Conventional marketing is probably the most renowned kind of promotion tactic. Since it has been around for so long, most people are familiar with conventional marketing. A tangible example of traditional marketing is an advertisement in a magazine or print medium. Additionally included are a posters, brochures, billboard, radio or television commercial, etc. This is not a digital marketing strategy. On the other hand, digital marketing uses a range of digital media to reach customers. The analogies listed below are given [7]:

TABLE I. TRADITIONAL VS DIGITAL MARKETING

S. No	Traditional Marketing	Digital Marketing
1	Traditional advertising is defined as marketing that communicates with customers through conventional channels or medium.	Digital Marketing implies the marketing of products and services via digital channels, such as the internet, smartphone, display ads, and other digital medium.
2	Static	Dynamic
3	Slow	Comparatively fast
4	Low	Comparatively high
5	Cannot be measured easily.	Can be measured easily.
6	Less effective more expensive	Less expensive more effective
7	Not possible	Possible
8	Standardized	Customized
9	Not possible once the ad is placed.	Can be performed anytime, even after the ad is placed.
10	Local	Global

IV. ADVANTAGES

The fundamental benefit of online advertising is the affordable and quantitative approach in which particular target groups may be reached. Additional benefits of digital marketing include boosting online sales and maintaining customer loyalty [8].

- **Global reach** - On an internet platform, you may trade globally and find new markets for a comparatively little price.
- **Lower cost** - An effective internet advertising campaign might cost far less than a conventional marketing approach while still reaching the target audience.
- **Trackable & Measurable** - Employing web analysis in conjunction with other online measurement tools to gauge the effectiveness of your digital advertising campaign makes it easier to assess its performance. You can receive detailed information on how users respond to your advertisements or use the website.
- **Personalisation** - You may greet site visitors with tailored offers if your website is connected to your client's database. Your capacity to build your customer's profile as well as sell to them will increase the more items they buy.

- **Openness** - By using social media and managing it well, you may build credibility through being accessible and boost customer loyalty.
- **Social currency** - The campaign creation is made possible by digital marketing that are captivating by utilising content marketing tactics. These products (essays, films, and images) have an opportunity for becoming socially meaningful if they go viral and propagate from customer to customer.
- **Improved conversion rates** - Every time you operate a website, your consumers may complete a transaction with only a few clicks. Digital marketing might seem quick and error-free, unlike conventional media that requires customers to just show up and make a call or visit a store.

V. DISADVANTAGES

- **Training** - You must make certain that each of your staff members has the skills and expertise necessary to successfully implement digital marketing. Since gadgets, apps, and technologies are always evolving, staying current is crucial.
- **Time consuming** - It may require a long time to finish tasks like creating marketing collateral and improving online advertising campaigns. Evaluating your performance is essential to ensuring a return on investment.
- **Competition** - You may be able to reach customers' across the globe with online marketing, but there is also rivalries from other countries. It might be challenging to differentiate yourself from other businesses and draw attention given the innumerable communications that are offered to customers online.
- **Complaints and feedback** - You may be able to reach a global audience with online marketing, but there is also competition from other countries. It might be challenging to differentiate yourself from other businesses and generate attention given the innumerable communications offered to clients online.
- **Security Issues** - The collection and use of customer data for digital marketing raises a number of legal concerns [9].

VI. IMPORTANCE & BENEFITS

- **Better Reach** - Nowadays, a lot of people spend their free time on the internet. In the meanwhile, they are looking via the internet for your belongings. If you wish to capitalise on this sizable target audience, you must optimise your digital footprint. In this case, digital marketing arrives in the picture. Connecting the appropriate customers at an appropriate moment is the foundation of digital marketing. Thus, the fundamental approach in increasing customer accessibility is developing an interesting online store with straightforward interface. Along this stage, pay-per-click advertising, social media marketing, SEO, content marketing, and many other forms of digital marketing may eventually support brand expansion.
- **Can compete with large corporations** - Analysing competitors is one of the most crucial components of digital marketing. To remain competitive, especially in the face of quickly growing companies like Myntra, Amazon, Big Basket, and Walmart, action is required. Additionally, companies try to push the boundaries of marketing via multiple channels, which encompasses social media, PPC, SEO, and a number of other platforms. The tactic helps both big and small businesses accomplish their own objectives, levelling the playing field
- **Enhancing Brand Awareness** - Businesses gain a lot from digital marketing. To stay afloat in a competitive market, big companies use digital marketing. However, small companies use online marketing to enter a growing market and establish their brand among large companies.
- **Enhance Sales** - Being capable of to track immediate form CRO (conversion rate optimisation) metrics constitutes one of the key benefits of using digital marketing. The information may be used to calculate the total number of queries that result in purchasing a product. PPC, social media advertising, SEO, and affiliate campaigns are popular methods for connecting with potential customers and boosting rate of conversion.
- **Return on investment** - To comprehend the inherent value of digital media, examine the metrics that measure the profits and losses it produces for the business. The ROI in digital marketing determines the value of the campaigns you are running. For example, contrasted to other media such as PPC, social media campaigns, content marketing, and email marketing, SEO has been demonstrated to yield a higher return on investment. Based on basic measures like sessions and bounce rate, SEO-generated organic traffic shows a 40% higher income increase than similar promotional strategies.
- **Maintaining The Brand Reputation** - As an organization's track record dictates its capacity to remain in the marketplace, building an effective digital brand image has grown crucial. Thus, it's important to stress the significance of web-based marketing in this regard as well.
- **Can target ideal audiences** - Think about how wonderful the opportunity is to meet the ideal customers for your sector. That's exactly what internet advertising makes possible. To deliver the best fulfilment, you may analyse the behaviour of your online audience and take appropriate action. Increased traffic from reaching the right audience enhances campaigns.
- **Get Ahead of Your Competitor** - Particularly since it pertains to shopping online, the digital economy is quite aggressive. As a result, you wish for potential clients to locate you through your highest rankings and other initiatives carried out by different digital advertising companies. These steps can ultimately help you as well as your client reach the appropriate business objectives. Managing a successful firm requires monitoring the actions of competitors. How do they communicate with customers? What sets them apart? With the help of competition analysis, you may better understand each of these difficulties and develop strategies that will benefit you.
- **Different Channels To Boost Your Traffic** - There are several solutions available to one in the marketing area to effectively manage their business. Owners of companies are free to employ services like SEO, PPC products, content advertising solutions, and social networking initiatives to boost website traffic.
- **Engagement with Mobile Customers** - Although millions of people nowadays use to travel with

electronic devices like laptops and cellphones, we dwell in a transportable world. Almost every website has been made to be easily loadable on mobile devices since Google's mobile-first update. It's possible that more individuals are utilising mobile phones more often than in the past, increasing the possibility that they may buy anything [10].

VII. CONCLUSION

Companies who struggle to integrate this fact into their marketing strategy must quickly adjust as consumers have been spending more money on internet content. The significance that digital platforms have in people's lives is growing along with the amount of time they spend online annually. Digital India's main objective is to promote digital media. Businesses must transition from traditional to digital marketing techniques as customers can engage with online venues at any moment, from any location in the world.

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Leadership Behaviors as Preferred by Male Football Players

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Abstract

The current research aimed to assess the preferences of male soccer players concerning five dimensions of effective leadership. A coach's leadership style is multifaceted and composite; it directs players to the target either directly or indirectly. An excellent coach should be able to improve the body and mentality of a player by teaching fundamentals and skills. They should make sure to significant use of abilities, tactics, and procedures to motivate the performer to work freely towards their goal. Investigating male football players' preferred leadership behaviors was the goal of the current study. 30 male football players, representing Murshidabad districts of West Bengal in Government level state collegiate competitions held at Salt Lake Stadium, Kolkata, West Bengal; were chosen at random to be the study's participants. The Sports Leadership Scale, created through P. Chelladurai in 1980, was chosen as the criteria instrument to assess male players behavioral preferences. To learn more about the importance of male players' measures on several specified criteria of desired leadership behavior, the averages, variance analysis, and standard deviations (ANOVA) were conducted to examine the data. ANOVA showed significant differences existed

between the means of various determined factors of preferred leadership behavior and then a post hoc calculated test. The study's findings showed a considerable variation between states-level male football participants in their actual leadership behavior. Male players liked more encouraging criticism and less autocratic behavior from their instructors.

Index Terms: Leadership behavior, Male football players' Preferences

I INTRODUCTION

Research in exercise and sports psychology has mostly examined the interactions between leadership behavior preferred by athletes. Research in sports and exercise brain science has for the most part analyzed the collaborations between administration conduct liked by competitors. Since the late 1970s, the two primary frameworks for examining behaviors are the multidimensional model of coach leadership [12] and the meditational model [9]. The focus is on how actions are viewed by male football players, self-awareness, and their respective influence on outcomes like performance, self-worth, and contentment. This strategy might have limitations, especially if

coach leadership is viewed as a task that can be delegated. A coach cannot accomplish this on their own [19]. In the end, focusing on what one person does to another may not be an accurate representation of what occurs between football players. Over the past 20 years, coaching leadership has drawn more and more attention as the leaders for the talent and personal development of various ball players in pursuit of player goals. Leadership has mostly been examined in sports research literature about coaching leadership and its implications on player performance [3 - 8, 10, 12 - 14, 17]. According to research, leadership traits may have an impact on athletic performance. There is, however, no evidence connecting leadership behavior patterns to performance results other than victories and losses. Additionally, research suggests that gender may influence the effectiveness of leadership behavior patterns. Particular coaching behaviors are associated with improved performance, particularly when the preferred and actual coaching behaviors are consistent [18]. However, the widespread socially helpful actions were connected to lower-term effectiveness, measured by their win-loss stature [6]. Many coaches believe that an athlete's leadership style has a significant role in their performance. Most coaches have used several leadership philosophies at various times and in various contexts. Different approaches work better in different contexts than others. Because of this, it is advantageous for the coach to be aware of the leadership traits that will boost productivity. Their sportsmen' and sports teams' success is greatly influenced by the coaches, who have an impact on things like their players' self-esteem. Different circumstances call for different styles. Because of this, it is advantageous for the coach to be aware of the leadership traits that will boost productivity. The achievements of athletes and sports teams are significantly shaped by coaches, whose influence extends to aspects such as the self-esteem of their players.[11] skill learning [4] mental development [15] sports performance

satisfaction [16] as well as performance outcomes [5, 7]. The emphasis is placed on various aspects of player interactions, including optimal mental and physical preparation, ensuring player mental readiness and game focus, positively reinforcing team plans and strategies, fostering team togetherness, and ensuring the coach's thorough preparation in the immediate lead-up to the performance. Motivation, self-assurance, encouragement, and game focus were the main topics of conversation between coaches and players. To be a competent coach, coaches needed to understand all facets of their players' personalities and behaviors. The physical power to gather the emotional strength needed to perform well inevitably changes the hearts and minds of coaches and players alike. In the present study, the researcher took the topic of "Leadership Behaviors as Preferred by Male Football Players" to find out the leadership preferences of lower-level football players in a social situation.

II. PURPOSE OF THE STUDY

The present study was undertaken to compare the Five facets of effective leadership preferred by male football players.

III. HYPOTHESIS

It is to hypnotize that there exist no significant differences between males at the state level football members of their preference for actual leadership behavior in the five dimensions of leadership.

IV.METHODOLOGY

a) Subjects:

30 male football players, representing Murshidabad districts of West Bengal in Government level state collegiate competitions held at Salt Lake Stadium, Kolkata, and West Bengal; were chosen randomly were participants in this study. The individuals' ages ranged from 25 to 35. The participants were selected from male football players who represented their

district in Inter-college Football Games spanning from 2014 to 2017.

b) Criterion measure:

Lower team performance is measured by their win-loss record [6]. Many coaches believe that an athlete's leadership style has a significant role in their performance. Most coaches have used several leadership philosophies at various times and in various contexts. Different approaches work better in different contexts than others. Because of this, it is advantageous for the coach to be aware of the leadership traits that will boost productivity. Their sportsmen' and sports teams' success is greatly influenced by the coaches, who have an impact on things like their players' self-esteem. The scale comprised 40 items for five dimensions, and there were no negative responses on any of the Instruction and training (13 pieces), democratic behavior (9 items), autocratic behavior (5 items), social support (8 items), or positive feedback (rewarding behavior) five items. The following criteria were used to score the leadership-related items: 5, frequently: 4, Rarely: 2, Never: 1, Occasional: 3. Each question received five

answers: Always, Often, Rarely, Occasionally, and Never. According to the responses provided Scores were as follows for the athletes' preferred leadership conduct. To determine a score for each dimension, the scores collected for each item under the leadership behavior dimensions were averaged.

c) Research Design:

The LSS questionnaire containing 40 items was supplied to 30 subjects and their responses were collected independently and then analyzed by using the appropriate statistic.

d) Statistical Design:

To ascertain whether there are discernible differences in the means of observable behaviors among male football players if desired. In addition to post-hoc analysis, leadership, means, standard deviations, and variance analysis were performed.

V. ANALYSIS AND INTERPRETATION OF DATA

Means and standard deviations were calculated to gauge the chosen leadership style of state college-level male players, and the resulting statistics are displayed in Table I.

Table I: Descriptive Statistics for Preferences on Dimensions of leadership Behaviors of Male Players Have a place with Football

Sl. No.	Leader Behaviour Dimensions	Mean	SD
1.	Training & Instruction (TI)	3.975 (T ₁)	0,4103
2.	Autocratic Behaviour (AB)	3.66 (T ₂)	0.8681
3.	Democratic Behaviour (DB)	4.0343 (T ₃)	0.6931
4.	Social Support (SS)	4.1263 (T ₄)	0.5132
5.	Positive Feedback (PF)	4.2333 (T ₅)	0.6127

The table above shows the mean ratings for the five dimensions of leadership behavior that state college-level male football players liked. To determine the significance of the discrepancies between the Analysis of Variance was calculated

and information related to this has been given in the mean score on several identified characteristics belonging to preferred leadership conduct.

Table II: Analysis of Variance for Preferred Leadership of State College Level Male Football Players

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F*</i>	<i>p value</i>
Between-treatments	5.6292	4	1.4073	3.44749	0.01006
Within-treatments	59.1904	145	0.4082		
Total	64.8197	149			

*** Significant at 0.05 level**

From Table II, there was a statistically significant difference across states, which is obvious. College level male football players who favored leadership, as shown by the F-value 3.44749 was bigger than the required F.05 (4, 145) = 2.42 as well as p-value 0.01006 < 0.05 showed the existence of significant differences. Given that the F-ratio was determined to be

significant, the significant differences among male football players from different colleges participated at state level on the five dimensions of leader behavior of preferred leadership were analyzed utilizing Tukey's HSD Trial of Post-hoc Correlation. The information applicable to this is displayed in table III.

Table III: Significance of Differences among State College Level Male football Players between Ordered Paired Means on Five Dimensions of Preferred Leadership

<i>Pair wise Comparisons</i>		HSD _{.05} = 0.4557 HSD _{.01} = 0.5471	Q _{.05} = 3.9066 Q _{.01} = 4.6900
T₁:T₂	M ₁ = 3.98 M ₂ = 3.66	0.31	Q = 2.70 (<i>p</i> = .31698)
T₁:T₃	M ₁ = 3.98 M ₃ = 4.03	0.06	Q = 0.51 (<i>p</i> = .99639)
T₁:T₄	M ₁ = 3.98 M ₄ = 4.13	0.15	Q = 1.30 (<i>p</i> = .88991)
T₁:T₅	M ₁ = 3.98 M ₅ = 4.23	0.26	Q = 2.21 (<i>p</i> = .52173)
T₂:T₃	M ₂ = 3.66 M ₃ = 4.03	0.37	Q = 3.21 (<i>p</i> = .16105)
T₂:T₄	M ₂ = 3.66 M ₄ = 4.13	0.47	Q = 4.00 (<i>p</i> = .04213)*
T₂:T₅	M ₂ = 3.66 M ₅ = 4.23	0.57	Q = 4.91 (<i>p</i> = .00598)*
T₃:T₄	M ₃ = 4.03 M ₄ = 4.13	0.09	Q = 0.79 (<i>p</i> = .98082)
T₃:T₅	M ₃ = 4.03 M ₅ = 4.23	0.20	Q = 1.71 (<i>p</i> = .74774)

$T_4:T_5$	$M_4 = 4.13$ $M_5 = 4.23$	0.11	$Q = 0.92 (p = .96666)$
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*** Significant at 0.05 level**

It is quite evident from Table III, that there are no significant differences in all dimensions of preferred leadership among State level male Football players between TI –AB, TI-DB, TI-SS, TI-PF; AB-DB, DB-SS, DB-PF, and so on. Significant differences were found in the cases of AB-SS and AB-PF only. Therefore, differences exist between Authoritarian Behavior (AB) and Social Support (SS) as well as between Authoritarian Behavior (AB) and Positive Feedback (PF).

IV. RESULT AND DISCUSSION:

The study's findings showed that state-level male students differed significantly in football players as it was discovered that the F-ratio is higher than the necessary number of significances. The path-goal theory appears to be supported by the fact that male football players in this study gave their coaches better ratings on the positive feedback leader behavior facet. It was argued that in a group setting where interpersonal requirements would not be met, the fulfillment of each student-athlete's demands for positive reinforcement could be reflected in preferences for positive feedback conduct, reward and recognition. [5]. Chelladurai and Saleh Coaches reinforced motivating, recognizing, and coaching student-athletes to perform at their best as seen by the proposed positive feedback behavior. [9, 2]. In comparison to other valued leadership traits, the male players expressed autocratic behavior to a lesser degree than their coaches' behavior. This Leadership scale used in our study i.e. LSS has received substantial validation in research on a variety of sports, including ice hockey and football, as well as in studies on a variety of cultural contexts, including the US, Canada, Japan, and Singapore [21-23, 12]. The majority of these studies showed modest to modest effect

sizes when comparing various groups. [22, 21, 12]. Our result is very much concerned with the study conducted by other scholars [23].

V. CONCLUSIONS:

1. On a state level, among male football players, there were noticeable differences in the way they displayed leadership.
2. Male football players at the state level expressed a preference for their coaches' criticism to be more constructive and uplifting.
3. State-level male football players demanded less amount of autocratic behavior from their coaches.
4. Players, who wanted Authoritarian behavior, had denied preferring social support as well as favorable comments from their leaders or trainers.

