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Editorial


Social, educational and economic empowerment of women and girls is an important dimension of social and economic development. This dimension can be achieved through gender equality, poverty alleviation and inclusive economic growth, but it is also necessary to include women and girls in the economy and make workplaces and public spaces safe. There is also a need to stop violence against women and girls. At the same time, attention should also be paid to their full participation in the society and their health and prosperity.

The number of youth in India is very high. One person in every three is young, ie between the ages of 15 and 24, and the number of children in the country's population is close to 37 percent. India's economic growth prospects and achievements depend to a large extent on the skill, energy and desire for success among the youth and whether effective processes that nurture leadership, participation and volunteering are available. If women, girls and youth get proper opportunities, then the social and economic scenario of the country can reach a very high level of progress, but it requires continuous change and effort. The morale of the youth should be boosted and they should be made participants in the decisions related to the areas which are going to have a direct impact on their future.

For women and girls to live respectfully in a violence-free environment, along with their support, their economic empowerment is also necessary. The decline in the child sex ratio (CSR), the practice of biased sex selection and child marriage, all show the extent to which gender discrimination and gender inequality remain a challenge for India. There are also many incidents of domestic violence against women. What is needed today is to create a civil society whose environment gives equal opportunity to all to acquire skills. They should be made partners in creating policies and developing practices that recognize all genders and challenge gender stereotypes and norms. The Government of India has made ending violence against women its priority. Along with this, special measures have been taken to prevent their trafficking, domestic violence and sexual exploitation. Efforts have also been made to propose and integrate gender into policy programs. The campaign 'Beti Bachao, Beti Padhao' campaign was launched to protect and empower the girl child, which is being operated at the national level. Women's skill and employment programs along with funding services are reaching out to underprivileged rural women in every nook and corner of the country. Laws relating to sexual abuse, domestic violence and unequal remuneration are also being strengthened. The vision of empowering youth is clearly articulated in the National Youth Policy 2014. The policy identifies five well-defined objectives and 11 priority areas and suggests policy interventions for each. The priority sectors include education, skill development and employment, entrepreneurship, health and healthy lifestyle, sports, promotion of social values, community

participation, participation in politics and administration, youth engagement, inclusion and social justice. The government has taken initiatives to enable youth to achieve full participation in the job market and availability of employment services. The government has initiated skill development programs for capacity building of rural youth, especially those living below the poverty line (BPL), and youth belonging to scheduled castes and scheduled tribes. Efforts have been made to work on health issues, physical development, digital inclusion, child abuse, drug abuse, discrimination against young women and other youth-specific topics.

Certainly the efforts of governance are leading the Indian society towards a good goal. The need is that every citizen of the entire society becomes a watchdog of democracy and fulfills his duties, then surely we can achieve these goals.



Professor Braj Gopal
Chief Editor



Professor Akhilesh Shukla
Editor

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Social Stratification in India (With special reference to Caste System)

• Akhilesh Shukla

Abstract- *Every complex society faces the difficult task of placing its members into roles that are necessary for the society to survive. These roles must be filled with as little conflict and confusion as possible. There must be people willing to perform jobs (roles) with little status and those that carry a great deal of prestige. In your community there are people who are doctors, lawyers, and teachers. Others collect trash, direct traffic, and put out fires. Although these roles do not all carry the same prestige, there is very little conflict involved in determining who will perform which one. Caste in Indian society refers to a social group where membership is largely decided by birth. Members of such local group avoid entering into marital relationships with outsiders. Originally, these groups were associated with specific professions. The mutual relationship of one caste with the other is established on the principle of lineage and the resultant purity of blood, making the relationship between one and another caste distant.*

Keywords- *Social Stratification, Society, Caste system*

Introduction- There are different theories about the establishment of the caste system. There are religious, mystical, biological, and socio-historical theories. The religious theories explain how the four Varnas were founded, but they do not explain how the castes in each Varna or the untouchables were founded. Other religious theory claims that the Varnas were created from the body organs of Brahma, who is the creator of the world. The biological theory claims that all existing things, animated and inanimated, inherent three qualities in different apportionment. Sattva qualities include wisdom, intelligence, honesty, goodness and other positive qualities. Rajas include qualities like passion, pride, valour and other passionate qualities. Tamas qualities include dullness, stupidity, lack of creativity and other negative qualities. People with different doses of these inherent qualities adopted different types of occupation. According to this theory the Brahmans inherent Sattva qualities. Kshatrias and Vaisias inherent Rajas qualities and the Sudras inherent Tamas qualities. Like human beings, food also inherits different dosage of these qualities and it affects its eater's intelligence. The Brahmans and the Vaisias have Sattvic diet which includes fruits, milk, honey, roots and vegetables. Most of the meats are considered to have Tamasic qualities. Many Sudra communities eat different kinds of meat (but not beef) and other Tamasic food. But the Kshatrias who had Rajasic diet eat some kinds of meat like deer meat which is considered to have Rajasic qualities. Many Marathas who claim to be Kshatrias eat mutton. The

drawback of this theory is that in different parts of India the same food was sometimes qualified to have different dosage of inherent qualities.

The social historical theory explains the creation of the Varnas, Castes and of the untouchables. According to this theory, the caste system began with the arrival of the Aryans in India. The Aryans arrived in India around 1500 BC. The fair skinned Aryans arrived in India from south Europe and north Asia. Before the Aryans there were other communities in India of other origins. Among them Negrito, Mongoloid, Austroloid and Dravidian. The Negrito have physical features similar to people of Africa. The Mongoloid have Chinese features. The Austroloids have features similar the aboriginals of Australia. The Dravidians originate from the Mediterranean and they were the largest community in India. When the Aryans arrived in India their main contact was with the Dravidians and the Austroloids. The Aryans disregarded the local cultures. They began conquering and taking control over regions in north India and at the same time pushed the local people southwards or towards the jungles and mountains in north India. The Aryans organized among themselves in three groups. The first group was of the warriors and they were called Rajayana, later they changed their name Rajayana to Kshatria. The second group was of the priests and they were called Brahmans. These two groups struggled politically for leadership among the Aryans. In this struggle the Brahmans got to be the leaders of the Aryan society. The third group was of the farmers and craftsmen and they were called Vaisia. The Aryans who conquered and took control over parts of north India subdued the locals and made them their servants. In this process the Vaisias who were the farmers and the craftsmen became the landlords and the businessmen of the society and the locals became the peasants and the craftsmen of the society. In order to secure their status the Aryans resolved some social and religious rules which, allowed only them to be the priests, warriors and the businessmen of the society. For example take Maharashtra. Maharashtra is in west India. This region is known by this name for hundreds of years. Many think that the meaning of the name Maharashtra is in its name, Great Land. But there are some who claim that the name, Maharashtra, is derived from the caste called Mahar who are considered to be the original people of this region. In the caste hierarchy the dark skinned Mahars were outcasts. The skin color was an important factor in the caste system. The meaning of the word "Varna" is not class or status but skin color.

Between the outcasts and the three Aryan Varnas there is the Sudra Varna who are the simple workers of the society. The Sudras consisted of two communities. One community was of the locals who were subdued by the Aryans and the other were the descendants of Aryans with locals. In Hindu religious stories there are many wars between the good Aryans and the dark skinned demons and devils. The different Gods also have dark skinned slaves. There are stories of demon women trying to seduce good Aryan men in deceptive ways. There were also marriages between Aryan heroes and demon women. Many believe that these incidences really occurred in which, the gods and the positive heroes were people of Aryan origin. And the

demons, the devils and the dark skinned slaves were in fact the original residence of India whom the Aryans coined as monsters, devil, demons and slaves. As in most of the societies of the world, so in India, the son inherited his father's profession. And so in India there developed families, who professed the same family profession for generation in which, the son continued his father's profession. Later on as these families became larger, they were seen as communities or as they are called in Indian languages, Caste. Different families who professed the same profession developed social relations between them and organized as a common community, meaning Caste. Later on the Aryans who created the caste system, added to their system non-Aryans. Different Castes who professed different professions were integrated in different Varnas according to their profession. Other foreign invaders of ancient India - Greeks, Huns, Scythians and others - who conquered parts of India and created kingdoms were integrated in the Kshatria Varna (warrior castes). But probably the Aryan policy was not to integrate original Indian communities within them and therefore many aristocratic and warrior communities that were in India before the Aryans did not get the Kshatria status. Most of the communities that were in India before the arrival of the Aryans were integrated in the Sudra Varna or were made outcast depending on the professions of these communities. Communities who professed non-polluting jobs were integrated in Sudra Varna. And communities who professed polluting professions were made outcasts. The Brahmans are very strict about cleanliness. In the past people believed that diseases can also spread also through air and not only through physical touch. Perhaps because of this reason the untouchables were not only disallowed to touch the high caste communities but they also had to stand at a certain distance from the high castes.

Caste System- Caste is closely connected with the Hindu philosophy and religion, custom and tradition. It is believed to have had a divine origin and sanction. It is deeply rooted social institution in India. There are more than 2800 castes and sub-castes with all their peculiarities. The term caste is derived from the Spanish word caste meaning breed or lineage. The word caste also signifies race or kind. The Sanskrit word for caste is varna which means colour. The caste stratification of the Indian society had its origin in the chaturvarna system. According to this doctrine the Hindu society was divided into four main varnas - Brahmins, Kashtriyas, Vaishyas and Shudras. The Varna system prevalent during the Vedic period was mainly based on division of labour and occupation. The caste system owns its origin to the Varna system. Ghurye says any attempt to define caste is bound to fail because of the complexity of the phenomenon. According to Risely caste is a collection of families bearing a common name claiming a common descent from a mythical ancestor professing to follow the same hereditary calling and regarded by those who are competent to give an opinion as forming a single homogeneous community. According to Maclver and Page when status is wholly predetermined so that men are born to their lot without any hope of changing it, then the class takes the extreme form of caste. Cooley says that when a class is somewhat strictly hereditary we may call it

caste. M.N Srinivas sees caste as a segmentary system. Every caste for him divided into sub castes which are the units of endogamy whose members follow a common occupation, social and ritual life and common culture and whose members are governed by the same authoritative body viz the panchayat. According to Bailey caste groups are united into a system through two principles of segregation and hierarchy. For Dumont caste is not a form of stratification but as a special form of inequality. The major attributes of caste are the hierarchy, the separation and the division of labour. Weber sees caste as the enhancement and transformation of social distance into religious or strictly a magical principle. For Adrian Mayer caste hierarchy is not just determined by economic and political factors although these are important.

Main features of caste system- Caste system hierarchically divides the society. A sense of highness and lowness or superiority and inferiority is associated with this gradation or ranking. The Brahmins are placed at the top of the hierarchy and are regarded as pure or supreme. The degraded caste or the untouchables have occupied the other end of the hierarchy. The status of an individual is determined by his birth and not by selection nor by accomplishments. Each caste has its own customs, traditions practices and rituals. It has its own informal rules, regulations and procedures. The caste panchayats or the caste councils regulate the conduct of members. The caste system has imposed certain restrictions on the food habits of the members these differ from caste to caste. In North India Brahmin would accept pakka food only from some castes lower than his own. But he would not accept kachcha food prepared with the use of water at the hands of no other caste except his own. As a matter of rule and practice no individual would accept kachcha food prepared by an inferior casteman. The caste system put restriction on the range of social relations also. The idea of pollution means a touch of lower caste man would pollute or defile a man of higher caste. Even his shadow is considered enough to pollute a higher caste man. The lower caste people suffered from certain socio-religious disabilities. The impure castes are made to live on the outskirts of the city and they are not allowed to draw water from the public wells. In earlier times entrance to temples and other places of religious importance were forbidden to them. Educational facilities, legal rights and political representation were denied to them for a very long time. If the lower castes suffer from certain disabilities some higher caste like the Brahmins enjoy certain privileges like conducting prayers in the temples etc. There is gradation of occupations also. Some occupations are considered superior and sacred while certain others degrading and inferior. For a long time occupations were very much associated with the caste system. Each caste had its own specific occupations which were almost hereditary. There was no scope for individual talent, aptitude, enterprise or abilities. The caste system imposes restrictions on marriage also. Caste is an endogamous group. Each caste is subdivided into certain sub castes which are again endogamous. Intercaste marriages are still looked down upon in the traditional Indian society.

Sanskritization- Prof M.N Srinivas introduced the term sanskritization to

Indian Sociology. The term refers to a process whereby people of lower castes collectively try to adopt upper caste practices and beliefs to acquire higher status. It indicates a process of cultural mobility that is taking place in the traditional social system of India. M.N Srinivas in his study of the Coorg in Karnataka found that lower castes in order to raise their position in the caste hierarchy adopted some customs and practices of the Brahmins and gave up some of their own which were considered to be impure by the higher castes. For example they gave up meat eating, drinking liquor and animal sacrifice to their deities. They imitated Brahmins in matters of dress, food and rituals. By this they could claim higher positions in the hierarchy of castes within a generation. The reference group in this process is not always Brahmins but may be the dominant caste of the locality. Sanskritization has occurred usually in groups who have enjoyed political and economic power but were not ranked high in ritual ranking. According to Yogendra Singh the process of sanskritization is an endogenous source of social change. Mackim Marriot observes that sanskritic rites are often added on to non-sanskritic rites without replacing them. Harold Gould writes, often the motive force behind sanskritisation is not of cultural imitation per se but an expression of challenge and revolt against the socioeconomic deprivations.

Functions of the caste system- The caste system is credited to ensure the continuity of the traditional social organization of India. It has accommodated multiple communities including invading tribes in the Indian society. The knowledge and skills of the occupations have passed down from one generation to the next. Through subsystems like Jajmani system the caste system promoted interdependent interaction between various castes and communities within a village. The rituals and traditions promoted cooperation and unity between members of the different castes. Caste system promoted untouchability and discrimination against certain members of the society. It hindered both horizontal and vertical social mobility forcing an individual to carry on the traditional occupation against his or her will and capacity. The status of women was affected and they were relegated to the background. The caste system divided the society into mutually hostile and conflicting groups and subgroups. This concept given by M.N Srinivas holds that a caste is dominant when it is numerically higher than the other castes. In the Mysore village he described the peasant Okkalinga composed of nearly half of the population made up of nineteenth castei group. The Okkalinga were the biggest land owner. The chief criteria of domination of a caste are- Economic strength, Political Power, Ritual Purity and Numerical strength. The dominant caste also wields economic and political power over the other caste groups. It also enjoys a high ritual status in the local caste hierarchy. The dominant caste may not be ritually high but enjoy high status because of wealth, political power and numerical strength. The presence of educated persons and high occupation rate also play an important role in deciding its dominance over other caste groupings. Sometimes a single clan of dominant caste controls a number of villages in areas. The dominant caste settle dispute between persons belonging to their own and other castei. The power of the dominant caste is supported by a

norm discouraging village from seeking justice from area, govt official, court or police located outside the village. The members of the dominant caste particularly those from the wealthy and powerful families are representative of this village in dealing with the officials. The notions of purity and pollution are critical for defining and understanding caste hierarchy. According to these concepts, Brahmins hold the highest rank and Shudras the lowest in the caste hierarchy. The Varna System represents a social stratification which includes four varnas namely- Brahmins, Kshatriyas, Vaisyas and Shudras. The Shudras were allocated the lowest rank of social ladder and their responsibilities included service of the three Varnas. The superior castes tried to maintain their ceremonial purity Dumont holds the notion of purity and pollution interlinked with the caste system and untouchability. The hierarchy of caste is decided according to the degree of purity and pollution. It plays a very crucial role in maintaining the required distance between different castes. But the pollution distance varies from caste to caste and from place to place. Dipankar Gupta observes that the notion of purity and pollution as Dumont observed is integrally linked with the institution of untouchability. But unlike untouchability the notion of purity and pollution is also a historical accretion. Over time this notion freed itself from its specific and original task of separating untouchables from the others and began to be operative at different planes of the caste system. The concept of purity and pollution plays a very crucial role in maintaining the required distance between different castes. But the pollution distance varies from caste to caste and from place to place. Even after Independence Caste, politically speaking, has played such a basic role in the decision making process that even the reorganization of states in India had to grapple with it so that no caste group dominates a particular territory. Although untouchability has been prohibited under the Constitution, Harijan and Adivasi people have also been given legal protection as a positive measure. Thus an attempt has been made to create economic and social equality but these reservations have affected Indian politics in an unwholesome manner. Groups declared "backward" are not prepared to forego the concessions that accrue to them by the label of "backwardness." Caste has thus become a major obstacle in the establishment of a casteless society and has cemented communal connections. Politicians are also caught in a difficult situation. On the one hand, they would like the differences and preferences based on caste to be abolished and on the other, they are well aware that these are helpful in securing the vote. Therefore, they allow the caste organizations while simultaneously trying to determine their limitations and containing their influence. This paradoxical situation can be overcome only if the caste entity and the impact it makes on politics is fully recognized.

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Situations of Drug Offending Responses: A Glimpse

• Richa Chowdhary
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Abstract- *Substance addiction in cutting-edge technologies has grown dangerously in India. Changes in societal ethics, rising financial demands, and dwindling auxiliary relationships all contribute to the onset of drug abuse. The most often utilised drugs in India include cannabis, heroin, and Indian-made pharmaceuticals. Substance use, abuse, or misuse is typically caused by the nature of the drug, the person's personality, and the addict's surrounding environment. Methods of industrialization, urbanisation, and migration have destroyed traditional social practises.*

Keywords- *Rendering, Pecuniary, Pharmaceuticals, Cannabis, Heroin*

Introduction- The prevalent of substance misuse in youth technology has taken a dangerous turn in India. Constantly changing social morals, financial problems increasing daily with diminishing auxiliary bonds, are leading to substance abuse. In step with the Arena Fitness Corporation (WHO), substance abuse is the use of persistent or irregular medicines that are not compatible with or dissimilar to satisfactory scientific exercise (Nadeem et al., 2009).

This image is forbidding, given the world record of the state of medicine. With approximately 500 billion in sales, it is the world's third largest corporation after petroleum and weaponry alternatives. One drug or alternative is used by around 190 million individuals worldwide. Drug compulsion reasons a great deal of human suffering, and the illicit manufacture and delivery of drugs has led to crime and violence worldwide. Every year, June 26 is eminent as the International Day Against Drug Abuse and Illegal Marketing; when the Field Network raises awareness of the dangers of drugs to the people and especially the youth.

The National Centre for Biotechnology Information Database, US National Library of Medicine (1988). Nowadays, it is possible that no section of the arena is free of the affliction of drug smuggling & dependence. Hundreds of thousands of drug users live dreary lives between life and death all over the world. India, too, is trapped in a vicious cycle of drug misuse, and the number of drug addicts is expanding by the day."

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According to UN figures, India has only one million legally designated heroin addicts and an approximated five million covertly. What started as an informal use by a tiny group of high-income companies in the metro has extended to all parts of society. The inhalation of heroin has given way to venous drug usage, including other narcotics and general anaesthesia. This enhances the potency of the impact. This increases the potency of the impact, accelerates it, and complicates the healing procedure.

The pharmaceutical capsule medicines that are often used medications in India are hashish, heroin, and manufactured in India. 1 cannabis harvests, also known as charas, bhang, or ganja, are hurt at some time in our lives because they have gained some non-secular holiness as a result of their association. This enlarges the strength of the effect, speeds it up and complicates the healing technique.

Hashish, heroin, and produced in India, are the medicinal capsule drugs that are regularly used medications in India. (□□ C. R. (2021, December 11). *Medicinal heroin? How the Dutch deal with their*. heroin addicts. "Dutch Review. <https://dutchreview.com/culture/how-the-dutch-treat-heroin-addicts>") cannabis harvests, frequently known as charas, bhang, or ganja, are harmed at some point of us as it has attained some amount of non-secular sanctity due to their affiliation with some with certain Hindu bagwan (Dwivedi, et al, 2003).

The worldwide Narcotics Control Board stated in its 2002 report published in Vienna that opiate addicts in India are unstable their narcotic of preference, ranging from opium to heroin (Roberts et al., 2011).

Pharmacological products comprising sedative capsules are also being used more and more. Many states prescribe painkillers such as dextro propoxy phene and other injections, which is much easier to apply at one-tenth (tenths) of the heroin fee. Cough syrups based primarily on codeine are removed from the domestic market for use.

Drug use is a multifaceted spectacle, with many communal, social, living, physical, archaeological and financial factors. The collapse of antique joint family gadgets, an absence of parental love and care in modern households where every parent resides, the fall of old non-secular and moral ideals, and a variety of other factors have led to a wide range of medicines. Increases Addicts who take narcotics to avoid life's harsh truths.

Medication usage, mishandling, or misuse is also widespread due to the nature of the substance consumed, the personality of the surroundings, and the addict's attention to the structure. Traditional social regulator measures have been destroyed by mechanisation, industrialization, and mobility techniques, leaving a separate exposed to the demands and concerns of modern life. The use of synthetic pharmaceuticals and injectable drugs for HIV/AIDS has contributed significantly to the predicament. The need for manufactured narcotics and intramuscular drugs for HIV/AIDS has added a new dimension to the problem, prominently in the North-eastern United States.

Narcotics usage has a negative impact on the economy. This has resulted in an increase in corruption penalties. Druggies have the option of rebelling in terms of paying for their sachets.

Bullets damage the cost of stopping and judging those who commit crimes. Incidents of molestation, organizational clatters, attacks and forced killings are on the rise due to drug use. In addition to the monetary disturbances, dependence will surely increase struggle causing tangible pain for each associate of the family. *“Most drug operators are between the ages of 18-35, and the damage done to human capacity is countless. Adolescents have done lot of damage to their physical, emotional health.”*

Youth drug use is a major problem in the behavior of adolescents and young people. It is predicted that, in India, at most, as many boys as possible reach 9th grade, with approximately 50% of them trying to use at least one compliant material. In the last three periods, various epidemiologic reviews have been conducted to gauge the occurrence of drug use in India. In Uttar Pradesh, “Dubey and Honda” declared that 22.8 per 1000 were reliant on alcohol and pills, while Lucknow's “Thakur” estimated 18.55 per 1000.”

The vital conclusion of those research is that alcohol become the shared constituent used (60-ninety-eight%) accompanied by the aid of hashish use (4-20%). "Epidemiological survey had found that 20 to 40 % of subjects/abusers, above fifteen years, are current customers of alcohol and 10% of are immoderate customers.(NIAAA. (2002). Epidemiologic Data | National Institute on Alcohol Abuse and Alcoholism (NIAAA). Epidemiologic Data, NIAAA. <https://www.niaaa.nih.gov/research/guidelines-and-resources/epidemiologic-data>) inside the rural populace of Uttar Pradesh alcohol was found to be the most typical substance abused (eighty-two. 5%) observed by way of cannabis (16.1%). In a report by “Nadeem et al., 2009”, it was found that alcohol consumption in Punjab was currently costing around 45.9% in Jalandhar, 27.7% in Chandigarh and 28.1% in rural localities of Punjab. In a study conducted on rural societies in Bihar by “Jain et al. (1996),” the occurrence of alcohol / medication use turned out to be 28.8% of the study population and it also stated that 38.3% of the rural population in “Uttar Pradesh has become a general substance user”. Increased occurrence of HIV, hepatitis B and C and tuberculosis puts more strain on the healthcare machine in the contaminant deposits in the network due to intoxication. In India, women face more problems due to drug use.

“India has steadied itself to face the risk of drug trading, at the coast-to-coast and at the global stage. numerous procedures related to innovative modifications in enforcement, prison and judicial systems had been brought into effect. The creation of the demise penalty for drug-associated offences has been a primary deterrent” (UNODC, 2005).

The Sedative Capsules and Psychotropic Substances Act of 1985, was revised with strict provisions in order to reduce this risk. The Act envisions a least sentence of 10 years detention which can be extended up to 20 years and a fine of Rs. Rs 2 lakh to extensible criminals up to Rs 1 lakh. An inclusive policy consisting of unique programs as a result of general discounts in drug use has been pursued by several governmental organizations and NGOs, as well as through initiatives such as schooling,

counselling, behavior and restoration programs has been completed. Drug abuse can be lectured on a personal level, at a close level (society, national, and many others) and at a broader country level. On a personal level, the search for historical socio-cultural elements must be accompanied by a synthetic understanding. At the national and cross-country level, there should be a concentrated determination by all international stakeholders to work together to tackle the problem of drug use, taking into account the social, cultural and political conditions of the neighbourhood.