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An Ethno-botanical exploration of medicinal plants used by traditional healers in Dhamtari, Chhattisgarh, India, showing wound healing activity

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Abstract:

The study was performed in the Dhamtari regions of Chhattisgarh state, India. At the study site, a total of 50 medicinal plants belonging to 30 families were documented. Between March 2021 and February 2022, intensive field surveys were conducted in the research areas. Native knowledge of wild medicinal plants was obtained on field trips through questionnaires, discussions, and in-person interviews. In accordance with their correct nomenclature, plants were organized according to their botanical name, family, common name, parts used for the treatment of wound healing activities. In the current investigation, the Zingiberaceae family was the most prevalent accounting for a total of 6 plant species followed by Fabaceae comprising 4 families used by the indigenous people of studied region for the wound healing purposes. For a longer period of time, the rural residents of the Dhamtari region have used native flora for primary healthcare and the treatment of various diseases. However, there was little information about traditional knowledge of medicinal plants documented. Rural Dhamtari people asserted that younger generations are less

interested in traditional knowledge of medicinal herbs as a result of societal development. Therefore, it is crucial to document ethno-medicinal plants bearing wound healing activities before they are no longer available and go extinct. In order to effectively conserve plants and

traditional knowledge for the future, this ethno-botanical database will be helpful to scientists, naturalists, planners, policymakers and chemists.

Index Terms: Abundance, Dhamtari regions, Density, Ethno-medicinal herb, Frequency, wound healing.

I. INTRODUCTION

For the primary healthcare, rural populations all across the world rely on traditional local knowledge of medicinal plants [21, 22]. Ethnobotany is the study of the interactions between pre-colonial human societies and plant ecosystems. Rural populations have received knowledge of traditional medicinal

herbs down the generations [18, 9] Ethnobotanical research is essential in the search for modern drugs made from naturally occurring medicinal plant resources [7, 12]. Rural communities in developing countries have a good alternative to medical facilities to the use of plant species as traditional treatments [10, 6]. According to studies, traditional medicines constitute the primary method of healthcare for 80% of people in underdeveloped countries. It is usually stated that these medicinal plants are safe, inexpensive, and simple to find in the neighborhood [4, 14]. According to studies by , 7500 plant species in India have been identified as having therapeutic uses in both conventional and contemporary medical systems [2, 5].

Since the time of the Vedas, plants have been used in India as food and medicine. The Rig Veda and the Atharvaveda include the oldest descriptions of plant medicine [20]. The majority of people in India—roughly 75%—live in rural areas. In times of food scarcity, the majority of rural populations rely on natural resources like wild edible plants to provide for their requirements [15]. Over 800 different types of food plants are consumed by rural societies [17]. Wild plants have been used extensively in human life for a variety of purposes since the beginning of time, including food, medicine, fibre, and animal feed. Wild edible plants have been found to be important to people and have been suggested as a way to maintain a balance between population growth and agricultural output, especially in developing countries [19].

There are 54 million tribal people residing in India, according to reports. For the maintenance of daily activities, locals in rural areas depend on trees and forest products. According to Phillips *et al.* (1994), Musa *et al.* (2011), and Zeeshan *et al.* (2021), the majority of tribal communities still rely on local traditional remedies to live [13, 11, 23].

Because these areas lack an effective transportation infrastructure and access to immediate medical care, the local population of these areas is reliant on these traditional medicinal plants for a variety of maladies. Without adequate recording, this traditional knowledge of medicinal plants has been passed down from one generation to the next. To the main occupants of natural habitats and traditional healers, it has occasionally been a "closely secret" [1, 16, 8, 3].

Wound healing is a complex and highly coordinated biological process that the body undergoes to repair damaged tissue. It involves various cellular and biochemical mechanisms that work together to restore the integrity of the skin or other tissues after injury. Medicinal plants have been used for centuries in traditional medicine for their potential wound healing properties. Many of these plants contain bioactive compounds that can promote the healing process and reduce inflammation, infection, and pain.

Since ages, Medicinal plants have been used for varied wound healing treatments. Therefore, phyto-therapeutic information is extremely valuable for finding medicines that assist humanity for the treatment of wound healing. Its authenticity is supported by the long-standing use of these traditional medicinal plants, which is documented in classical literature like "Charak Sanhita," "Sushrut Sanhita," and others, as well as by tribal healers today. If it has been adequately inspected, documented, and enumerated, it will be useful for future discoveries of innovative drugs.

II. MATERIAL AND METHODS

Study area:

Dhamtari is a city and district located in the Indian state of Chhattisgarh. It is situated in the central part of India (Fig. I). Here are the geographical coordinates of Dhamtari: **Latitude:** 20.712992⁰ North, **Longitude:** 81.552055⁰ East.

Dhamtari is located in the central region of Chhattisgarh, approximately 74 kilometers (about 46 miles) southwest of the state capital, Raipur. It is well-connected by road to other major cities and towns in Chhattisgarh, making it accessible for travellers and visitors to the region.

Dhamtari, located in the state of Chhattisgarh in central India, experiences a tropical wet and dry climate. **Seasons:** Summer (March to June): Summers in Dhamtari are typically hot and dry. Temperatures can soar during this period, with daytime temperatures often exceeding 40°C (104°F). The region experiences intense heat, especially in April and May. **Winter** (December to February): Winters in Dhamtari are relatively mild and dry compared

to the rest of the year. While daytime temperatures are pleasant and range from 20°C to 25°C (68°F to 77°F), night time temperatures can drop to around 10°C (50°F).

This season is characterized by cool and comfortable weather. **Rainfall:** Dhamtari receives the majority of its annual rainfall during the monsoon season, with an average annual precipitation of around 1,200 to 1,400 millimeters (47 to 55 inches). The heavy rains contribute to the region's lush greenery and agricultural productivity. **Humidity:** Humidity levels are relatively high, especially during the monsoon season. The combination of heat and humidity in the summer can make the weather uncomfortable.

Data Collection: In the research region, extensive field investigations were carried out between March 2021 and February 2022. The specimens of plants that were collected were dried, mounted, and labeled with the date and technique of collection on herbarium sheets. The plants were recognized using the standard taxonomic literatures.

Quadrat method applied to find out the density, frequency and abundance of medicinal plant species of the studied region by the following formula:

$$\text{Density} = \frac{\text{Total number of individuals of a species in all quadrates}}{\text{Total number of quadrates studied}}$$

$$\text{Frequency (\%)} = \frac{\text{Number of quadrates in which the species occurred}}{\text{Total number of quadrates studied}} \times 100$$

$$\text{Abundance} = \frac{\text{Total number of individuals of a species in all quadrates}}{\text{Total Number of quadrates in which the species occur}}$$

Native knowledge of wild medicinal plants was obtained on field trips through questionnaires, discussions, and in-person interviews. It was found that people between the ages of 50 and 65 made up the majority of responders. Every informant gave their freely given consent to participate, and they were able to discontinue the interviews whenever they desired. Locals helped with the field inquiry, and samples of medicinally important plants were collected using local identity and information provided by informants.



FIG.: II . SAMPLE COLLECTION FROM STUDY AREA: DHAMTARI, CHHATTISGARH, INDIA

III. RESULTS AND DISCUSSION

In the current survey, 50 medicinal plants belonging to 30 families were found that the tribal people use to cure and heal wounds. Table 1 shows plants by family, scientific name, local name, portion used, and a variety of therapeutic uses in alphabetical order. According to the study, the dominant family, with 6 species of medicinal importance, was Zingiberaceae. The tribal people used the other important plant families, such as Fabaceae (4 species), Amaranthaceae (3 species), and Lamiaceae (3 species), for wound treatment.

Based on primary sources and locally accessible medicinal plants used by the tribal members for wound healing, the survey documented the information. Fruits (8%), Leaves (38%), Whole Plant (18%), Rhizome (12%), Root (10%), Tuber (6%), Seed (6%), and Stem (2%), were the most often used parts for the wound healing treatments by the tribal people represented in Figure: 3.

In Fig. 4, various plant families used for wound healing are depicted according to survey results.

The findings indicate that Zingiberaceae holds the top spot among plant families from which native people used it to treat wounds.

The scientific name, common name, parts used, medicinal use, frequency, density and abundance of the studied plants were enumerated in (Table: I). Study reveals that, *Acalypha indica* L., *Amaranthus gangaticus* L., *Argemone Mexicana* L., *Basella alba*, *Bauhinia variegata*, *Cassia fistula*, *Cleome viscosa* L., *Curcuma angustifolia*, *Curcuma amada* Roxb., *Curcuma longa*, *Foeniculum vulgare* Mill., *Zinziber roseum* Roscoe. bearing highest occurrence in the studied region acting as wound healing treatment. On the other hand, *Solanum nigrum*, *Leucas aspera* L., *Dioscorea hispida* Dennst. possesses highest Abundance. *Zinziber roseum* Roscoe., and *Curcuma longa* observed to occur in highest density in the studied regions. This result will be the primary data for the researchers or any other investigators for further studies related to isolation of individual bioactive phyto-constituents from these medicinal plants for wound healing treatment.

TABLE: I. MEDICINAL PLANTS FOR THE PURPOSE OF WOUND HEALING ACTIVITIES IN THE DHAMTARI, REGIONS OF CHHATTISGARH STATE, INDIA.

Sl. No	Scientific Name	Local Name	Family	Parts Used	TNI	NQS	TQS	F (%)	A	D
1	<i>Abelmoschus esculentous</i> L. (Moench)	Bhendi	Malvaceae	Fruit	4	1	10	10	4	0.4
2	<i>Acalypha indica</i> L.	Muktojhuri	Euphorbiaceae	Leaves	14	7	10	70	2	1.4
3	<i>Achyranthes aspera</i> L.	Chirchira	Amaranthaceae	Whole plant	7	2	10	20	3.5	0.7
4	<i>Acorus calamus</i> L.	Gorbach	Acoraceae	Rhizome	7	3	10	30	2.4	0.7
5	<i>Amaranthus gangaticus</i> L.	Jadi	Amaranthaceae	Leaves	14	9	10	90	1.9	1.4
6	<i>Amaranthus caudatus</i> L.	Marshisak	Amaranthaceae	Leaves	5	2	10	20	2.5	0.5
7	<i>Ananas comosus</i> L.	Anaras	Bromeliaceae	Fruit	9	4	10	40	2.3	0.9
8	<i>Argemone Mexicana</i> L.	Peeli kater	Papaveraceae	Whole plant	14	7	10	70	2	1.4
9	<i>Asparagus racemosus</i>	Satawar	Liliaceae	Root	7	3	10	30	2.4	0.7
10	<i>Ateracantha longifolia</i>	Mokhla	Acanthaceae	Leaves	3	2	10	20	1.5	0.3
11	<i>Basella alba</i>	Poibhaji	Basellaceae	Whole plant	14	10	10	100	1.4	1.4

12	<i>Bauhinia variegata</i>	Kachanar	Fabaceae	Leaves	14	7	10	70	2	1.4
13	<i>Boerhaavia diffusa</i> L.	Punarnova	Nyctaginaceae	Whole plant	4	2	10	20	2	0.4
14	<i>Cassia fistula</i>	Amaltas	Fabaceae	Whole plant	14	7	10	70	2	1.4
15	<i>Cassia tora</i>	Charota	Fabaceae	Leaves	11	4	10	40	2.8	1.1
16	<i>Catharanthus roseus</i> (L.) G.Don.	Nayantara	Apocynaceae	Leaves	10	2	10	20	5	1.0
17	<i>Centella asiatica</i>	Thankun	Apiaceae	Leaves	12	3	10	30	4	1.2
18	<i>Cleistanthus collinus</i>	karra	Phyllanthaceae	Leaves	12	7	10	70	1.8	1.2
19	<i>Cleome viscosa</i> L.	Hurhur	Capparidaceae	Whole plant	14	8	10	80	1.5	1.4
20	<i>Colocasis esculenta</i> L.	Bankochai	Araceae	Root	14	9	10	90	1.6	1.4
21	<i>Costus speciosus</i>	Keokand	Costaceae	Root	12	4	10	40	3	1.2
22	<i>Curculigo orchids</i> Gaertn	KaliMusali	Amaryllidaceae	Leaves	12	7	10	70	1.8	1.2
23	<i>Curcuma angustifolia</i>	Tikhur	Zingiberaceae	Rhizome	14	8	10	80	1.5	1.4
24	<i>Curcuma zedoaria</i>	Gengi	Zingiberaceae	Rhizome	12	7	10	70	1.8	1.2
25	<i>Curcuma aromatica</i>	Jangali Haldi	Zingiberaceae	Rhizome	12	5	10	50	2.4	1.2
26	<i>Curcuma amada</i> Roxb.	Amada	Zingiberaceae	Rhizome	14	8	10	80	1.5	1.4
27	<i>Curcuma longa</i>	Halud	Zingiberaceae	Rhizome	21	9	10	90	2.4	2.1

28	<i>Cuscuta reflexa</i> Roxb.	Alok-jui	Cuscutaceae	Whole plant	10	4	10	40	2.6	1.0
29	<i>Cyperous scariosus</i> R. Br.	Muthaghas	Cyperaceae	Tuber	5	3	10	30	1.7	0.5
30	<i>Dioscorea hispida</i> Dennst.	Baichandi	Dioscoreaceae	Tuber	7	1	10	10	7	0.7
31	<i>Enhydra fluctuans</i> Lour.	Hinche	Asteraceae	Leaves	3	2	10	20	1.5	0.3
32	<i>Eclipta alba</i> (L.) Hassk	Keshunt	Asteraceae	Leaves	4	3	10	30	1.4	0.4
33	<i>Foeniculum vulgare</i> Mill.	Mouri	Apiaceae	Fruits	14	7	10	70	2	1.4
34	<i>Gloriosa superba</i> (L.)	Kalihari	Liliaceae	Whole plant	4	2	10	20	2	0.4
35	<i>Ipomea aquatic</i> Forssk.	Kolmisak	Convolvulaceae	Leaves	6	1	10	10	6	0.6
36	<i>Ipomoea pes-caprae</i> (L.) R.Br.	Bay-hops	Convolvulaceae	Leaves	7	2	10	20	3.5	0.7
37	<i>Hibiscus cannbinus</i> L.	Patwabha	Malvaceae	Stem	4	1	10	10	4	0.4
38	<i>Hordium vulgare</i> L.	Jow	Poaceae	Leaves	11	5	10	50	2.2	1.1
39	<i>Leucas aspera</i> L.	Bodkibha	Lamiaceae	Leaves	12	1	10	10	12	1.2
40	<i>Mimosa pudica</i> L.	Lajwanti	Fabaceae	Root	11	4	10	40	2.8	1.1
41	<i>Oxalis corniculata</i> Linn.	Amrulsak	Oxalidaceae	Whole Plant	11	6	10	60	1.9	1.1
42	<i>Ocimum americanum</i>	Bantulsa	Lamiaceae	Leaves	12	5	10	50	2.4	1.2
43	<i>Ocimum sanctum</i> L.	Tulsi	Lamiaceae	Leaves	4	1	10	10	4	0.4

44	<i>Paspalum scrobiculatum</i>	Kodo	Poaceae	Seed	7	2	10	20	3.5	0.7
45	<i>Rauvolfia serpentina</i>	Sarpgandha	Apocynaceae	Root	4	1	10	10	4	0.4
46	<i>Sesamum indicum</i> L.	Till	Pedaliaceae	Seed	2	1	10	10	2	0.2
47	<i>Solanum nigrum</i>	Mokaya	Solanaceae	Leaves	7	1	10	10	7	0.7
48	<i>Solanum Xanthocarpum</i>	Bhaskatiy	Solanaceae	Fruit	8	2	10	20	4	0.8
49	<i>Schleichera oleosa</i>	Kusum	Sapindaceae	Seed	12	7	10	70	1.8	1.2
50	<i>Zinziber roseum</i> Roscoe.	Jangali Adrak	Zingiberaceae	Tuber	21	9	10	90	2.4	2.1

TNI= TOTAL NUMBER OF INDIVIDUALS OF A SPECIES IN ALL QUADRATES **NQS**= TOTAL NUMBER OF QUADRATES IN WHICH THE SPECIES OCCUR.

TQS= TOTAL NUMBER OF QUADRATES STUDIED **F (%)**= FREQUENCY **A**= ABUNDANCE **D**= DENSITY

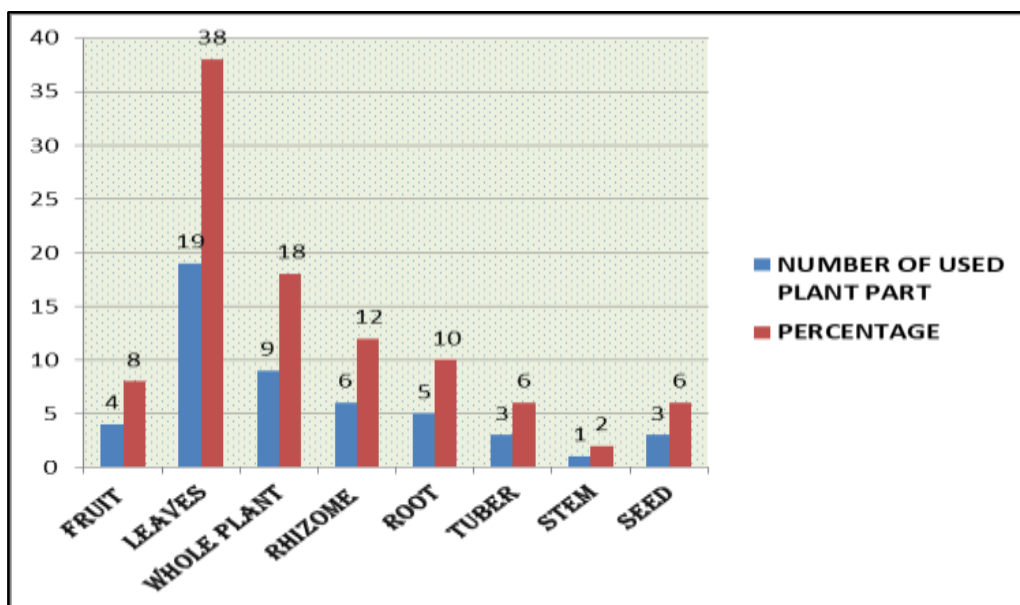


FIG.: III . DIAGRAM SHOWING NUMBER AND PERCENTAGE OF DIFFERENT USED PLANT PARTS.

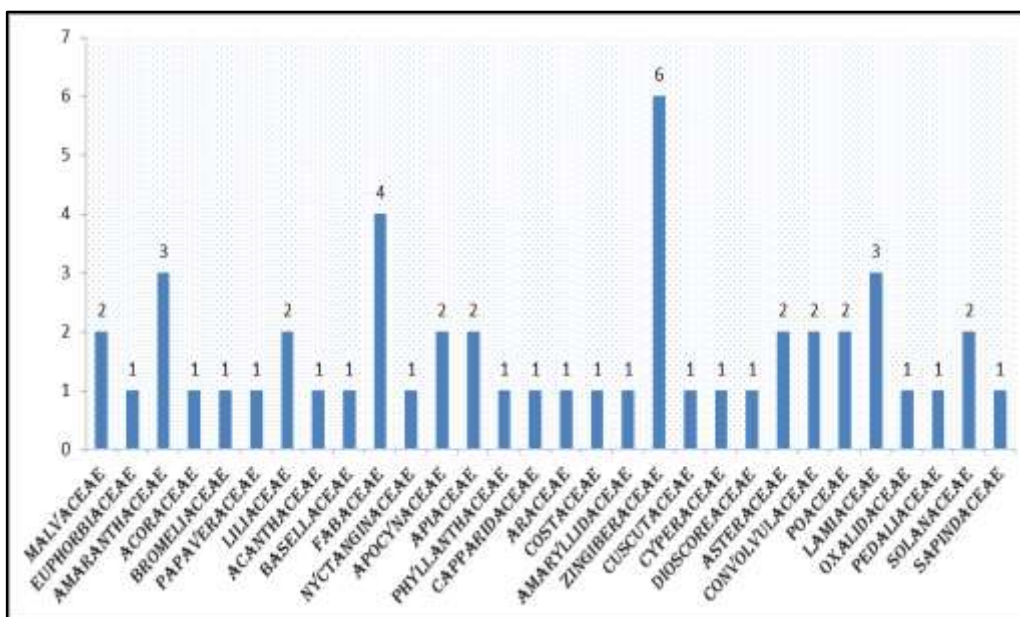


FIG.:IV. DIAGRAM SHOWING NUMBER OF PLANT FAMILIES USED IN WOUND HEALING TREATMENT

Maximum number and percentage (19, 38 %) of leaves of various medicinal plants has been utilized for the treatment of wound healing purposes as represented in Fig. 3. In Fig. 4, various plant families used for wound healing are

depicted according to survey results. The findings indicate that Zingiberaceae holds the top spot among plant families from which native people used it to treat wounds.

IV. CONCLUSION

The ethnobotanical investigation reveals that the traditional people use fifty (50) medicinal plant species from thirty (30) families for their basic health care requirements, particularly for the purpose of wound healing. Out of these, the family Zingiberaceae represented the dominant family, representing six plant species of therapeutic significance, followed by Fabaceae (4 species), Amaranthaceae (3 species), and Lamiaceae (3 species). For the treatments of wound healing, the tribal people most commonly were using Fruits (8 %), Leaves (38%), Whole plant (18%), Rhizome (12%), Root (10%), Tuber (6%), Seed (6%), Stem (2%). The current study reveals that, the plants with the highest frequency in the study area acting as wound healing potency are *Acalypha indica* L., *Amaranthus gangaticus* L., *Argemone Mexicana* L., *Basella alba*, *Bauhinia variegata*, *Cassia fistula*, *Cleome viscosa* L., *Curcuma angustifolia*, *Curcuma amada* Roxb., *Curcuma longa*, *Foeniculum vulgare* Mill., *Zinziber roseum* Roscoe.. The maximum Abundance is found in *Solanum nigrum*, *Leucas aspera* L., and *Dioscorea hispida* Dennst. In the examined regions, the largest densities of *Zinziber roseum* Roscoe and *Curcuma longa* were observed. This finding will serve as the main source of information for researchers and other investigators conducting more studies on the isolation of certain phytoconstituents from these medicinal plants for the purpose of treating wounds. The preliminary data collected from the tribal people and compiled in this paper may be very useful for future research in the fields of ethno-medico-botany, phytochemistry, and pharmacology by researchers because there is a lack of organised data regarding the utility of these medicinally significant plant species in the studied region.

Due to a lack of recording and appropriate scientific research, traditional wisdom is being lost day by day. The information has been passed

down from generation to generation and has been tightly guarded by "Plant doctors" or "folk medicine men." It is incredibly challenging to learn anything from these guys. In order to isolate and identify "active principles" or "secondary metabolites" for upcoming novel drug discoveries and follow-up bioactivity studies, the knowledge that has been documented in this paper is extremely valuable and significant for researchers, botanists, chemists, druggists, and many pharmaceutical companies.

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Contribution to Common Fixed Points Results in Complex Valued Metric Space for Expansive type Contraction

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Abstract: The paper suggests that in a complete complex-valued metric space, there are two self-mappings that meet contraction type conditions of expansiveness. These mappings have common fixed points. The paper also presents generalizations and extensions of well-known results from the literature [19], which further advances our understanding of this topic

IndexTerms: Expansive mapping, stationary (fixed) point, Common stationary point, complete complex valued metric space.

I INTRODUCTION

An important result related to contractions in complete metric spaces was proved by Banach, S.[1], in 1922. Machuca [2] developed a model of fixed points in expansive mappings in 1967, and Jungck extended it to cover numerous other types of expansive mappings in 1975. According to Wang et al. [5], expanded mappings can be used to demonstrate the theorem of fixed points in complete metric spaces. In 1922, Daffer and Kaneko[6] established a pair of mappings by defining expanding status as the state of expansion under a common stationary (or fixed) point.

In recent times, two papers, namely Azam et al. [3] and Rauzkard and Imdad [4], have extensively studied complex-valued metric spaces (CVMS). These papers have used contraction maps to establish theorems for common stationary points, and have delved into

sequence properties to gain new insights into fixed points within these spaces. Prior research in this field has led to several broad conclusions, which are cited in (sources [3], [4],[7-19]).

Furthermore, the manuscript provides generalizations and extensions of well-known results from the literature [19] which further expands our understanding of this topic.

II PRELIMINARY NOTES

As a starting point, let's discuss the features of complex valued spaces, including their definition.

Presume that, ξ_1, ξ_2 be a any two complex numbers with their the set $\mathbb{C}$ and $\leq$ be ordered partially under $\mathbb{C}$, then consider as below:

$\xi_1 \preceq \xi_2$ if and only if $\text{Re}(\xi_1) \leq \text{Re}(\xi_2)$ and $\text{Im}(\xi_1) \leq \text{Im}(\xi_2)$

As a result, we are able to deduce $\xi_1 \preceq \xi_2$ whenever anyone circumstances are accomplished

- (i) $\text{Re}(\xi_1) = \text{Re}(\xi_2), \text{Im}(\xi_1) < \text{Im}(\xi_2);$
- (ii) $\text{Re}(\xi_1) < \text{Re}(\xi_2), \text{Im}(\xi_1) = \text{Im}(\xi_2);$
- (iii) $\text{Re}(\xi_1) < \text{Re}(\xi_2), \text{Im}(\xi_1) < \text{Im}(\xi_2);$
- (iv) $\text{Re}(\xi_1) = \text{Re}(\xi_2), \text{Im}(\xi_1) = \text{Im}(\xi_2);$

When $\xi_1 \preceq \xi_2$ and $\xi_1 \neq \xi_2$, then condition of (i), (ii) and (iii) are gratified, and if (iii) is only rewarding, then correspond to $\xi_1 \prec \xi_2$. Take note of the fact that,

- (a) If $0 \preceq \xi_1 \preceq \xi_2$, then $|\xi_1| < |\xi_2|$,

(b) if $\xi_1 \lesssim \xi_2$ and $\xi_2 < \xi_3$, then $\xi_1 < \xi_3$, (c) $\alpha, \beta \in \mathbb{R}$ and $\alpha \leq \beta$, then $\alpha\xi \lesssim \beta\xi, \forall \xi \in \mathbb{C}$.

Definition 2.1[3]: Setting a operator as function $d: Y \times Y \rightarrow \mathbb{C}$ such that gratify some circumstances as below:

- (i) $0 \lesssim d(a, b), \forall a, b \in Y$, and $(a, b) = 0 \Leftrightarrow a = b$;
- (ii) $d(a, b) = d(b, a), \forall a, b \in Y$;
- (iii) $d(a, b) \lesssim d(a, c) + d(c, b).$
 $\forall a, b, c \in Y$.

Then we can say pair (Y, d) is well-known CVMS where d be CVM on Y .

Example 2.2: Presuming that an operator $d: Y \times Y \rightarrow \mathbb{C}$ on (Y, d) and $Y = \mathbb{C}$ specified by

$$d(\xi_1, \xi_2) = e^{it} |\xi_1 - \xi_2|,$$

where $\xi_1 = (a, b)$ and $\xi_2 = (c, d)$ at $[0, \frac{\pi}{2}]$.

As condition (Y, d) be a CVMS.

Definition 2.3 [2]: Assume we have $\{\lambda_k\}$ been a sequence on (Y, d) and $\lambda \in Y$. Then we can say that

- (i) $\{\lambda_k\}$ is convergent to λ , through $c \in \mathbb{C}$ with $0 < c$, we have $k \in \mathbb{N}$ such that $d(\lambda_k, \lambda) < c, \forall \lambda > k$, Presented by $\lambda_k \rightarrow \lambda$ as $k \rightarrow \infty$ or $\lim_{k \rightarrow \infty} \lambda_k = \lambda$;
- (ii) Additionally, $\{\lambda_k\}$ is sequence of Cauchy, through $c \in \mathbb{C}$ and $0 < c$, we have $k \in \mathbb{N}$ such that $d(\lambda_k, \lambda_{k+l}) < c, \forall \lambda > k$ and $l \in \mathbb{N}$;
- (iii) When each Cauchy sequence converges, in (Y, d) , so, (Y, d) will be considered Complete CVMS.

Lemma 2.4 [2]: Presume that $\{\lambda_k\} \in Y$ is a sequence on (Y, d) , then sequence $\{\lambda_k\}$ converges to λ if that's the case $|d(\lambda_k, \lambda)|$, like $k \rightarrow \infty$.

Lemma 2.6 [2]: Presume that $\{\lambda_k\} \in Y$ is a sequence on (Y, d) , then sequence $\{\lambda_k\}$ is a Cauchy sequence if and only if $|d(\lambda_k, \lambda_{k+l})| = 0$, where $l \in \mathbb{N}$.

Lemma 2.7 [20] If $\{\lambda_k\}$ converges to $\lambda \in Y$, and $\{\delta_k\}$ converges to $\delta \in Y$ over (Y, d) , then

$$\lim_{k \rightarrow \infty} d(\lambda_k, \delta_k) = d(\lambda, \delta);$$

$$\lim_{k \rightarrow \infty} |d(\lambda_k, \delta_k)| = |d(\lambda, \delta)|.$$

In particular, for any fixed element $u \in Y$, the following holds

$$\lim_{k \rightarrow \infty} d(\lambda_k, u) = d(\lambda, u); \quad \lim_{k \rightarrow \infty} |d(\lambda_k, u)| = |d(\lambda, u)|.$$

Lemma 2.8: Assume that $\{\lambda_k\}$ be a Cauchy sequence on (Y, d) . If $\exists 0 \leq h < 1$ through for all $k \in \mathbb{N}$

$$d(\lambda_{k+1}, \lambda_k) \leq h d(\lambda_k, \lambda_{k-1}).$$

1. Main Results

Theorem 1: Suppose that the two continuous onto mappings L_1 and $L_2 : Y \rightarrow Y$ on complete CVMS on (Y, d) . Suppose $\eta \geq -1$, $\beta + \gamma \geq 0$, $\alpha + \gamma \geq 0$ and $\frac{1}{2} < \gamma \leq 1$, are constants, with $\alpha + \beta + \gamma + \eta > 1$. For all $\lambda, \delta \in Y$, the condition holds as follows

$$\begin{aligned} d(L_1 \lambda, L_2 \delta) + \alpha [d(\lambda, L_1 \lambda) + d(\delta, L_2 \delta)] \\ + \beta [d(\lambda, L_2 \delta) + d(\delta, L_1 \lambda)] \\ \geq \gamma d(\lambda, \delta) \dots (1.1) \end{aligned}$$

Then, it can be determining that L_1 and L_2 are common stationary point in Y as unique.

Proof: Consider $\lambda_0 \in Y$. We also have two onto function L_1 and L_2 , $\exists \lambda_1, \lambda_2 \in X$ such that

$$L_1(\lambda_1) = \lambda_0, \text{ and } L_2(\lambda_2) = \lambda_1.$$

From here, we can define two sequences $\{\lambda_{2k}\}$ and $\{\lambda_{2k+1}\}$ by

$$\lambda_{2k} = L_1 \lambda_{2k+1}, \text{ some } k = 0, 1, 2, 3 \dots$$

and

$$\lambda_{2k+1} = L_2 \lambda_{2k+2}, \text{ some } k = 0, 1, 2, 3 \dots$$

Remark that, $\lambda_{2k} = \lambda_{2k+1}$ for $k \geq 1$, then it is common fixed point of L_1 and L_2 .

Currently put $\lambda = \lambda_{2k+1}$ and $\delta = \lambda_{2k+2}$, in (1.1) we gain

$$\begin{aligned} (\alpha + \beta) d(\lambda_{2k+2}, \lambda_{2k+1}) \\ \geq \gamma d(\lambda_{2k+1}, \lambda_{2k+2}) \\ (\gamma - \alpha - \beta) d(\lambda_{2k+1}, \lambda_{2k+2}) \geq 0. \end{aligned}$$

Therefore, $(\gamma - \alpha - \beta) |d(\lambda_{2k+1}, \lambda_{2k+2})| \leq 0$.

Since $(\alpha + \beta) < \gamma$. So, $d(\lambda_{2k+1}, \lambda_{2k+2}) = 0$

Implies that $\lambda_{2k+1} = \lambda_{2k+2}$. Thus $L_1 \lambda = \lambda_{2k} = \lambda_{2k+1} = L_2 \lambda_{2k+2} = L_2 \lambda_{2k+1}$.

$\Rightarrow \lambda_{2k+1}$ is a common fixed point of L_1 and L_2 . Now if there exist k such that $\lambda_{2k+1} = \lambda_{2k+2}$, then taking $\lambda = \lambda_{2k+3}$, and $\delta = \lambda_{2k+2}$ in (1.1), we get

$$(\gamma - \alpha - \beta) d(\lambda_{2k+3}, \lambda_{2k+2}) \geq 0.$$

Therefore, $(\gamma - \alpha - \beta) |d(\lambda_{2k+3}, \lambda_{2k+2})| \leq 0$.

Since $(\alpha + \beta) < \gamma$. So, $d(\lambda_{2k+3}, \lambda_{2k+2}) = 0$.

Implies that $\lambda_{2k+3} = \lambda_{2k+2}$.

Therefore $L_2 \lambda_{2k+2} = \lambda_{2k+1} = L_1 \lambda_{2k+3} = L_1 \lambda_{2k+2}$. Hence, λ_{2k+2} is a common fixed point

of L_1 and L_2 .

Hence from now on, we presume that, $\lambda_{2k} \neq \lambda_{2k+1}, \forall k = 0, 1, 2, \dots$

Now letting $\lambda = \lambda_{2k+1}, \delta = \lambda_{2k+2}$ in (1.1), we get

$$(1 + \alpha + \beta)d(\lambda_{2k+1}, \lambda_{2k}) \geq \gamma - (\alpha + \beta)d(\lambda_{2k+1}, \lambda_{2k+2})$$

Implies that

$$d(\lambda_{2k+1}, \lambda_{2k}) \geq \frac{\gamma - (\alpha + \beta)}{1 + \alpha + \gamma} d(\lambda_{2k+1}, \lambda_{2k+2})$$

Hence

$$|d(\lambda_{2k+1}, \lambda_{2k+2})| \leq \frac{1 + \alpha + \gamma}{\gamma - \alpha - \beta} |d(\lambda_{2k}, \lambda_{2k+1})| \quad (1.2)$$

Similarly, we can produce that, if putting letting

$$\lambda = \lambda_{2k+3}, \quad \delta = \lambda_{2k+2} \quad \text{in} \quad (1.2)$$

$$|d(\lambda_{2k+3}, \lambda_{2k+2})| \leq \frac{1 + \alpha + \beta}{\gamma - \alpha - \beta} |d(\lambda_{2k+2}, \lambda_{2k+1})| \quad (1.3)$$

$$\text{Now Put } \ell = \max \left\{ \frac{1 + \alpha + \beta}{\gamma - \alpha - \beta}, \frac{1 + \alpha + \gamma}{\gamma - \alpha - \beta} \right\}.$$

Then $0 < \ell < 1$, and from (1.2) and (1.3)

$$\forall k = 0, 1, 2, \dots$$

$$|d(\lambda_{2k+2}, \lambda_{2k+1})| \leq \ell |d(\lambda_{2k+1}, \lambda_{2k})| \quad (1.4)$$

$$d(\lambda_{2k+2}, \lambda_{2k+1}) = d(\lambda_{2k+1}, \lambda_{2k}),$$

$$\forall k = 0, 1, 2, \dots$$

Hence, we conclude that, the by Lemma 2.8, $\{\lambda_{2k}\}$ corresponds to the Cauchy sequence over (Y, d) as well as also complete $\exists \lambda_{2k} \rightarrow u$. Since L_2 is continuous and onto mapping there exists a point $u^* \in Y$ by through $u^* \in L_2^{-1}(u)$ i.e. $u = L_2(u^*), \lambda_{2k} \rightarrow L_2 u^*$ and $\lambda_{2k+1} \rightarrow L_2 u^*$.