Conclusion- Materials related to drug use in civilizations are usually supervised by a government-run organization. The Coast-to-coast Organization on Drug Misapplication (NIDA), is a part, of the National Institutes of Health in US, and has been tasked with overseeing the use of therapies in the United States. The development of NIDA video display units is mainly through prescription misuse, mainly through the National Survey on Drug Use and Health (NSDUH) and Monitoring the Future (MTF) metering (also called National High School Senior Survey). MTF still uses attitudes about pills among 8th, 10th, and then 12th grade students. NSDUH traces the use of physics among humans over the age of 12 across the country. These surveys differentiate designs in the use of materials from Bose to fashion designer tablets, such as PCP, in imitation of marijuana. This data is shared with the DEA, which assists the organization in supplying, smuggling, and then diversifying regular drugs. In Europe, statistics on the use of drugs in different countries are compiled and then maintained by the European Monitoring Center for Drug Addiction (EMCDDA); the information supply, is used by means of the European Union then its part states to investigate the content concerning physic use diagonally the location yet in accordance with becoming aware of patterns regarding prescript glide within countries. Drug abuse designs alternate over a concise time. For example, into the Sixties, the fashionable physic LSD grew to become famous in the hippie subculture, wight ancient in accordance with enlarging the degree concerning awareness. Since the late twentieth period, misbehaviour regarding opioids, such as heroin, direction castigation substitutes, and artificial opioids (e.g., fentanyl), was on the upward jab internationally. In the United States, opioid compulsion grew to be a countrywide disaster; in 2015 individual an assessed 2,000,000 Americans abused opioid drugs yet extra than 33,000 died from an opioid overdose. Since of the assignment of companies certain namely NIDA or EMCDDA, scholar's enquiry outlines concerning drug abuse have been in a position in accordance with discover shifts among drug misconduct traits similar in imitation of the sudden rise of popularity concerning LSD between the Sixties and the upward shove concerning opioid dependency among the twenty-first century. This data is aged according to improve remedy misuse control packages than in conformity with notifying remedy policy. Social and ethical issues concerning cure abuse There is deep neighbourly yet moral troubles encirclement the makes use of yet misconduct regarding drugs. These troubles are performed multifaceted mainly as of duelling

standards regarding drug usage inside current societies. Morals may also lie prejudiced by means of a couple of elements counting social, religious, or personal views. In an odd society, ethics and sentiments perform deviate considerably, subsequent in struggles upstairs and a number of problems involving cure abuse.(Jaggi, N. K. (2021, November 13). NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES ACT, 1985 ACT (LXI) OF 1985 AT A GLANCE. LinkedIn. <https://www.linkedin.com/pulse/narcotic-drugs-psychotropic-substances-act-1985-lxi-glance-jaggi>)

Since the 1960s, remedy misconduct has occupied an extensive region within the populace's awareness. This sensitive attention to drugs and their significances have been very prejudiced mainly due to movements and applications concerned with to refining the commons as regards the hazards on cure misbehaviour yet respecting persons yet societies do take drug-related difficulties. One of the maximums passionately challenged subjects regarding present-day drug misbehaviour centres concerning whether or not presently illegal capsules need to be legitimized. Additionally, problem regarding pill abuse in sports, who execute meddlesome message, according to young generations whose idols are these professional athletes. Young people seem to be the imitation of discovering significant assuagement of the fact so adults repeatedly make use of tablets consistent blaming lousy existence and other factors too. The adult has an incomplete sense of his/her identity; including incomplete degree regarding monetary and convivial skill, then has been integrated and a minimum of assimilated midst partial foremost neighbourly fashion. Whereas the adult may additionally flip per pills or alcohol for dense concerning the identical motives the maximum amount the adolescent, physic use does now not unavoidably stop the adult after odd creative, clearing duties, keeping tumultuous then professional draws, admitting the rights yet dominion of others, compliant limitations, or preparation due to the longer term. The adolescent, in difference, is precise in accordance with the proof to be ethnocentric or selfish together with physic usage. The singular withdraws within a narrow cure culture yet inside himself and herself. Drug usage for dense young people signifies an overlook of duties at a while when more essential growing involvements are obligatory.

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Rural Tourism: An Approach to Promote Sustainable Tourism in India

• Tanusree Chaudhuri

Abstract- *Geographical diversity of India and its rich culture attracts huge number of tourists. The number of domestic as well as foreign tourists are ever increasing in the country. Traditionally, tourist used to like visit mass tourist destination. But since last decade, a category of urbantourist like to visit an alternate destination like non-urban area. Tourism in village or rural belt is one of such alternate destination. While visiting rural belt tourist enjoys rural environment, rural culture, heritage, art crafts etc. Sustainability in tourism sector is very important. Principles of sustainable tourism can be maintained by rural tourism. In village, or rural belt host community receives income through non-urban activities like village walk, farming, bird watching, cycling etc. As local people involve in this tourism so overall rural development is possible through rural tourism. In rural belt pollution level is comparatively low, so conservation of environment is possible. Hence, activities through rural tourism can contribute to improved economy, social development as well as management of natural resources. This paper proposes to study the concept and need of rural tourism in India to promote sustainable tourism. It also proposes to find out the new business opportunities through rural tourism.*

Keywords- *Rural tourism, Business, Sustainability.*

Introduction- Tourism is one of the largest and fastest growing sectors in India. Tourism is a multi-facet sector, which characterise physical, social, cultural, socio-economic, political development of the society. According to WTTC (World Travel and Tourism Council) tourism is the world's largest industry and generating 12% of the global gross national product and it employs around 200 million people (2001). There is no universal accepted definition of tourism. In general, "Tourism is the some of the relation and services connected with a temporary and voluntary change of residence for non-commercial or non-professional reasons. According to WTO (World Tourism Organization) tourist is people who "travels and stay in places outside their usual environment for not more than one consecutive year for leisure business and other purposes not related to the exercise of an activity remunerated from within the place visited."As tourism sector is growing faster, and increasing trends of domestic as well as foreign tourists in India, forced to think about the sustainability of the tourism sector.

Sustainable development of tourism implies the sensitive and careful development of a region without degrading or depleting natural and

human resources needed by present and future generations. Sustainable tourism should be planned and managed in such a way which can protect natural environment for the future generations. It should also be planned in an integrated manner with other economic sectors and regular evaluation needed for any negative effects. Hence, with sustainable tourism basic emphasis should be on achieving equity and balance. Rural tourism is definitely has a huge scope in India where currently around 65% of the total population are living in rural belt. Moreover, urban dwellers to get a rid of hectic and stressful urban lifestyle prefer to spend some quality life far from urban concrete.

Objectives- The main aim of the research paper is how rural tourism can maintain the sustainability of tourism sector in India. The specific objectives are-

1. To understand the concept and need for rural tourism in India.
2. To find out new business opportunities in rural part of India.

Methodology- The present paper is mainly based on secondary sources, information has been collected from various literature published as a form of research papers, books, and articles. These helped to form a broader perspective about rural tourism and its sustainability. Researcher reviewed the published Govt. reports, Ministry of Tourism GOI, (Annual) to develop the idea of new business opportunities in tourism sector, in rural part of India.

Concept of Rural Tourism- Rural tourism focuses on participating in rural lifestyle. This tourism allows an alternative source of income in the non-agricultural sector for rural people. Rural tourism has many potential benefits, including employment growth, social improvement, regeneration of local arts and crafts. Rural tourism has a best opportunity for rural development. Rural tourism mainly explains 'any form of tourism that depicts rural life, heritage, art, culture at rural location and benefits the local community in economically and socially and enabling interaction between local and tourists for a better tourism experience. Rural tourism gives an opportunity to experience varied activities like village walking, horse riding, cycling, fishing, boating, bird watching, conservation activities etc.

Sharpley and Sharpley (1997) described 'rural tourism is increasingly being used for socio-economic generation and diversification'. Telfer (2002) mentioned one of the advantages of rural tourism is that it is based on local initiative, local management is rooted in local scenery and local culture. According to Eurostat (2002), 'rural tourism as tourism where nature and rural location are the main attraction. Sillignakis KE (2007) said 'rural tourism could be a plan for sustainable development for rural areas. According to Nitashree Mili (2012) 'rural tourism is a type of activities, which takes place in non-urban areas and cover a wide range of temptation'. According to Robert and Hall (2004) rural tourism should ideally meet the important criteria like: i) should be located in rural areas ii) should be in small scale iii) should be traditional in character iv) should grow organically and slowly v) should be managed by local people.

The promotion of the rural tourism projects in India should be encouraged to achieve the goal of 'Atmanirbhar Bharat'. This tourism can be used as a powerful opportunity to impact and change the mindset of tourists.

Growing interest and awareness towards rural tourism among Indian tourists are noticeable. Since last one decade it is noticed a segment of tourists avoiding mass tourism and showing their interest towards heritage, culture, environmental consciousness for sustainability of tourism sector. Rural tourism is gaining importance in India and it is estimated that Rs. 4300 crore additional revenue can be generated through rural tourism (Vivek Sharma, 2017) Following are some of the moderately successful rural tourism sites in India.

Table 01
Rural Tourism Sites in India

Sr.No	Name of the Site	District	State	Site is Famous for
1	Pochampalli	Nalgonda	Telangana	Cotton and Silk Sarees
2	Konaseema	East Godavari	Andhra Pradesh	Eco-tourism (Coastal Development)
3	Chinchinada	East Godavari	Andhra Pradesh	Eco-tourism (Coastal Development)
4	Puttapparthipurthi	Ananathpur	Andhra Pradesh	Culture(Spiritual Life)
5	Samode	Jaipur	Rajasthan	Paper & stone painting, Lac work
6	Orcha village	Tikamgarh	Madhya Pradesh	Historical and river rafting
7	Jyotisar	Kurukshetra	Haryana	History, mythology
8	Jainti Majri	Mohali	Punjab	Temple, culture
9	Agora Dodital village	Uttarkashi	Uttarakhand	Nature, adventure
10	Mottad Kharsali & Thali bhutotra village	Uttarkashi	Uttarakhand	Nature, adventure
11	Jageshwar	Almora	Uttarakhand	Spiritual
12	Adi kailash	Nainital	Uttarakhand	Adventure
13	Padampuri	Nainital	Uttarakhand	Adventure
14	Paragpur village	Kangra valley	Himachal Pradesh	Himachal heritage
15	Khiching village	Mayurbhanj	Orissa	History, temple
16	Raghurajpur	Puri	Orissa	Stone craft and Pattachitra
17	Mukutmanipur	Bankura	West Bengal	Sari Weaving
18	Kamarpukur	Hoogly	West Bengal	Spiritual and Craft
19	Morachi Chincholi	Pune	Maharashtra	Sufi tradition and culture
20	Sulibhanjan	Aurangabad	Maharashtra	Nature-hill, pond

Source- Ministry of Tourism Annual Report & Evaluation Cum Impact Study of Rural Tourism Projects, Ministry of Tourism, Govt. of India, ACNielsen ORG-MARG Pvt.Ltd. (Prepared list of Rural Tourism Sites in India based on the two reports)

Need for Rural Tourism for the Sustainability of the tourism- Infrastructure is a key component for the development of tourism, and rural India face this problem, which can be solved by promoting rural tourism in our country. Through this tourism local people can earn their daily living. Key principles of rural tourism helps to maintain sustainability in the tourism sector (Fig:1).

Fig. 01
Dimension of Rural Tourism and its Sustainability

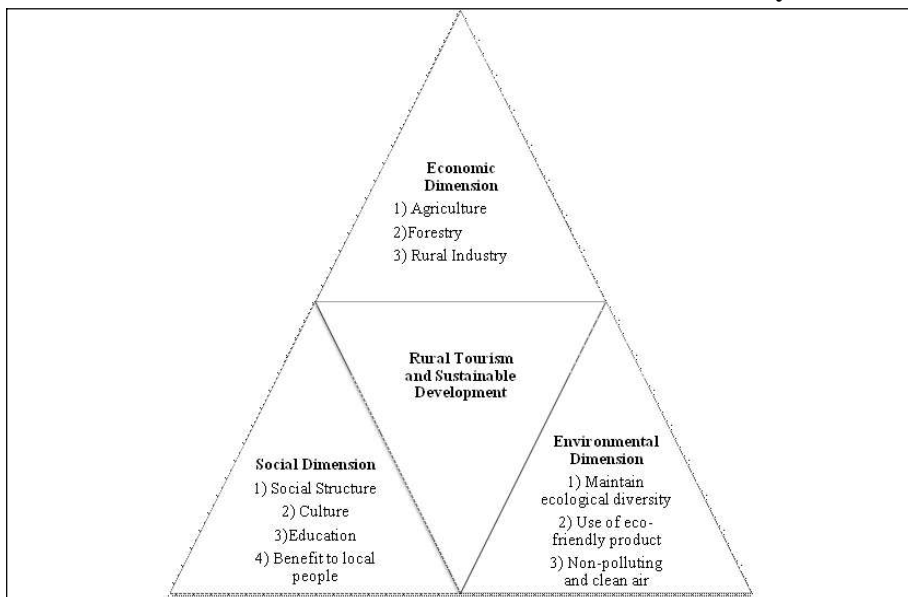


Figure: 1 explains that through rural tourism not merely change the circumstances of rural environment rather make a balanced socio, economic and environmental development of the region. As a outcome profound changes can be seen in host community and local entrepreneurs. In rural tourism both host and tourists behave sensibly towards the environment. In this tourism, tourists always have an opportunity to direct involvement in the activities so they gain a real experience.

New Business Opportunities- It is a fact that rural tourism is still a minority tourism market in India but can make a valuable contribution for rural community and economy. It can create decent job scope in rural belt. Promotion and marketing measures taken by the government for rural tourism, it is expected that more number of tourist will visit rural belt. Rural tourism helps to expand a complementary business avenue such as local food, hospitality services, recreational activities local arts and crafts etc.

Opportunities for youth- career options are enhanced with the opportunities for training and direct involvement in running tourism business.

Conservation of Rural Culture and Heritage- Rural culture and heritage can be maintained partly through the rural museum which may attract good number of tourists. Museum may play an important role to preserve culture of a particular community or a region.

Sale of Arts and Crafts can be Increased- As India is multicultural country, so different state has their own arts and culture. Through rural tourism demand of arts and crafts are well observed. While visiting rural belt tourist love to purchase rural arts and crafts like stone carving, bamboo craft, pottery, paper painting, pattachitra, silk sarees etc. Many communities now use arts and crafts festivals as a marketing mechanism to attract and encourage tourist to come to their areas.

Opportunities of Digital Technologies- Digital technologies and platform have become a new opportunity for rural entrepreneurs to improve their market access and it helps to reduce geographical boundaries and other marketing channels. Tourists prefer to book bulk items of arts and crafts through digital mode which provides new business opportunities to the host communities.

Environmental Improvements- Environment of the rural area will be developed with proper infrastructure, sanitation, sewage, electricity, communication etc. These developments can be assisted by tourism revenues. With more tourist flow host communities as well as tourists will learn about preservation of natural habitats, biodiversity etc.

Conclusion- Rural tourism can be a good option for sustainable development in rural belt and if proper marketing is done for the tourism product, definitely the business will grow. Rural tourism has emerged as an important element for sustainable human development, economic growth, employment generation, gender sensitization, social integration and environmental conservation.

Local involvement, inclusion of local people for policy making, sustainable marketing, environmental management will help to grow rural sites for tourism in a better way. It will also help to inflow of resources from urban to rural areas. Moreover migration from rural belt to urban belt can be reduced.

Hence, to maintain the sustainability of host community and tourists should support: i) local economies not at the cost of environmental degradation. ii) need to promote traditional tourism products iii) continuous improvement, qualification, and training for local people iv) need to assess existing infrastructure and to identify level of development needed for transport, other infrastructure and amenities. v) as sustainability plays a very important role for the development of tourist sites and tourism business so environment plays a key role for that. Hence all stakeholders in rural tourism should take care about the management and protection of environment.

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An Analysis of offences Relating to Marriage in Indian a Critical Study

• Pinky Sagar
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Abstract- *The sanctity and importance of the marriage has been recognized among all the people of the world. In India, a list of offences against marriage and punishment provided in the Indian penal code, 1860 which had passed during the British era and at that time the social status of woman in Indian was pitiable woman were not independent economically and were considered as an object. The structure of society was different from what its today and several social evils were prevalent during days, polygamy, child marriage and safi system were common and since woman were observed as a property of men, women were subjugated and exploited by men and this led to the framing of such Laws. The investigator in this article will reviews the sanctity of the institution of marriage which is very basic to Indian society, needs to be preserved at all cost, by analyzing the various provisions of Indian penal code 1860, specifically deals with offences relating to marriage.*

Keywords- *Marriage, Punishment, Social status, Woman*

Introduction- Marriage is a legitimate relationship between man and women but there are certain offences like Bigamy, adultery, an mock marriages that threaten this institution and the society. Section 493 to 498 – 498- A of the Indian penal code deals with the offences ovulating to marriage.

Mock Marriage- As per the section, mock marriage means invalid marriage. It is a cohabitation or sexual intercourse by a man, married or unmarried with a woman of any age whom he induces to be his wife, but in fact his concubine. This form of marriage depends upon the race or religion to which the parties to the marriage belong to, if the parties to the marriage belong to the same race or religion then they can change their religion.

Ingredients of section- To constitute the offence under section – 493 the following system needs to be satisfied;

- The accused cohabited with the prosecutrix.
- He was not legally married to her, Dr. Manisha Saini J.V Jain College Saharanpur (U.P) Associate professor
- She has consented to the cohabited to the cohabiting believing that she had been lawfully married to him
- Such belief in her was induced by deceit on the part of the accused

- But the section [2] Seeks to punish Fraudulent or mock marriage. It applies to those situations where a Fake ceremony is gone through pretending it too be a valid marriage. As in the case of Kailash Singh v/s State of Rajasthan [3], the accused who was a married man induced a girl saying that he was unmarried. The parents of the girls also believed his words.

Offences relating of Marriage- Offences pertaining to marriage are provided in section 493 to 498 of the Indian Penal Code 1860 (IPC) these laws deal with the various aspects of a marriage, and their subsequent felonies. The most illuminated of these is section 498 –A otherwise known as the cruelty law. This law along with the Domestic Violence Act (Passed 2005) aims to provide substantial protection to female victims of cruelty and domestic violence with the incrementally increasing cases of such nature it was observed that such legislation was necessary to ensure that the Fundamental Right to life and Dignity, entrusted upon each citizen by the constitution of India is complied with. Furthermore cruelty was also made to be a substantial ground for the dissolution of a marriage, too.

Other sections of Chapter XX includes-

- Mock marriages (Section 493)
- Bigamy section (Section 494 and 495)
- Fraud Marriage (Section 496)
- Adultery (Section 497)
- Criminal Elopement (Section 498)
- Section 50 of the Evidence Act and section 198 (I) (C) of CrPc
- Section 17 of the Hindu Marriage Act
- Section 108 of the Evidence Act
- Article 44 of the Indian Constitution
- Uniform Civil Code
- 498 A offence against dowry death

Land mark Judgments-

- Subhansu Sekhar v/s Samantray The State (2002)
- Alamgir v/s State of Bihar (1958)
- Mohd. Hoshan V/S State of A.P (2002)
- Sushil Kumar Sharma V/S Union of India (2005)

Fraudulent conduction of wedding ceremony without a lawful, genuine marriage- Section 496 provides for a jail term extending up to as long as seven years along with a fine, for anyone who dishonestly, clubbed with a fraudulent intention, goes through the wedding ceremony, despite knowing that he is not these by lawfully married.

Adultery- Earlier, Section 497 gave way for Jail term up to five years with or without a fine, to a person who had sexual intercourse with the wife of another man without the consent or connivance of that man. If it was not rap, the man would be guilty of the offence of adultery meanwhile, in such a case, the wife would not be punishable as an abettor. It is important to note that this

law has since been decriminalised but continues to be strong grounds for divorce.

Eriticing a married woma for illicit sexual relations- Section 498 of the IPC provides for a two year Jail term, with or without a fine, for anyone who takes, or conceals, or detains or entices away, any woman who is and whom any woman who is and whom he knows or has reason to believe to be the may of any other man, with the intent that she may have illicit intercourse with any person.

Essential ingredient are-Take or entices away.

1. Woman to be a married woman
2. The person enticing or taking away the married woman should have knowledge that she is the wife of another man.
3. Taken from control of husband or person having care of here on behalf of here husband,.
4. Intention to have illicit intercourse
5. Conceals or detains any such woman

[Alamgir V/S Sate of Bihar AIR 1969 S.C 436]

[Section 498-A Cruelty by husband or relatives of husband]

Whoever being husband or relative of husband of a woman, subject such woman to cruelty shall be punishment with imprisonment For term which may extend to three years and shall also be liable to five.

[Inder Raj Malik v/s Sunita Malik 1896]

Held that word cruelty is defined in explanation which inter alia say that harassment of a women with.

[meaning of cruelty]Cruelty includes both physical and mental torture. Willful conduct in explanation (a) to section 498- A IPC can be inferred from direct and indirect evidence. The word cruelty in the explanations clause attached to the section has been given a wider meaning.

It was held in (kaliya perumal v/s state of Tamil Nadu) that cruelty is a common essential in offences under both the section 304-B and 498 A of IPC Section 304-B For the offence of dowry death can be convicted for an offence under sec- 498 A of IPC. The meaning of cruelty is given in explanation to section 498 A. Section 304 B does not contain its meaning but the meaning of cruelty or harassment as given in section 498 A applies in section 304 B as well.

Offences Outraging the Modesty of a woman- The offences of outraging the modesty of a woman has been dealt with in the Indian penal code under section 509 and section 354.

[Mrs Rupan Deol Bajaj & other v/s kanwar pal singh gill & anr]

The essential ingredients of the offence under this section – 354.

1. A woman was assaulted or criminal force was used against her.
2. The accused intended to outrage her modesty or knew that her modesty was likely to be outraged.
3. Section 354-A Sexual Harassment
4. Section 354-B Section 354- C Voyeurism
5. Section 354- D stalking

Rape- “Rape is the highest in the class of all indignities, one which can never be fully righted and that diminishes all humanity “ supreme court of California in M V City of Los Angelss, Rap is a type of sexual assault initiated by one against the other's consent with the purpose of forces sexual intercourse. In India, rape has been the subject of definition under section 375 of the Indian penal code with it's aggravated forms given under section 376 of the IPC. There sections were substantially amended on the recommendations of the Justice J.S Verma committees that was setup in wake of the 16 Dec 2012 gang rape case.

State of Punjab v/s Gurmeet Singh

Queen v/s Flattery

State of Maharastra v/s Prakash

Mathura Rape Case

Queen v/s Elbekkary

State of Himachal Pradesh v/s Raghbir Singh

Conclusion - Matrimonial offices are multi-causal and Multi- Dimensional in nature. It is impossible to justly address them with a strait jacked Method. Among the various kind of offences against woman prevalent today are the marital offences including bigamy. Adultery criminal elopement among other and the one that is probable the most common offence is cruelty.

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Hate Crime: A Rising Menace

• Ashhad Ahmad

Abstract- *India has seen a rigorous rise in hate crimes towards minority communities in the last five years. Muslims and Dalits constituted a significant share of the victims of religious hate crimes. Being a Secular, Democratic, Republic, the responses from the state administration and machinery are contradicting these constitutional safeguards. Apart from that, leaders of the ruling political party and their affiliated organizations have played a crucial role in polarizing the country and further accelerating the hatred and violence. Later on, the fairness and credibility of state apparatuses were questioned due to its partial interventions in the hate crime cases. This article intends to analyse the religious hate crimes in India, further focusing on the mob lynchings in the last five years. The paper brings into limelight the discourse of hate and power in the context of communalism in India.*

Keywords- *Hate Crimes, Mob Lynching, Communalism, Hate Speech, Ethnic violence etc.*

Introduction- The Indian subcontinent is witnessing a sudden rise in the incidents of hate crimes in contemporary times. Incidents under this generally involve violence against an individual or a group, of a particular social group, by mobs, mainly on religious matters, which create turmoil in the overall Social Structure. Motivated by hate and biased mindset, hate crimes are often aimed at sending a message to a particular group of society to instill in them fear and make a statement. Here in this article, we would be dealing with the meaning, history, nature and consequences of Hate Crimes in the Indian context.

What is Hate Crime? According to the Organization on Security and Co-Operation in Europe (OSCE), Hate crimes are criminal acts committed with a biased motive.¹ Also known as a “bias-motivated crime” or “bias crime” they are not defined as a legal offense but as a concept which occurs when a perpetrator targets a victim of a particular social group.

Hate crime refers to criminal acts which are motivated by bias against an individual or social group because of certain differences, majorly in their religious practices and customs. In contemporary times its meaning has proliferated beyond lynching, discrimination and offensive speeches and now encompasses speech that is insulting, derogatory or incites and violence. In totality, Hate Crimes could be defined as an attack on a person's rights entrusted to him thereby affecting not only him but the social structure as a whole which in many ways makes it more heinous than many other Criminal Offences. Most common grounds of hate speech are race, ethnicity, religion or class.²

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Hate crime refers to criminal acts which are motivated by bias against an individual or social group because of certain differences, majorly in their religious practices and customs. In contemporary times its meaning has proliferated beyond lynching, discrimination and offensive speeches and now encompasses speech that is insulting, derogatory or incites and violence. All of this results in disturbing the harmony and order in society at large. It affects its victims drastically which chillingly affects a victim both mentally and physically, resulting in his/her mental and physical dilapidation.

To determine whether a crime is a hate crime or bias crime, the motivation behind the act is to be taken into consideration. A hate crime is always motivated by bias or hatred of a person or social group against another person or social group because of differences arising out of race, religion, ethnicity, customs, practices and the like. It has a psychological and emotional impact that extends far beyond the victim. Attacks motivated based on such biases also undermine the person's rights given to him by virtue of being born as an Indian Citizen. Thus, in totality Hate Crimes could be defined as an attack on a person's rights entrusted to him thereby affecting not only him but the social structure as a whole which in many ways makes it more heinous than many other Criminal Offenses.