Taking $\lambda = \lambda_{2k+1}$ and $\delta = u^*$ in (1.1.) we get

$$d(\lambda_{2k}, u^*) + \alpha \left[\frac{d(\lambda_{2k+1}, \lambda_{2k})}{+d(u^*, L_2 u^*)} \right]$$

$$+ \beta [d(\lambda_{2k+1}, L_2 u^*) + d(u^*, \lambda_{2k})]$$

$$\geq \eta d(\lambda_{2k+1}, u^*).$$

Hence

$$(\alpha + \beta) |d(u^*, L_2 u^*)| \geq \gamma |d(\lambda_{2k+1}, u^*)|$$

Let $k \rightarrow \infty$, then by Lemma 2.7, the above inequality becomes

$$(\gamma - (\alpha + \beta)) |L_2 u^*, u^*| \geq 0.$$

Since $\alpha + \beta < \gamma$. so, $|d(L_2 u^*, u^*)| = 0$.

$$\Rightarrow d(L_2 u^*, u^*) = 0 \Rightarrow L_2 u^* = u^*.$$

In similar manner, we can prove that $L_1 u^* = u^*$.

As results, $L_1 u^* = u^* = L_2 u^*$.

Thus both L_1 and L_2 have u^* as their common stationary points.

Now to demonstrate uniqueness, suppose that, $v^* = L_1 v^* = L_2 v^*$ holds, where v be additional common fixed point of L_1 & L_2 . Now Taking $\lambda = u^*$ and $\delta = v^*$ in (1.1), we get

$$(1 + 2\beta - \gamma) |d(u^*, v^*)| \geq 0.$$

Since $0 < \gamma < \frac{1}{2} \beta$. So, $|d(u^*, v^*)| = 0 \Rightarrow d(u^*, v^*) = 0$. Hence $u^* = v^*$.

Thus both L_1 and L_2 have u^* as their common stationary points with unique. Complete proof of this theorem.

If we take $\beta = 0$ and $\gamma = \beta$ in Theorem 1, then we get the following Corollary

Corollary 2: Suppose that the two continuous onto mappings L_1 and $L_2 : Y \rightarrow Y$ on complete CVMS on (Y, d) . Suppose $\alpha \geq 0, \alpha + \beta \geq 1$. for all $\alpha, \beta, \lambda, \delta \in Y$, the condition holds as follows

$$d(L_1 \lambda, L_2 \delta) + \alpha [d(\lambda, L_1 \lambda) + d(\delta, L_2 \delta)] \geq \beta d(\lambda, \delta) \dots (1.1)$$

Then, it can be determining that L_1 and L_2 are common stationary point in Y as unique.

If we take $\alpha = 0, \beta = \alpha$ and $\gamma = \beta$ in Theorem 1, then we get the following Corollary

Corollary 3: Suppose that the two continuous onto mappings L_1 and $L_2 : Y \rightarrow Y$ on complete CVMS (Y, d) . Suppose $\alpha \geq 0, \alpha + \beta \geq 1$. for all $\lambda, \delta \in Y$, the condition holds as follows

$$d(L_1 \lambda, L_2 \delta) + \beta [d(\lambda, L_2 \delta) + d(\delta, L_1 \lambda)] \geq \gamma d(\lambda, \delta)$$

Then, it can be determining that L_1 and L_2 are common stationary point in Y as unique.

Theorem 4: Suppose that the two continuous onto mappings L_1 and $L_2 : Y \rightarrow Y$ on complete CVMS

on (Y, d) . Suppose $\alpha \geq 0, \alpha + \beta \geq 1$. for all $\alpha, \beta, \lambda, \delta \in Y$, are constants, the condition holds as follow

$$d(L_1\lambda, L_2\delta) \geq \alpha[d(\lambda, \delta) + d(\lambda, L_1\lambda) + d(\delta, L_2\delta)] + \beta[d(\lambda, L_2\delta) + d(\delta, L_1\lambda)] \dots \quad (4.1)$$

Then, we can conclude that L_1 and L_2 are common stationary (or fixed) point in Y .

Proof Assume that $\lambda_0 \in X$. We also have two onto functions, L_1 and L_2 , $\exists \lambda_1, \lambda_2 \in X$ such that

$$L_1(\lambda_1) = \lambda_0, \text{ and } L_2(\lambda_2) = \lambda_1.$$

From here, we can define two sequences $\{\lambda_{2k}\}$ and $\{\lambda_{2k+1}\}$ by

$$\lambda_{2k} = L_1\lambda_{2k+1} \text{ for } k = 0, 1, 2, 3 \dots$$

.and

$$\lambda_{2k+1} = L_2\lambda_{2k+2} \text{ some } k = 0, 1, 2, 3 \dots$$

Remark that, $\lambda_{2k} = \lambda_{2k+1}$ for $k \geq 1$, then it is common fixed point of L_1 and L_2 .

Presently put $\lambda = \lambda_{2k+1}$ and $\delta = \lambda_{2k+2}$, in (2.1) we gain

$$(1 - 2\alpha - 2\beta)d(\lambda_{2k+2}, \lambda_{2k+1}) \geq 0.$$

Hence,

$$|d(\lambda_{2k+2}, \lambda_{2k+1})| \leq 0$$

$$\Rightarrow d(\lambda_{2k+2}, \lambda_{2k+1}) = 0.$$

Since $\alpha + \beta < 1$. So, $\lambda_{2k+2} = \lambda_{2k+1}$.

Thus

$$L_1\lambda_{2k+2} = \lambda_{2k} = \lambda_{2k+1} = L_2\lambda_{2k+2} = L_2\lambda_{2k+1}.$$

Implies that

λ_{2k+1} is common fixed point of L_1 and L_2 .

If there exists k such that $\lambda_{2k+2} = \lambda_{2k+1}$, then we put $\lambda = \lambda_{2k+3}, \delta = \lambda_{2k+2}$ in (3.1.1.) we get

$$d(\lambda_{2k+3}, \lambda_{2k+2}) = 0 \Rightarrow \lambda_{2k+3} = \lambda_{2k+2}.$$

Therefore,

$$L_2\lambda_{2k+2} = \lambda_{2k+1} = L_1\lambda_{2k+3} = L_1\lambda_{2k+2}.$$

$$\Rightarrow \lambda_{2k+2} \text{ is common fixed point of } L_1 \text{ and } L_2.$$

Hence from now on, we assume that $\lambda_{2k} \neq \lambda_{2k+1}$, $\forall k = 0, 1, 2, \dots$

Now, letting $\lambda = \lambda_{2k+2}, \delta = \lambda_{2k+1}$ in (2.1.) we get

$$d(\lambda_{2k+1}, \lambda_{2k}) = d(L_1\lambda_{2k+2}, L_2\lambda_{2k+1})$$

$$\geq \alpha[d(\lambda_{2k+2}, \lambda_{2k+1}) + d(\lambda_{2k+2}, L_1\lambda_{2k+2}) + d(\lambda_{2k+1}, L_2\lambda_{2k+1})]$$

$$+ \beta[d(\lambda_{2k+2}, L_2\lambda_{2k+1}) + d(\lambda_{2k+1}, L_1\lambda_{2k+2})]$$

$$\geq \alpha[d(\lambda_{2k+2}, \lambda_{2k+1}) + d(\lambda_{2k+2}, \lambda_{2k+1}) + d(\lambda_{2k+1}, \lambda_{2k}) + \beta[(\lambda_{2k+2}, \lambda_{2k}) + (\lambda_{2k+1}, \lambda_{2k+1})]$$

$$\geq \alpha[2d(\lambda_{2k+2}, \lambda_{2k+1}) + d(\lambda_{2k+2}, \lambda_{2k})]$$

$$+ \beta[d(\lambda_{2k+2}, \lambda_{2k+1}) + d(\lambda_{2k+1}, \lambda_{2k})]$$

$$= (2\alpha + \beta)d(\lambda_{2k+2}, \lambda_{2k+1}) + (\alpha + \beta)d(\lambda_{2k+1}, \lambda_{2k})$$

$$\Rightarrow 1 - (\alpha + \beta)d(\lambda_{2k+1}, \lambda_{2k}) \geq (2\alpha + \beta)d(\lambda_{2k+2}, \lambda_{2k+1})$$

$$|d(\lambda_{2k+1}, \lambda_{2k+2})| \leq \frac{1-(\alpha+\beta)}{(2\alpha+\beta)} |d(\lambda_{2k}, \lambda_{2k+1})| \quad (4.2)$$

Similarly, we can prove that, if we take $\lambda = \lambda_{2k+2}, \delta = \lambda_{2k+1}$ in (2.1.)

$$|d(\lambda_{2k+3}, \lambda_{2k+2})| \leq \frac{1-(\alpha+\beta)}{(2\alpha+\beta)} |d(\lambda_{2k+1}, \lambda_{2k+2})|, \quad (4.3)$$

Now Put $\ell = \max\left\{\frac{1+\alpha+\beta}{\gamma-\alpha-\beta}, \frac{1+\alpha+\beta}{\gamma-\alpha-\beta}\right\}$.

Then $0 < \ell < 1$, and from (2.2) and (2.3)

$$\forall k = 0, 1, 2 \dots$$

$$|d(\lambda_{2k+2}, \lambda_{2k+1})| \leq \ell |d(\lambda_{2k+1}, \lambda_{2k})| \quad (4.4)$$

$$d(\lambda_{2k+2}, \lambda_{2k+1}) = d(\lambda_{2k+1}, \lambda_{2k}),$$

$$\forall k = 0, 1, 2 \dots$$

Hence, we conclude that, the by Lemma 2.8, $\{\lambda_{2k}\}$ corresponds to the Cauchy sequence over (Y, d) as well as also complete $\exists \lambda_{2k} \rightarrow u$. Since L_2 is continuous and onto mapping there exists a point $u^* \in Y$ by through

$u^* \in L_2^{-1}(u)$ i.e. $u = L_2(u^*)$, $\lambda_{2k} \rightarrow L_2u^*$ and $\lambda_{2k+1} \rightarrow L_2u^*$.

Taking $\lambda = \lambda_{2k+1}$ and $\delta = u^*$ in (2.1.) we get

$$1 - (\alpha + \beta)d(u^*, L_2u^*) \geq 0$$

Let $k \rightarrow \infty$, then by Lemma 2.7, the above inequality becomes

$$1 - (\alpha + \beta)|d(u^*, L_2u^*)| \geq 0$$

Since $\alpha + \beta < 1$. So, $|d(u^*, L_2u^*)| = 0 \Rightarrow u^* = L_2u^*$. In similar manner, we can prove that

$$u^* = L_1u^*$$

Since $L_1u^* = u^* = L_2u^*$. Thus both L_1 and L_2 have u^* as their common stationary points with unique. Complete proof of this theorem.

Corollary 5: Suppose that the two continuous onto mappings L_1 and $L_2 : Y \rightarrow Y$ on complete CVMS on (Y, d) . Suppose $\alpha > 1$, for

all $\lambda, \delta \in Y$, are constants, the condition holds as follows

$$d(L_1\lambda, L_2\delta) \geq \alpha \left[\begin{array}{c} d(\lambda, \delta) + d(\lambda, L_1\lambda) \\ + d(\delta, L_2\delta) \end{array} \right]$$

Then, we can conclude that L_1 and L_2 are common stationary (or fixed) point in Y .

Proof: From Theorem 4, we take $\beta = 0$ and get above corollary.

Theorem 6: Suppose that the two continuous onto mappings L_1 and $L_2 : Y \rightarrow Y$ on complete CVMS on (Y, d) . Let α be a positive constant and β be a constant between $1/2$ and 1 , where $\alpha + \beta \geq 1$. If the following condition holds for all $\lambda, \delta \in X$:

$$\begin{aligned} d(L_1\lambda, L_2\delta) &\geq \\ \alpha \max\{d(\lambda, \delta), d(\lambda, L_1\lambda), d(\delta, L_2\delta)\} &+ \beta \max\{d(\lambda, L_2\delta), d(\lambda, \delta)\} + \gamma d(\lambda, \delta) \end{aligned}$$

Then, we can conclude that L_1 and L_2 are common stationary (fixed) point in X .

Proof: The proof of this theorem is similar to that of above Theorem.

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ECONOMIC IMPACT OF MITANIN PROGRAMME ON LIVELIHOOD OF MITANIN (ASHA) FAMILIES

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Abstract— The Mitanin programme is a local area wellbeing volunteer program which is started by the public authority of Chhattisgarh, in 2002. Mitanin have been suitably characterized as effort ladies volunteers who take care of the medical services needs of the networks, participate in friendly activation and support of medical problems. They are serving the wellbeing division and helping individuals of the state. As a return, mitanin get impetuses. Some of them rely upon this impetus to acquire bread for the family. This paper takes care of the financial effect of mitanin program on mitanin.

Index Terms— Mitanin, Livelihood, Incentives, Health care.

I. INTRODUCTION

Mitanin programme, also known as the Accredited Social Health Activist (ASHA) programme, has a significant economic impact on the livelihoods of the Mitanin family. Who are community health workers in India. This Programme was launched to strengthen the health care delivery at the grassroot level to improve maternal and child care, NCD and non NCD health programmes and to enhance health care access for rural and urban slum community.

The role of Mitanin goes beyond healthcare, and their involvement in the programme has far-reaching economic implications. Mitanin typically come from the same villages or Para-Tolas and communities they serve, and their work not only improves public health system but also contribute to economic development in several ways. In this introduction, we will explore the economic impact of Mitanin Programme on the livelihood of these dedicated community health workers.

The Mitanin often women, are trained and provided with financial incentives for their work. Which includes promoting health awareness, conducting immunization campaign, assisting in institutional deliveries, supporting people for medicines in local areas, support on NCD and non NCD health programmes and facilitating health access for marginalized populations. These responsibilities have resulted in several notable economic outcomes.

Employment Generation: The Mitanin Programme has created jobs at the community level, especially in rural and urban slum areas with limited employment opportunity with social responsibilities. Mitanin are not only empowered with knowledge and skills but also receive financial compensation. Which contributes to their economic well being and livelihood of family.

Income Generation: Through their work contributed towards the health care services to the community, Mitanin earn incentives and honorariums, which not only supplement their family income but also help alleviate poverty in their communities. This additional income is often crucial in rural and urban slum households.

Empowerment and Skill Development: Mitanin gains valuable skills and experiences of healthcare, community mobilizations, record keepings and online reporting's, knowledge of various govt schemes, and departmental exposures. These skills are transferable and it can lead to economic opportunities beyond their roles as community health workers.

support received through a Mitandin Programme for upliftment of her life.

Community Development: Mitandin efforts contribute to improved health outcomes in their communities living, reducing the economic burden of diseases. Health communities are more productive and this indirectly leads to economic growth through increased agriculture and business productivity and reduced healthcare expenditures.

Women Empowerment: All Mitandin's are women, and their active participation in the programmes has a positive impact on gender equity and women's economic and social empowerment. It challenges traditional gender roles and empowers women to make financial decisions in their households and community.

In the study, we will delve deeper into this economic impact. Analysis the Mitandin Programmes effect on livelihood and the broader economic development of rural and slum communities in India. Through a combination of qualitative and quantitative research methods, we assess the tangible economic benefits derived from the Mitandin programme and explore the potential for further economic growth and empowerment among Mitandins.

In Chhattisgarh, Mitandin is a government community health worker (CHW). Presently there are upto 70,000 women CHWs, called Mitandins, who reach around 24 million people across 20,000 villages and 3,800 urban slums in the Chhattisgarh. They provide health education, link communities with formal government healthcare services, and mobilize community action for health rights. Mitandin are now backbone of the health system of Chhattisgarh state.

OBJECTIVE OF THE STUDY

1. To study the concept of the community health workers with special reference to mitandin programme in Chhattisgarh.
2. To study the scope of the Mitandin work in district Janjgir Champa (CG) and describe the processes by which they address economic and social determinants of health, specifically RCH, Nutritional programme, NCD, and non-communicable national health programmes, and violence against women.
3. To know and understand the economic status of the Mitandin's in study area and economic

II. LITERATURE REVIEW

Paper on Assessment of ASHA program in Karnataka under the Public Provincial Wellbeing Mission investigates the variety inside the ASHA programs in various locale and generally inside Karnataka. The examining plan we embraced was a multi-stage testing configuration proposed by the Public Wellbeing Frameworks Assets Center (NHSRC) for all states across India to empower correlations. The significant discoveries of this study are the ASHA laborers perform errands for the most part as connection laborers and local area wellbeing laborers and to just a little degree as friendly activists. Inside the space of their connection laborer job, through their home visits to the families of local area individuals they have added to enhancements in the fundamental antenatal consideration and furthermore in expanding the quantity of institutional conveyances and vaccination. It's completely impacted by the deferral of the impetus installments profoundly. They have likewise observed that there is deficient inclusion of minimized families inside towns and villages in rustic and periurban Karnataka[1].

Evaluating people group wellbeing laborers' exhibition inspiration: a blended strategies approach on India's Certify Social Wellbeing Activists (ASHA)' program. BMJ Open 2: e001557. This study analyzed the exhibition inspiration of local area wellbeing laborers and its determinants on India's Licensed Social Wellbeing Lobbyist (ASHA) program. This study is led in the province of Orissa and 386 CHWs were chosen for the review. The significant discoveries of the review is the CHWs are more spurred on the individual and local area level elements than the wellbeing framework determinants and the deficient medical services conveyance status and certain functioning modalities decreased their inspiration. It has been seen that absence of adequate monetary advantages influences the presentation of the program[2].

Paper on Wellbeing of the Public Provincial Wellbeing Mission. J Financial and Political 4: 53-60. depends on the discoveries of assessment concentrates on embraced by the Arranging Commission, the Service of Wellbeing and free specialists. These examinations demonstrate what is happening as far as

quantitative objectives and nature of administration in many states comes up short. This concentrate additionally has presumed that nonetheless, inside this restricted period, the NHM has prevailed with regards to returning the issue of general wellbeing at the highest point of the public authority plan[3].

Assessment of prepared Certify Social Wellbeing Lobbyist (ASHA) laborers with respect as far as anyone is concerned, demeanor and practices about youngster wellbeing. Provincial Far off Wellbeing 12: 2099. Study was made an endeavor to assess information, perspectives and practices of ASHA laborers according to kid wellbeing. A cross-sectional review was led at Palghar Taluka in the Thane locale of Maharashtra for a time of 90 days from January 2011 to Walk 2011, comprehensive, with the review members all being prepared ASHA laborers working in the different essential wellbeing communities of Palghar Taluka. A sum of 150 ASHA laborers were working nearby, of which four specialists were undeveloped and, in this way, prohibited from the review. The review contends that notwithstanding the preparation given to ASHAs, lacunae still exists in their insight with respect to different parts of kid wellbeing horribleness. Later on instructional meetings, more accentuation ought to be given to high gamble with cases requiring brief reference. [4] It was likewise seen that installment of impetus are extremely late and it is influencing the presentation.

Report stating that "Performance based payments are able to incentivize the ASHA and act as adequate encouragement for her to perform these tasks. However across the states payments to ASJ-IAs are invariably delayed and on many occasions denied. The challenge seems to be to set up a system of payment that is accountable and reliable, yet swift and dignified". JSA, CHSJ as well as the second CRM report have reported delay in payments, the situation being more acute in Chhattisgarh and Jharkhand (CHSJ, 2007; JSA, 2008 and GOI, 2009). As the ASHA focused on areas which had incentives, the other crucial areas were neglected. There were instances of conflict due to the incentive money under JSY and sterilization money where two workers would often fight to get the incentive amount[5].

In Chhattisgarh, there is irregularity in the incentives that are given to the Mitans. "ASHA incentive component of JSY is not given in time to Mitans and there is backlog in many places. Many other

incentives as part of disease control programmes (Revised National TB Control Programme) and remuneration for the work of Mitans on immunization days are not given. Incentives however seem to have created some sense of competition with ANMs, especially for family- planning incentives" (GOI, 2008a). JSA has also reported irregularities in payment of incentives and the health workers and the Mitans having tussle about the incentive money.

III. RESEARCH METHODOLOGY

A. Study Population

The study has been conducted in the districts Janjgir Champa, Chhattisgarh. District has been selected for study because proposed district is on central of the state and it is one of the biggest districts in the state. District is basically an agricultural district and one of the fastest industrial growing districts. Present study is conducted among Mitans.

B. Sampling

If a population from which a sample is to be drawn constitutes a homogeneous group, random sampling technique is generally applied in order to obtain a representative sample. Under random sampling, every item of the population has equal chance to be sample. Sampling has been done on random sampling basis.

C. Sample Size

In this work, the sample size of the research is 300 Mitans were selected in the district Janjgir Champa.

D. Study Design

Descriptive research design is used to carry this research.

E. Data Collection

Primary data was collected with Schedule, which were filled with the responses of Mitans. Review of articles and reports about the Mitans programme was also undertaken.

Schedule was raised in Hindi language and in the specific dialect of the study location. Factors like role of Mitans' action on social determinants, impact on social determinants, challenging and facilitating factors. Familiarity with the subject matter helped the researcher to undertake this research.

IV. ANALYSIS

The analysis of the data is done through the three processes of description, classification and connection.

Age:

Table I

Response	No. of Mitanin
Below 25 Yrs	47
25 - 35 yrs	104
More than 35 Yrs	149
Total	300

Marital Status

Table II

Response	No. of Mitanin
Unmarried	39
Married	261
Total	300

Caste

Table III

Response	No. of Mitanin
General	29
OBC	107
ST	38
SC	126
Total	300

Education

Table IV

Response	No. of Mitanin
Primary	87
Middle	72
High	52
Higher Secondary	64
Graduate/PG	23
Total	300

Monthly Income

Table V

Response	No. of Mitanin
Below 6000	12
6000 - 9000	114
9000 - 12000	151
More than 12000	23
Total	300

Economic Status

Table VI

Response	No. of Mitanin
APL	205
BPL	95
Total	300

Main Earning Member

Table VII

Response	No. of Mitanin
Self	126
Husband	112
Father	35
Brother/Other	21
Total	300

Other Income Source

Table VII

Response	No. of Mitanin
Labor	74
Agriculture	131
Private Job	23
Business/Self Employed	31
Other/No source	41
Total	300

Reason for Becoming Mitanin

Table VIII

Response	No. of Mitanin
Desire to serve community	67
Hope of getting Govt Job	136
Financial Reasons	97
Total	300

Area of Work

Table IX

Response	No. of Mitanin
Rural	253
Urban	47
Total	300

Economic Impact of Mitanin Program on Livelihood

Distance of the Furthest Hamlets

Table X

Response	No. of Mitanin
Less than 1 km	43
1-2 Km	72
2-3 Km	158
More than 3 Km	27
Total	300

Duration of Work

Table XI

Response	No. of Mitanin
Upto 3 Hrs per day	6
3-4 Hrs per day	65
4-5 Hrs per day	134
More than 5 Hrs per day	96
Total	300

Incentive Plan is adequate

. Table XII

Response	No. of Mitanin
Disagree	266
Neutral	22
Agree	12
Total	300

Incentive is given regularly

Table XIII

Response	No. of Mitanin
Disagree	149
Neutral	79
Agree	72
Total	300

Table XIV

Response	No. of Mitanin
Positive	252
Neutral	35
Negative	13
Total	300

V. CONCLUSION

Out of the total 300 respondents (Mitanins), 47 were below 25 years of age. 104 falls in the age group between 25 to 35 years and there were 149 Mitans who are of more than 35 years of age. It is the societal benefit to have all age group women working in Mitanin programme

About out of 300 Mitans, 261 Married and 39 Unmarried. And 29 belong to General category, 107 are from OBC category, 38 comes from ST category and 126 belong to SC category. It shows the oneness among Mitans working together which signifies the unity and oneness among these women, despite belonging to different caste, religions, cultures, and social backgrounds.

As per the responses among received from all 300 respondents Mitans, it is found that 87 have passed primary school, 74 passed middle school education, 52 have got high school certificates, 64 have higher secondary education and 23 are Graduates/PG. It is worthy that 211 have at least passed the middle school education.

It has been found that about their monthly income, among all 300 Mitans, 12 have income of Rs. 6000, 114 receive income between Rs. 6000 to 9000, 151 earn Rs. 9000 to Rs. 12000 and 23 Mitans get income more than Rs. 12000 respectively.

If we see the economic or family status of 300 Mitans, 205 Mitans are belonging to APL (Above Poverty Line) category and 95 Mitans are under BPM category to there exist to increase

their economic status by proper support so they may work and help the society more efficiently.

Key Source of family income of 300 Mitanin Families result shows that only 126 Mitanin the self, earning member of the family, 112 Mitanin consider their husbands as the main earning member of their families. In 35 families, Father is the main earning member whereas in 27 families brother/others are considered to be the main earning member of these Mitanin families.

Hope of getting government job and financial reasons is the main cause of becoming mitanin. Some have the desire to serve community also.

In most of the cases, Mitanin herself and their husband is main earning member of the family. unmarried mitanins' father takes the responsibility of the bread and butter of the family. Median monthly income of mitanin was found around Rs. 6000. very few mitanin get more than Rs. 12000. some of the mitanin also get less than 6000 also.

43% of the mitanin families are engaged in agriculture work for their other income source. Other sources of income are labor, private job and self employment. Few of them don't have other income source. They earn through mitanin work only.

Average distance of the furthest hamlets was found 2.7 Km. In few areas, the distance is more than 3 km. maximum Mitanin spends 4 to 5 hours in a day in a week for this work. Some of the mitanin spend more than 5 hours per day for the same.

Most of the mitanin feel that incentive plan is not adequate as compare to the work. They do not even get the incentives regularly. There are various problems in getting incentives. Still mitanin programme has very positive impact on the livelihood of mitanin families.

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भारत में स्व-सहायता समूहों के माध्यम से महिलाओं का सशक्तिकरण: एक साहित्य समीक्षा

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शोध-सारांश

पिछले कई दशकों में सबसे महत्वपूर्ण विषयों में से एक महिला सशक्तिकरण रहा है। स्व-सहायता समूह, हाल के वर्षों में महिलाओं की स्थिति में सुधार और सशक्तीकरण के लिए एक महत्वपूर्ण माध्यम के रूप में उभरे हैं। गरीब ग्रामीण महिलाओं को सामाजिक और आर्थिक स्तर पर सशक्त बनाना स्व-सहायता समूह का प्राथमिक उद्देश्य है। स्व-सहायता समूहों के माध्यम से महिला सशक्तिकरण पर कई राष्ट्रीय और अंतर्राष्ट्रीय अध्ययन आयोजित किए गए हैं। साहित्य का यह विश्लेषण 2010 और 2020 के बीच भारत में ग्रामीण महिलाओं के सामाजिक आर्थिक सशक्तिकरण में स्व-सहायता समूह की भूमिका के बारे में कालानुक्रमिक रूप से व्यवस्थित, उपलब्ध माध्यमिक स्रोतों की विस्तार से जांच करता है। इस समीक्षा पत्र के निम्नलिखित उद्देश्य हैं¹। स्व-सहायता समूह में उनकी सदस्यता के बाद ग्रामीण महिलाओं का सामाजिक आर्थिक सशक्तिकरण। 2. स्व-सहायता समूह में आने के बाद ग्रामीण महिलाओं को जिन चुनौतियों और कठिनाइयों का सामना करना पड़ता है।

शब्द संकेत- सशक्तिकरण, स्व-सहायता समूह, सामाजिक-आर्थिक स्थिति, चुनौतियाँ और समस्याएँ।

I. प्रस्तावना

महिलाएं दुनिया की आधी आबादी बनाती हैं, जो उन्हें सभ्यता की मूलभूत इमारत बनाती है। महिलाएँ परिवार, समाज और अंततः राष्ट्र की नींव हैं। कई विकासशील

देशों में महिलाओं का एक बड़ा वर्ग मताधिकार से वंचित है क्योंकि उनके पास संसाधनों, काम के अवसरों और

शिक्षा तक पहुंच का अभाव है। महिला सशक्तिकरण की अवधारणा के रूप में जब जीवन के विभिन्न पहलुओं तक

उनकी पहुँच बन पाती है, तब ही राष्ट्र का विकास शुरू हो सकता है। वैश्विक महिला आंदोलन द्वारा शुरू की गई कई चर्चाओं का परिणाम महिलाओं का सशक्तिकरण है। महिला सशक्तिकरण एक बहुआयामी और बहुस्तरीय विचार है जिसका उद्देश्य जीवन के सभी क्षेत्रों में समान पहुँच प्रदान करना और महिलाओं को यह समझने में मदद करना है कि वे कौन हैं। भारत सरकार ने 1970 के दशक से स्व-सहायता समूहों के माध्यम से महिला विकास कार्यक्रमों का समर्थन करने के लिए कई प्रयास शुरू किए हैं। यह महिलाओं को सशक्त बनाने और कम आय वाली ग्रामीण महिलाओं के बीच गरीबी को कम करने के लिए एक शक्तिशाली माध्यम साबित हुआ है।

स्व-सहायता समूह की शुरुआत जड़ें बांग्लादेश के ग्रामीण बैंक से हुई हैं, जिसकी स्थापना 1975 में चटगांव विश्वविद्यालय के अर्थशास्त्री प्रोफेसर मोहम्मद यूनुस द्वारा वंचितों की सहायता करने के प्राथमिक लक्ष्य के साथ की

गई थी। स्व-सहायता समूहों का विचार प्लोगों द्वारा, लोगों के लिए और लोगों के लिए की कहावत के अनुरूप है [1]। स्व-सहायता समूह उत्पादकों के समूह हैं जो विचारों, विशेषज्ञता और अनुभवों का आदान-प्रदान करने के साथ-साथ समान अनुभव वाले अन्य लोगों से समर्थन प्रदान करने और प्राप्त करने के लिए एक साथ आते हैं। ये व्यक्ति समान चुनौतियाँ और परिस्थितियाँ साझा करते हैं[2]।

II. साहित्य समीक्षा

शोध में यह समझने का प्रयास किया गया है कि भारत में महिलाओं को स्वयं सहायता समूहों के माध्यम से कैसे सशक्त बनाया जाता है। जानकारी द्वितीयक स्रोतों से एकत्र की गई थी, जैसे नाबार्ड की माइक्रोफाइनेंस स्थिति। इस अध्ययन के अनुसार, स्व-सहायता समूहों को जीवन के सभी क्षेत्रों में उनकी पहचान, क्षमता और शक्ति का एहसास कराने में मदद करके गरीबी को कम करने और महिलाओं को सशक्त बनाने के साधन के रूप में मान्यता दी गई है। ध्यान दें कि सच्चा महिला सशक्तिकरण तभी हो सकता है जब उनके पास वित्तीय संसाधनों तक अधिक पहुंच, अधिक आत्म-आश्वासन, शक्ति और आत्म-प्रेरणा हो। अध्ययन के निष्कर्षों के अनुसार, स्व-सहायता समूह ने भारत में महिला सशक्तिकरण में महत्वपूर्ण प्रगति की है, और उनकी आर्थिक गतिविधियाँ लगातार बढ़ रही हैं। नतीजतन, ग्रामीण और शहरी दोनों ही परिस्थितियों में महिला सशक्तिकरण को बढ़ावा देने में स्व-सहायता समूह के प्रभाव पर प्रकाश डाला गया है[3]।

लेखक ने विभिन्न शोध परियोजनाओं के माध्यम से महिलाओं के सामाजिक आर्थिक सशक्तिकरण पर स्वयं सहायता समूहों के कई पहलुओं और प्रभावों की जांच की। यह मूल्यांकन इस विचार के साथ शुरू हुआ कि स्व-सहायता समूह आय-सृजन गतिविधियों को बढ़ावा देकर और महिला सशक्तिकरण और गरीबी में कमी के लिए एक माध्यम के रूप में कार्य करके महिलाओं को गरीबी रेखा से ऊपर आने में मदद कर सकते हैं। आर्थिक विकास के कार्यक्रमों में महिला सशक्तिकरण, स्थिति उन्नति और आर्थिक भूमिकाएँ शामिल होनी चाहिए क्योंकि

ये कारक किसी देश की आर्थिक रूप से आगे बढ़ने की क्षमता को प्रभावित करते हैं[4]।

लेखकों द्वारा बांग्लादेश मेडिकल कॉलेज और रिसर्च इंस्टीट्यूट के शहरी क्षेत्र में एक क्रॉस-अनुभागीय अध्ययन किया गया था। पिछले वर्ष (2016) का हिस्सा रहीं 95 महिलाओं से पूर्व-मान्य प्रश्नावली का उपयोग करके पूछताछ की गई थी। इस सर्वेक्षण के अनुसार, 62.1% लोग साक्षर थे, और 65% लोगों को कार्यक्रम से आर्थिक रूप से लाभ हुआ। 21% ने अपने स्वयं के स्वास्थ्य में सुधार देखा, 26% ने अपने परिवार और समुदाय के महत्व को देखा, और 68% ने स्वास्थ्य संबंधी समस्याओं के लिए चिकित्सा सहायता लेने का निर्णय लिया[5]।

अध्ययन का उद्देश्य उन महिलाओं की सामाजिक और आर्थिक स्थिति को सत्यापित करना है जो देश के कई स्व-सहायता समूहों की सदस्य हैं। इस अध्ययन का प्राथमिक लक्ष्य ग्रामीण भारत में स्व-सहायता समूहों की स्थिति का निर्धारण करना है और उन्होंने 2012 और 2015 के बीच महिलाओं के सामाजिक आर्थिक विकास को कैसे प्रभावित किया है। जानकारी भारत के माइक्रोफाइनेंस उद्योग (नाबार्ड) से संबंधित माध्यमिक स्रोतों से एकत्र की गई थी। रिपोर्ट के अनुसार, स्व-सहायता समूहों ने इन माताओं को दैनिक आवश्यकताओं तक पहुंच और उनके बच्चों की शिक्षा के लिए वित्तीय सहायता प्रदान की। स्व-सहायता समूहों की सफलता में योगदान देने वाले मुख्य कारक वंचितों के साथ इसके संबंध, इसके रचनात्मक तरीके, और विकास में व्यक्तियों की भागीदारी और सभी स्तरों पर विश्वास की स्थापना को सुविधाजनक बनाने की क्षमता है। इसके अतिरिक्त, स्व-सहायता समूहों ने ग्रामीण महिलाओं को स्वतंत्रता और आत्म-आश्वासन प्राप्त करने में सहायता की, जिससे उनके जीवन स्तर में सुधार हुआ[6]।

कश्मीर में महिलाएं कई तरह के मुद्दों और कठिनाइयों से जूझती हैं, जिनमें उनके स्वास्थ्य, शिक्षा, आर्थिक सुरक्षा, यौन शोषण, घरेलू दुर्व्यवहार, कन्या भ्रूण हत्या और शिशुहत्या, बाल विवाह, बेरोजगारी, और अन्य मुद्दे शामिल

हैं। जम्मू और कश्मीर में ग्रामीण महिलाओं के सशक्तिकरण और इन मुद्दों को कम करने के लिए शिक्षा में दीर्घकालिक सुधार और न्यायसंगत और जागरूकता के अवसर महत्वपूर्ण होंगे। इस अध्ययन के लिए कुल 100 उत्तरदाता थे, जिसमें से 50 पुरुष और 50 महिलाएं, और कश्मीर घाटी के प्रत्येक जिले से 10 उत्तरदाता थे। प्राथमिक और द्वितीयक स्रोतों और सर्वेक्षण पद्धति के उपयोग के माध्यम से आंकड़े एकत्र किये गए थे। कश्मीर घाटी के 10 जिलों के 100 प्रतिभागियों के आधार पर, अध्ययन के निष्कर्षों से पता चला कि 44% उत्तरदाताओं का मानना नहीं है कि महिलाओं को अपने जीवन में कई बाधाओं का सामना करना पड़ता है, 46% सहमत हैं, और 10% इस बात से अनजान हैं। पैंतीस प्रतिशत उत्तरदाताओं ने कहा कि पुरुष वर्चस्व प्राथमिक कारण है कि महिलाएं पारिवारिक निर्णय लेने में भाग नहीं लेती हैं, जबकि पचास प्रतिशत ने कहा कि गरीबी और अशिक्षा पंद्रह प्रतिशत कारण है जिसके कारण महिलाएं निर्णय लेने में भाग नहीं लेती हैं। सर्वेक्षण से यह भी पता चला कि, 72% उत्तरदाताओं का मानना है कि परिवार में महिला सदस्य पुरुषों की अपेक्षा कम चतुर हैं जबकि 28% उत्तरदाता इस वक्तव्य से असहमत थे। सबसे हालिया परिणामों के अनुसार, 56% उत्तरदाताओं का मानना था कि मनरेगा, शिक्षा, स्व-सहायता समूह और अन्य सरकारी कार्यक्रमों से महिलाओं की सामाजिक प्रतिष्ठा बढ़ेगी, जबकि 44% इससे असहमत थे[7]।