History of Hate Crimes- The concept of hate crime emerged in the United States in the late 1970s, but such crimes even occurred before that, Roman persecution of Christians and the Nazi slaughter of Jews being imminent examples of the same. Cases of Hate crimes in the past were committed against the members of oppressed groups which were motivated by biases against the other community making it substantially different and more dangerous than other kinds of crime.

Some of the most imminent examples of hate crimes include lynching of Afro-Americans in South America, and Chinese in the West, assaults on LGBTQ Community; xenophobic responses to a variety of minority ethnic groups and the like. The concept got a distinct recognition in 2003 when the term "hate crimes" was first used by the OSCE, the Ministerial Council where the member states recognised it and made commitments to make legislations to curb such crimes.

In India, Hate Crime is not a new concept. There were incidents related to such crimes since the very formation of the nations which were majorly based on religion. Apart from religion-biased crimes, there was also the presence of Caste and Gender-based violence and an event marking the inception of Hate Crimes in India cannot be pinpointed. As per a report by NCRB, India has the majority of hate crimes based upon Caste and Religion, followed by gender-biases which are increasing at an alarming rate. In India, Hate crimes like lynching and Hate Speeches not only affect the victim but also alienate entire communities.

As per the report of Hate Crime Watch as of April, 2019, there were 282 Hate Crimes which resulted in 100 deaths. Muslims were in a majority of 57% incidents victims to such crimes followed by Christians in 15% cases and then Hindus, in 13% cases. All of these data simply show the alarming

rate at which such crimes occur and how it has deep-rooted itself in society.

Nature and Characteristics of Hate Crime- Hate Crimes are not like any other crime in India and have a sense of bias attached to the motive which is not there with any other type of crime. There is a certain nature and characteristic of hate crimes which makes it differentiable from any other criminal offenses and they are as follows-

1. Hate Crimes though different in nature are always based on a crime which is penal and therefore imposes some form of punishment. This makes hate crime an offense under domestic criminal law and enunciates its criminality.
2. A hate crime is always motivated by biases. It is only when there is a bias that a criminal act forms into a hate crime. The factor to be observed is the selection of a victim based on prejudice based upon his religion, community, gender and the like.
3. Hate crimes are an extreme form of discrimination. It is committed out of some big difference present in the community against the other which makes the former discriminate against the latter and in dire condition commit crimes against them because of their biases.
4. In the case of Hate crimes, the target is always an individual or a group of individuals with common characteristics that are noticeable and result in the differences and biases.
5. Hate crimes have a varying degree of occurrences which ranges from vandalism to physical abuse and even sometimes homicide. The gravity of hate crimes is based upon the brutality and cruelty to which they amounted and its effect on the society as a whole.

Hate Crimes in India

1. Introduction

- India witnessed over 200 suspected hate crimes, including cow-related lynchings and honour killings in 2018.
- For a demographically diverse country such as India, hate crimes - including crimes of contempt - are a disaster.

2. Recent Incidents

- Two Muslim men beaten by mobs in Jharkhand and Mumbai, demanding they shout 'Jai Shri Ram', one so mercilessly that he died.
- A tribal man was lynched in Tripura on suspicion of being a cattle thief.
- 24 men accused of being cattle smugglers, beaten and made to shout 'Gau Mata ki Jai', in Rajasthan

3. Present Status

- Studies of hate crimes in India show that they have steadily risen over the past five years.
- Amnesty International India documented 721 such incidents between 2015 and 2018.
- The more common hate crimes, they found, were honor killings and

'cow-related violence', that was rare earlier but has become more frequent over the past five years

- According to Hate Crime Watch, crimes based on religious identity were in single digits until 2014, when they surged from nine in 2013 to 92 in 2018
- Rarely did bystanders attempt to stop the violence or police arrive on time to do so
- In both studies, Uttar Pradesh topped the list of States with the largest number of hate crimes for the third year.
- According to a study, there are at least 45 politicians in our newly elected union legislature who have indulged in hate speech over the past five years.
- Human Rights Watch India pointed out that only some States had complied with the Supreme Court's orders to designate a senior police officer in every district to prevent incidents of mob violence.
- There is also incitement to violence through social media.

4. Concerns / Challenges

- There is a rising tide of concern, both domestically and internationally.
- Internationally, India has begun to feature prominently on a growing list of countries marked by hate crime, including hate speech in electoral campaigns.
- We have a number of sections in the **Indian Penal Code** that can be used to punish or even prevent hate crime, but they are disparate and few policemen are aware of them.
- Fear to use them in areas whose political leaders mobilize through hate speech.
- Worldwide data show that hate speech encourages or legitimizes acts of violence
- In religiously motivated hate crimes, the accused are often released on bail, and the prosecution of suspects can take years
- The true extent of hate crimes in India is unknown because the law – with some exceptions – does not recognize hate crimes as specific offenses.

5. Court Directives

- In **2018**, the Supreme Court directed Central and State governments to make it widely known that lynching and mob violence would 'invite serious consequence under the law'

6. International Practice

- **Germany** amended its **Criminal Procedure Code**, dealing with sentencing in violent crime, to say the sentence must be based on consideration of 'the motives and aims of the offender, particularly where they are of a racist or xenophobic nature.

- France has a draft Bill to prohibit hate speech, and Germany has already enacted one.

Types of Hate Crimes in India and Provisions Connected with Them

1. Lynching and Mob Violence- It is a form of violence in which a mob, under the pretext of administering justice without trial, punishes and inflicts torture on a presumed offender, sometimes even resulting in murders. In 2018, the Supreme Court described lynching as a “**horrendous act of mobocracy**”. The Court exhorted the Centre and State governments to frame laws specifically to deal with the crime of lynching and laid down certain guidelines to be incorporated in these laws including fast-track trials, compensation to victims, and disciplinary action against lax law-enforcers.

In *Tehseen S. Poonawalla v. Union of India*³ Hon'ble Supreme Court has defined Lynching as targeted violence which affects the human body and is against private and public property. In India, these are incidents where a group of people kill a person allegedly for an offense which is usually based on some rumor. The belief and practice of one community makes some other community dislodged of its emotions which often leads to an unlawful act of mob violence. In a report of 2018, states like Uttar Pradesh, Karnataka, Haryana, Gujrat, Delhi, Rajasthan and Madhya Pradesh were the major for cases lynching and mob violence.

In the recent few years the spread of fake news, especially about child-lifters on prowl, have caused panic and unrest across the country leading to the death of many in various mob lynching episodes⁴.



According to the reports, at least 27 people have been killed in the country due to several fake media videos and messages containing similar themes of outsiders stealing children in a span of one year.

While the data now has been stopped to collect by NCRB because the data became unreliable as the crime was not defined.⁵ The Ministry of Home Affairs (MHA) informed the Lok Sabha that the National Crime Records Bureau (NCRB) discontinued data collection on mob lynching, hate crimes and cow vigilantism. Earlier, NCRB collected data on mob lynching, hate crimes and cow vigilantism in 2017.

It was observed that the data was unreliable as these crimes etc. have not been defined. The term 'anti-national' is not defined in law. The word "anti-national has not been defined in statutes".

- However, there is criminal legislation and various judicial pronouncements to sternly deal with unlawful and subversive activities which are detrimental to the unity and integrity of the country."
- **Article 31D of the Constitution**, which defined "anti-national activity", and was "inserted during Emergency", was omitted by a later amendment.

2. **Hate Speech-** 'Hate speech' is often posited against 'free speech', as if they were complementary ideas. In truth, the concept of 'free speech' stems from the idea of equality: from the democratic impulse; whereas the tendency towards hate mongering is mired in the oldest, most archaic 'bullying for power'. In that sense, 'hate speech' is almost a misnomer, for it isn't a speech problem: it is a problem of systemic bullying with an eye towards exclusivist, political power. The incitement is not *always* meant to lead to physical violence; it is in itself violent in its persistent stigmatizing and calls towards exclusion. 'Hate speech' does not refer to offensive, or foul-mouthed speech directed at a people, or even to vitriolic complaints directed at the government. It is speech that can cause *actual material harm* through the social, economic and political marginalization of a community. 'Hate speech' must be understood as linked to systemic discrimination and eventual political marginalisation of a community. It's not just random vitriol: it feeds into a broader context of discrimination.⁶

In its **267th Report, the Law Commission of India** says: "Hate speech generally is an incitement to hatred primarily against a group of persons defined in terms of race, ethnicity, gender, sexual orientation, religious belief and the like ... This, hate speech is any word written or spoken, signs, visible representations within the hearing or sight of a person with the intention to cause fear or alarm, or incitement to violence."⁷

Hate speech is generally defined as a restriction on free speech that aims to prevent or prohibit communication that exposes a person, a group, or a segment of society to hatred, violence, ridicule, or indignity.

What does Indian law say about it? The major legal provisions that deal with provocative speeches and expressions that seek to punish 'hate speech' are widely taken to be **Sections 153A and 505 of the Indian Penal Code**.

Promotion of animosity between different groups on the basis of religion, race, place of birth, residence, language, etc., and doing acts harmful to the maintenance of harmony are both crimes punishable by three years in prison under **Section 153A**. If it occurs at a place of worship, or an assembly engaged in religious worship or religious ceremonies, it is punishable by a **five-year sentence**. Furthermore, making "statements conducive to public mischief" is punishable under **Section 505 of the IPC**. The statement, publication, report, or rumor that is punishable under Section 505(1) should be one that promotes armed forces mutiny, or causes such fear or alarm that people are induced to commit an offense against the

state or public tranquility; or is intended to incite or incites one class or community against another class or community.

This can result in a three-year prison sentence. Making remarks that create or promote hostility, hatred, or ill-will between classes is illegal under **Section 505(2)**. If the same offense occurs at a house of worship or any assembly engaged in religious worship or religious rites, it can result in a **five-year prison sentence under subsection (3)**.

What is the Law Commission's Recommendation? Instead of being subsumed in the current sections covering inflammatory acts and speeches, the Law Commission proposes that distinct crimes be added to the IPC to criminalize hate speech more specifically. It proposes the addition of two new provisions, **Section 153C** and **Section 505A**.

According to the draft, anyone who (a) uses gravely threatening words, spoken or written, signs or visible representations, with the intent to cause fear or alarm; or (b) advocates hatred that causes incitement to violence, on grounds of religion, race, caste or community, sex, gender identity, sexual orientation, place of birth, residence, language, disability, or tribe, should be prosecuted. It suggests a two-year prison sentence and/or a **₹5,000 fine**, or both, for this offense.

Its draft for **Section 505A** proposes to criminalize words, or display of writing or signs that are gravely threatening or derogatory, within the hearing or sight of a person, causing fear or alarm or, with intent to provoke the use of unlawful violence against that person or another". It proposes a prison term of up to one year and/or a fine up to **₹5,000** or both.

The M.P. Bezbaruah Committee⁸ and the T.K. Viswanathan Committee⁹ both proposed adding sections to the IPC to punish acts and statements that promote racial discrimination or amount to hate speech. Currently, the Committee for Criminal Law Reforms, which is studying more broad reforms to criminal law, is looking into establishing specific rules to deal with hate speech.

Judicial Pronouncements- The Supreme Court of India in the case of **Pravasi Bhalai Sangathan v. Union of India (2014)** has said as much when it stated that 'the idea of discrimination lies at the heart of hate speech'. Its impact is not measured by its abusive value alone, but rather by how successfully and systematically it marginalizes a people:

"Hate speech is an effort to marginalize individuals based on their membership in a group. *Using expression that exposes the group to hatred, hate speech seeks to delegitimize group members in the eyes of the majority, reducing their social standing and acceptance within society.*"

The Supreme Court in the case of **Amish Devgan v. Union of India (2020)** has also recognised the principle of 'variable context' and held that contextually "all speeches are not alike. This is not only because of group affiliations, but in the context of dominant group hate speech against a vulnerable and discriminated group, and also the impact of hate speech depends on the person who has uttered the words."

Hate speech case: If said with smile, no criminality, says Delhi HC- The court was hearing CPI(M) leader Brinda Karat's petition against a lower

court order in which the prayer for registration of FIR against Union Minister Anurag Thakur and MP Parvesh Verma for their alleged hate speech was declined.¹⁰

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Hate speech case: If said with smile, no criminality, says HC

EXPRESS NEWS SERVICE
NEW DELHI, MARCH 25

IN A case related to alleged hate speeches connected to the Northeast Delhi riots, the Delhi HC Friday said a speech given during election is different from one during ordinary times and sometimes things are said to create a 'mahaul' (atmosphere) without there being the intention.

Justice Chandra Dhari Singh observed that if something is said with a smile, then there is no criminality, but if something is said offensively, then there may be criminality. The court was hearing CPI(M) leader Brinda Karat's petition against a lower

court order in which the prayer for registration of FIR against Union Minister Anurag Thakur and MP Parvesh Verma for their alleged hate speech was declined.

"Was that an election speech or speech in ordinary time? If any speech is given during election, then it's a different thing. If you're giving a speech in the ordinary course, then it is instigating something," said the court, adding, "If you're saying something with a smile then there is no criminality, if you're saying something offensively, then criminality."

"Because we are also in democratic ... you also have the right to speech and all these things..." said the bench. The court has reserved its verdict in the case.

Initiatives to Combat Hate Crimes- Here are some following Point Plans to Fight Hate Crimes ;

1. Recognize and condemn violent hate crimes whenever they occur. Senior leaders must promptly, emphatically, publicly and consistently send messages that violent crimes that appear to be motivated by prejudice and fanaticism will be thoroughly investigated and prosecuted with due severity.
2. Adopt laws that specifically address hate crimes. Recognizing the particular harm caused by violent hate crimes, governments should enact laws codifying specific crimes or establish stricter sanctions for violent crimes based on race, religion, ethnicity, sexual orientation, gender, gender identity, physical and mental identity of the victim, disability or other similar state.
3. Strengthen law enforcement and the persecution of offenders.

Governments should ensure that hate crime perpetrators are accountable to the law, that the enforcement of hate crime laws is a priority for the criminal justice system, and that records of their enforcement are well documented and published.

4. Provide adequate guidance and resources to law enforcement. Governments should ensure that police and investigators, as first responders in violent crime cases, receive specific instructions and have the procedures, resources and training necessary to identify, investigate and record the causes of crime, distorted motives and those that lead to legal proceedings action required for hate crimes.
5. Conducting parliamentary, inter-institutional or other special inquiries on the problem of offenses motivated by prejudice. These public and official investigations should stimulate public debate, seek ways to better respond to hate crimes, and seek creative ways to address the roots of intolerance and discrimination through education and other means.
6. Creation and strengthening of anti-discrimination organizations. Official anti-discrimination and human rights organizations should have the power to fight hate crimes by monitoring, reporting and supporting victims.

Conclusion- Change is constant and nature is always evolving. With the changing requirements and circumstances we need to challenge the era of Hate crimes because this causes a huge loss to life, resources and time. The effective changes will emerge if these facets are taken care of. We need to have strict law reforms as well as a good moral education system. Criminals are studied with their behavior so that after knowing the cause we can conclude the effective reforms and this could be done by focusing on all the aspects and by raising the voice against it. Be it majority or minority the violence is leading the humans nowhere and therefore as a recent example Australia has allowed LGBT marriage nationwide and this is an example how evolved mindset can bring change, peace and harmony and this is the ultimate goal to attain the desired results. More accepting nature and understanding the importance of adapted and revamped structure would give society a good head start.

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9. An expert committee headed by former Lok Sabha secretary general TK Viswanathan to deal with cybercrimes, especially online hate speech, has submitted its report to the Union Home Ministry. The committee was formed after the Supreme Court struck down Section 66 A of the Information Technology (IT) Act, 2000 in *Shreya Singhal vs. Union of India*.
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Position of Altruistic and Commercial Surrogacy: An Appraisal

• Qazi Nadeem Alam

Abstract- *Surrogate motherhood has both advocates and detractors, each with strong arguments in favour of their respective thoughts. And it is also important to discuss both sides of the argument to get, understand the actual picture of surrogacy arrangements. It is very hard to visualize the child as the subject matter of trade. Children are after all the fruit of an intimate experience of love, not of money, which occurs far away from any commercial activity.*

Keywords- *Altruistic Surrogacy, Commercial Surrogacy.*

Introduction- Though, poor parents across time and place have viewed their children as possible economic assets, weighing their ultimate economic contribution in rice fields or factories, against the costs of carrying them through childhood.¹In the same way, surrogacy has become a global trade in countries like India, which has given rise to many queries leading to continuous political debate for the last many years. The globalization of ARTs has overwhelmingly transformed women's reproductive lives and motherhood itself. ARTs have brought women's reproductive bodies into the public techno-scientific domain and bringing not only pregnancy and delivery, but also conception under the preview of medical control, sexuality and maternity are separated and motherhood becomes fragmented into genetic, gestating, and nurturing segments.²

Considering all those factors, surrogacy has now become an assemblage of numerous genuine social, legal and ethical challenges, which is being closely examined by feminists, anthropologists, sociologists and lawmakers alike.³

Moreover, feminists have denounced surrogacy as the ultimate form of medicalization, commodification and technological immigration of the female body and as prostitution and slavery resulting from economic and patriarchal exploitation of women.⁴

Introduction- Surrogacy arrangements are termed as either commercial or altruistic, considering the financial involvement in the respective arrangement. All opponents of surrogacy mainly prefer their contention on surrogacy as an ethically disgusting practice, especially when it practices like a commercial deal. Though, monetary transaction is the main criticism associated with commercial surrogacy, which centred on 'buying' and 'selling' of the child. But, one cannot ignore the helpful action of altruistic surrogacy, while it, in reality, opens the door to all kinds of possible abuse.

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Many of the opponents forwarded their views on religious grounds, whereas others judge it using rational, legal or political criteria. It also pleaded that surrogacy is tending towards a critical and complex child-parent relationship that finally harms the tradition of the family. On the other hand, some feminists oppose surrogacy because of its political and economic context.

Hence, they disagree with the view that women liberally choose to become surrogates. They argue that coercion at the societal level, rather than the personal level, causes poor women to become surrogate mothers for the rich.⁵

Some feminists also prefer to term surrogacy as reproductive prostitution. Further, the antagonists of surrogacy practice consider that it is a menace to the health of the surrogate, due to being unaware of the risk to her health and also the kind-heartedness of giving away the child while agreeing.

However, advocates in favour of surrogate motherhood propose it as an empathetic solution to the problem of infertility. It is seen that infertility affects about 10-15% of couples in the reproductive age group.⁶ They note that infertility is common and affects almost one out of every six couples who wish to have children to whom they are genetically related.⁷

Besides this, they assert commercial surrogacy contract is a contract to bear a child, not to sell a child and payment to a surrogate is considered as a fee for gestational services, just like Dr services. Surrogacy is also supported on the ground that society is served best when the liberties of individuals are maximized and also mention that in a successful surrogacy arrangement, all parties concerned are benefited.⁸

Through which the intended parent(s) get a child and the surrogate receives a monetary reward with the great satisfaction of helping someone needy. One more argument is that though adoption is a means to have a child, it does not adequately fulfil the desired needs of infertile couples who wish to have a genetically linked baby.

In favour of surrogacy arrangements, liberal feminists and their supporters forward their views as a woman's right to use her body as she chooses, and to prevent women from entering into surrogacy contracts implies is to deny them both autonomy and reproductive self-determination.

Every country in the world has a different standpoint on surrogacy. One thing is very clear that traditional surrogacy involves the union of the sperm of the intended father and the egg of the surrogate mother and both the intended father and the surrogate mother of the home country, the intended father would be the surrogate child's legal father and the surrogate mother would be the child's legal mother.

But the complex problems of parentage, custody, nationality etc. arise while the gestational surrogacy arrangement involves gametes of the donor, done through AI or IVF and parties concerned are from different jurisdictions.

The Indian society and legal system differ from the rest of the world. The concept of surrogate mothering in India raises a broad host of concerns

from both legal and social standpoints in the practice among three stakeholders: the commissioning parent, the surrogate mother, and the surrogate child.

Position of Altruistic and Commercial Surrogacy in Different Nations- Domestic laws and policies of the states are different on Surrogacy. Some states even prohibit surrogacy either altruistic or commercial.

Some others regulate surrogacy arrangements by specific Laws. In the current aspect surrogacy arrangements are in a state of flux, because most of the States are in process of making laws on Surrogacy or in the state of amendment of existing laws or doing research for legalising or prohibiting the surrogacy arrangements.

However, the overall situation on surrogacy arrangements can be examined by classifying different countries of the world into three categories-

1. States which prohibits surrogacy arrangements, or where surrogacy arrangements are illegal such as Germany, France, Sweden, Spain, Italy, Hungary, Belgium etc
2. States which expressly permit and regulate surrogacy, or where surrogacy arrangements are legal such as Israel (the first country of the world to legalise surrogacy under Surrogate Motherhood Agreements Act 1996) and the United Kingdom, United States(some States, California, Florida), India (law is in process of making) South Africa, Russia, Korea, Iran, Greece, Canada, Australia, Brazil, Hongkong, etc
3. Some countries are silent on the practice of surrogacy neither ban it nor regulate the practice like China, Japan, New Zealand and Thailand (the law was recently made to prohibit commercial surrogacy in Feb 2015).

Prohibiting Countries- There are certain countries where surrogacy arrangements are prohibited by express legal provisions. These countries do not only prohibit surrogacy arrangements but declare it a criminal act and provide the punishment for any such activities. The prohibition in these countries is on the ground that human beings are not subject to sale and purchase and such arrangements are a violation of human dignity.

Germany- Surrogacy is prohibited in Germany. Surrogacy arrangements are violative to the provision of the Constitution of Germany which provides that human dignity is inviolable.⁹

The reason for prohibiting surrogacy is the violation of the child's and the surrogate mother's human dignity, reducing both to objects of (commercial) contracts. Furthermore, grave psychological damage might occur to a child growing up with one mother who gave birth and another from whom it originates genetically (split biological motherhood). In contrast to adoption or sperm donation both also lead to 'split' parenthood, the birth procedure creates not only a social but also a special biological bond between child and birth mother. Both are thus considered as victims.

The mutual bond, as well as a traditional picture of motherhood, has to be protected.¹⁰ There is no distinction between altruistic and commercial surrogacy in Germany. The Embryo Protection Act, 1990 (ESchG) and Adoption Placement Act (AdVermiG) are two important legislations of Germany that deal with the surrogacy arrangement specifically.

France- France is a Prohibitory State. Surrogacy arrangements are prohibited in all its forms. Though there is no specific law on the subject, the application of substantive law makes surrogacy arrangements unenforceable and even punishable in France. Surrogacy arrangements are against public policy and are void under civil law, and such practice is punishable under criminal law.

Current Approach- A liberal approach to surrogacy is in demand in France because a high number of French Couples are performing surrogacy abroad. In 2008 the Senate Commission submitted a Report, recommending that surrogacy should be allowed in specific circumstances and strictly regulated.¹¹

The revision of the Bioethics Act took place in 2011, which provides that prohibition on the establishment of maternity between the intending mother and the child should be maintained while legal alternatives should be found to facilitate family life without legal parentage between the intending mother and the child. The revision of the Bioethics Act was adopted, but it did not bring about any change regarding the prohibition on surrogacy.

Spain- In Spain Surrogacy is not recognised. The Parliament of Spain adopted an anti surrogacy approach in 1980 via Human ART¹² and made it clear surrogacy has no legal effects in Spain. However, in recent concern, confusion was created when the liberal approach was adopted by the administrative authorities of Spain in the case of foreign surrogacy in the establishment of parental relationships.

The lack of a specific prohibition entails that the Spanish law also lacks sanctions against those persons involved in the practice. Where the surrogacy takes place in Spain there is no sanction other than the civil denial of the intended effects. There are no consequences from the viewpoint of the criminal law, at least if the practice is entered into openly.

If however, a woman pretends that she has given birth, and another woman, who does give birth, hands over the child to the first woman, both of them would commit a criminal offence (Articles 220 and 221 of the Spanish Civil Code).¹³

Japan- Surrogacy is legally prohibited in Japan. In April 2008 the Science Council of Japan recommended in principle legal prohibition of surrogate birth.¹⁴

However, the Science Council acknowledged that even if law prohibits surrogacy in Japan, parents may still arrange a surrogate birth overseas, so the government needed to clarify the child's legal status.¹⁵ The Science Council recommended that Japanese law should recognise the birth mother as the legal mother and establish parenthood between the social parents and child only by formal adoption.¹⁶

Due to the lack of any legal framework in Japan for Surrogacy

contracts, the practise of surrogacy is likely to be banned in Japan and judicial interpretation of the Japanese Courts also does not support the practice of surrogacy.

China- China takes an anti surrogacy approach. On 20 Feb 2001, The Ministry of Public Health of the People's Republic of China issued 'Administrative Measures for Human Reproductive Technology.'¹⁷

This administrative rule bans all forms of trade in fertilised eggs and embryos and prohibits medical institutions and medical staff from performing any form of surrogacy procedure. It also stipulates that the use of assisted reproductive technology shall conform to China's family planning policy, ethical standards and laws.¹⁸

Moreover, it states that any medical institution which abets surrogacy arrangements in violation of the Administrative measures shall be warned and punished by a fine of not more than 30,000 yuan (RMB) and the relevant responsible personnel shall be subject to administrative liabilities, and when committing a crime, shall be prosecuted for criminal liabilities.¹⁹ In order to complement the Administrative measures, the Ministry of Public Health amended the Ethical Principles of Assisted Human Reproductive Technology and Human Sperm Bank on 23 June 2003.

As mentioned above China has not enacted any national law to regulate surrogacy, the existing legal documents that regulate surrogacy arrangements are the administrative rules made by the Ministry of Public Health.

Under the Constitution and the Legislative Act of the People's Republic of China, the ministry of public health, as a department directly under the state council, has the power to enact the administrative rules within the scope of its authority,²⁰ However, the legal status of such administrative rules is rather low within the Chinese Legislative system, insofar as they can contravene neither the Constitution nor the national laws.

Regulating Countries- There are a group of countries where surrogacy arrangements are legally permissible and regulated by specific legislation. Such as Britain, Australia, Israel, Ukraine, USA, Thailand, Russia etc. These States further classified the surrogacy arrangements into altruistic and commercial surrogacy based on payment to the surrogate.

Countries Permits Only Altruistic Surrogacy- Altruistic surrogacy means a surrogacy arrangement where intended parents pay the surrogate nothing or, more usually, only for her "reasonable expenses" associated with the surrogacy. No financial remuneration beyond this is paid to the surrogate.

This may be a gestational or a traditional surrogacy arrangement. Such arrangements often (but not always) take place between intending parents and someone they may already know i.e relative or friend.²¹ Britain, Australia and Israel Canada are the countries that allowed surrogacy arrangements in altruistic form only.

United Kingdom- Thus Surrogacy arrangements are not illegal in the UK, but there are a range of legal restrictions contained in the Surrogacy

Arrangements Act 1985 which was enacted in response to widespread public concerns about commercial surrogacy.

The 1985 Act prohibits the operation of commercial surrogacy agencies, and any advertising for a surrogate or of willingness to become a surrogate. It also makes clear that surrogacy arrangements are not legally enforceable contracts.

A Report on Surrogacy Law Reform, Nov 2015²² recommended a careful formulation of new legislation on surrogacy which recognises the value of surrogacy as a way of having children and helps to protect and facilitate the altruistic and compulsory nature of surrogacy in the UK while preventing commercialization and sharp practice. Its recommendations are premised on the primary assumption that the welfare of the children born through surrogacy is paramount.²³

Australia- The Legal response to Australia is partial and chaotic. The surrogacy legislation legalises altruistic surrogacy, subject to a number of requirements. Commercial Surrogacy is widely prohibited, but this prohibition appears to be ineffective in preventing Australian intended parents from entering into commercial agreements abroad. It seems that the Australian surrogacy legislation is therefore largely ineffective.

Intended parents have relied on other areas of law, especially federal family law, to gain recognition of their parental responsibilities. The lack of coordination between different areas of law creates uncertainty for the parties and their layers, difficulties for courts in dealing with cases involving surrogacy.

All Australian territories prohibit commercial surrogacy agreements and hold them as criminal offences except in the Northern Territory. In the ACT, New South Wales, Queensland, Tasmania and Western Australia, an entry into a Commercial Surrogacy Agreement is an offence to all parties to the Agreement.²⁴

In Queens land, the making and receiving of payments in excess of reimbursement of the surrogate mother's reasonable expenses are also criminalised.²⁵ In Victoria State mere entry in commercial surrogacy agreement is not an offence but receipt of payment by the surrogate mother for her services in excess of reimbursement is an offence.²⁶

In Southern Australia commercial Surrogacy Agreement is itself illegal and void under the Family Relationship Act 1974.²⁷ Further third party activities to the surrogacy arrangements are also prohibited as procurement of surrogacy arrangements, advertisement related to surrogacy and services to assist in achieving pregnancy in commercial surrogacy agreements are also criminalised. ACT, Southern Australia, Tasmania, and Western Australia criminalise

procuring and brokering surrogacy arrangements.²⁸ Advertisement is criminalised to all seven jurisdictions except NT.²⁹ The surrogacy legislation does not clearly or effectively address cross border surrogacy cases.³⁰

Israel- The Israeli surrogacy law of 1996 made Israel the first and only country in the world where all surrogacy contracts are publicly legislated by a government-appointed commission.

In March 1996, the Israeli government legalized gestational surrogacy under the "Embryo Carrying Agreements Law." The legal regulation of surrogacy in Israel is the effect of the ban on commercial surrogacy in the Baby M case in 1988. The policy of Legalising surrogacy in the country was affected by the three events. First, there is a pragmatic need to reproduce and 'populate the nation'³¹ in the circumstances due to permanent war. Secondly, in *Nachmani v Nachmani*³² The Israeli Supreme Court held with the majority that the right to be a parent is more important than a wish not to be a father.

Countries Permit Commercial Surrogacy- A surrogacy arrangement where the intending parents pay the surrogate financial remuneration which goes beyond her reasonable expenses.

This may be termed "compensation" for pain and suffering" or simply the fee which the surrogate mother charges for carrying the child. This may be a gestational or traditional surrogacy arrangement.³³

There are some countries where commercial surrogacy arrangements are allowed and regulated by the specific legislation such as some of the States of United States of America (USA), Ukraine, and it is allowed without any specific regulation or even any regulation in Thailand (which were prohibited since July 2015), and India (regulation through the Legislation is proposed but the Bill is pending in Parliament).

Ukraine- Ukraine has a liberal approach to Surrogacy. Ukrainian Legislators have proven to be more progressive towards surrogacy than other neighbouring European countries. At present Ukraine is one of the surrogacy friendly countries in Europe.

In contrast to other countries which limits surrogacy or either ban it, in Ukraine from the very moment of conception the intended parents of the child are considered to be the biological parent of the child and their name is mentioned in the birth certificate without any formality as it is and without mentioning the name of a surrogate mother.³⁴

Commercial Surrogacy is legal in Ukraine. Though there is no specific law in Ukraine for regulating commercial surrogacy, some of the provisions of the Civil Code of Ukraine are concerned with commercial surrogacy.

Ukraine signed the Convention of the Council of Europe on Human Rights and Bio medicine without any reservations.

Article 21 of the convention provides that the human body and its parts shall not, as such, give rise to financial gain. Therefore, if the Convention were to be ratified by the Ukrainian Parliament and come into force in Ukraine, becoming part of domestic legislation, it would be prohibited to pay to use a surrogate mother's womb for carrying and delivering a child for genetic parents. At the same time, the convention entering into force will not prevent would-be parents from paying some sort of compensation to a surrogate mother for the loss of earnings, medical care, etc.³⁵ These provisions lay down foundations for a vibrant commercial surrogacy market in Ukraine, since they determine that commercial surrogacy which is not prohibited by the Ukrainian legislation is thus completely legal.³⁶

United States of America- The United States of America is a country from which all debate over the surrogacy arrangements initiated in 1980 in the famous Baby M case. Though the Country at that time adopted the restrictive approach of the New Jersey Supreme Court towards the surrogacy arrangements. But with the passage of time later judicial decisions turned and permitted the surrogacy arrangements into legal ones in Johnson v Calvert, Buzzanca v Buzzanca etc.

At present, though there is no federal law on surrogacy in the country it is the most favourable country surrogacy arrangements. If we understand the surrogacy law of America it is not an easy task because the United States law on Surrogacy is very complicated as different states have different laws.

Only Arizona, the District of Columbia, Michigan and North Dakota are the States which forbid Surrogacy. In the rest of the States, there is either favourable statutes (Delaware, Florida, Illinois, Louisiana, New Hampshire, Tennessee, Utah, Virginia, and Washington) or Highest Court has given favourable decisions (Alabama, Alaska, Arkansas, California, Colorado, Connecticut, Georgia, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, New Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Vermont, Virginia, West Virginia, Washington, Wisconsin and Wyoming).³⁷

Commercial Surrogacy Permitted without Regulation- India is the only country in the world where commercial surrogacy is allowed without any regulation. The only regulation to process is the guidelines issued by the Indian Council of Medical Research in 2006.

India as a state is ill-equipped to enact appropriate legislation to regulate the harmful social side effects of rapid change in advanced reproductive technologies.

As its government is unable to ensure public safety for its citizens who choose to become gestational surrogates, as its Government does not enforce any particular ethical standards in dealing with the complexities in the evolving medical field of infertility.³⁸ Commercial surrogacy is legal in India though it is unregulated because there is no law regulating surrogacy contracts.

Conclusion- The Laws concerned with the surrogacy arrangements of about twelve countries are discussed hereunder three categories as those prohibit surrogacy arrangements (France, Germany, Spain, Japan, China) those regulate and permits only altruistic and prohibit commercial surrogacy (Britain and Australia) and those where commercial surrogacy is permitted either regulated or allowed without any restriction or regulations (some of the States of USA, Israel, Ukraine, India).

Out of all these Countries, Israel provides a unique model for addressing the legal implications of commercial surrogacy, provides a balanced approach between deeply rooted cultural practise, religious traditions and civic life, while respecting individual autonomy. In contrast to Indian inactiveness, American reliance on the state's regulations,

European States' restrictive approach, Israel takes a bold and pragmatic approach to create effective regulation of commercial surrogacy.

The ultimate result of this analysis is that where surrogacy arrangements are prohibited, a liberal approach is required as the European Union of Human Rights recommended in some cases.

Similarly where it is regulated and permits only altruistic surrogacy regulations are proved insufficient as easily restrictive provisions of the statutes can be overlooked.

Further where surrogacy arrangements are legal and commercial surrogacy is allowed, there are issues of exploitation of surrogates, their health issues and the welfare of the child requires immediate attention. Thus in conclusion it can be said that either surrogacy arrangements need a uniform legal approach all over the world with one required concern that is the welfare of the child is paramount or its commercial form should be regulated in a manner at least prohibits its commercialization.

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Women Empowerment Through Skill Development & Vocational Training

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Abstract- *This was the topic of discussion for the skill development of women. How the government participated, to analyze the challenges facing skill development programmes in India, and to highlight the specific needs for improvement in favour of the large number of informal workers, especially women. Women entrepreneurship is gaining importance in India in the wake of economic liberalization and globalization. The policy and institutional framework for developing entrepreneurial skills, providing vocation education and training has widened the horizon for economic empowerment of women. However, women constitute only one third of the economic enterprises. There exist a plethora of successful business women entrepreneurs both in social and economic fields in India. They are performing well. The women group should be indulge with working group in India for better economy development; this comes only through skill development programs & vocational education system. Government of India has also introduced National Skill Development Policy and National Skill Development Mission in 2009 in order to provide skill training, vocational education and entrepreneurship development to the emerging work force. However, entrepreneurship development and skill training is not the only responsibility of Government and therefore other stakeholders need to shoulder the responsibility. In Hindu scriptures, woman has been described as the embodiment of Shakti. But in real life she is treated as Abla. Women are leaving the workforce in droves in favour of being at home. Not to be a homemaker, but as job-making entrepreneurs. The increasing presence of women in the business field as entrepreneurs has changed the demographic characteristics of business and economic growth of the country. Women-owned businesses enterprises are playing a more active role in society and the economy, inspiring academics to focus on this interesting phenomenon. This paper focuses on the problems, issues, challenges faced by women entrepreneurs, how to overcome them with skill development policies of Indian government for and problems faced by them while pursuing the same.*

Keywords- *Skill development for women, women-empowerment, women-entrepreneurship, Skill training, Vocational education*

Introduction- A quiet revolution is taking shape right now among women. Unlike the Quiet Revolution that began in the 1970s which saw women leave the home and enter the workforce in droves, women today are

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leaving the workforce in droves in favour of being at home. But unlike generations of women before, these women are opting to work in the home not ashomemakers— but as job-making entrepreneurs. It is a general belief in many cultures that the role of women is to build and maintain the homely affairs like task of fetching water, cooking and rearing children. Since the turn of the century, the status of women in India has been changing due to growing industrialization, globalization, and social legislation. With the spread of education and awareness, women have shifted from kitchen to higher level of professional activities.

Entrepreneurship has been a male-dominated phenomenon from the very early age, but time has changed the situation and brought women as today's most memorable and inspirational entrepreneurs. In almost all the developed countries in the world women are putting their steps at par with the men in the field of business. The role of Women entrepreneur in economic development is inevitable. Now-a-days women enter not only in selected professions but also in professions like trade, industry and engineering. Women are also willing to take up business and contribute to the Nation's growth. Their role is also being recognized and steps are being taken to promote women entrepreneurship. . Women entrepreneurship must be molded properly with entrepreneurial traits and skills to meet the changes in



trends, challenges global markets and also be competent enough to sustain and strive for excellence in the entrepreneurial arena. This was the topic of discussion during the second Gender and Economic Policy Discussion (GEPD) Forum, co-organized by Heinrich Boll Stiftung, New Delhi and Institute of Social Studies Trust (ISST), New Delhi. Representatives from the skill development sector and the government participated, to analyze the challenges facing skill development programmes in India, and to highlight the specific needs for improvement in favour of the large number of informal workers, especially women.. This brief paper is mainly aimed to encourage further dialogue on the subject with a gender sensitive perspective.



Skill Development And Women's Empowerment - Majority of the workforce in India is in the informal sector. Low income women workers in the informal sector, due to the irregular nature of work and little bargaining power, are amongst the most vulnerable groups in the Indian economy. The National Policy for Skill Development and Entrepreneurship, 2015 envisions skill development as a vehicle for women's empowerment. To impart skills to women, the government has taken steps like the Skill Development Initiative Schemes under Directorate General of Employment and Training developing over 10,000 training providers under which 12.6 lakh woman have availed benefits. There are 402 women ITIs and 1134 women wings in ITIs, which provide training to 1,41,907 women annually (Lok Sabha Starred Question 226). Furthermore, vocational training schemes for women are being run by 10 Regional Vocational Training Institutes (RVTIs). The government has proposed to open 8 more. Given below are some of the policy provisions for skill development with a special focus on women.

**Madhya Pradesh State Rural
Livelihoods Mission (Skills & Employment)**

Year	Self Employment (RSETI) No. of Youth	Training & Placement (ILP)	Training & Placement(DDU GKY) No of Youth	No of Job Fairs	Job offered (Job fairs)	Total
2012-13	19642	39161	0	268	44549	103352
2013-14	22998	50364	0	448	83580	156942
2014-15	27743	20045	0	599	56315	104103
2015-16	32203	1193	14023	625	61505	94901
2016-17	34769	2502	11308	661	58923	96194
2017-18	36179	1504	5556	632	56623	94306
2018-19	35194	1167	9442	603	55517	91878
2019-20	31521	0	10433	804	48248	79769
2020-21	19220	0	6219	817	109591	128811
2021-22	0	0	0	5	217	217
Total	259469	115936	56981	5462	575068	950473

**Note: - Trainings are not being organized due to COVID curfew in the state. Placement drives are being conducted for trained candidates under DDU GKY (1216). 7 Virtual Job fairs are also being conducted with the coordination of employers.

- Job Fairs are being organized at blocks & sub blocks level
- Empanelment of Industries as training partners under DDU DKY for captive placement.
- All Courses (DDU DKY/ RSETIs) are NSQF
- Monitoring through ERPs (Kaushal Pragati & Kaushal Panjee)

National Policy on Skill Development and Entrepreneurship, 2015- The National Policy on Skill Development highlights that in order to improve the productivity of the economy, participation of women in the labour force needs to be improved. Below are the major takeaways from the policy.

1. Improving access to skill development by creating more seats for women
2. Gender mainstreaming of content & delivery of training.
3. Use of digital platform for women's empowerment.

The policy provides a roadmap for skill development, including the setting up of Ministry of Skill Development and convergence of skill development initiatives of other Ministries. It also outlines various interventions that the government must take up to catalyze skill development for women. Some of the proposed interventions are enlisted below.

- The policy highlights the need to improve access to skill development for women. According to the policy, additional training and apprenticeship seats will be set up exclusively for women. While the skill development infrastructure in India is vast, we need to create facilities dedicated to women. This also includes increasing the pool of women trainers. As per the policy, mechanisms to provide certification to women trainers would be put into place. New institutes for training of women trainers will also be promoted.

- The policy mentions the need for gender mainstreaming of training. Women participation in vocational education and training is low as compared to men. In order to bridge the gap, the policy identifies the need for special delivery mechanisms such as mobile training units, flexible afternoon batches along with on local needs based training. The policy envisions incorporation of women related issues in the guidelines for skill training procedures, such as issues of safe and gender sensitive training environment, employment of women trainers, equity in remuneration, and complaint redressal mechanism.
- While Digital India is gaining momentum, there is need to incorporate ICT for providing skill development solutions as well. The policy announces the promotion of an internet or mobile based platform for women employment. The platform would connect skilled women and employers. It would focus on women willing to re-enter the workforce after a break and those affected by migration. The government of India is implementing several schemes on skill development. Given below are some of the schemes which have a special focus on women's skill development.

Role Of Government To Develop Women Entrepreneurs In India-

The growth and development of women entrepreneurs required to be accelerated because entrepreneurial development is not possible without the participation of women. Therefore, a congenial environment is needed to be created to enable women to participate actively in the entrepreneurial activities. There is a need of Government, non- Government, promotional and regulatory agencies to come forward and play the supportive role in promoting the women entrepreneur in India. The Government of India has also formulated various training and development cum employment generations programs for the women to start their ventures. These programmes are as follows: In the seventh five-year plan, a special chapter on the —Integration of women in development was introduced by Government with following suggestion:

Specific target group: It was suggested to treat women as a specific target groups in all major development programs of the country.

Arranging training facilities- It is also suggested in the chapter to devise and diversify vocational training facilities for women to suit their changing needs and skills.

Developing new equipments- Efforts should be made to increase their efficiency and productivity through appropriate technologies, equipments and practices.

Marketing assistance- It was suggested to provide the required assistance for marketing the products produced by women entrepreneurs.

Decision-making process- It was also suggested to involve the women in decision-making process. The Government of India devised special

programs to increase employment and income-generating activities for women in rural areas. The following plans are launched during the **Eight-Five Year Plan**- Prime Minister Rojgar Yojana and EDPs were introduced to develop entrepreneurial qualities among rural women. Women in agriculture' scheme was introduced to train women farmers having small and marginal holdings in agriculture and allied activities.

To generate more employment opportunities for women KVIC took special measures in remote areas. Women co-operatives schemes were formed to help women in agro-based industries like dairy farming, poultry, animal husbandry, horticulture etc. with full financial support from the Government. Government of India has introduced the following schemes during Ninth Five-Year Plan for promoting women entrepreneurship because of the future of small scale industries.

Depends upon the women-entrepreneurs- Trade Related Entrepreneurship Assistance and Development (TREAD) scheme was launched by Ministry of Small Industries to develop women entrepreneurs in rural, semi-urban and urban areas by developing entrepreneurial qualities. Women Component Plan, a special strategy adopted by Government to provide assistance to women entrepreneurs.



DDUGKY On September 2014, under the aegis of its National Rural Livelihood Mission, the Ministry of Rural Development (MoRD) announced the DDUGKY. The scheme targets rural families who fall below

the poverty line. Individuals from such families who are in the age range 15 to 35 are eligible for government sponsored training and post-training job placement in positions that offer regular monthly wages.

The DDUGKY skilling ecosystem consists of The Ministry of Rural Development (MoRD) or the National Mission Management Unit (NMMU), State Missions, Project Implementing Agencies (PIA) and Technical Support Agencies (TSA). The MoRD is responsible for framing policy, monitoring the scheme and in collaboration with state governments, responsible for providing funds.⁹ Identification of courses to be offered is based on skills gap assessment studies carried out by the National Skill Development Corporation (NSDC) as well as inputs from state missions. On the basis of these studies, DDUGKY invites tenders from private sector partners who wish to provide training. State missions are responsible for planning and implementing the program through the private sector PIA. The PIA are responsible for identifying prospective applicants, providing information on the training courses, delivering training and placing the trained graduates. To elaborate, the PIA begins the implementation process by embarking on a process of community mobilisation and awareness building using different modes such as awareness camps, job fairs, placing banners, distributing handbills and pamphlets and door to door counselling. PIA also involves village self-help groups (SHG) and Gram Panchayats (GP) in their efforts to reach out to eligible candidates. After mobilisation, candidates who have indicated an interest in a training program are asked to complete a field registration form and are then invited for counselling. During counselling, candidates and in some instances, their parents are given information on the nature of work in the selected sector, availability of jobs, growth prospects and the challenges. The counselling sessions are also used to determine whether the applicants fulfil eligibility conditions. After counselling, the list of selected candidates is sent for approval to the state missions and once approved, the candidates may join the training program. Each course offered through the DDUGKY consists of two broad components. The first component includes training on soft skills, English and information technology and the second component deals with sector specific training. Depending on the course, the duration of training may be for 3 (576 hours), 6 (1,152 hours), 9 (1,578 hours) or 12 months (2,304 hours).

The scheme provides for on-the-job training (OJT) ranging from a maximum permissible 30 days for a 3 month course to 120 days for a one year course. The training courses offered by the PIA have to be approved by the National Council for Vocational Training (NCVT) or Sector Skill

Councils (SSCs). These TSA also provide support in terms of designing the curriculum and

Certifying the trained graduates Post-training, PIA are required to place a minimum of 70 percent of trained individuals in jobs which offer regular monthly wages at or above a minimum monthly wage of Rs.6000.

The scheme has provisions for post-placement financial support. To enhance employment sustainability all trained/placed candidates are tracked for one year. During this year they are also entitled to counselling and guidance. The scheme has special focus on women and outlines provision to improve quality of impact amongst women beneficiaries-



- **Improving Coverage-** The scheme mandates that 1/3rd of the seats would be covered by women. Gram Panchayats will have to undertake special efforts to improve participation of women under the programme by conducting special counseling sessions. To enhance coverage, the upper age limit for women has been revised up to 45, as against 35 years.
- **Setting up of migration support centres (MSC)-** MSCs would be set up to look after the needs of the vulnerable population, specially women. They will be set up both inside the state, as well as outside the state in areas where a large number of DDUKVY trainees have been placed. Funding for this is provided to the State Rural Livelihoods Mission (SRLM) which may take it up on its own or with the support of the PIA.
- **Training of trainers-** The scheme has special focus on establishing training centres with focus on women trainers. This is in line with the National Policy of Skill Development, which aims to increase the number of women trainers. Furthermore, wherever women trainers are being trained, the scheme mandates at least one women manager.
- **Post placement support-** It would be the responsibility of the PIAs to conduct post placement counselling sessions for the candidates, and specially for the women, to help them in adapting to new environment.

Conclusion- Empowerment includes higher levels of literacy, educational attainment, awareness of rights and responsibilities, active participation in economic activities, better healthcare and equal access to productive

resources and improvement in the standard of living. Skills can be acquired in many ways. Skill development takes place, through vocational courses run by government and NGOs but real and sustainable growth of India depends on positive socio-economic transformation with men and women as partners in progress, reinforcing each other's effort in removing barriers to inclusive growth, SELF HELP GROUPS are revolutionary tool in this regard.

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Issues and Challenges of The Women Empowerment in Jammu and Kashmir

• Indira Barman

Abstract- *The focus of this paper is to highlight the issues, obstacles and challenges of the women empowerment in Kashmir in J&K. In Jammu and Kashmir, woman is the most defenseless and nastiest hit section of the society particularly under circumstances of violence caused by political and social conflicts. They not only undergo extrememortification and harassment but also suffer traumatic occurrences with protracted depression leading them towards gigantic mentally sickness. However, the troubling situation prevalent in Jammu and Kashmir has hit the Kashmiri women hardest and such unrests has also affected their working skills and desires up to a huge extreme. Thousands of women who turned widows have to tolerate the entire responsibility of bringing up their offspring and managing the domestic expenses. Despite being highly hand skilled and professional oriented they are hardly being offered any vent to their talents as the unrest in the valley has curbed it all under horrifying situations like militancy and non involvement of government policies towards them. The outcomes highlight that the women in Kashmir are still facing enormous relentless issues and challenges related to health, economy, education, politics, domestic violence, declining sex ratio, female feticide and infanticide, state violence, dowry harassment, eve teasing, unequal wages and child labour leaving the empowerment like modern concept only a joke to their lives. Hence, the central government, state government, NGO's and local bodies should work together for the empowerment of women in Jammu and Kashmir.*

Keywords- *Women, Violence, Empowerment, Challenges, Jammu and Kashmir*

Introduction- Jammu & Kashmir is the disputed territory between Indian and Pakistan, and unarguably the most beautiful State. Surrounded by the Himalayas and many other mountain ranges, the State is sanctified with deep valleys and breathtaking sceneries. It is also well known as paradise on the earth. Geography condition of the J&K comes in the way of rising adequate infrastructure and is further compounded by militancy and armed conflict that have taken a heavy toll of life and public property besides throwing normal life out of gear. The State has been the focus of interest over more than a decade and has drawn the attention of the world. A gradual rise in terms of gender discrimination especially during the last two decades due to the prevailing social, economic and political turmoil has become prominently displayed. Women's participation in the socioeconomic and political

processes has taken a back seat. The effect of such a development results in an erosion of their freedom of speech, freedom to get education and enhancement of employment opportunities. The role of women has been marginalized affecting adversely the processes of human development and well-being. Their lives have witnessed sweeping changes compelling them to be a silent spectator amidst the fast changing socioeconomic scenario. So much so, that the changes have developed signs of exclusiveness resulting in an identity crisis. So we can say that women are the most vulnerable and worst hit section of the society in J&K especially under situations of violence caused by militancy and armed conflict. They don't only suffer from intense humiliation and harassment, but also undergo traumatic experiences with prolonged depression, making them mentally and emotionally sick. Like many other places woman's role in Jammu and Kashmir has been central in the upbringing of children and managing domestic affairs.