यह शोध करने का प्रयास करता है कि जम्मू और कश्मीर के बारामूला क्षेत्र में महिलाएं स्व-सहायता संगठनों के माध्यम से आर्थिक सशक्तिकरण कैसे प्राप्त कर रही हैं। इस जांच के लिए सही प्रतिदर्श चुनने के लिए, बहुस्तरीय प्रतिचयन का उपयोग किया गया। प्राथमिक आंकड़े इकट्ठा करने के लिए स्व-सहायता समूह के कुल 120 सदस्यों को चुना गया था। आंकड़ों के विश्लेषण से प्राप्त परिणामों के अनुसार, स्व-सहायता समूह द्वारा प्रदान किए गए सूक्ष्म ऋण से इसके सदस्यों को लाभ हुआ है। जब प्रतिभागी स्व-सहायता समूह में भाग लेते हैं तो उनकी आय, बचत और संपत्ति की स्थिति में सुधार होता है[8]।

स्व-सहायता समूह ने दुनिया भर में लाखों गरीब महिलाओं की आजीविका की स्थिति में उल्लेखनीय सुधार किया है। अध्ययन के लिए तिरुवल्लुर जिले को चुना गया क्योंकि इसमें अन्य तमिलनाडु राज्यों की तुलना में अधिक स्व-सहायता समूह कार्यशील हैं। विभिन्न अध्ययन क्षेत्रों के गांवों के 100 स्व-सहायता समूह सदस्यों ने एक सर्वेक्षण में भाग लिया, और परिणामों से पता चला कि स्व-सहायता समूह सदस्यों की सामाजिक और आर्थिक स्थिति में सुधार हुआ है[9]।

महिला स्व-सहायता समूह सदस्यों के आर्थिक सशक्तिकरण को प्रभावित करने वाले माइक्रोफाइनेंस और चर की जांच की गई है। हसन जिले में एकत्र किए गए प्राथमिक आंकड़ों का उपयोग मुख्य घटक विश्लेषण के उद्देश्य से किया गया है। इस अध्ययन ने विभिन्न प्रकार की तकनीकों और आर्थिक गतिविधियों का प्रदर्शन किया जो आर्थिक सशक्तिकरण की ओर ले जा सकती हैं। आर्थिक सशक्तिकरण को बढ़ावा देने के लिए बीस तरीकों में से केवल छह को व्यवहार्य माना गया है। इस प्रकार, हसन जिले में स्व-सहायता समूह महिलाओं का पूर्ण आर्थिक सशक्तिकरण साकार नहीं हो सका है। हालांकि, बैंक-स्व-सहायता समूह कार्यक्रम ने सापेक्ष आर्थिक सशक्तिकरण प्राप्त करने में सहायता की है। इस अध्ययन से यह भी पता चला है कि महिलाओं के प्रभावी आर्थिक सशक्तिकरण में सबसे बड़ी बाधाओं में से एक आय-अर्जित कार्य विकल्पों की कमी है। परिणामस्वरूप, स्व-सहायता समूह संवर्धन संगठनों को महिला सदस्यों के आय-सृजन प्रयासों के लिए वित्तीय सहायता प्रदान करनी चाहिए [10]।

III. स्व-सहायता समूह की महिलाओं द्वारा सामना की जाने वाली चुनौतियाँ और समस्याएँ

इस अध्ययन के लिए न्यायदर्श की कुल संख्या बनाने के लिए प्रत्येक क्षेत्र से तीन समूहों (महा लक्ष्मी स्व-सहायता समूह, असल स्व-सहायता समूह और सदा शिव स्व-सहायता समूह) के बीस उत्तरदाताओं को यादृच्छिक रूप से चुना गया था, जिससे की कुल संख्या साठ सदस्य हो गयी थी। स्व-सहायता समूह के प्रतिभागियों द्वारा

अनुभव की गई चुनौतियों पर आंकड़े एक साक्षात्कार अनुसूची के माध्यम से एकत्र किये गए थे। अध्ययन के निष्कर्षों से पता चला कि उत्पादन संबंधी समस्याएं — उच्च गुणवत्ता वाले कच्चे माल खरीदने के लिए पर्याप्त धन न होने के रूप में परिभाषित — 62.50% उत्तरदाताओं द्वारा अनुभव की गई, इसके बाद विपणन समस्याएं (अपर्याप्त परिवहन, उत्पाद की बहुत अधिक कीमत, प्रचार में परेशानी) थीं, पारिवारिक मुद्दे, (वित्तीय कठिनाइयाँ, पुरुष प्रभुत्व, बाहरी स्थानों पर प्रशिक्षण में भाग लेने में परिवार का असहयोग, और स्व-सहायता समूहों में शामिल होने के लिए परिवार की ओर से हतोत्साहित होना) विलंबित ऋण, उच्च गुणवत्ता वाले कच्चे माल खरीदने के लिए अपर्याप्त साधन, खाता रखने में परेशानी, धन का अनुचित उपयोग, सामाजिक मुद्दे, सदस्यों के बीच एकता की कमी, आपसी विश्वास की कमी, समूह की गतिविधियों के बारे में संचार, निर्णय लेने की प्रक्रिया के दौरान विकसित होने वाली असहमति पंजाबी स्व-सहायता समूह सदस्यों द्वारा अनुभव किए गए प्राथमिक मुद्दे थे[11]।

स्व-सहायता समूह सदस्यों को जिन मुद्दों का सामना करना पड़ता है, उन पर चर्चा की है, जिसमें तमिलनाडु के कोयंबटूर जिले में थिममपालयम पर विशेष ध्यान दिया गया है। आंकड़े एकत्र करने के लिए प्रश्नावली के उपयोग के माध्यम से वर्तमान अध्ययन के लिए 10 स्व-सहायता समूहों के 114 सदस्यों को चुना गया था। अध्ययन के निष्कर्षों से पता चला कि अधिकांश उत्तरदाता (74.6%) महिलाएं थीं, अधिकांश (40.40%) विवाहित थे, बहुसंख्यक (54.4%) 25-30 आयु वर्ग में थे, बहुसंख्यक (36.8%) स्व-सहायता समूह सदस्यों से प्रेरित थे, बहुमत (38.6%) के पास कोई औपचारिक शिक्षा नहीं थी, बहुमत (33.3%) का समूह के अन्य सदस्यों के साथ मतभेद था, बहुमत (39.5%) अपने उत्पादों को बेचने के लिए तीव्र प्रतिस्पर्धा में लगे हुए थे, और बहुमत (46.5%) के पास अभाव था उनकी वित्तीय स्थिति के लिए आवश्यक धनराशि। अध्ययन क्षेत्र में स्व-सहायता समूहों के बीच, भारी प्रतिस्पर्धा विपणन समस्याओं का मुख्य स्रोत है, और अपर्याप्त ऋण उनकी प्रमुख वित्तीय समस्या है। कुल मिलाकर,

औपचारिक शिक्षा की कमी, पारिवारिक जिम्मेदारियाँ उनकी प्रमुख व्यक्तिगत समस्या, संघर्ष और निर्णय लेने की प्रक्रिया में समूह के सदस्यों के बीच संचार कौशल की कमी उनकी प्रमुख सामाजिक समस्याएँ थीं[12]।

शोध कार्य में उन मुद्दों पर ध्यान दिया गया जिनका सामना स्व-सहायता समूह सदस्यों को करना पड़ा, जिन्हें कई संस्थानों का समर्थन प्राप्त था। वर्तमान अध्ययन के लिए एक खोजपूर्ण शोध प्रणाली का उपयोग किया गया था, और 48 स्व-सहायता समूह से यादृच्छिक रूप से 120 नमूने चुने गए थे। प्राथमिक स्रोतों से प्रश्नावली के उपयोग के माध्यम से आंकड़े एकत्र किये गए थे। अध्ययन के निष्कर्षों से पता चला कि स्व-सहायता समूह महिलाएं चार अलग-अलग प्रकार के मुद्दों से निपटती हैं: व्यक्तिगत मुद्दे, जैसे औपचारिक शिक्षा की कमी (58.33%), सरकारी कार्यक्रमों के बारे में ज्ञान की कमी (50.00%), और प्रशिक्षण की कमी (41.66%), मुख्य मुद्दे थे। अधिकांश स्व-सहायता समूह सदस्यों (50.00%) ने सामाजिक चुनौतियों की सूचना दी, जैसे निर्णय लेने के दौरान समूह के सदस्यों के बीच असहमति, इसके बाद परिवार के सदस्यों के कारण खराब संचार कौशल (16.66%) और सीमित सामाजिक गतिशीलता (16.66%)। स्व-सहायता समूह सदस्यों के आर्थिक मुद्दों में अपर्याप्त ऋण (50.00%), बिना बाजार वाला उत्पाद, वित्तीय साक्षरता की कमी और ऋण स्रोतों की कमी (26.66%) शामिल हैं। बेहतर पशुधन नस्लों की अनुपस्थिति, अपर्याप्त प्रौद्योगिकी, सूचना संसाधनों की कमी और एक असंगठित बाजार नेटवर्क पशुधन से संबंधित मुद्दे हैं जिनका सामना स्व-सहायता समूह सदस्यों को करना पड़ता है[13]।

शोध कार्य में उन मुख्य बाधाओं को निर्धारित किया गया, जिन्हें स्व-सहायता समूह में महिला उद्यमियों को दूर करना होगा। नमूना यादृच्छिक दृष्टिकोण और प्राथमिक स्रोतों को नियोजित करके, कुल 250 उत्तरदाताओं (अलुवा से 125 और एर्नाकुलम जिले के परावूरटालुक से 125 अन्य) से प्रश्नावली के माध्यम से आंकड़ों का संकलन किया। अध्ययन के निष्कर्षों से पता चलता है कि केरल के

एर्नाकुलम जिले में स्व-सहायता समूह सदस्यों द्वारा सामना किए जाने वाले मुख्य मुद्दों में व्यवसाय का प्रबंधन करने में असमर्थता, उनके सदस्यों की अशिक्षा के कारण बुनियादी ज्ञान की कमी, ऋण प्राप्त करने की प्रक्रियाओं में लगातार बदलाव, उनका अपर्याप्त प्रशिक्षण, शामिल हैं। पारिवारिक सहयोग की कमी, ऋण चुकाने की कम अवधि, सरकारी आवश्यकताओं को पूरा करने में कठिनाई, उनके पास अनुभवी कर्मियों की कमी, उनके आत्मविश्वास की कमी, उनमें डिजिटल साक्षरता की कमी, उनके पास बुनियादी ढांचे की कमी आदि प्रमुख बाधाएं हैं[14] ।

IV. निष्कर्ष

उपरोक्त चर्चा से यह स्पष्ट होता है कि स्व-सहायता संगठनों के माध्यम से महिलाओं के सामाजिक आर्थिक सशक्तिकरण के मौलिक विचारों पर कुछ शोध किए गए थे। कुछ शोधों के आधार पर, भारत के विभिन्न क्षेत्रों में स्व-सहायता समूह में शामिल होने वाले लोगों ने अपने जीवन में महत्वपूर्ण सकारात्मक सुधार की सूचना दी। इससे आगे बढ़ते हुए उन्हें अपने आय-सृजन प्रयासों को बढ़ाने और गरीबी के स्तर को पार करने का मौका मिला है। कई अध्ययनों से यह भी पता चला है कि महिलाएं अब अधिक आत्मविश्वासी और आर्थिक और सामाजिक रूप से स्वतंत्र महसूस करती हैं। स्व-सहायता समूहों के लिए काम करने वाली महिलाओं की संसाधनों, बुनियादी ढांचे, स्वास्थ्य देखभाल, बुनियादी शिक्षा और स्वायत्त निर्णय लेने के अधिकार तक अधिक पहुंच थी। हालांकि कुछ अध्ययनों से पता चला है कि उनमें से कुछ ने अपर्याप्त प्रशिक्षण सुविधाओं, बाजार कनेक्शन की कमी, प्रबंधकीय कौशल की कमी, सामाजिक और कार्मिक मुद्दों आदि के मुद्दों का अनुभव किया है, परन्तु अधिकांश उत्तरदाता इससे संतुष्ट हैं, और कुल मिलाकर, स्व-सहायता समूह के फायदे नुकसान से कहीं अधिक हैं। महिलाएं लंबे समय से सामाजिक रूप से बहिष्कृत वर्ग की सदस्य रही हैं, लेकिन अब यह जरूरी है कि इस बाधा को दूर करने के लिए उन्हें सही न्याय दिया जाए।

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RIGHT TO HEALTH VIS-A-VIS THE INDIAN CONSTITUTION AND INTELLECTUAL PROPERTY RIGHTS REGULATIONS

“Health is a human Right, and not a Privilege to be purchased”

-Shirley Chisholm

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Abstract— The Indian Constitution is a Sacrosanct document. It is the cardinal law of the land governing India. The Indian constitution acknowledges the right to life as a fundamental right in its Article 21. However, while interpreting the term “Right to life” the courts have moved way further and have included numerous new confines. The Right to health is one of those dimensions. Right to Health is a fundamental human right which is of outmost importance for the enjoyment of other human rights. The Universal Declaration of Human Rights, 1948 in its Article 25 mentions health as a part of the right to an adequate standard of living. The Indian Supreme Court has time and again put forward various decisions significant in protecting health of the people, but with “unrestricted Privatization,” profiteering policy and day to day strengthening of IPR mechanism, access to health care has become very expensive and difficult for the common man. The health trends throughout the world indicates that despite rapid industrialization and progress, a large number of people do not have access to life saving medicines, which also became very evident during the corona pandemic. Much of the present problem is attributed to Lack of access to medicines due to their expensive nature. The strong Intellectual policy plays a vital role in ensuring that the medicine is beyond the reach of common man as the existing IPR regime results in making the medicine expensive, in addition, it also adds a

monopolistic power in hands of those who have the IPR rights over those medicine. However efforts have been made, wherein the pioneers like the World Intellectual Property Organization(WIPO), World Trade Organization(WTO) and World Health Organization (WHO) have shared a common platform in the form of Trade-Related Aspects of Intellectual Property Rights Agreements (TRIPS), Doha Declaration and then the 30 August 2003 Compulsory License Import Export mechanism to prevent the patent abuse and misuse, giving primacy to the public health and accelerating health standards throughout the world. In this paper an attempt has been made to highlight various provisions related to life and health as provided in the Indian constitution and how the IPR regime is creating a setback in achieving those said principles as embedded in the Indian Constitution.

Index Terms— Indian Constitution, Right to life, Right to Health, Intellectual Property Right

I. INTRODUCTION

Health is a state of complete physical, mental, and social well-being and not merely the absence of any disease or infirmity [1]. Health is one of the most fundamental

basic human rights of an Individual. The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without the distinction of race, religion, and political belief, economic or social condition [2]. The makers of the Indian constitution recognized and understood the importance of health from the very outset. Accordingly, the Indian Constitution contained provisions for the protection of health of the public. The makers of the Indian constitution tried to ensure that the health of the masses is not compromised by providing various provisions in the form of important fundamental rights, Directive Principles of State policy and various other provision as enshrined in the constitution. However, despite all the provisions and privileges related to human health and safety as contained in the constitution, when the data related to health is given a close look, shockingly a completely different picture is presented. Although tremendous progress has been made in the field of science and especially medicine, the data compiled by WHO for the year 2019, shows that in India Ischemic heart disease causes 110.95 deaths per 100,000 population, Chronic obstructive pulmonary disease is the cause of 64.21 deaths per 100,000 population, Stroke accounts for 50.88 deaths per 100,000 population, Diarrhoeal disease kills 48.93 persons per 100,000 population, Tuberculosis causes 31.82 deaths per 100,000 population, 31.69 deaths per 100,000 population is caused in Neonatal conditions, Lower respiratory infections takes a toll of 28.64 lives per 100,000 population, Diabetes Mellitus causes 19.82 deaths per 100,000 population, while Cirrhosis of liver and Falls results into 19.6 and 16.48 deaths per 100,000 population. After 2019, the Covid Era took over and resulted in the greatest number of deaths. However, one thing remained common. i.e., unavailability of life saving drugs and medical services which became even more evident during the Covid. The prime cause for the inaccessibility of medicines of essential nature required for appropriate treatment is the high prices set for those drugs. The expensive nature of drugs is often attributed to the strong intellectual protection. Intellectual property law regulates the production, use, and exploitation of mental or creative labor and includes copyright, trademarks, geographical indications, industrial designs,

layout designs of integrated circuits, designs covered by patents, as well as confidential information and trade secrets. A strong IPR regime though is need of the hour, but it cannot be denied that it results into monopolistic rights in the hands of holder of those rights. These monopolies when created restricts competition and pave a path for the rights holder to set up exorbitant prices. As a result of which the prices of essential and lifesaving drugs are inflated multiple times the cost of production of those drugs Therefore, it is obvious that there is a direct connection between the right to health, another human right, and intellectual property rights (IPR), both of which are recognized as fundamental human right. The relationship between intellectual property rights and health, however, has generated a lot of discussion. The tussle between intellectual property rights and the right to health vis-à-vis the Indian Constitution has drawn more social and scholarly attention than any other legal topic during the past few decades. National and International standard-setting initiatives have begun mapping previously unknown crossroads between intellectual property law on the one side and the human right to health on the other side in recent years.

II. RIGHT TO HEALTH AND INDIAN CONSTITUTION

A) Right to Health as seen through the lens of Directive Principles of State Policies (DPSP):

Part IV of the Indian constitution deals with Directive Principles of State Policy. These cannot be enforced by any court but are fundamental in the governance of the country. When enacting laws, the State has a responsibility to adhere to these principles. The following rules are significant from a Right to Health standpoint.