Domestic Violence against Women- Among all forms of violence faced by the women, Domestic violence is one of the emerging crimes against women which is linked to their disadvantageous position in the society. Domestic violence is any act of physical, sexual, or psychological abuse, or the threat of such abuse, inflicted against a woman by a person intimately connected to her through marriage, family relation, or acquaintanceship is universal and has its root in the socio-cultural set up of the society. The perpetrators of domestic violence have often been found to be the males and the victims, their sexual partners. It is always the women who have to be in the tight rope, subject to inequality and looked down as an inferior sex. Starting from childhood to the end of her life she has to be under the control of father or husband or the son. The subordinate status of women combined with socio cultural norms that are inclined towards patriarchy and masculinity can be considered as an important factor determining the domestic violence. Internationally, one in three women have been beaten, coerced into sex or abused in their lifetime by a member of her own family.

Domestic Violence in Kashmir- It is the traditional set-up of Kashmiri society, whereby a man is believed to be the responsible person for the nourishment of the family, in economic terms. Due to this cultural belief, men try for jobs, and women, who are dependent on men, try to marry that man who has a job and economic stability. Domestic violence against women is on the rise in the state of Jammu and Kashmir. Even the ones who are educated and the economically independent are at the receiving end. Police figures show an increase in domestic violence cases, mostly relating to matrimonial disputes and family squabbles. Harassment for dowry too is one of the most common complaints lodged with the police, data shows. In 2008, 772 complaints were received. Out of which 62 were registered, 121 reached the trial stage and 381 were settled by mutual agreement and 108 are still pending. In 2009, the number of cases nearly doubled with 1272, and in 2010 in just three months 191 complaints were recorded (Sharma: 2010). In order to intervene effectively, into the issue, more scholarly inquiry needs to address the theoretical parameters of domestic violence. In light of this, the present work acknowledges the prevalence of domestic violence is rooted in

the traditional setup of societies and exists beyond the parameters of nature and development of societies while also suggesting that enhancing the status and dignity of a woman within and beyond families can be helpful in not only understanding family violence, but in giving direction for intervention at the family level.

Women and Unemployment: A persevering concern- In Jammu and Kashmir, women face a lot of challenges that stop them from entering the workforce as compared to their male counterparts or even their female counterparts in the rest of the country, leading to the percentage of unemployment in women being alarmingly higher than the women of neighbouring states. Ghulam Sarwer (2017) points to Sharma's study (2015) that reported that the rate of unemployment in the then state of Jammu and Kashmir was 20.2%, much higher than its neighbours Punjab (5.6%), Haryana (4.8%), Delhi (4.3%) and Himachal Pradesh (2.2%). It is also a lot higher, as Sarwer rightly points out, than the national average of 3.7 percent. Not only is the UT facing a female unemployment scenario far worse than many other states in India, but there is also the troubling trend of an increasing unemployment rate among women in J&K. A study pointed out that while 2011 data showed unemployment among women in urban J&K at 19% and rural J&K at 3%, in 2015-16, the Fifth Annual Unemployment Survey by the Ministry of Labour showed that women above the age of 15 in J&K had an unemployment rate of 25%, clearly indicating that "fewer women had jobs". This high rate of unemployment can be explained by a number of factors that sometimes are interconnected. The chief issue in this regard is the lack of educational opportunities. According to the census report of 2011, only 58.01% of women in J&K are literate as opposed to 78.26% male literacy. Moreover, it has to be acknowledged that literacy is far from enough to secure anyone any job in this day and age. Completing graduation or at the least school-level education is required for getting a decent job. This low rate of literacy and lack of educational empowerment is due to a lot of factors that may be interconnected in some cases.

Women, Entrepreneurs in J&K, Online Space and Covid-19- By 2015, 42% of women in the urban areas of Jammu and Kashmir were self-employed. Naturally, women entrepreneurs in the region constitute a vital part of the narrative of working women. While getting jobs alone is a challenge in J&K, it is natural to assume that the situation faced by women striving to create and build their own businesses in the conflict-ridden region is even more challenging. A study by Muneer Ahmad Khan and Dr. Nisar Ahmad Wani (2017) showed that apart from the problems of lack of education, the structural marginalization by a male-dominated society and conflict that haunt working women in general, they face additional blockades. The various challenges, especially the issue of lacking a significant source of capital, have made the online space more attractive to up-and-coming women entrepreneurs. Omaira Khayoom, a school teacher and co-owner of Craft World Kashmir, acknowledged that the internet is not only a lucrative field but also a safe space for women entrepreneurs in J&K. She and Binish Basheer Khan turned their passion into a profession by

founding Craft World Kashmir where they use Instagram to publicize and sell crochet and floral jewellery. Their business had grown exponentially from humble beginnings and they had taken 16 female employees under their wing. At one time, they earned 2000 dollars per month in a region where most peoples' annual income was close to 1300 dollars. However, the internet clampdown that came with the abrogation of J&K's special status (August 5, 2019) resulted in business coming to a grinding halt as the principal means to advertise and contact potential clients was suddenly gone. When restrictions were finally lifted in March 2020, the Covid-induced nationwide lockdown put the breaks on the hopes of recovery. Omaira and Binish have continued to pay the 16 employees because they know that for many of them that is the sole source of income. Portrait artist Sana Mir who was selling portraits online by advertising through Instagram has also lost her source of income and empowerment. The recent restoration of 4G connectivity to the Valley was a new ray of hope for women entrepreneurs in the region, but as the second wave of Covid-19 is ravaging the country and the people facing another lockdown, the future of promising entrepreneurs like Khayoom, Basheer and Mir remains uncertain.

The pandemic has also affected the women employed in organised labour. By December 2020, 13% fewer women had jobs or were looking for jobs, as compared to 2% fewer men, clearly showing that in India, women are more likely to lose jobs during the pandemic than men. There is no reason to believe that this is not the pattern in J&K as well.

Empowerment of Women in J&K- Empowerment of women, being a worldwide slogan and one of the Millennium Development Goals, aims at empowering of women in different spheres of life. Women groups, non-governmental development organizations, activists, politicians, governments & international agencies refer to empowerment as one of their goals. The phrase is used in two broad senses i.e. general and specific. In a general sense, it refers to empowering women to be self-dependent by providing them access to all the freedoms and opportunities, which they were denied in the past only because of their being women. In a specific sense, women empowerment refers to enhancing their position in the power structure of the society. The word women empowerment essentially means that the women have the power or capacity to regulate their day-to-day lives in the social, political and economic terms- a power which enables them to move from the periphery to the centre stage. The Central Act, Protection of Women from Domestic Violence Act, was passed in 2005. It took half a decade for the state government to pass a similar act in the state. Keeping in view the growing incidents of domestic violence, the state government passed the Protection of Women from Domestic Violence Act (PWDVA) in 2010. Since the Act was passed, little or negligible efforts were made for the proper implementation of the Act, though the domestic violence against women is rising in Jammu and Kashmir. Economic empowerment has been recognized as the dominant one because it exerts a strong influence on all other components of empowerment. It is a reality that if women gain economic strength they will gain visibility and voice at home, workplace and

the community. Thus it is imperative for women to know their economic role and increase their power and command on material resources. The following are Schemes for Women's Empowerment in J&K.

All though in rural areas, women being the biggest segment are the back bone of the Indian economy. They are the centre of rural development in terms of alleviation of rural poverty with economic growth and stability. But they face extreme violence and discrimination in all walks of life. They are neglected at family, community and societal levels and living as an oppressed class. Rural women persist with low levels of income, sparse access to education and health services, limited job security as well as limited land and inheritance rights. In addition to the entrenched pattern of discrimination, unsustainable development practices, climate change and violence against rural women intensify the burden placed on women and their families. Lack of access to services and infrastructures takes away time from education and other opportunities and this gap in access disproportionately affects women and girls. According to food and agriculture organization (FAO), rural women spend more than twice what men do on the same tasks. UN women sports the leadership and participation of rural women in shaping laws, strategies, policies and programmes on all issues that affect their lives, including improved food and nutrition security and better rural livelihoods. Rural empowerment of women is being regarded these days as a sine-quo-non of progress for a country; hence the issue of rural women empowerment is of paramount importance to political thinkers, social scientists and reformers. The self help groups, MNREGA, Education, various schemes, govt. laws and provisions, NGOs and also self realization have paved the way for rural empowerment of women. Through that, they can become independent and get employment themselves and provide opportunities to others.

I. Umeed- the hope, a Government of India funded flagship project to empower women in conflict ridden Kashmir, was launched by Congress scion Rahul Gandhi in June 2013. The scheme was made possible only after a group of students from Kashmir University visited Aameeti (UP) to study the model and its successful implementation. Umeed scheme is aimed to empower women in Jammu and Kashmir and other parts of India. The project is aimed at encouraging rural women to make small savings so that their SHGs will eventually become bankable at reduced rate of interest.

II. National Backward Classes Finance & Development Corporation (NBCFDC)- Women belonging to backward & other classes as prescribed under State SRO 126 are being financed under this scheme at a very low rate of interest 4% p.a up to Rs 50,000/- & 6% p.a up to Rs.1.00 lakhs for which the repayment period is 5 years.

III. National Handicapped Finance & Development Corporation (NHFDC)- Handicapped Women with 40% disability. Are being financed under this scheme at a very low rate of interest 3% up to Rs. 50,000/- and 4% p.a up to Rs. 1.00 lakh which is to be liquidated within a period of 7 years.

IV. National Minorities Development & Finance Corporation (NMDFC)- Women belonging to Minority Community viz. Muslims,

Buddhists, Sikhs, Christians and Zoroastrians are being financed under this scheme at a nominal rate of interest 6% p.a simple to be liquidated within a period of 5 years. Maximum loan amount for an individual beneficiary is Rs. 1.00 lakh.

- Educational Loan: Education loan is also provided to the women beneficiaries under each of the above mentioned schemes for professional/ technical trainings.
- Micro Credit loan: Micro Credit facilities are also provided to Self Help Groups (SHGs) at the rate of 5% for which repayment period is 3 years.

V. Sher-i-Kashmir Employment and Welfare Programme (SKEWP)-

In addition to the above mentioned centrally sponsored schemes the social welfare department is also implemented “Empowering Skilled Young Women, 2009” scheme taking a lead role in the implementation of Sher-I-Kashmir Employment and Welfare Programme (SKEWP) envisaged by the Government to create self-employment avenues for educated unemployed youth. The nominal interest of 6% charged on the credit being provided to prospective entrepreneurs is well taken by the unemployed youth women and in fact the Corporation is getting encouraging response in all parts of the state.

Challenges of Women Empowerment in J&K- The State government is taking some concrete steps in empowering women by helping women to help themselves and their families. A huge population of women in J&K is unemployed and another significant section consists of widows and half-widows, the importance of women's economic independence for their overall dignity and even survival is brought out by the fact that there is a linkage between the physical survival of women and their entry into the workforce. But are these programs sufficient? Are they bringing about a change in the attitude of a patriarchic society? Here are some important challenges of women empowerment-

- Violence against women is on leaps and bounds in J&K.
- Illiteracy or ignorance of people also a constraint in the empowerment of women.
- Many girls in many districts of J&K still get married at an early age, which affect their overall development to a greater extent.
- Lack of decision-making authority
- Many customs and cultural practices hinder the empowerment of women.
- For examples many parents do not send their daughters to schools when they attain puberty.
- Lack of women's participation in political affairs poor and low status of women.
- High level of illiteracy among women. Lack of awareness.
- Inadequate & unorganized health care delivery system Under/unemployment leading to poverty

As we see, the challenges we face in empowering women are far away from the prospects of development programs initiated by our government. Though some of the recent steps taken by the government seem to indicate that these are the right steps to take, but what State really needs right now are sizable leaps! As we progress from a developing nation towards a developed nation, every care must be taken to compositely develop and empower women along the way to stand true to what our great Jawaharlal Nehru said “You can tell the condition of a nation by looking at the status of its women”!

Conclusion- Empowerment of Women in J&K requires a strong and sustained commitment by governments and other stakeholders, a favorable policy environment, and well-targeted resources. Long-term improvements in education and awareness opportunities will play a positive role in the overall development of women. In the short term, significant progress can be achieved by strengthening and expanding essential awareness among masses about gender equality, improving policies, and promoting favorable atmosphere for women. The development of women in Kashmir, no doubt, has been a part of the development planning process right from inception of Five Year Plans. Despite of these attempts, women in Kashmir are still left with lot many issues and challenges related to health, economy, education, politics, domestic violence, declining sex ratio, female feticide and infanticide, late marriage, state violence, dowry harassment, eve teasing, unequal wages, child sexual abuse, child labour and sexual harassment at work. To reduce the domestic violence overall society need to take initiative against social evils like dowry, drug addiction, early marriage etc. Counselling at various spheres like in Masjids, Mohalla Committees meetings, at peer groups should take place regarding domestic violence. Government and Non-government agencies should take positive steps for reducing domestic violence, wherein government can strength their law enforcing agencies, Non-governmental agencies can setup counselling cells, organize community programs, form social groups for reducing violence through group work process.

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An Outline of Neediness Destruction Programs in India

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Abstract- *Destitution is a social peculiarity wherein a part of society can't satisfy even its fundamental necessities of life. Legislature of India sent off a few neediness destruction projects to make resources that benefit poor people and by raising the efficiency of the poor through training, general wellbeing and other human asset related measures. This paper looks at the outlines of destitution annihilation programs executed in India. From the review, obviously the Government have been endeavoring the destruction of the destitution through complex methodologies. Indeed however the Government assumes a significant part the execution of the projects the achievement yet vests with people in general confidential association where the job and responsibility of the confidential recipients without whom the undertakings wouldn't victory. As of late the NGO's and different types of the facilitators are assuming significant part in planning the projects through arrangement of Shg's. Still the best approach is long and accomplishments to be made are massive. Further incorporation of different undertakings is fundamental alongside the decentralization of the powers. The plans are executed by the Government Civil servants which should be changed to the hands of recipient associations to reap the greatest potential advantages to the weak segment of the general public. Legitimate execution of projects is vital to accomplish the explicit set goals as opposed to the numbers and immense monetary distribution in the current period of financial turn of events.*

Keywords- *Development, Poor People, Society*

Introduction- Destitution is a social peculiarity wherein a part of society can't satisfy even its fundamental necessities. The underdeveloped nations show the presence of mass destitution, despite the fact that neediness additionally exists even in the created nations in Europe and America. The idea of destitution is related with hardship of a base prerequisite of living or utilization that is least necessities for food, clothing, lodging, wellbeing, and so on. As per the FAO (2003), the quantity of individuals experiencing ongoing appetite overall had expanded to 848 million, addressing an increment of 6,000,000 over the base period gauges (1990-92). Be that as it may, the extent of yearning during 2003-05 came down to around 16%. The effect of expansion in food costs in 2007 has reflected in an expansion in the

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extent of craving to 17 percent. It has driven an extra 41 million individuals to underneath hunger edge in Asia and 24 million in Sub-Saharan Africa (FAO, 2008).

As per the information uncovered by the World Bank showed that India has cut down the quantity of individuals living underneath \$1 pay a day by 2 rate highlight 24.3 percent in three years between 2005 to 2008. It happened due to the way that Asia's third biggest economy advanced to seven percent in addition to development in those years. World Bank additionally cited the view that India has upwardly changed the cost for many everyday items among agricultural countries to \$ 1.25 each day against \$ 1 every day. Washington - based International Food Policy Research Institute (IFPRI) in its most recent report entitled. " The world's Most denied: Characteristics and Causes of Extreme Poverty and Hunger" uncovered that In Global Hunger Index (GHI) India has been positioned at 96th spot among 119 emerging nations. This Index uncovered that India did genuinely well in fighting appetite between 1997 to 2003.

India represents one-6th of the worldwide populace and is developing at quicker rate that not long from now it will end up being the most crowded country on the planet. The tension ashore is expanding step by step, while horticultural efficiency isn't staying up with the populace development. By and by, 72% of India's populace and 75 percent of the country's poor are in provincial regions. Almost two-third of the Indian populace actually relies upon farming for its work (Acharya, 2009). Consequently, rural improvement is a precondition for monetary improvement in an emerging nation like India. There has been a longstanding interest in figuring out the connection between farming development, provincial turn of events and neediness decrease. Many examinations that have endeavored to dissect the elements answerable for the rustic destitution in India, mostly centered around the rural development streaming down to poor people through its backhanded consequences for money and business open doors (Fan et al., 1999). However horticultural development assumes a urgent part in easing neediness, development in the provincial non-ranch economy, and government consumption on food endowment and business age have likewise become significant. Government consumption has been urgent since it contributed not exclusively to horticultural development yet in addition straightforwardly made provincial non-ranch occupations and higher wages. Land and water assets improvement works are embraced in the designated business plan to straightforwardly affect neediness lightening notwithstanding expanded agrarian efficiency through asset protection. The meaning of government's formative use is that more advantages are probably going to stream down the poor in the development, which frequently diminishes neediness exclusively by expanding mean utilization; government use lessens destitution both by expanding pay and working on the circulation of pay (Sen, 1997). As a matter of fact, the neediness situated programs try to further develop the resource base of poor people, make work and increment their admittance to fundamental requirements.

Destitution in India- In India, destitution has declined significantly in ongoing many years. As per the most recent NSSO information for the year 2004-05, destitution level in India has boiled down to 21.8% when contrasted with 36% in 1993-94. In metropolitan regions, the level tumbled from 23.6 percent in 1999-2000 to 21.7 percent in 2004-05 while in rustic regions, the neediness level descended from 27.1 percent to 21.8 percent during a similar period. Kerala keeps on being at the highest point of different markers showing an excellent of life. Tamil Nadu, Maharastra and Rajasthan are among those gaining great headway over the period. The least fortunate states are Orissa, Bihar, Chatisgarh and Madya Pradesh with destitution proportion of 46.4 percent, 41.4 percent, 40.9 percent and 38.3 percent separately.

The consistent decrease in neediness from the mid-1990's to the mid 1980's was emphatically connected with horticultural development, especially the Green Revolution, which prompted a sharp expansion in the pace of rural development (Ahluwalia 1978 and 1985). The occurrence of provincial neediness declined especially in those districts that were most profited from the Green Revolution. The critical element of this later period is that the agrarian compensation rate, despite the fact that deteriorated until the mid-1970's, showed resulting expansion in many pieces of India, which is the main consideration that decreased country neediness (Tendulkar et al., 1993; Sen, 1997; Ravallion and Datt, 1995). Be that as it may, the foundations for the decay appear to be more mind boggling, non-ranch wages and work assume a significant part in diminishing neediness. Further, Government spending on rustic neediness and work programs have expanded considerably as of late that have direct advantage to the provincial poor.

Government spending might affect destitution. The immediate impacts are the advantages that the poor gets from consumptions on business and government assistance projects, for example, the Integrated Rural Development Program (IRDP) and from different country work plans during dry season years. The roundabout impacts emerge when government interests in rustic foundation, horticultural examination, and the wellbeing and schooling of country individuals animate farming and non rural development, prompting more prominent work and pay procuring valuable open doors for poor people and to work with less expensive food.

Government drives to diminish neediness in India- Various projects have been required up after fourth long term plan for neediness lightening. Improvement of the objective gathering of the rustic poor is the essential target of these projects. It falls into three general classifications: (I) group of business creation (independent work) programs (ii) work concentrated public works plans and (iii) pay moves with regards to kind. The destitution annihilation programs are utilized to make resources that benefit poor people and by raising the efficiency of the poor through schooling, general wellbeing and other human asset related measures. Probably the main projects for destitution lightening in the provincial regions are recorded underneath (Mamoria and Tripathi, 2007).

Swarnajayanthi gram swarozgar yojana (SGSY)- The extent of neediness and variations that existed between the different gatherings required arranged state intercession to give aid and help especially to the burdened and minimized gatherings like SC/ST, ladies and so on. Keeping this in view and having see to the positive perspectives as well as lacks, the prior independent work programs like TRYSEM, SITRA, GKY, DWCRA, IRDP and MWS were blended and another independent work program viz., SGSY was sent off during 1999.

The primary target of the program is to bring the current unfortunate families over the neediness line. The consumption under SGSY is shared by the Center and the States in the proportion of 75:25. Sponsorship will be given at 30% of the venture cost subject to a limit of Rs. 7,500 and 50 percent for SC/ST subject to a limit of Rs. 10,000. For gatherings, the endowment is 50% subject to a roof of Rs. 1.25 lakhs.

Sampoorna grameen rozgar yojana (SGRY)- Jawahar Gram Swarozgar Yojana (JGSY) and Employment Confirmation Scheme (EAS) were combined and another plan in particular SGRY was sent off from fifteenth August 2001. The fundamental target of the new program is to give extra pay work in the provincial regions as food security by production of strong local area social and financial resources and foundation improvement in country regions. Towards this end the SGRY visualizes appropriation of food grains @ 5 kg for every manday to the specialists as part compensation. While the money part will be shared by the Center and States in the proportion of 75:25, the Central Government will supply the food grains liberated from cost to the States.

Rashtriya sam vikas yojana (RSVY)- During Tenth Plan another plan viz, Rashtriya Sam Vikas Yojana (RSVY)- Development and Reform Facility will be sent off by Government of India. The superb target of RSVY is to resolve the issues of pockets of high neediness, low development, low agrarian efficiency, joblessness and unfortunate administration by setting up projects and approaches, which would eliminate obstructions to development and speed up the advancement interaction. A measure of Rs. 15 crores each year will be given to execution of different formative projects, for example, dry spell sealing (soil preservation, afforestation, social ranger service, no man's land advancement and minor water system), agribusiness, agriculture and so on framework (street and power), social area (wellbeing and training) and work support (pay producing exercises, for example, handloom, data innovation, agrarian handling and so on.).

Jawahar rozgar yojana (JRY)- A Program needs to give work to the country poor was started in 1989. Public Rural Employment Program (NREP), Rural Landless Employment Guarantee Program (RLEGP) were converged into this program. The consumption under the program was shared by the Center and the States on 80 : 20 premise. (Division of Rural Development, 1989). The essential target of the program was age of extra beneficial work for the jobless and underemployed people all kinds of people in the country regions.

Little ranchers agri business consortium (SFAC)- Was started in 1994.

Expanded creation and efficiency, esteem expansion and effective linkages among makers and purchasers were high need objectives of the Consortium (Directorate of Extension, 1994).

Incorporated rustic improvement program (IRDP)- This program was sent off in 1987 with the principal objective of setting out maintainable work open doors for provincial poor. The objective gatherings under IRDP comprised of little and negligible ranchers, farming workers and country craftsmans living beneath destitution line. The program was converged into Swarnajayanti Gram Swarozgar Yojana in 1999.

Business confirmation conspire (EAS)- It was sent off in 1993. It pointed toward giving guaranteed work of 100 days for poor people and incompetent worker. The plan is available to all people of rustic regions who are over 18 years and under 60 years. It has been universalised and presently the plan covers all the local area improvement blocks of the country.

Top state leader's rozgar yojana (PMRY)- It was sent off during 1993 for giving independent work to instructed jobless youth. It was intended to give work to in excess of 1,000,000 people by setting up seven lakh miniature endeavors in Eighth long term plan. The plan was gone on in Ninth arrangement moreover.

Public social help program (NSAP)- It was begun on 1995 as a 100 percent midway supported conspire for social help advantages to unfortunate families impacted by advanced age, demise of essential bread worker and maternity care. The program has three parts viz. Public Old Age Pension Scheme, National Maternity Benefit Scheme and National Family Benefit Scheme.

Jawahar gram samridhi yojana (JGSY)- It was presented in 1999 by rebuilding the Jawahar Rozgar Yojana. It is being executed as a midway supported plot on an expense sharing proportion of 75:25 among focus and States. The goals of the program are to make strong useful local area resources and age of pay work for the rustic jobless poor.

Pradhan mantri gramodaya yojana (PMGY)- It was sent off in 2000-01 with the target of zeroing in on town level advancement in five basic region viz. wellbeing, essential training, drinking water, lodging and provincial streets. It has the general target of working on the personal satisfaction in the provincial regions.

Bharat nirman- It is time headed strategy for activity in country framework over the long term period (2005-09). This plan covers the areas of water system, rustic streets, provincial lodging, country water supply, provincial jolt and country telecom network.

Public country work ensure plot (NREGS)- The Food for Work Program (FWP) began in 1977 for making work by using the excess load of food grains was rebuilt, renamed as National Rural Employment Guarantee Program (NREGP) and being carried out from 2005. The Act covered 200 most in reverse locale in the nation in its most memorable year. Hundred additional areas were included the subsequent year, and from 2008 the Act would cover all locale of the country. It expects to improve the occupation security of individuals in provincial regions by ensuring hundred days of pay

work in a monetary year to a rustic family whose individuals volunteer to accomplish untalented manual work (Chakraborty, 2007). The subtleties of use on different projects are given in Appendix I. It shows that as of late the public authority is focusing on the National Rural Employment Guarantee Act (NREGA). During the 2006-2008, at Tamil Nadu and All-India level, 19.70 lakhs and 602.63 lakhs families were utilized and the aggregate sum of compensation dispensed was Rs.744.08 corers and Rs.19771.41 centers individually.

Public circulation framework (PDS)- Public Distribution System is the essential social government assistance and antipoverty program of Government of India. It is seen to be the principal wellbeing net to safeguard the poor from short-run, cost instigated, antagonistic impacts (Mooij, 1998). Redone Public Distribution System (RPDS) has been started by Government of India from the year 1992 to serve and give fundamental wares to individuals living in remote, in reverse and uneven regions. The Government had presented Targeted Public Distribution System (TPDS) in the year 1997. It focuses on poor people and conveys the fundamental wares in view of pay. Both Central and State Governments have been effectively engaged with guiding the tasks for the outcome of the PDS (Reddy et al., 1992).

Conclusion- Neediness is a social peculiarity wherein a part of society can't satisfy even its fundamental necessities of life. Legislature of India sent off a few destitution destruction projects to make resources that benefit poor people and by raising the efficiency of the poor through instruction, general wellbeing and other human asset related measures. From the review obviously the Government have been endeavoring the annihilation of the neediness through multi-faceted methodologies. Despite the fact that the Government assumes a significant part the execution of the projects the achievement yet vests with the public confidential organization where the job and responsibility of the confidential recipients without whom the undertakings wouldn't achievement. As of late the NGO's and different types of the facilitators are assuming significant part in planning the projects through arrangement of Shg's. Still the best approach is long and accomplishments to be made are tremendous. Further joining of different undertakings is fundamental alongside the decentralization of the powers. The plans are executed by the Government Bureaucrats which should be changed to the hands of recipient associations to collect the most extreme possible advantages to the weak segment of the general public. Appropriate execution of projects is essential to accomplish the particular set targets as opposed to the numbers and colossal monetary portions in the current time of financial turn of events.

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India's road to Economic recovery in the Post Covid-19 era

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Abstract- *Historically, erratic communicable disease outbreaks have had significant and long-term socio-economic impacts over any economy and its populace around the world. Over time, India has overcome deadly diseases such as cholera, dengue, smallpox, measles throughout the history of unprecedented global pandemics. The recent and ongoing global pandemic of Coronavirus 2019 (COVID-19), that started out as an infectious airborne virus (SARS-CoV-2) causing a serious acute respiratory problem to all living beings, has not only caused massive number of deaths throughout its incursion, but has hit the developing Indian economy like a truck. India, with its high population density, omnipresent poverty and malnutrition, high concentration of lower middle-class people and a defective healthcare sector infrastructure, had its economy setup for an ultimate setback. Since March 2020, India has seen two major national lockdowns, consistently declining Gross Domestic Product (GDP), sky-high unemployment and growing inflation across all sectors of the economy and other worsening economic indicator statistics. But, over the past two years (2019-2021) encouraging steps such as the widespread vaccination drive all across the nation and Government policies being introduced to get the economy back on track, has got everyone hoping for the economy to make its way back onto the trend of positive economic growth and bounce back eventually with time. While the Government is hopeful for a fast overall recovery, the economists all over the world don't have the most optimistic opinion for India's recovery. Will it be a K-shaped recovery or a V-shaped recovery? This paper tries to discover the possible recovery patterns, the reasons why and a possible way forward to fast track the recovery of the Indian Economy in a Post-Covid 19 world.*

Keywords- *Covid- 19, Economic Growth, Unemployment, Inflation, Economic recovery.*

Introduction-The ongoing Covid- 19 Pandemic hasn't only led to the loss of an innumerable number of lives but also has consumed the global economy, sliding into an era of economic distress.¹ Coronavirus (COVID- 19), a stealth virus which rapidly became one of the deadliest viruses wiping out populace worldwide. On 30 January, 2020, an infected individual from Wuhan, China who had travelled to India, was believed to have started the

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spread of the virus in India.²The death rate in India was reported to be one of the highest in the whole world with probable massive underreporting, due to a poor healthcare system and not enough resources to cope with the aftermath of such a sudden healthcare crisis of this scale. The sudden emergence of the Covid-19 pandemic shook the roots of the Indian economy, sabotaging it completely. The unforeseen crisis that Covid-19 has presented to the world and how it has ignited one of the worst jobs crises since the Great Depression. Global institutions and renowned world economists have slashed the economic growth rate projections of many countries to historic lows, including India.³Growth over the two-year period 2020-2022 was expected to be merely zero percent or negative as this pandemic had followed an economic slowdown, three years preceding it. In post-Independence era, India's GDP has dropped only four times prior to 2020 in 1958, 1966, 1973 and 1980; with the largest decline being to 5.2% in 1980.⁴Historically, this implies 2020-21 was the worst period in terms of economic contraction and much worse than the overall contraction in the world. Deaton and Ferreira conclude that the 2021 contraction was solely responsible for reversing the trend of otherwise decreasing global inequality. The out-and-out health crisis entirely subverted the country's existing medical infrastructure, leaving its citizens on the desperate daily outlook for hospital beds and oxygen tanks. Soon after, the national economic activity also started to feel the pinch.⁵With the investments and trade performance of the economy suffering a big blow during the incursion of the virus, the Indian economy was relying mainly on consumption, which the first and second waves of the pandemic affected adversely due to rising uncertainty since people altered their consumption patterns and most were in favour of savings due to fear and anticipation of being able to meet current and future consumption needs.⁶ In 2020, when the first stringent lockdown happened around April and May, individual income has dropped by nearly 40%.⁷All sectors of the economy deteriorated sharply growth wise due to reduced consumer and business confidence. With lesser overall personal and private consumption, aggregate demand was curtailed, impacting firms' production process; both the demand as well as supply side were disturbed. Facing labour shortage, capacity under-utilisation, a liquidity crunch, raw material shortage and supply chain disruptions, the production volume was declined rapidly. For firms and businesses, trying to remain operational and afloat due to falling turnover and revenue, many had to shut down or cut down on employment. The pandemic wreaked havoc on India, specifically during the virus's second wave of 2021 in India. Even though a promised vaccination drive was in the works, the billion people were still suffering with the aftermath of the last pandemic year and the new worse delta variant of the virus. A CESP survey said, that around 80 percent people had put off any plans of buying expensive electronic durables or changing to new furniture or buy any other expensive non-essential goods, e-retail sector saw recession with many of the shops and outlets seeing sales dropping by nearly 50% and some closing down completely, some finding it hard to pay off loans or debts, individuals started to reduce borrowings to buy a house, paused all investments as the future

looked unreliable.⁸ This caused a further drop in sales of housing and impacted the real estate sector badly. With a stressed banking sector and its growing non-performing assets, India's growing government debt to GDP ratio, government finances being burdened by the costs of the ongoing COVID-19 vaccination drive; the two covid waves aggravated them and with more virus peaks on the way, the further downfall can be on its way. As a result of a chain of such economic reactions, India plunged into recession for the first time in nearly a quarter of a which world economists warn will struggle to recover from the recession. The public restrictions in mobility and extended lockdowns, mostly everyone was compelled to stay at home, leading to a deteriorating labour market situation.⁹ The three main performance indicators in an economy: Gross domestic Product, Unemployment Rate and the Inflation rate in India depict the tragedy the covid years entailed.

Gross Domestic Product (GDP)- GDP is the “aggregate or gross value of all final goods and services produced in the domestic boundary of an economy or a country during a specific time period”.¹⁰ GDP includes all consumer expenditure (C), Investment expenditure (I), Government spending (G), the spending on exports by foreign sector (X) and the domestic spending on imports by households (M), firms and the government sector.

$$GDP = C + I + G + NX \quad \text{--- (1)}$$

where $NX = \text{Net exports} = (X - M)$

As implied by equation (1), a change in any of these components would change the level of GDP for an economy. Both the covid waves of March 2020 and April 2021, year after year, caused the economic system to halt and slip into a recession, demand and supply chains got disrupted both during and after the lockdown. CMIE's 'Consumer Pyramids Household Survey' (CPHS), show that per capita consumption spending fell by more than GDP, and could not return to the pre-lockdown levels during consistent periods of social distancing.¹¹ India's GDP had fallen by 24.4 percent from April to June, 2020. India's rate of overall economic contraction was around 7.3 percent for the entire fiscal year 2020/21. Many economists also believe that the contraction of gross domestic product (GDP) was severely underestimated by -23.9% as data collection efforts were affected due to the lockdowns. The situation has still not entirely improved, as evidenced through the latest data of the first quarter of FY'22 released by MOSPI, which shows the private final consumption expenditure of INR 17,83,611 crore, a level much lower than that of the pre-Covid **levels**.¹² India had become the second-worst country, after the United States in terms of GDP contraction among major economies. Driving the economy off the rails, the recovery from this GDP contraction would be a long and distressed given the limited resources, fair to say the economy won't be back to its pre-pandemic growth levels anytime soon.

Unemployment Rate- Millions of people who lost their jobs over April-May 2020 due to Covid-19, and are still very much struggling to find good jobs, after months of an unlocked India. Most sectors of the labour market took a huge hit by the virus wave, mostly displacing the migrant workers, who are already a vulnerable section of the society. According to the Centre

for Monitoring Indian Economy (CMIE) data, the labour force participation rate fell to a low of 27 per cent in April 2020. Just as the economic wheels started to rotate again in 2021 January, the second wave again pulled the participation down to 36 per cent in April-May 2021. The Centre for Economic Data and Analysis (CEDA), based upon the ILOSTAT data base of International Labour Organization (ILO), stated India's unemployment rate had gone from 5.27 percent in 2019 to 7.11 percent in 2020, the highest it had been since 1991. India had been witnessing a tough job environment for the past few years and the situation only exacerbated after the covid outbreak. Though after the first wave, economic activity was improving steadily, the Indian job market was still very much struggling. While some service sector workers moved to their farms again for their survival, salaried workers were in despair unable to meet their daily needs. Companies moderated the number of hired employees, but also cut down on the number of vacancies and job roles, permanently. Creating new jobs in a recession hit economy will be one of the toughest challenges for the Indian economy in the upcoming years.

Inflation Rate- After the pandemic disrupted India's economy and led to increased unemployment and slashed wages, a sustained period of higher inflation, particularly food inflation, had pushed millions of families to cut back on food expenditure, with possible a spell of nutritional poverty and malnutrition. China is one of the largest exporters of many of the inputs and raw materials to India. Shutting down of factories has damaged the supply chain resulting in a drastic surge in the prices of raw materials. Some of the other goods that have seen a rise in their prices were gold, masks, sanitizers, smartphones, medicines, consumer durables, etc. In October (2020), food inflation surged to 11%, but it came down only marginally in November to 9.43%.¹³ Even as food inflation has remained high in the months after the lockdown, unfortunately it coincided with rising unemployment and depressed rural-urban wages. As households dip into their savings because of either stagnating or no running incomes, economists warn that India's gross household savings could decline, thereby denting future consumption and compromising the economic recovery.

Recovery of The Indian Economy- 'Economic Cycle' or the 'Trade Cycle' shows the upward or downward movement in the economic activity of a country over time. It shows possible fluctuations in the Gross Domestic Product (GDP) and its growth rate. A business cycle, has four main phases: Peak, Contraction, Trough & Expansion.

During to COVID-19 outbreak, there was an extraordinary slowdown in the economic activity breaking the usual cycle like pattern. The world economy was already in contraction because of ceasing business activity owing to national lockdowns. Most countries were in a state of constant economic panic and had declared negative GDP growth rates for 2020 and 2021 as well. Consecutive path to recovery, was not going to be easy.

Though India's economic recovery hasn't been all smooth since 2020, India seems to have gotten the situation under control in 2022, majorly

due to the national vaccination drive, strict public precautionary measures and other government support policies for the Indian populace. The economic panic was avoided and a steadiness was brought in quickly by the national authorities imposing these standard measures.

Recovery Patterns- The recovery from the pandemic is tricky for the authorities to handle and it can also have different patterns for different economies around the world. Historically, the common patterns of economic recovery are: V, U, W and L shaped;¹⁴ L-shaped being the least desirable and V-shaped being the most desirable path for economic recovery.¹⁵



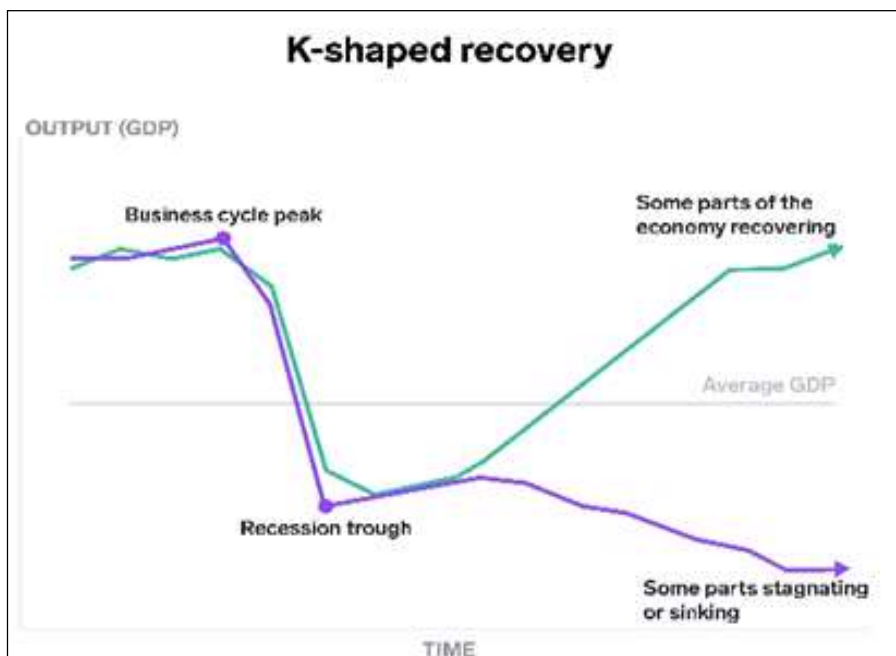
The recovery from the first covid year 2020, To counter this economic doom and gloom, the Indian government pushed the idea that the Indian economy will bounce back rapidly. A “V-shaped recovery,” was predicted according to the finance minister Nirmala Sitharaman. The Government of India's policy to improve logistics infrastructure, encouraging schemes for private investment, increased financial and technical support to states in order to expand capital investment to boost infrastructure spending will spur economic growth. Private consumption was also expected to pick up as labour market conditions continued to improve, after opening up nationwide restrictions. Forecasts were based on a normal monsoon and rising wheat prices which would improve agriculture output and farmers' income.¹⁶

The IMF also, predicted that the recovery period would be three years till the end of 2022, and that GDP per capita will be back to pre-Covid-19 levels.¹⁷ The massive vaccination drive (with nearly 1.4 billion population is fully vaccinated in India)¹⁸ and introduction tax incentives to boost the manufacturing sector; support to these sectors promised a significant recovery in manufacturing and construction were to accrue to their growth in 2021-22. FY 2021-22, there was onset of the Omicron variant which was highly transmissible but less severe as compared to previous covid variants; so due to increasing vaccination rates, herd immunity¹⁹, Government had hopeful expectations for fiscal years 2021-22, expecting a pick-up in amount of government spending, increase in consumer demand and a resumption of

most economic activities over time that were abridged by the pandemic. In the annual national budget for the 2022-23 fiscal year, the economic survey put forward the forecast that India's economy will experience a 9.2 percent growth in the 2022-23 financial year.

But in India, V-shaped recovery in hindsight, doesn't take into account the that a contraction in any economy has a very long-term cascading effect downstream for many years given the nature of compounding growth. Opportunity costs of national measures and policies have to be looked at, and taking account of all the pros and cons, economists have declared that even in the most optimistic scenarios, the economic loss is immense to recover rapidly from.²⁰

Though government officials claim post-pandemic recovery to be V-shaped, critics and economics argue to be otherwise. Several economists suggest that India's economic recovery will be K-shaped as it has recovered only partially, contrary to the government's claims. V-shaped recovery is when the economy rapidly recovers at the same rate at which it went down. "This had happened to India during the first lockdown of Covid". Understanding what K-shaped recovery, "There are some sections of the economy that have recovered very well whereas there are certain sections that have not recovered well".²¹ K-shaped recovery happens after a nation suffers a recession.²² A K-shaped recovery branches into two different directions. Large companies and public sector enterprises recover rapidly while small and medium-sized companies, are left out of the recovery process. In this recovery, one segment of the economy begins to climb back upward while another segment continues to suffer. Schumpeter, said that a K shaped recovery causes creative destruction as an economy as novel technology and industries take place of the old ones.²³



The richer top of the pyramid secure their incomes and savings rates forced up during the pandemic which drives future consumption whilst the poorer households at the bottom faces continuous setbacks.²⁴ Covid triggered transfer of effective income from the poor class to the rich, impedes consumption demand, as the poor class have a higher marginal propensity to consume (they consume more out of their income than they save), as opposed to the rich class. Covid-19 has created inequality in income distribution as well as job opportunities, which could further alter and impede growth in developing economies like India.²⁵

Sectors like IT (Information technology), the Tech sector companies and or online stores or e-commerce platforms services have seen tremendous growth in the Covid period. People in the sectors of tourism, travel, hospitality and even education (administration), fared badly despite the fact that classes were held through the online mode, but catered to a limited or a more privileged stratum. The focus must be on employment generation, economists say, that will help curb the economic problem.²⁶

RBI's Report on Currency and Finance in 2021-22, burst the bubble around India's quick V-shaped recovery from the pandemic crisis. RBI report states that only if all goes on well, India would take another 13 years, to possibly recover from the economic loss; if the GDP grows at a annual average pace of 7.5%. If the FY23 growth is less than an optimistic 7.2%, with the high inflation across most sectors and the ongoing Russia-Ukraine war, even 13 years might not be enough.²⁷

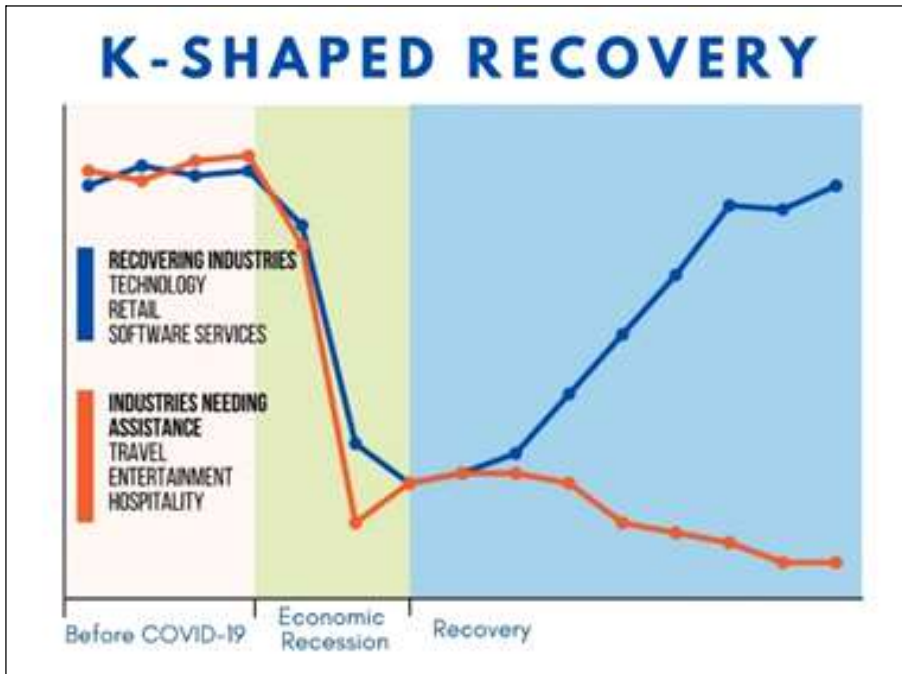
The data also indicates Indian Informal economy is still in distress. There is a recovery in the organized sectors to some extent, but not as well in the unorganized sector as they are vacating their spaces, unable to maintain their business or activity. This recovery is then creating more inequality in the country.²⁸

Raghuram Rajan, former Reserve Bank of India Governor and a well-reputed economist, said that "the Indian economy has some bright spots and a number of very dark stains". The bright spots being the health and success of larger firms, the roaring IT and IT-enabled sectors, prevalence of new strong online platforms and stronger subparts of the financial sector," he said recently. The "dark stains," are problems of widespread unemployment, low purchasing power, poorer lower middle-class, the financially troubled small and medium-sized firms. Even though the economy has picked up, multiple waves of outbreaks have battered the country's large informal sector and contact-intensive services like restaurants, hotels, retailing and tourism.²⁹

India similar to USA, has recovered in a manner where some sectors have caught up faster, while the other are really lagging behind. This type of recovery is known as 'K-Shaped' recovery is shown in the below graph.³⁰

(Sectors in the diagram are divided into two: Upward K in blue colour (seeing positive growth): Technology, Retail, Software services. Downward K in orange colour (seeing negative growth): Travel, Entertainment and Hospitality industry). Rajan said, government ought to focus on its spending "cautiously" so there are no colossal damages. A K-

shaped recovery alludes to a circumstance where innovation and huge capital firms recuperate at a quicker speed than small and medium size companies and businesses, that have been hit especially hard by the COVID-



19 pandemic.³¹

Research group, Oxford Economics, forecasts India's struggle with low growth will continue up to 2025 whereas; S. Kar, National Institute of Public Finance and Policy (Reserve Bank of India Chair), predicts 2033 to be the year for India could be getting back onto the pre-Covid growth path, assuming GDP grows at a very high growth of 7% for the next 13 years, for a significant recovery.³²

N.Kamath, co-founder of Zerodha and TrueBeacon, says that recovery path would ultimately come down to the actions of Governments and the individuals. The Government has resorted to expansionary fiscal policy in order to stimulate spending and consumption in the economy. Sooner or later, continuing the expansionary measures will have consequences like low-interest rates, tax cuts and issuing of more transfer grants. India requires more of an inclusive and equitable approach for overall recovery. Thus, economic growth needs a balanced approach including both monetary and fiscal policies measures, meaning the RBI has to reverse its accommodative approach, and specially focus on price stabilization mechanism (inflation control strategy) and the government will have to cut down its fiscal stimulus (expenditure on capital and other policy incentives).³³

Way Forward For India- A K-shaped recovery is when different parts of the economy recover at different magnitudes and within time spans. For a K-shaped recession recovery, the structure of the economy society gets

altered. The focus shifts to the new “pandemic poor”, increasing the subsidies, new employment generation policies, more rural development and other social sector programs become of prime importance. The vaccination costs of our overly populated country, will not bring relief either. The government has to laser focus upon its capital spending and try to contain any further damage to potential economic growth.³⁴ The possible steps for a faster recovery may include-

1. **Direct Cash packages to thenon- salaried and middle class-** A direct cash transfer by the government, to the non-salaried, middle-class people and households, in the form of a “Tax Holiday” as income support, for a specific time period could stimulate the macroeconomic aggregate demand and help contribute to a positive GDP growth as many lost their jobs or had to switch to lower salaried jobs. The Government could increase the progressive (direct) taxes and cut back the regressive (indirect) taxes lower-income households to ease their financial burden for a while. It is necessary to give priority to aggregate spending (by the middle and lower-middle-class, who are more likely to spend more and contribute to growth).³⁵
2. **Increase in government spending on public infrastructure-** It is a key step in the revival of the economic demand engine.³⁶ Infrastructure has also been a key issue in the inability to attract sizeable amount of foreign direct investment. This crisis time may have created an opportunity to bridge that long-standing gap. Aggressive public investment on infrastructure for a year will also have a positive influence on future exports. Building infrastructure creates immediate employment and purchasing power, infusing demand into the system. Through multiplier effect, it can then feed into the future investment cycle as well. In the short to medium term, India has to rely on debt financing to boost public investment in order to revive the economy. Strengthening and augmenting health infra, urban planning, roads, rural infra and digital infrastructure are going to be the key drivers even in the long run.³⁷
3. **Tax the rich-** Some of the increased spending will be automatically financed by the increased tax revenues from the increase in economic activity over time. Revenue can be financed by introducing new wealth taxes on the super-rich, who have gained considerably over the pandemic. It is true that forcing higher taxes on big firms could possibly jeopardize any attempts to attract foreign investments. However, economists say that a more serious worry for the government would be falling household savings that would discourage investments in the economy. The government should decide on a policy fix to balance the income distribution scenario in the economy.³⁸
4. **Improving the labour market-** Ensuring that there are adequate jobs in the economy, for the people who were not the part of labour

force before the pandemic and who still are actively striving for a job, is the first notch that could help alter the both employers and employees towards the labour market. Government would have to play an active role in subsidising firms, creating more public and informal sector work positions. More employment opportunities could be created under Rural as well as Urban MNREGA, which would assist the most vulnerable people. Introduction and implementation in labour-centric policies: Introduction and stringent implementation of labour-centric policies that restrict firms from cutting a fixed proportion of salaries during contingencies, or from firing more than a fixed proportion of people, could help get that sense of security back. Getting people to want to look for work is the first step, and a rather critical one in the country's labour-intensive endowment. By bolstering labour protection through provision of social security and unemployment benefits to the labour force and increased uniform minimum wages for low paying jobs, it could reduce risk and fear of people and influence them to participate actively in the labour and consumption market, both of which would help improve production conditions.³⁹

- 5. Provide input tax relief to producers in selected sectors-** A K shaped recovery can only be turned around, if growth of sectors that are facing a downward growth spiral, are supported through this period of instability. This can be in form of tax concessions on inputs of production or reducing or even abolishing input taxes for some time. While the government cannot provide input subsidies to all the sectors, it could start with the major manufacturing industries (with respect to economic contribution): metals, chemicals, oil, automobile and packaged food. Once some of the initial beneficiary sectors are able to revive themselves, they can be replaced by other industries like machinery & equipment, electrical equipment and also textiles. It would have to be a well-structured step wise plan which both the economists and Government could agree upon.⁴⁰

Conclusion- V-shaped economic recovery implies the economy recovered at the same pace at which it went down growth wise, which is what happened to India during the first lockdown. This pattern did make the Government hopeful, for a brighter future after the ruthless slowdown. But after the unseen disastrous consecutive wave in April 2021, the economists concluded that the economy is going to see a K-shaped recovery; certain sectors will do well and certain sectors would likely remain stressed for a while and may or may not be able to come back to their original pre-covid revenue levels. If growth has to go smooth and even, India's need of the hour is an equitable recovery; equitable inclusive growth will promote demand and consumption in the economy to get it up and running fast. However, maximum focus should be strictly on employment generation, because there are many people who were and still are rendered jobless due to the national lockdowns, industrial job cuts or cyclical unemployment due to

improvement of technology and the economic recession. Unemployment is being seen as the biggest economic problem, bigger than inflation. Although the increase in rural activity bodes well for the economy, the government needs to encourage more savings and hence investments in the core employment sectors or concentrate on direct policy measures upend demand across various sectors. Besides other stimulus measures, Indian economy has to overcome a lot of challenges and may still experience years of slow growth, but hopefully a consistently positive one.