1. Article 39: Certain principles of policy to be followed by the State:

This article guarantees the wellbeing and health of the workers—men and women by. It also requires that the necessary chances and resources should be provided to children to grow up in a healthy way, with freedom, and with dignity, and that youth and childhood be safeguarded from victimization and against moral and material neglect. It is true that Article 39(e) and (f) of the

Constitution shows that the authors of the document were keen to preserve and safeguard the welfare and interests of employees and children. It states that because the working class is crucial to nation building, state governments must defend their health

In a case, BHAGAWATI, J. while delivering the opinion of the court was of the view that: *“It is obvious that in civilized society the importance of child welfare cannot be over emphasized because the welfare of the entire community, its growth and development depends upon the health and well-being of its children. Children are a supremely important national asset and the future well-being of the nation depends on how its children grow and develop [3].”*

Again, In Supreme Court in a case has held that “A child is a national asset and therefore, it is the duty of the State to look after the child with a view to ensuring full development of its Personality [4].”

The Constitution 42nd Amendment Act, 1976 changed clause (f) in order to emphasize the State's beneficial role with relation to children.

2. *Article 42: Provision for just and humane conditions of work and maternity relief:*

The Indian judiciary from time to time has put light on the importance of this article. Plethora of judicial pronouncements are available highlighting the importance for just and humane conditions of work and maternity relief.

In a landmark case BHAGWATI, J. observed *“This right to live with human dignity enshrined in Article 21 derives its life breath from the Directive Principles of State Policy and Particularly clauses (e) and (f) of Article 39 and Article 41 and 42 [5].”*

3. *Article 47: Duty of the State to raise the level of nutrition and the standard of living and to improve public health:*

According to Article 47, the State's fundamental obligations include improving public health, boosting the standard of life for its citizens, and raising their level of nutrition. In particular, the State must work to prevent the use of harmful medications and alcoholic beverages that aren't done for medicinal reasons.

The Supreme Court opined that public health should be considered the state's highest priority because it is the

primary factor that will be held accountable for the betterment and growth of society, which will eventually contribute in the building of the nation [6].

4. *Article 48-A: Protection and improvement of environment and safeguarding of forests and wildlife:*

The 42nd amendment act 1976 inserted this article making it obligatory on the part of the state to protect and improve the environment and to safeguard the forest and wildlife of the country.

It was held by the court that, “Art 39 (a), 47 and 48-A by themselves and collectively cast a duty on the State to secure the health of the people, improve public health and protect and improve the environment [7].”

Right to health and Fundamental Duties

Fundamental Duties are contained in part IV of Indian Constitution

Article 51- A of the Indian Constitution makes every citizen of india duty bound to exhibit compassion for all living things and to preserve and enhance the natural environment, including woods, lakes, rivers, and wildlife.

The natural environment has a direct impact on the health, recognising this co relation the constitution made it a fundamental duty for its people to protect and improve natural environment.

Right to health and Fundamental Rights

The provisions of fundamental rights are given in Part III of the Indian Constitution. Fundamental rights are not unalienable; they are subject to comprehensible limitations. The Supreme Court's primary duty is to interpret the law. The right to enjoy the best practicable quality of physical and mental health under a specified provision is not incorporated in the Indian Constitution. However, the Indian judiciary views the right to health as an essential component of the fundamental human right to life guaranteed by Article 21 of the Constitution. The Supreme Court came up with the view that it is the Constitutional obligation of the government to provide health facilities [8]. The various provisions present in the Indian constitution encompassing the right to health are as under: -

1. **Article 19 (1) (g):** This article gives all citizens the right to practice any profession or carry on any trade, occupation or business, with restrictions as set under

Article 19 (6). The Apex court held that Article 19 (1) (g) does not provide any freedom that jeopardizes the safety, health, and peace of the community [9].

2. Article 21: Protection of Life and Personal Liberty

Article 21 is considered as the Pandora's Box for the Indian Judiciary. Time and again the Indian judiciary has came up with different dimensions of Article 21. The right to health and to the right to life are two faces of the same coin, it is a fundamental right guaranteed to all Indian citizens under Article 21 of the Indian Constitution. We owe the acknowledgment of this right to the Supreme Court of India, which logically expanded its view of the right to life to enclose in its ambit the right to health through many legal precedents.

In a case the court specifically said that the right to health was also a fundamental factor in having a meaningful existence and the right to life under Part III. Furthermore, the court noted that health involves access to clinical consideration for the best fulfilment of basic comfort expectations [10],

In a case the scope of Article 21 was further widened, as the court commented that The government must ensure that everyone has access to adequate medical care and work towards the general welfare of the population [11].

In a landmark case, the Supreme court interpreted "the right to medical aid as an essential part of the right to life under Article 21 and held that no accident victim could be denied treatment at hospitals simply because the hospital did not handle medico-legal cases. It was the constitutional right of accident victims to get life-saving treatment and this right could not be taken away by any enactment [12]".

Article 25 and Article 26: Freedom to Profess or Practice Religion and Freedom to manage Religious Affairs

Every person, even those who are not Indian citizens, is guaranteed the freedom to profess and practise their religion under Article 25, and religious denominations are given specific protection under Article 26. Any person may use either, as long as they abide by the relevant provisions of the corresponding part of the Constitution regarding public morals, public order, and health.

4. **Article 243-W** of the constitution provides that the State legislature may, by law, invest municipalities with such rights and authorities as may be required to enable them to function as institutions of local self-government, according to the Constitution [13]. The Panchayats are given the same protections under Article 243-G in matters related to the Eleventh Schedule's item 23 on health and sanitation, which includes hospitals, primary health clinics, and dispensaries.

5. Articles 39(e) (f), 42 and 47 in Part IV of the Constitution of India.

It provides for preserving employee health and vitality is crucial for preventing abuse of individual rights and preventing economic necessity for inappropriate occupations. Ensuring opportunities and facilities are healthy and protected against exploitation, moral abandonment, and material abandonment is essential. A healthy environment safeguards human life, ensuring physical existence, dignity, and quality of life.

The State is required to make provisions for just and humane conditions of work and for maternity benefit (Article 42).

The State should ensure the raising of the level of nutrition and standard of living of its people by improving the public health of its citizen's. Protection of health of citizens and improvement in their healthy existence is an enshrined cardinal duty of the State[14]. The State Legislature is given the authority to enact legislation pertaining to Public Health and Sanitation, hospitals, and dispensaries under Entry 6 of the State List in the Seventh Schedule to the Constitution.

Through the addition of Article 48A, the Constitution (Forty Second Amendment) Act of 1976 officially included environmental conservation and advancement as a part of State policy. A comparable obligation to "protect and improve the natural environment, including forests, lakes, rivers, and wildlife and to have compassion for all living creatures" was placed on every citizen by Article 51A (g).

The Indian legal system contains five effective pieces of legislation dealing with the regulation of the medical industry and protecting citizens from medical malpractices. They are These are: Law of Torts; Consumer Protection Act, 1986; Indian Penal Code,

1860; Indian Medical Council Act, 1956; Indian Contract Act, 1872.

The 73rd and 74th Amendment Acts of 1992, which added parts IX and IXA of the constitution titled "The Panchayat" and "The Municipality," put the Directive Principles into practice. The health sector is now significantly impacted by municipal governance. The legislature of a state has the jurisdiction to grant the Panchayats and Municipalities the required power and authority in connection to the items enumerated in the eleventh and twelfth Schedules, respectively, pursuant to Articles 243-0 and 243-W. Drinking water, health and sanitation, hospitals, primary care clinics, dispensaries, family welfare, women's and children's development, social welfare, including welfare of the handicapped and mentally retarded, and other entries in these two schedules all directly relate to health.

Right to health and the Evolution of Intellectual Property Rights: -

Intellectual property (IP) is a type of property that encompasses intangible works of human creativity. The World Intellectual Property Organization (WIPO) is the body responsible for superintending various treaties for promotion of IPRs at the international level. IPR in knowledge, information, or reputation is a capitalist innovation that dates to 1474, when it was first established in Italian city states. In 1963, the Statute of Monopolies ended all monopolies except those made by the "true and first inventor" of a "method of manufacture in England[15].

In India, Act VI of 1856 was the first step of patent. However, the Indian Patents and Designs Act, 1911, which was passed that year, marks the beginning of Indian patent law history, which contained provisions both for product and process patents. However, this act was benefited foreigners far more than Indians and stifled innovation and ingenuity of Indians.

In 1949, a committee headed under Justice (Dr) Bakshi Tek Chand, Retired Judge Lahore high court was made to undertake Comprehensive review of working of and functioning of Patents and Designs Act, 1911. On the Commission's recommendations, the 1911 Law was amended in 1950 (by Law XXXII of 1950) to deal with the working of inventions, including compulsory

licensing and revocation of patents. In 1952, further amendments were made to provide for compulsory licensing of substances or processes of manufacture relating to foods and medicines, insecticides, fungicides or fungicides, and surgical or therapeutic instruments (1952 by Law Article LXX). Later this act was replaced by The present Patents Act, 1970 which came into force in the year 1972.

The Indian Pharmaceutical market was dominated by foreign MNCs till the early 1970s, which accounted for nearly 70% for the market share. The dependency of Indian industry on foreign Pharmaceutical MNCs resulted in High prices of drugs. In the Late 1970s and 1980s, Indian pharmaceutical industry started mass production which reached to remarkable levels in 1990s. Now the Indian industry even started exporting medicines and drugs.

India joined the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement on 1st January, 1995. However, unambiguousness between the fundamentals of public health and the TRIPS agreement was clarified by Adoption of special declaration on TRIPS agreement and public health at the WTO ministerial conference of 2001 in Doha on November 14, 2001. Medical patents were anticipated to skip novel treatments, vaccinations, and other essential health discovery medications. The Fourth WTO Ministerial Conference, held in 2001 in Doha, Qatar, addressed all of these troubling issues and endorsed the Declaration on TRIPS and Public Health, which was a game-changing development in the IPR framework. The focus of the agreement was on TRIPS' adaptability for membership countries to avoid drug patents for high-quality, widely available essential medications. The main goal of this special session was to outline the relationship between the IPR system and the objective for vital drug access in the most contentious TRIPS agreement. The Declaration reaffirmed the dominating role of governance in upholding the state's trade and health agendas in order to guarantee a system for safeguarding community health. Instead of merely considering commercial considerations, it championed a balanced approach to IP for society as a whole and changed the stereotypical perception of medical patents. To honor the obligations arising out of TRIPS, The Patent Act Was amended and

the Patents (Amendment) Act, 2005 came to force. The new Act extended the product patent to all fields of Technology including foods, drugs, chemicals, and microorganisms. Further a provision of compulsory license to be used as a tool to regulate the exclusive rights conferred by patents was also introduced. From 1st January 2005, drug product patent protection has been reintroduced in India for complying with the requirement under the Trade-related Aspects of Intellectual Rights (TRIPS) of the General Agreement on Tariffs and Trade/World Trade Organization[16].

THE INDIAN CONSTITUTION AND INTELLECTUAL PROPERTY RIGHTS

The Indian Constitution outlines fundamental rights, but neither explicitly mentions intellectual property rights in any of them nor does any constitutional clause explicitly exclude them from the scope of fundamental rights. The right to property was a basic right under article 19 (1) (f) at the time the Constitution was established, but it was downgraded to a simple constitutional right in 1978 with the insertion of article 300A.

Entry 49 of List 1 of 7th Schedule of Indian Constitution recognizes intellectual property rights as it mentions "Patents, inventions and designs; copyright; trade-marks and merchandise marks". However, as IPRs are not listed in List I or List III, it is reasonable to presume that such IPRs would likewise be included in Entry 49. Additionally, Article 248 gives the parliament the only authority to enact laws on any subject not covered by the State List (List-II) and Concurrent List (List III).

The preamble of the Indian constitution recognizes economic liberty as one of the most significant liberties and permits diversified economies. In order to achieve this, the Indian Constitution guarantees that citizens have the right to their property, stating that "no person shall be deprived of his property except by authority of law." According to the Supreme Courts, the term "property" as used in Articles 31 and 300A should be given a broad construction and should include all legitimate interests that share features with property rights. It ought to cover both physical and intangible rights.

According to Article 253, the parliament has the authority to enact laws for all or a portion of India's territory in order to carry out treaties, international conventions, and agreements with other nations, as well

as any decisions taken at conferences, associations, or other international gatherings. The implementation of international agreements and conventions relating to intellectual property rights depends heavily on this article.

The article 372 allows for the continuation of pre-constitutional intellectual property rules in India and allows for the adoption of various foreign agreements or conventions on intellectual property rights into Indian law. For instance, the 1911 Patent Act was repealed and the current Patent Act, 1970, was enacted as a result of Article 372 (1) of the Indian Constitution, which gave the legislature or any other appropriate body the ability to do so.

Further evidence that the Indian Constitution recognizes intellectual property comes from the reference of the intellectual property system in the Constitution's entries. Rightfully, Entry 12, 13, and 14 were included to List 1 of the 7th Schedule of the Indian Constitution. List I entry 49 is the one that has been specifically and solely committed to the intellectual property system. Only patents, designs, copyright, trademarks, and other property rights are recognized under Entry 49. Traditional knowledge, biodiversity, geographical indications, and other concepts are not recognized, but they can be incorporated into the existing system of intellectual property rights. If we examine entry 97 of List I, which stated that "any other matter not specified in List II or List III, including any tax not specified in either of those Lists," we see that Article 248 states that "the legislature has the sole authority to make any laws with respect to any matter not specified in the concurrent List or State List." Therefore, it is safe to assume that traditional knowledge can be categorized with other intellectual properties and is acknowledged as such by the Indian Constitution.

Conclusion

Although the right to health is not explicitly stated in the constitution, the Supreme Court has determined that it is a basic right protected by Article 21. The Supreme Court's initial interpretation of the Right to Health under section IV, or Directive, is a significant viewpoint. The constitutional requirement that the state protect the health and vitality of its citizens has not yet been effectively implemented. To a much extent the stronger

IPR regime is responsible for non-effective implementation of health policies. However, with the cooperation of WHO and other international organizations such as the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO) continuous efforts are being made so that the complex conflict between the human rights especially right to health and the Intellectual property rights can be solved in the most amicable manner. A human rights-based strategy is adopted which places a special emphasis on the requirements of the most underprivileged and marginalized people and groups. Because the right to health is a fundamental human right, the extent to which it benefits those who have historically been the most marginalized and underprivileged and raises them to a standard of protection is particularly important when evaluating its implementation. As a result, when adopting intellectual property regimes, States and other actors must pay special attention at both the national and international levels to the adequate protection of the human right to health of the underprivileged and marginalized individuals and groups, such as indigenous peoples, by giving them access to drugs and medicines at reasonable prices. This in turn will ensure that the precious health and life of the citizens are not compromised with and the true spirit of constitution is upheld

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The Current State Of Digital Growth In The State Of Chhattisgarh

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Abstract:

The first steps that were going to be the giant leap in the field of information technology in India started in the mid-1990s and 2000s and incidentally it was in the year 2000 that the state of Chhattisgarh came into existence. This paper focuses on how in two decade this relatively new has gone from strength to strength in terms of e governance and use of digital technology in providing ease of government functioning, which otherwise in infamous for its redtapism and is considered a time taking procedure. . With a straightforward vision, the ongoing government is pushing ahead the Digital India drive to improve the country into a carefully sceptered society and an information economy. With the sendoff of this drive, the public authority intends to accomplish perished set citizens inside the remotest of areas and fabricate them with computerized instruments which can enable electors and persuade be huge advantage. Advanced India conveys the genuinely necessary drive to the 9 mainstays of development regions,

transcendently Broadband Highways, Universal Access to Mobile property, and Public net Access Programs.

This article shows that engaging examinations concerning the latest rising patterns of the

computerized economy in India with special reference to Chhattisgarh

Index term : Digital-Economy, Mobile Property, Red-Tapism, Availability, Access Programs, Computerized

Introduction:

India is poised to become the next global powerhouse in the upcoming decade. The continuous advancement in the realm of information technology across many states has facilitated this achievement. In order to prepare contemporary India for a future based on an information economy. To recognize the exceptional, one must acknowledge the fusion of Indian Talent (IT) with Information Technology (IT), resulting in India's promising future (IT). Emphasizing the importance of innovation in enabling transformative transformation. An umbrella program that encompasses many government divisions. The program intricately weaves together a vast array of ideas and reflections into a unified, all-encompassing vision, ensuring that each of them is considered as part of a superior purpose. The Digital India Program aims to include several existing initiatives, which will be restructured and implemented in a systematic manner. The organization plans to provide a diverse range of electronic assistance and promote digital education in India using advanced technologies such as

cloud computing and mobile applications. These emerging trends serve as drivers for economic growth and citizen empowerment[1].

Chhattisgarh has been recognized as the top-performing state for its commendable achievements in the field of data innovation during the 'Digital India Week 2015'. Digital India was an initiative led by the Prime Minister of India, Shri. Narendra Modi, on 1 July 2015, was determined to provide fast Internet connectivity across different parts of the country and prioritize advancements in education. The Digital India initiative aims to achieve holistic progress in the domains of electronic governance, products, manufacturing, and employment opportunities. Computerized India is a flagship initiative of the Government of India aimed at transforming India into a digitally empowered society and knowledge-based economy. The aphorism is "Power to Empower." The implementation of e-administration in India began in the mid-1990s, focusing on broader sectoral applications and emphasizing citizen-centric services. The first implementation of the Government's core information and communication technology (ICT) initiatives included many main projects,

Chhattisgarh, being a comparatively new state, possesses a much superior digital economy infrastructure in comparison to its adjacent states. Under the leadership of former Chief Minister Raman Singh, more than 16 advanced digital services were introduced. These included a Chief Minister-run board portal, a Wi-Fi city plan to provide free high-speed internet access to the public, particularly students in public places, mobile applications for e-

region services, online facilities for five pension plans in the social welfare department and six in the revenue department, an integrated Chhattisgarh mobile application, a Chhattisgarh campus connect portal, LokSeva Kendra, and Common Service Centers in villages. These services were launched during the specified period. The Chhattisgarh Infotech and Biotech Promotion Society (CHIPS) is the central body responsible for promoting and implementing IT development and strategies in the state[2-3].