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Coronavirus Impact on Online Shopping

• Kumar Ravi Ranjan

Abstract- *The fundamental reason for this study is to examine if the Covid is pushing individuals to do web based shopping and will they keep doing internet shopping when this plague is finished. The information for this paper has been gathered by circling poll on the virtual entertainment as the circumstance is inadmissible to go for actual studies. The poll is involved six distinct inquiries 549 individuals were drawn nearer for criticisms on the survey and 205 individuals answered. This proportion isn't terrible as online review ordinarily give reactions around this number. This report is exhaustive in knowing whether Covid is setting off individuals to do web based shopping, or they are as yet figuring out how to truly purchase items. Examination has welcomed on the end that individuals are not doing more web based shopping during Covid and individuals likewise differ that they will be keeping on doing internet shopping with a similar rate in future when this pandemic is finished.*

Keywords- *Coronavirus, Physical business sectors, Online Shopping*

Web based shopping is a strategy for purchasing items through electronic gadgets, for example, portable or PCs by utilizing web . Individuals generally lean toward purchasing items by going truly in business sectors as opposed to purchasing on the web it is a result of different reasons and the unmistakable explanation from them is worries of nature of items that individuals purchase online this demand them purchasing physically. In spite of the fact that there are a few benefits of web based shopping like more affordable, efficient and so forth however they are quality cognizant . The world is confronting one of the most horrendously terrible catastrophes in the set of experiences . As the world is in the overwhelming circumstance and nations have been put under lockdown, limitations have been forced on leaving homes, orchestrating swarmed occasions, going in business sectors, pretty much every business has been closed down on the planet right after COVID-19 and individuals are focused on to remain in homes. subsequently individuals can't go in business sectors for purchasing items, so this is most likely pushing individuals to do web based shopping . Web based shopping permits individuals to satisfy their necessities remaining at home and without going business sectors . This exploration plans to examine on the off chance that Covid is pushing individuals do web based shopping and it is additionally engaged in this review to be aware assuming individuals will keep doing shopping on the web with similar rate as they are doing now when the business sectors are shut and they are likewise stringently banished from going in business sectors.

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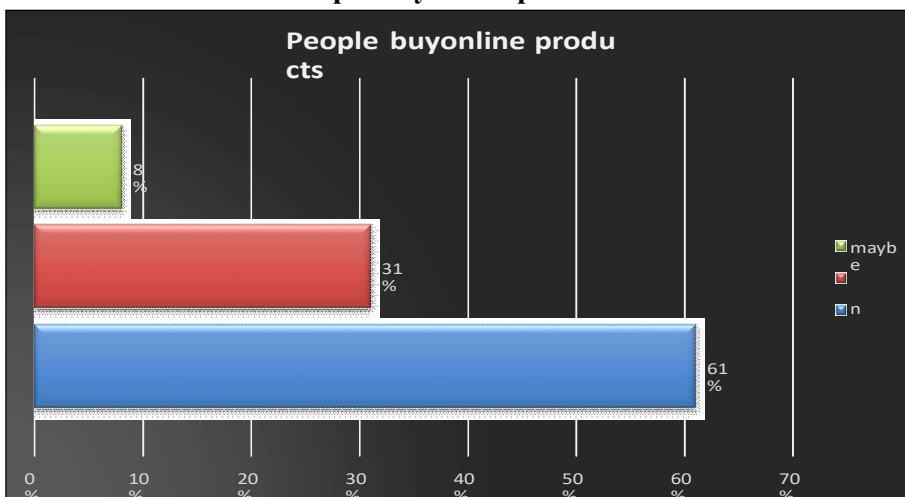
Goals- The point of this report is to be aware if the Covid is pushing individuals to do web based shopping other than this, it is additionally analyzed in this study that assuming individuals will keep purchasing items online with a similar rate in future when Covid is finished.

Strategy- For assortment of information, A survey is created which contains of six unique inquiries. The poll has been coursed via web-based entertainment for gathering reactions from individuals 549 individuals were sent the survey and 205 individuals answered.

Measurable Analysis- All the accumulated data of this study has been displayed in various diagrams and charts. Rate examination has additionally been utilized for this review.

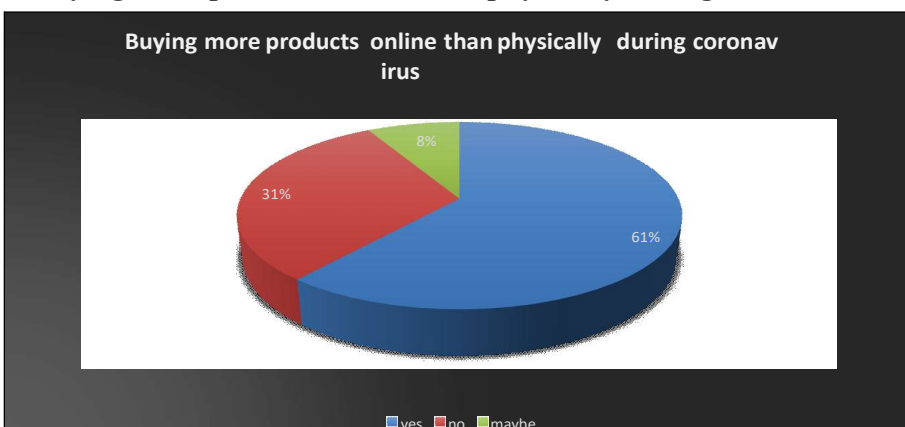
Results and Discussions- The results of this assessment are kept in the accompanying Diagrams.

Figure01
People buyonline products



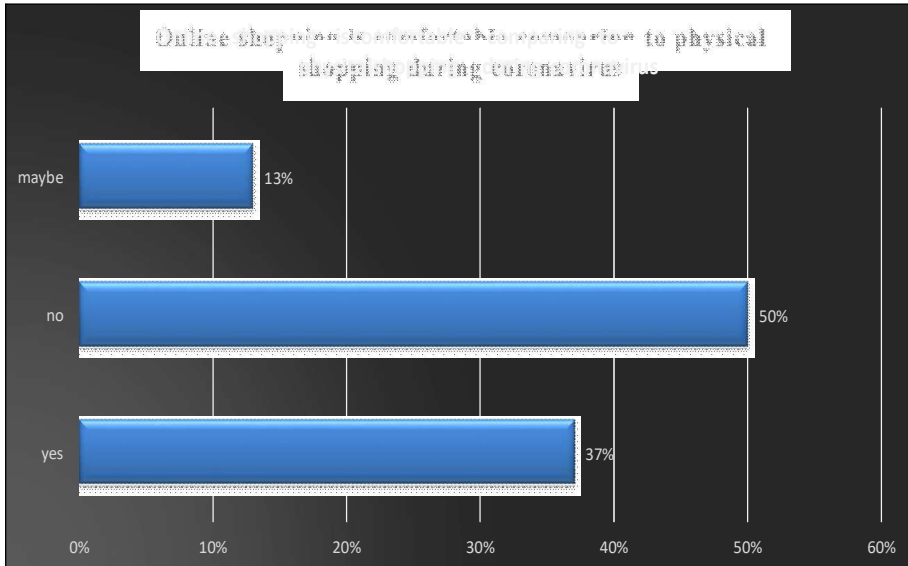
This picture shows that 61% people buy online products and 31% avoid it and 7% are not sure about both cases.

Figure 02
Buying more products online than physically during corona virus



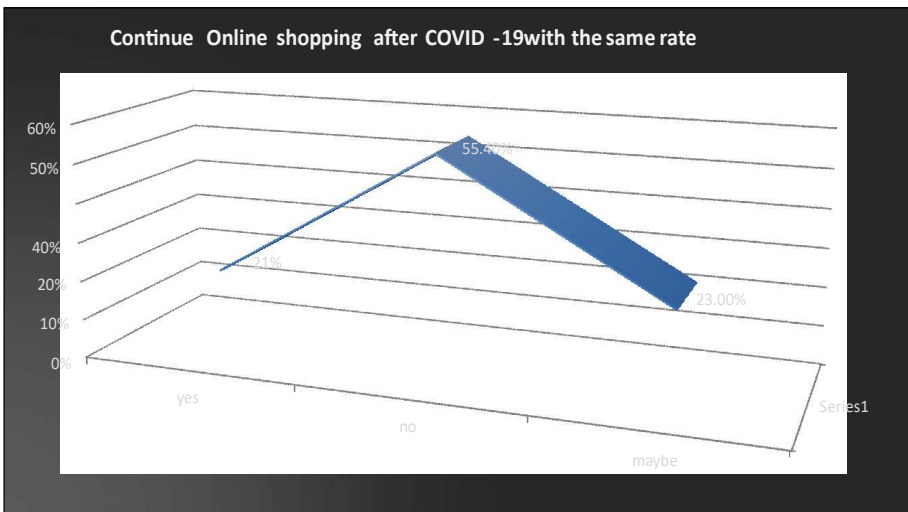
In this chart, 37% people said that they are buying more online products in corona virus and 56% peoplesaidtherearewhereas7% people are uncertain.

Figure03
Online shopping is comfortable comparing to physical shopping during corona virus



In this picture, almost 37% people said buying products online is comfortable comparing to physical shopping during COVID-19 and 50% people said it is not and rest of the people are unsure.

Figure04
Continue Online shopping after COVID-19 with the samerate



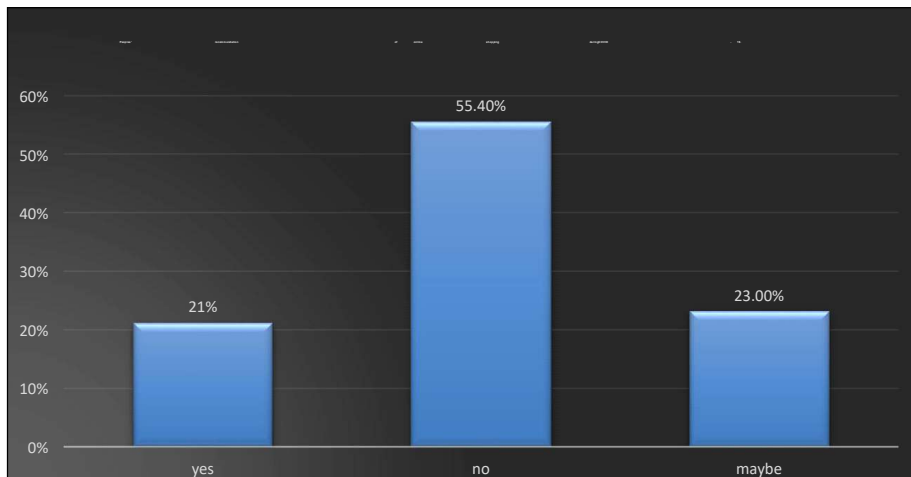
This chart says that, 21% people will continue doing online shopping after COVID-19. 55% peoplerepondedthattheywillnotand23% people are unsure.

Figure05
Online shopping Satisfy asmuc has physical shopping



According to this chart, 29% are agreed that buying online products is as much satisfying as buying physically in markets and 50% people said it is not such a case whereas rest of them are unsure about it.

Figure06
Peoples' recommendation of online shopping during COVID-19



In this graph, 53% respondents said they will recommend online shopping to their family members, friends, and other people whereas 31% respondents said they will not while 15% are uncertain about it.

Conclusion- The end for this overview has been made that individuals are not doing more web based shopping during Covid-90 as half individuals answered that they are not accepting more items internet during Covid-90 while simply 37% individuals said they are.

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A study on success of green marketing practices through customer engagement

• Nawab Akram

Abstract- *Today the primary concern of green marketing is customer engagement. Smart marketers are focused not only on whether customers view their message, but to what extent they engage with it. The motive of green marketing campaigns is to influence customer attitude and behaviour by communicating the benefits of engaging in environmentally responsible behaviour, such as recycling, conserving energy, purchasing locally or regionally grown/raised food, etc. A growing number of customers expect the companies they buy their products from, must have a positive impact on the environment and society. They demand products that generate less waste, and look for the ways to make their own social and environmental contribution. These concerns are the major influencing factors to engage the customer for green marketing. This paper focuses on the success of green marketing efforts put by marketers through different ways of customer engagement. It further reviews how the different tools of customer engagement bring better customer experience and influence them to feel connected with green marketing practices.*

Keywords- *Green marketing, Customer engagements, Environment.*

Introduction to Green Marketing- Green Marketing is also referred as Environmental Marketing or Ecological Marketing. The term green marketing came into prominence in the late 1980s and the early 1990s. The American Marketing Association held the first workshop on ecological marketing in 1975. The proceedings of this workshop resulted into one of the first book on green marketing, titled Ecological Marketing.

Today there is a widespread concern about protecting the environment over the world. Trees are being cut and replaced by concrete jungles; more automobiles are playing on the roads than ever before and emitting carbon dioxide and carbon monoxide that cause air pollution. With increasing industrialization, urbanization, and purchasing power, more and more household can afford Air conditioners and Refrigerators. Most of these Air conditioners and Refrigerators, especially in developing countries like us are not CFC free. Many factories let their unwanted chemicals run into nearby water resources without processing them and thereby causing water pollution and posing threat to aqua life in it. All These factors affecting the environment balance, leading to serious problem such as global warming, air and water pollutions, respiratory diseases, and many other social as well as health issues.

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Evolution of Green Marketing- Environmentally responsible or "green" marketing refers to the satisfaction of customer needs, wants, and desires in conjunction with the preservation and conservation of the natural environment. The evolution of green marketing can be divided in three phases-

1. The first phase was termed "Ecological" green marketing. During this period all marketing activities were concerned to solve environment problems and provide remedies for such problems.
2. The second phase was "Environmental" green marketing and the focus shifted to clean technology that involved designing of innovative new products, which takes care of pollution and waste issues.
3. The third phase was "Sustainable" green marketing. It came into prominence in the late 1990s and early 2000.

Customer Engagement- The concept of customer engagement (CE) has emerged from the body of knowledge on the phenomenon of the customer active presence in value co-creation process which is a component of relationship marketing.

What Is Customer Engagement? Many attempts have been made to define customer engagement. However, taken together all of the definitions seem to suggest that customer engagement is comprised of two critical elements-

Affinity- means feelings of liking or attraction towards a brand.

Activation- is related to customer repurchase and recommendation of the brand to others because of emotional attachment towards a brand.

Beyond repurchase and recommendation, customer can do posting on various social media, can form and organise or participate in brand based communities or even can participate in brand sponsored public or charitable events.

Effects of Affinity and Activation: In effect, affinity is what holds customer attention and keeps focused on a brand. Activation takes the form of continued transactions and interactions with a brand, as well as attempts to get and keep other current/potential engaged with that brand.

Objectives of the study-

1. To understand the effect of corporate commitment to engage customer for green marketing activities.
2. To understand the effect of customer education program to engage customer for green marketing activities.
3. To understand the effect of customer involvement and contribution on customer engagement for successful implementation of green marketing practices.

Successful Green Marketing through Customer engagement- Now corporations are adopting sustainable purposes in order to guide all of their activities, bonding with today's customers and growing their commercial success. Without customer engagement, corporate sustainability programmes fail.

Corporate Commitment- Walmart has been highly vocal in pledges to the

environment since 2005, addressing impacts such as renewable energy use and emissions in its supply chain. Such public commitments hold the company accountable to the public, while cementing a brand image that customers can feel good about supporting.

Google has publicly committed to sourcing 100% of its energy needs from renewable sources, demonstrating a commitment through heavy investment (\$1 billion+) in renewables research and development since 2010.

SC Johnson's Greenlist is a ranking system that guides the company's product sustainability towards continuous improvement over time. The system, which was initiated in 2001, classifies ingredients for SC Johnson household products based on their impact on human health and the environment. In addition to facilitating sustainable purchasing choices, the system ensures that the lowest-impact ingredients will be used in developing new products or in improving existing ones.

From the above examples it is quite clear that, the corporate commitment is the demonstration to stimulate customer engagement in green marketing practices.

Customer Education- Customer education initiatives and programs is another way which makes the customer ready to engage themselves for green marketing orientation.

After conducting an audit on the lifecycle of jeans, Levi's found that customer care habits account for nearly half the energy and water used by jeans in its lifetime can be curbed. In an effort to curb these impacts, Levi's launched a customer education campaign through a new care instruction tag on all its jeans. The Care Tag campaign, which calls for cold water, line-drying the jeans, and donating them to Goodwill, informs customers that their participation is a vital part of Levi's sustainability platform.

To counter the higher calorie content of its products, Coca-Cola encourages physical activity and a balanced lifestyle through its sustainability platform Live Positively. Customers can get involved in Coke-sponsored events and activities around healthy living and learn about calorie counts in products as well as what drives obesity and how it may be prevented. The success of these two events shows that informing and educating customer can lead to better customer engagement to practice green marketing effectively.

Customer Involvement- Successful companies are able to frame their green marketing efforts in terms of what consumers are able to contribute. Collaborative themes and language spur customers to action as an integral part of the company's sustainability strategy.

Starbucks: My Starbucks Idea – Starbucks maintains an open forum on mystarbucksidea.com where consumers can submit their ideas on anything from social responsibility to products to community engagement. Through this forum, Starbucks has implemented several consumer-driven changes towards more sustainable business.

Patagonia: Worn Wear and 'Don't Buy This Jacket' – In 2011, Patagonia launched an ad campaign with the tagline 'Don't Buy This Jacket'

in an effort to bring attention to today's overuse of limited resources. The result was hugely successful, and the campaign quickly went viral on social media.

Building on the success of this campaign, Patagonia used YouTube to introduce its Worn Wear initiative, accompanied by Twitter and Facebook hashtags #WornWear and #AntiBlackFriday. Through Worn Wear, consumers will participate in Patagonia's Responsible Economy by repairing and reusing existing Patagonia gear.

"Worn Wear is a set of tools to help our customer partner with Patagonia to take mutual responsibility to extend the life of the products Patagonia makes and customers purchase. The program provides significant resources for responsible care, repair, reuse and resale, and recycling at the end of a garment's life."

The above examples enforce that customer contribution /involvement lead to customer engagement for the purpose of green marketing.

Conclusion- This study investigates about Successful Green Marketing through Customer engagement. Customer engagement is now the primary focus of green marketing. Aspirational are receptive, best practices are established, and now commercial success depends on creatively engaging with them. Aspirational are receptive i.e. readiness (knowledge, liking, preferences, conviction) of the customer for green marketing is moving to an upward stage. Best practices are established – Customer engagement tool has contributed a lot in policy formulation of green marketing practices.

Corporate commitment towards green marketing is prerequisite for customer engagement. Successful green marketing practices are the outcome of customer education and involvement that lead to customer engagement. Future of Green marketing is associated with the creative application of customer engagement tool.

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Performance Management System in Private Hospitals of Bihar with special Reference to Patna District

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Abstract- Many countries implemented various private-sector-inspired management practices to improve the performance of publicly funded health systems in response to increasing pressure on public budgets. The significance grows even more in the context of events related to the coronavirus disease outbreak in 2020, which will present new challenges for hospital performance management. A national contextual examination of hospital management and knowledge-sharing is then a more appropriate approach to assisting practitioners in their search for the most appropriate mix of management practices. A mixed methodological approach was used in this study to examine individual aspects of performance management from the perspective of hospital management in order to identify areas of potential efficiency gains. The primary research phase included on-site visits to three private hospitals that began in September 2019 and included respondents from various management levels as well as clinicians and non-clinicians. The discoveries were comparative among all inspected foundations and generally consistent with comparably natured contemplates. While the exhibition estimation appeared to mirror the clinical presentation better than the authoritative one, it is likewise seen as insufficient to the intricacy of administration. The administration appeared to consider execution by the executives for functional purposes instead of being motivator arranged or exploratory, in accordance with the apparent absence of association between the presentation estimation and the authoritative system. Joined with helpless correspondence of execution the executive standards, this discrepancy seems to add to the likely strain between the emergency clinic and clinical administration in setting needs between the financial presentation and the quality of care. Generally, these discoveries ought to give understanding into viewpoints impacting execution of the board utilized in open emergency clinics and present the proof for the conversation of potential productivity gains.

Keywords- Performance management; performance measurement; healthcare management.

Introduction- The pursuit of gains in Medicare virtualization productivity became more pressing in view of the number of incidents in 2020 pandemic, when hospitals faced an increased need for capacity management as patient arrival soared due to the corona virus disease outbreak. As indicated by the aftereffects of a yearly overview asking nature of medical care in Bihar,

emergency clinic chiefs, a lot of respondents believed Bihar as the wellbeing framework to be of acceptable quality. Simultaneously, more than 3/3 of respondents recognized the requirement for development in the proficiency of the executives in their organization. Inside such a climate the subject of medical care execution, the executives are exceptionally applicable, similarly just like the recognizable proof of conceivable outcomes that may volatility efficiency increase in order to balanced a good level of administration in the long run.

Although, writing gives helpful information with respect to the hypothetical way to deal with execution the board by and large, there are still a lot of opportunities for the exploration of execution the executives in the different logical settings. The assessment of execution the executives with regards to private emergency clinics presents one such examination hole, where the normal issues identified with performance the board practice in open foundations join with the intricacy of the medical services climate. Such a climate is trying for any exploration exertion, which may disclose to date shortage of any connected writing, yet additionally present a potential for extra information gains.

To bridge that gap, the purpose of this review is to submit evidence on the existing iteration of institutional board execution, as well as discuss the logical angles influencing executive presentations in order to recognize potential productivity gains and add to the information available to practitioners and policymakers.

Since the examination objective of this investigation is to inspect the performance system of the executives in private medical clinics, it is important to initially explain the extent of understanding the exhibition and the presentation the board, given the conceivable equivocalness in the comprehension of these ideas. Performance is perceived as what the authoritative action means for the clinic yield as measured by monetary and non-monetary indicators, owing to its multidimensional and multipurpose nature (Mettler and Rohner 2009; Veillard et al. 2005). Therefore, to improve the situation in these actions (for example monetary position, case-blend yield, patient criticism) would address an improvement in performance. The Performance management system addresses the movement of estimation and assessment that outcomes in the fathomable show of performing data. The exhibition the board in this setting remembers the administration of execution for both functional and key levels, driving towards the satisfaction of hierarchical technique in regards to the medical clinic yield and the supporting parts of these exercises (for example data advancements supporting Performance Management System). Notwithstanding, as this theme is fairly tremendous, the particular focal point of this paper lies with the recognizable proof of spaces of potential effectiveness gains in medical clinic execution management by inspecting singular parts of execution the board according to the viewpoint of private medical clinic executives.

Aspects of performance management that have been identified- The recognized issues going with the presentation of Performance Management System and the variables influencing execution the board are

specifically comparative for public clinics paying little heed to the distinctive medical care settings and the assortment of nations in the referenced investigations. The subjects of arrangement of Performance Management System Clients' Necessities and Performance Management System plan with its proposed use, of appropriate comprehension of the movement yield change system, of close collaboration with clinicians in the reception of execution, the executives rehearses, or of the capacity to break down hierarchical methodology on the functional level, give hints supporting to control the course of execution, the board in open clinics bit by bit towards the theoretical best practice. Understanding these regions has all the earmarks of being the empowering element of authoritative mastering in execution the executives, which could prompt further developed execution, and hence these perspectives are a subject of examination for this situation study.