The State of Chhattisgarh takes into account the significance of information technology (IT) as a crucial facilitator in its economic progress. It has already formulated a plan of action to:

- Foster innovation, business incubation, and entrepreneurship in the IT sector
- Develop the first Smart City in the country at Naya Raipur
- Establish Electronic Manufacturing Clusters and an Information Technology Investment Region (ITIR).
- Providing financial support to new IT&ITeS units in the state.
- Ensuring compatibility and standardization of operations in the state.
- Creating market opportunities within the state for new IT&ITeS units.
- Developing online clearance processes and promoting the online economy.
- Utilizing data science to drive growth and inform government decision-making.
- Enhancing workforce skills by establishing prestigious institutions like IIT, IIIT, and IIM in the state.
- Supporting academia and research within the state.
- Expanding and improving IT infrastructure, including 4G network and access to the latest mobile and broadband technologies.
- Implementing state regulations on privacy, security, data protection, and cyber security.
- Utilizing the UID Aadhaar framework for identity management. (Electronics, IT and ITES

Investment Policy of Chhattisgarh, Prelude, [2].

The existing services included computerization of train routes, computerization of property records, and other similar initiatives, all aimed at enhancing information systems. Shortly thereafter, other states initiated distinct e-administration initiatives aimed at providing electronic services to the public. Although these e-administration projects were initiated by residents, they fell short of meeting the desired standards due to their insufficient features. The distant and less user-friendly frameworks revealed substantial deficiencies that hindered the successful implementation of e-administration across all levels of management[4-5].

Designated areas for the electronics, IT, and ITES industry are known as venture zones.

(i).The IT Special Economic Zone (SEZ), ITIR (Information Technology Investment Region), Electronic Manufacturing Cluster (EMC), are located in Naya Raipur and other major urban regions, in addition to the IT Hub.

(ii). Ready to move into a newly built structure, focused on business innovation and development.

The Hatching Center and Software Technology Park are newly established IT parks located in major urban areas[6].

(iii) The state's progress in the field of Electronics, IT, and ITES is being led by improvements.

Projects related to Electronic Governance -

(i).Chhattisgarh is a prominent frontrunner in the adoption of e-Governance, having received various accolades and recognition both nationally and internationally.

Secondly. One of the few states that has a dedicated network for all government offices,

A reliable e-Governance infrastructure, incorporating a 'State Wide Area Network'.

Network, State Data Center, Application, Payment, SMS, and other dedicated portals.

Third.The first state to adopt a more digital approach to its governmental services and secretariats, reducing the use of paper.

Fourth.An optical fiber network is already available in all block headquarters, and soon all panchayats will be connected by fiber. Various telecommunications providers offer excellent connectivity.The online framework for obtaining a "development license" in Chhattisgarh has been recognized as the most exemplary method in India, as assessed by BRAP 2016 review.

The website <https://digitalseva.csc.gov.in/web/services> offers a wide range of services. From Aadhaar to banking, pension, education, agriculture, health, and insurance. It offers a diverse array of digital amenities to the residents of Chhattisgarh.

The Government of Chhattisgarh has recently implemented a new policy called "TuharsarkarTuhardwar" which translates to "your government at your doorstep". In response to the shutdown, state administrations are endeavoring to provide comprehensive online services. An initiative called TuharsarkarTuhardwarYojana has been implemented as part of this endeavor. With the TuharsarkarTuhardwarYojana 2022 online platform, you can conveniently access 10 license-related services, such as duplicate license issuance, driving license renewal, and address change. Additionally, you can also avail 12 vehicle-related services, including ownership transfer and address change, without leaving your home.

Mobile Connectivity Coverage: In several locations in India, modern amenities such as electricity and telephone access are still limited. However, in Chhattisgarh, a significant transformation is currently underway. In the province of Chhattisgarh, the mobile network coverage used to be the lowest in the country, with a rate of 29%. 75% of families in rural areas of the state were isolated, and those who had a basic mobile phone had to endure the unfortunate reality of climbing a mountain or tree to make a call [7].

In order to resolve this issue, the state administration devised a computerized revolution last year, which aimed to empower rural communities through telecommunications access and provide them with the same level of network connectivity as the rest of the country[8].

The Sanchar KrantiYojana (SKY) [7] is designed to address this issue. The state government, with the support of the Chhattisgarh Infotech Promotion Society (CHIPS), implemented a meticulously

planned and effectively executed strategy to ensure mobile connectivity throughout the state. This initiative achieved multiple objectives simultaneously, including economic growth, social development, and empowerment of rural communities through connectivity. The Sanchar KrantiYojana aims to connect and empower the inhabitants of the state. SKY played a crucial role in enabling numerous possibilities and opportunities, while also strengthening citizen engagement with the government and laying the foundation for a Smart Chhattisgarh.

Government aims to enhance its business processes by leveraging IT to streamline transactions, simplify forms, reduce online applications and tracking, and facilitate interdepartmental communication through the use of online repositories such as school endorsements and voter ID cards.

The coordination of administrations and platforms, such as UIDAI, Payment Gateway, Mobile Platform, and EDI Electronic Databases, involves the conversion of all data sets and data into electronic format, eliminating the need for manual processes. The aim is to automate workflow within the government.

Public Grievance Redressal involves the use of information technology to automate, respond to, analyze data in order to identify and resolve recurring issues, mostly through process improvements.

Implementation throughout the whole government is essential for initiating transformative progress.

E-Revolution refers to the electronic delivery of services.

Program for enhancing advanced literacy skills

MOOCs are developing a prototype technology called Massive Online Open Courses for Health e-Healthcare.

Virtual clinical discourse, digital medical records, and remote drug provision.

India's Skillet commerce involves the exchange of patient data for the purpose of conducting pilots in 2015. The goal is to achieve full integration of this technology within three years for planning purposes.

The National GIS Mission Mode Project utilizes GIS technology to provide dynamic and real-time information to farmers. The project allows for online access to cost data and the ability to request information sources. Utilize mobile banking technology to securely manage online money, credit, and installment assistance.

Mobile banking technology for financial inclusion with portable emergency services.

Program for miniaturized ATM machines used in CSCs and Post Offices, utilizing advanced technology to promote justice.

The use of digital systems such as e-Courts, e-Police, e-Jails, and e-Prosecution Technology is aimed at enhancing security measures.

The Public Cyber Security Co-appointment Center - Ongoing Program (NeGP) will be revised to encompass these elements [9].

General Information

Chhattisgarh has implemented an online system for hosting and providing access to information and documents. This

open data platform allows citizens to easily and freely access the information.

The Chhattisgarh Government aggressively utilizes social media and web-based platforms to proactively disseminate information to its residents through My Gov.in.

The following are the top 10 services launched by the government under the Digital India initiative, which are also operational in Chhattisgarh:

Implementation of government initiatives in India

1. Secure Digital Storage

2. Bharat net refers to a high-speed broadband network infrastructure in India.

3. Government Application

4. Electronic signature

5. The National Scholarship Portal

6. The Swachh Bharat Mission (SBM) App

7. Online education

8. Electronic health, commonly known as e-Health, refers to the use of digital technologies and communication tools to deliver healthcare services and information.

9. Wireless internet access points.

10. E-Kranti

The source of the information is the website www.digitalindia.gov.in. The source is referenced with the number 10.

The progress and impact of Digital India in Chhattisgarh state will result in the following benefits: broadband connectivity

in 250,000 towns, comprehensive telephone network coverage, elimination of imports by 2020, establishment of 400,000 public internet access points, provision of Wi-Fi in 250,000 schools and all colleges, and the creation of public Wi-Fi hotspots for residents. Additionally, digital inclusion efforts have prepared 1.7 crore individuals for jobs in the IT, telecom, and electronics sectors.

Job creation: 1.7 million. Additionally, the amount is not less than 8.5 Crore rupees, but it is obtained indirectly. e-Governance and eServices: Implemented throughout the whole government.

The state's significant advancements in IT implementation are poised to establish it as a trailblazer in using technology for various sectors like as healthcare, education, and banking. This will result in digitally empowered residents and increased use of public cloud and online access[9].

According to the expert's analysis, the advancement of India has the potential to provide up to \$1 trillion to the GDP by the year 2025. According to the World Bank analysis, an increase of 10% in mobile and broadband penetration leads to a commensurate increase of 0.81% and 1.31% in per capita GDP in emerging economies. There are a total of 12,000 provincial postal station branches that have been naturally linked. The proliferation of electronic exchanges has been facilitated by the widespread use of e-administration, driven by the estimated presence of over 1 billion mobile phones in India. The Bharat Net program has connected over 1.15 lakh Gram Panchayats with a total length of 2,74,246 kilometers of optical fiber network.

Common Service Center (CSC)

Difficulties encountered in the digital economy

The slow performance of Wi-Fi networks and their comparatively slower speed, in comparison to other developed nations. Overall, small and medium-scale industries are under pressure to adapt to modern technology. Entry-level cell phones or mobiles have limited capabilities or storage for efficient operation in digital technology. Lack of customer data or education, mindfulness, and there are partial services to train folks. India requires about 1,000,000 network security innovators or information professionals to examine and monitor the increasing threat of digital crime.

Analysis and Findings

Mastery of advanced skills is the first step in effectively involving residents.

Residents should possess the knowledge and skills to get their online security information or data.

In order to ensure the success of this program, it is necessary to conduct a comprehensive and extensive mindfulness program.

There is an urgent need to educate and enlighten the population, especially in rural and remote areas, about the advantages of internet services to promote the growth of internet usage.

The computerized partition and the confidential area require attention.

The government lacks proficiency in creating material. This task requires content and service providers with expertise in telecommunications and other companies.

There should be an investigation of models of the Check Protection Program (PPP) to ensure the sustainable development of digital infrastructure.

The success of the computerized India initiative depends on achieving maximum connectivity while minimizing the potential for digital vulnerabilities.

In order to enhance proficiency in network security, we want to offer network security courses at the alumni level and encourage international accreditation organizations to provide diverse skill-oriented cybersecurity courses[10].

Conclusion

The evolving trend in the digital landscape of Chhattisgarh state will create several opportunities in the fields of Information Technology, Telecom, and Electronics, both directly and indirectly. This program's advancement would help India to become digitally empowered and a leader in utilizing information technology for the delivery of services related to many sectors such as healthcare, education, agriculture, banking, etc. The Digital India initiative is the foundation of a digital revolution, which, when implemented effectively, would create numerous new opportunities and avenues for the citizens of the country.

Through the implementation of several strategies, India aims to achieve maximum transparency and become a global leader in IT revolution, e-Governance, e-education, e-healthcare, and e-banking. Indian institutions aspire to have a significant global influence in these areas. From this standpoint, organizations

worldwide are eager to invest in India's advanced mission. Remarkably, global investors such as Shri. Sundar Pichai, Mr. Satya Nadella, Mr. Elon Musk is fully dedicated to advancing services, infrastructure, empowerment, e-government, and other related areas.

Practical implication

AarogyaSetu is a mobile application.

There is a system in place for contact tracing related to the Coronavirus using the AarogyaSetu program. This program has been downloaded over 90 million times..

Google's digital payment platform in India had a significant growth of 46% in the fiscal year 2020.

Development of applications for Digital India and AatmaNirbhar Bharat.

India has banned 109 Chinese mobile applications, including the National Digital Library app, which provided assistance to students in pursuing postgraduate degrees.

The Public Education plan for 2020 with the Environmental Impact Act for 2020.

Reduced corruption is essential for maintaining macroeconomic stability and achieving sustainable and inclusive economic growth.

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IMPACT OF INTERNET AND SOCIAL NETWORKING SITES ON THE HAPPINESS OF HIGHER SECONDARY SCHOOL STUDENTS

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Abstract-*This study explores the impact of Internet usage and engagement with social networking sites on the happiness of higher secondary school students. With the increasing prevalence of digital technologies and online platforms, concerns have emerged about their potential effects on the well-being of young individuals. Through a comprehensive review of related literature, this study examines the relationship between Internet use, social media usage, and the emotional well-being of students. The operational definitions of key terms are established, and the significance of the study is underscored. By shedding light on the intricate interplay between technology and happiness among students, this research aims to inform educators, parents, and policymakers about the potential benefits and challenges associated with Internet and social networking site use.*

Index Terms--Internet, social networking sites, happiness, higher secondary school students, well-being, digital technology, online platforms.

I.INTRODUCTION

The rapid integration of Internet technology and social networking sites into the daily lives of

young individuals has raised important questions about their effects on well-being. This study aims to investigate the impact of Internet usage and engagement with social networking sites on the happiness of higher secondary school students. As the first generation to grow up in a digital era, these students are particularly vulnerable to the potential benefits and pitfalls of digital technology. With growing concerns about mental health and social interactions, it is imperative to gain insights into the complex relationship between online activities and emotional well-being [1].

II. SIGNIFICANCE OF THE STUDY

Understanding the influence of the Internet and social networking sites on the happiness of higher secondary school students holds significant implications for multiple stakeholders. Parents, educators, and policymakers need to be well-informed about the potential positive and negative effects of digital technology on student well-being. By identifying the factors that contribute to happiness or distress among students, this study can guide the development of targeted interventions and strategies to enhance their overall quality of life. Furthermore, insights from this research can aid in shaping

responsible and balanced approaches to technology use among young individuals [2].

III. REVIEW OF RELATED LITERATURE

The connection between Internet usage, social networking sites, and the happiness of higher secondary school students has garnered considerable attention within scholarly discourse. A comprehensive review by delved into the various dimensions of online interactions and their influence on adolescents' mental well-being. The study identified a positive correlation between moderate social media use and enhanced levels of happiness, emphasizing the importance of balance in online engagement [3]. Conversely, Thompson and James conducted a qualitative analysis of student experiences, unveiling concerns about the negative impacts of excessive social media exposure on self-esteem and overall life satisfaction [4]. In support of these findings, proposed that social media platforms, while fostering virtual connections, can also contribute to feelings of social comparison and inadequacy, thus affecting happiness levels adversely [5].

IV. STATEMENT OF THE PROBLEM

The problem for the present study is stated as follow:-

“Impact of Internet and Social Networking Site on happiness of higher secondary school students”.

V. OPERATIONAL DEFINITION OF TERMS

Internet: Refers to the global network of connected computers and servers that allows users to access and exchange information.

Social Networking Sites: Online platforms that enable users to create profiles, connect with others, and share content, fostering social interactions in a virtual environment.

Happiness: The Student Happiness Index is a quantifiable measure used to assess and

evaluate the overall well-being and contentment of students within an educational institution.

Higher Secondary School Students: Students in the upper secondary education level, typically aged 16 to 18 years.

VI. OBJECTIVES

1.To study the significant correlation between internet and happiness of higher secondary school students.

VII. HYPOTHESIS OF THE STUDY

HO₁- There is no significant correlation between internet and happiness of higher secondary school students.

VIII. STUDY SCOPE

The scope of this study is limited to the West Singhbhum District in the Jharkhand state of India.

IX. SAMPLE SIZE

A sample size of 640 students from Higher Secondary Schools is used for this study. This sample is evenly split between genders, with 320 boys and 320 girls.

X. STUDY FOCUS

This study focuses on the variables of Internet usage, Social Networking Sites, and Happiness.

XI. RESEARCH DESIGN

Sampling: The schools are selected using a simple random sampling technique, and within each school, a simple random sampling method is employed to select Higher Secondary School students. The sample consists of a total of 640 students, divided equally between genders (320 boys and 320 girls) and also equally between rural and urban students.

XII. METHODOLOGY

The study employs a descriptive research method. The study's population consists of

Higher Secondary Schools located in the West Singhbhum District of Jharkhand State.

XIII. VARIABLES

Independent Variable: The independent variables for this study encompass Internet usage and Social Networking Sites.

Dependent Variable: Happiness is the dependent variable being examined in this study.

XIV. DATA COLLECTION TOOLS

The tools utilized for data collection in this study are as follows:

- The Internet and Social Networking Sites Attitude Scale, developed by Subhash Sarkar and Prasenjit Das (ISNSAS–SSDP).
- The Happiness Scale, created by Himanshi Rastogi and Janki Moorjani (HS–RHMJ).

XV. ANALYSIS AND INTERPRETATION OF DATA

HO₁ There is no significant correlation between internet and happiness of higher secondary school students.

TABLE I.
Correlation Between Internet and Happiness of Higher Secondary School Students.

Category.	Number of Observation	Mean	Sum of Squares of The X-Value and Y Value	Sum of the Products of Corresponding X and Y Values	The Correlation Coefficient	Degrees of Freedom	Significance Level	Interpretation
Internet	640	72	304296	128639	0.16	1278	0.05=0.062	HO ₁ Rejected
Happiness	640	176	2124740				0.01=0.081	

XVI. INTERPRETATION

The calculated correlation coefficient (r) between internet usage and happiness is 0.16. Since this value is positive, it suggests a positive relationship between these two variables. However, the correlation coefficient itself is relatively low, indicating that the strength of the relationship is not very strong.

The degrees of freedom (df) are 1278, and the significance level (α) is 0.05. Comparing the calculated p-value (0.062) with the significance level, we find that the p-value is greater than the significance level. Therefore, its reject the null hypothesis (HO₁) at the 0.05 significance level .Furthermore, the correlation coefficient of 0.16, while positive, suggests a weak association between internet usage and happiness. This means that changes in internet usage are not strongly indicative of changes in happiness levels among the students.

XVII.RESULT

Based on the given calculations and significance level, The null hypothesis (HO₁) is rejected, indicating that the relationship between these variables might be weak or non-existent in this particular sample.

XIX. CONCLUSION

The impact of Internet and social networking sites on the happiness of higher secondary school students is a multifaceted issue that warrants careful examination. While these technologies offer unprecedented opportunities for connection and information sharing, their effects on emotional well-being are complex and often context-dependent. [4-6] Through this study, it is evident that a balanced approach to technology use is crucial for fostering positive outcomes among students. By addressing the challenges associated with

excessive screen time and promoting healthy online behaviours, educators, parents, and policymakers can help ensure that students navigate the digital landscape in a way that

enhances their overall happiness and well-being..[7-8].

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