ID	Individual aspects of performancemanagement	Relatedsources
A	Scope of measuring the ability to reflect the performance ofmedical centers	-----
B	The dependability of performance data and its importance in decision-making	NylandandPettersen2003
C	The relationship between performance measures and operational strategyand performance	MettlerandRohner2009
D	Data collection and evaluation process quality	McConnell et al. 2013; Mettler andRohner2009
E	IT assistance with Performance Management System processes	Bardhan and Thouin 2013; Angst et al.2011;Mettler and Rohner2009
F	Use of performance data and Performance Management System orientation (operational, exploratory, incentive-oriented)	van Elten et al. 2019; Schwartz andDeber2016;SpekléandVerbeeten2013
G	Personnel performance information should be communicated to them.	JääskeläinenandRoitto2015;WettsteinandKueng 2002
H	The impact of the legislative structure and consumer preferences on performance management	McConnell et al. 2013; Mettler andRohner2009

Research Methodology- This examination utilizes a consolidated methodological methodology as it points not exclusively to give quantifiable proof to respond to the characterized research question yet in addition to improve its educational worth by getting the logical reasoning behind the appropriate responses. The on-location research stage finished up the eye to eye meet for every respondent with information gathered utilizing the pre-talk with poll and post-survey talk with notes. The post-information assortment insightful stage concluded the measurable examination of study results and their understanding to settle the characterized research assignment of catching the connection between the exhibition management viewpoints and medical clinic execution the board.

The cross-sectional plan was received in a fairly standard manner for the exploration in administration bookkeeping because the reason for the review was somewhat spellbinding, as it zeroed in on catching the current status and thus giving the premise to additional learning The written survey had an organised plan that included the inspected factors, their written portrayal,

and the seven-point standard Likert-type scale, with respondents expected to in how much they agreed with the introduced statements.

ID	Statement
1	The monetary exhibition measures reflect emergency clinic execution.
2	The non-monetary exhibition measures reflect medical clinic execution.
3	The monetary exhibition measures reflect clinical execution.
5	The non-monetary exhibition measures reflect clinical execution.
6	The exhibition estimation framework gives dependable data about execution.
7	The extent of the exhibition estimation framework upholds dynamic.
8	The connection of monetary execution measures to functional execution is conceivably characterized.
9	The connection of non-monetary execution measures to functional execution is fathomably characterized.
10	The connection of monetary execution measures to authoritative technique is fathomably characterized.
11	The connection of non-monetary execution measures to hierarchical procedure is intelligibly characterized.
12	The exhibition information assortment measure is computerized (no manual information assortment is required).
13	The exhibition information assessment measure is computerized (for example robotized normalized reports, on-request perception).
14	The exhibition estimation framework is enough upheld by data innovations in the information assortment measure.
15	The exhibition estimation framework is enough upheld by data innovations in the information assessment measure.
16	The exhibition data is utilized for spending control and functional arranging (functional use).
17	The exhibition data is utilized for the presentation evaluation of workers.
18	The exhibition data is utilized for the presentation evaluation of supervisors.
19	The exhibition data is utilized for compensating workers (motivator situated use).
20	The exhibition data is utilized for compensating supervisors (motivator situated use).
21	The exhibition data is examined with authoritative individuals to recognize their motivation (exploratory use).
22	The exhibition data is imparted to the work force.
23	The exhibition the executives is impacted by the administrative structure (for example Repayment Decree).
24	The exhibition the board is affected by market elements (for example contest).
25	The clinical directors are engaged with execution the executives.
26	The non-clinical directors are engaged with execution the executives.

Data Analysis: Sample Institute detailse

Clinic/ Hospital	Sub - Department	Assets	Expenses	TotalEmploy ees	TotalBeds	TotalRespondents
A	26	2.3	3.3	2508	1113	32
B	28	3.6	9	3811	1537	28
C	30	2.3	3	2253	1063	27

Information from the survey were broke down utilizing apparatuses

of clear insights and connection examination. For every one of the assertions the mean and standard deviation was determined to decide the respondents' assessment with respect to singular expressmen's' substance. Each mean worth was tried for importance utilizing a two-followed t-test to test the meaning of results against the base speculation of respondents being irresolute (mean = 3) on a certainty level of 99 %. Expressive measurements were additionally assessed and tried independently for every one of the analyzed foundations to look at the comparability of results between the various organizations. A relationship investigation was performed to look at the chance of a critical association between the appraisals of individual explanations. Relationship coefficients above 0.5 and underneath-0.5 were additionally broke down, accepting their relationship not being irregular. Every one of the coefficients was additionally tried for importance utilizing a two-followed t-test performed against the base speculation of no huge relationship between the reactions for the analyzed pair of explanations on the certainty level of 99 %.

Table 01
Measurement scope and ability
to reflect clinical and hospital performance

Statement ID	N	Total Mean				Standard Deviation	Extracted p-value	correlating variables (r)
		All	A	B	C			
Subjects	All	All	A	B	C	All	All	All
1	87	3.289*	3.719*	3.213	3.381	1.119	0.0001	B2 (0.51*), C3 (0.51*)
2	87	3.873*	5.219*	3.363	3.889*	1.087	0	none
3	87	3.805*	3.833*	3.963*	3.593*	1.033	0	none
4	87	5.231*	5.313*	5.000*	5.307*	0.862	0	none

Table 02
Reliability of performance
information and its value for decision-making

Statement ID	N	Total Mean				Standard Deviation	Extracted p-value	correlating variables (r)
		All	A	B	C			
Subjects	All	All	A	B	C	Subjects	All	All
5	87	5.195*	5.313*	3.963*	5.296*	0.95	0	B2 (0.59*), E2 (0.53*)
6	87	3.529*	3.750*	3.363	3.333	1.218	0.0001	A1 (0.51*), B1 (0.59*)

Table 03
Relation of performance measures
to operational performance and strategy

Statement ID	N	Total Mean				Standard Deviation	Extracted p-value	correlating variables (r)
		All	A	B	C			
Subjects	All	All	A	B	C	Subjects	All	All
7	87	5.033*	3.833*	5.071*	5.222*	0.958	0	None
8	87	3.655*	3.938*	3.393	3.593*	1.033	0	None
9	87	3.977	3.338	3.893	3.519	1.257	0.865	A1 (0.51*)
10	87	3.325*	3.369	2.893*	3.926	1.369	0.0002	None

Table 04
Data collection
and evaluation process quality

Statement ID	N	Total Mean				Standard Deviation	Extracted p-value	correlating variables (r)
		All	A	B	C			
Subjects	All	All	A	B	C	Subjects	All	All
12	87	3.126	3.906	3.107	3.307	1.098	0.2856	E1 (0.67*), E2 (0.53*)
13	87	3.633*	5.093*	3.321	3.333	0.927	0	None

Table 05
Support of performance measurements system processes by IT

Statement ID	N	Mean				Standard Deviation	Extracted p-value	Significantly correlating variables (r)
		All	A	B	C			
Subjects	All	All	A	B	C	All	All	All
14	87	3.737*	3.281	3.821*	5.222*	1.07	0	D1 (0.67*), E2 (0.61*)
								B1 (0.53*), D1 (0.53*)
15	87	3.920*	3.781*	3.786*	5.222*	0.918	0	E1 (0.61*), F6 (0.70*), I2 (0.55*)

Table 06
The use of performance data and the orientation of the PMS

Statement ID	N	Mean				Standard Deviation	Extracted p-value	Significantly correlating variables (r)
		All	A	B	C			
Subjects	All	All	A	B	C	All	All	All
16	87	5.931*	6.093*	5.786*	5.889*	0.728	0	None
17	87	3.310*	3.875	2.963*	3.000*	1.288	0	F3 (0.60*), F3 (0.67*)
18	87	3.183	3.563	3.133	3.778	1.167	0.1351	F2 (0.60*), F5 (0.53*)
19	87	3.586*	3.063	3.071*	3.556	1.196	0.0018	F2 (0.67*), F5 (0.70*)
20	87	3.873	3.063	3.679	3.852	1.033	0.2615	F3 (0.53*), F3 (0.70*)
21	87	3.931	3.969	3.679	3.138	1.265	0.6123	E2 (0.70*), I2 (0.53*)

Table 07
Personnel performance
communicated information

Statement ID	N	Mean				Standard Deviation	Extracted p-value	Significantly correlating variables (r)
		All	A	B	C			
Subjects	All	All	A	B	C	All	All	All
22	87	5.253*	5.375*	5.179*	5.185*	0.766	0	None

Table 08
The impact of the regulatory framework
and market dynamics on performance management

Statement ID	N	Mean				Standard Deviation	Extracted p-value	Significantly correlating variables (r)
		All	A	B	C			
Subjects	All	All	A	B	C	All	All	All
23	87	3.023	3.125	3.179	3.731	1.201	0.8587	None
24	87	3.69	3.531	3.786	3.778	1.35	0.0338	None

Table 09
Clinical managers are
involved in performance management.

Statement ID	N	Mean				Standard Deviation	Extracted p-value	Significantly correlating variables (r)
		All	A	B	C			
Subjects	All	All	A	B	C	All	All	All
25	87	5.080*	5.333*	3.929*	3.926*	0.892	0	None
26	87	5.036*	5.125*	3.633	5.370*	0.975	0	E2 (0.55*), F6 (0.53*)

Findings- Due to the similarities of replies across the mutilated subjects, the findings support the continuation of disclosures and ideas. Whereas the show assessment appears to give appropriate result and to highlight the clinical presentation better than the various leveled display, the insufficiency of assessment to the complexity of organization limits the informational worth of execution information for the administration. The issue of assessment harshness isn't phenomenal in clinical consideration and along these lines presents an opportunity for progressive learning. With the improvement of assessment would outfit the organization with overhauled execution in-line. The probably justification powerless assessment might lie with the insufficient correspondence of execution the chiefs' norms to the general staff.

This explanation, gotten together with the vague thought of the association between the various leveled methodology and execution the leaders, adds to the likely pressing factors between the clinical center and clinical organization in setting needs in regards to the monetary display and the idea of care. Subsequently, the Performance Management System has every one of the reserves of being used rather practically and not to its most extreme limit, like the case in execution assessment structures as reviewed.

The improvement in the correspondence of execution the leaders' principles in like manner presents another test for center the board that might yield gains in organization ampleness, to the plan of which the exploratory use of Performance Management System might contribute, as the composing. The presentation information doesn't appear to expect a basic part with respect to specialist evaluation due to the by and by seen absence of clinical staff (HICR 2020), yet any equivalent finishes should consider that improvement in execution information may really incite the progression of crisis facility works out, which subsequently may mitigate the strain on existing clinical workforce.

The current status of help of Performance Management System by informational advancement gives other opening for improvement. As the informational development essentially enables effective execution the board (Bardhan and Thouin 2013; Angst et al. 2011), the utilization of more refined creative gadgets followed by suitable tutoring in their use should additionally foster the information regard got from the Performance Management System. While the segments of market components and the clinical benefits managerial packaging work may impact the determination of execution the chiefs (Mettler and Rohner 2009), the results give minimal confirmation of any effect on the current status of execution the board. The results hence suggest a shortfall of an external improvement for extra headway of execution the board practice, with the justification this maybe being the rigid idea of the regulatory cooperation, very much like the case in various countries (Dubas-Jakóbczyk et al. 2020).

The respondents generally perceived the necessity for advancement in execution the chiefs, yet it in like manner had all the earmarks of being that there was a general assessment of negativity concerning any conceivable change towards progress. Further discussions with the respondents proposed the explanation being the introduction of some half-gauges already, which might have responded to the need of the leaders by then anyway were not piece of any total thought of execution the board. This thought, and a to some degree purposeful reason of any show the board practice subsequently, potentially builds up an environment dissuading from the introduction of any many-sided thought consolidating all spaces of execution the chiefs, which could offer the response for the issue of the board amazing ness. Given the current status of market components, joining the show the board principles into the authoritative design might be one response for streak off the vital progress in execution the chiefs practice in open clinical centers.

Conclusion- Clinical consideration is seen as of good quality in Bihar, the events of 2020 have raised the prerequisite for the board to have the alternative to deftly respond to the components of the prosperity situation in the general population. In this particular circumstance, the capability of private facility load up is a higher priority than some other time, with execution framework the leaders having a critical effect in organization's work to achieve adequacy. Regardless, feasible execution the leaders require trustworthy and precise execution information relevant to the unique

activity of the board. This examination used a mixed methodological approach to manage take a gander at various pieces of execution the board in three private centers to give confirmation on the current status of execution the chiefs practice on an institutional level and to recognize unequivocal spaces of potential efficiency gains.

The results suggest that the show assessment structures used in the broke down subjects reflect the clinical show better compared to the affiliation al execution, while furthermore being too designed in their assessment and rather not adequate to the multifaceted nature of organization. The presentation information gained from these systems is used for utilitarian organization rather than work on the appreciation of the intentional cycles or for the appraisal of specialist execution. The confined use of execution information got together with lacking correspondence of execution the chiefs principles makes the appreciation of execution the board goals and their association with progressive strategy for the general work power irksome. While these troublesome outcomes add to the normal strains between the facility and clinical organization in setting prior ties between the money related show and the idea of care, they are moreover typical for the assessed environment, as shown by similar examinations. The normal ness of recognized hardships presents an opportunity for legitimate learning and upgrades in current execution the board practice if sufficiently tended to by chiefs. These difficulties furthermore present an opportunity for extra assessment. It could take a gander at the feasibility of various organization responses to this issue in different associations and upgrade the available data base.

The critical revelations concerning the show the board practice were comparable across the reviewed establishments and all things considered as per the disclosures of various examinations taking a gander at the individual issues in prosperity systems of different countries, de-exhibit disdain for the constraints of this assessment. Yet the requirements of the examination approach were possibly directed by methodological triangulation and organized documentation of theory, the limitations given by the model decision procedure ought to be seen as when making any conclusions. Henceforth the results of the outline should be carefully seen as verification on the current status of key spaces of execution the leaders in open crisis facilities in patna and fill in as a justification the discussion of spaces of potential capability gains in the broke down clinical benefits system. On the other hand, a point-by-point depiction of the used methodology al-lows the tolerably clear replication of this assessment later on, likewise making a justification extra cross-sectional relative examinations or seeing of the improvement of applied execution practice on time.

Revelations are primarily applicable by specialists in execution the leaders in open facilities as they raise the critical pieces of system setup, redesigning the institutional capacities to affect the real show. Focus perspectives lie with setting up clear and complete crucial targets fit to be disintegrated to unequivocal practical objections and the arrangement of an

assessment system fit for reflecting the achievement of these goals at all levels of the organization. In addition, the execution of the assessment system should be the eventual outcome of investment b/w clinical organization and center association to protect the financial and clinical multifaceted nature of clinical consideration organization enough. Insatisfactorily keeping an eye on these perspectives might achieve the unpleasant arrangement of the estimation system fail to reflect the basic pieces of execution, appropriately not filling its need and accounting of the potential strains b/w different levels of the chiefs. This state controls a definitive environment, possibly impeding the use of more recent execution the board strategies and the organization's tendency to stick to the fundamental demonstration of expenditure reach.

All things considered, the genuine situation in clinical benefits extended the prerequisite for development in the organization of crisis center cutoff points similarly as the interest for quality execution information, which possibly addresses a really important lift for extra improvement of execution the board practice in open crisis facilities. However, the show the chiefs might have been considered good beforehand, it gives perilous execution data in the current time span, as depicted by unsteadiness in the general population's prosperity situation and by a long stretch monetary squeezing factor.

The certification of the prerequisite for advancement in the viability of the board by clinical facility bosses also centers to the current interest for extra improvement of at present used execution the leader's training. The authentic cognizance of the relationship between the arrangement of execution the leaders, dynamic development, and facility execution is major for any such turn of events. Regardless, the data base as for execution the board is wide, and the crisis facility bosses should in a perfect world have the alternative to find inspiration to fix the deficiencies of execution the leaders recognized in this examination.

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Leadership and Participation: Indian Women in The United Nations: Select Case Studies

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Abstract- *As the country aims to enhance its role in world systems, makes its presence felt in international arena and defines its attitude towards the lesser advantageous nations, India will have to deliberate a policy of engaging women in decision making at every level to enable their participation at the domestic and international level. The struggle is to challenge the institutions of patriarchy and exclusion. We cannot wait decades; we need to see a much faster pace of change!*

Keywords- *Leadership, Participation, Women.*

Introduction- The United Nations (UN) is the world's largest and the most influential inter-state organization. Borne out of the concerns for future peace and stability as the world witnessed the World War II (1939-1945), the UN Charter aimed to “save succeeding generations from the scourge of war”. Dag Hammarskjöld, the second Secretary-General, famously said about the organisation: “The UN was not created to take mankind to heaven, but to save humanity from hell.” The UN furthered the cause of peace for all nations and declared to uphold equal rights of men and women. Involving women and ensuring their equal and active participation at all levels for integrating a gendered perspective into UN policies and programmes has been a goal of the UN.

The Charter of the United Nations and the Universal Declaration of Human Rights (UDHR) stipulate that there can be no distinction or discrimination on the basis of gender. As early as 1986, the UN General Assembly had set numerical targets on the representation of women. *Beijing Platform for Action* of 1995 established a goal of 50:50 gender balance to be achieved by 2000 and ensure full participation of women in decision-making and power at all levels and in all forums. The 2017 theme for 8 March, International Women's Day, focused on “[Women in the Changing World of Work: Planet 50-50 by 2030](#)”.

India has actively participated and cooperated in upholding and promoting the aims and objectives of the UN. In the last seven decades India has made enormous contribution to the UN through Governmental efforts, work of scholars, soldiers and international civil servants. However, very few women from India have positioned themselves on posts of significance in this organization. The shining example was Vijaya Lakshmi Pandit who became the first woman President of the UN General Assembly in 1953.

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Since then very few women from India have made a mark on UN bodies and agencies. The paper aims to focus on the participation and contribution of Indian women to the UN as policy and decision makers while exploring future possibilities for the same.

India's role in the UN- When the UN charter was being drafted, India was still a colony. Sir Arcot Ramaswamy Mudaliar an Indian lawyer with prolific career in international relations had led numerous Indian delegations to the UN including the one for signing of the Declaration by United Nations at Washington on 1 January 1942 and the United Nations Charter, on behalf of India during the United Nations Conference on International Organization held in United States, 1945.

On 25th October, 1946 Vijaya Lakshmi Pandit, led the Indian delegation, the first woman to head a delegation at the United Nations General Assembly.

Jawaharlal Nehru conveyed through this Indian delegation to the UNGA in 1946, “towards the United Nations India's attitude is whole-hearted cooperation and unreserved adherence both in spirit and letter to the Charter governing it- to that end India will participate fully in its varied activities and endeavor and assume that role in its councils to which her geographical position, population and contribution towards peaceful progress entitle her – in particular the Indian delegation will make it clear that India stands for independence of all colonial and dependent peoples and their full right to self-determination.”

Vijaya Lakshmi Pandit had added, “India does not yet play a sufficient part in this assembly. She desires and intends to do so. As a major country, geographically in a strategic position in the Indian Ocean, with significant relations and cultural ties with her neighbors in Asia, the contribution she has made in resistance to aggression and the cause of human freedom and her role in world economy entitle her to a place in the important organs of United Nations Organization.”

Since then independent India has fully subscribed to the principles enshrined in the UN charter and as one of the founding members of UN it has “consistently supported the purposes and principles of the UN and has made significant contributions to implementing the goals of the UN Charter”.

In the last seven decades of India's contribution to the UN on various fronts only a handful of women from India have been appointed to various UN bodies and agencies. It would be worthy to look at the contribution so far.

The Illustrious career of Vijaya Lakshmi Pandit (1900-1990)- The shining example in independent India's participation in the UN on an eminent position was Vijaya Lakshmi Pandit. Vijaya Lakshmi Pandit had a notable diplomatic career, and had led the Indian delegation to the United Nations twice in 1946–48, and later in 1952–53. She also served as India's ambassador to Moscow, from 1947 to 1949 and to Washington and Mexico, from 1949 to 1951. In 1953 Vijaya Lakshmi Pandit was elected as the President of the eighth session of the United Nations General Assembly (UNGA) elected by 37 votes against 22. She achieved the post for which “there are no nominations and no campaign.” She was the first woman

President to the United Nations General Assembly. Her election she said was “in recognition of the part women will play in furthering the UN,” though in a later interview she had mentioned that she was “never conscious of being a woman president”. India since then has not had anyone elected to the UNGA though the scope is less probable and so far only two women are elected since then.

Vijaya Lakshmi Pandit served as Indian high commissioner in London and she was also the ambassador to Dublin. She served as governor of the state of Maharashtra from 1962 to 1964, and from 1964 to 1968 she was a member of the Indian Lok Sabha. In 1978 she was appointed the Indian representative to the UN Human Rights Commission. As the President of UNGA her task was “of interpreting complex, ambiguous rules of procedure of the Assembly- on the able performance of which depends not merely the expedition of business, but amicable handling of all the many problems before the House”.

Hansa Jivraj Mehta (1897-1995)- Hansa Mehta a freedom fighter, politician, academician and an ardent human rights supporter had won a seat at the Bombay Legislative council election in 1937. She was also elected to the Constituent Assembly and served in the Indian Constituent Assembly from 1946-49 where she argued in favour of women's rights. She was a member of the fundamental Rights Sub-Committee, the Advisory Committee and the Provincial Constitutional Committee. On 15 August 1947, a few minutes after midnight, Mehta, on behalf of the “women of India”, presented the national flag to the assembly that was the first flag to fly over independent India.

Hansa Mehta was involved with the All India Women's Conference as an active member. The Conference had started in the mid-1920s with a suggestion for educational reforms for women and quickly moved to social reforms with the realization that one will be worthless without the other. Sarojini Naidu, Vijayalakshmi Pandit, Urmila Mehta and many others across various political party lines were actively involved in the AIWC. In 1946 Hansa Mehta became the President of AIWC. During her presidency, she drafted the Indian Women's Charter of Rights and Duties, which demanded gender equality and civil rights for women. Around this time she also served as a member of the United Nations sub-committee on the status of women.

She was eventually appointed to the UN's Human Rights Council. With Vijaylakshmi Pandit she worked on women's equality and human rights in the UN. She served as a member of the United Nations sub-committee on the status of women, which was established under the commission of Human Rights, right from the first session. She was also the vice chair, with Eleanor Roosevelt on the United Nations Universal Declaration of Human Rights committee. An active feminist, in 1946, she articulated the need for a charter of rights on women that established 'the freedom of women and her equality with man, equality of identity'. She looked to already formulated Indian models, including the 1931 resolution of the Indian National Congress (INC). Some aspects for the Commission on

the Status of Women (CSW) were adopted verbatim from a charter she had co-drafted for the AIWC. She had actively participated in all the three sessions of Human Rights Commission that drafted the Universal Declarations of Human Rights, 1948 and adorned the chair of the subcommittee of working group on Implementation of Human Rights.

Begum Shareefah Hamid Ali- She was a pioneer in the field of women's emancipation in India. She belonged to a broad minded progressive family. Her participation in the Indian freedom struggle provided her the opportunity to connect with the all India women's movement and her firm belief in improving the status of women was an impetus to her activism that resulted in heading national conferences to participation in international committees for women's rights. She represented the All India Women's Conference at the Istanbul Congress of the International Alliance of Women in 1935. She was elected President of All India Women's Conference for the year 1940-41.

Soon after the founding of the United Nations in 1945 the United Nations Commission on the Status of Women (CSW) was formed and which held its first meeting in 1947. The Commission aims to promote gender equality and engage women in all aspects of human rights. Begum Shareefa Hamid Ali represented India on the UN Commission on the Status of Women and was the original member of the 15-member committee which prepared recommendations and reports to the United Nations Economic and Social Council (ECOSOC) on promoting women's rights in political, civil, social and educational fields. The commission had contributed in introducing new, more inclusive language for the UDHR.

Women representatives for the All India Women's Conference (AIWC) participated in the various sessions of CSW. For e. g. Lakshmi Menon, one of the pillars of AIWC, and the principal of the Patna Women's Training College represented India in 1949 third Session of CSW. Susheela Dayal attended the fifth session in 1951 on behalf of All-India Women's Conference. Parimal Das attended the sixth session 1952 as representatives of specialized agencies for United Nations Educational, Scientific and Cultural Organization. Putul Banerji was representative of World Federation of UN Associations (founded in 1946) that raised awareness about the aims of UN in the areas of peace, human rights and sustainability.

Hannah Sen (1894–1957)- Hannah Sen an educationist and activist was the daughter of a Baghdadi mother and a prominent Hindu lawyer who converted to Judaism. She earned a Teacher's Diploma from the University of London, where she got an opportunity to be associated with some prominent women's organizations. She eloquently expressed the condition of women in India.

She was instrumental in the founding of the Lady Irwin College of Home Science in New Delhi, and served as Principal of the same till 1947. Hannah Sen was the President of the All India Women's Conference in 1951-52. She represented India at international conferences of non-governmental organizations, UNESCO, and the United Nations Commission on the Status of Women. Hannah Sen served as the head of AIWC, 1951-1953 and was

representative at the fourth and fifth session of the United Nations Commission on the Status of Women in 1950 and 1951. She was the sole female member of India's first delegation to the PRC in 1951, representing the AIWC.

Guided Tours- The American Association for the UN began a guided tour service at the United Nations headquarters on 20th October 1952 with 10 girl guides. Kailas Damania and Leela Lakshman Rao from India were a part of the guiding team.

Neeru Chadha- Neeru Chadha is the first Indian woman to be appointed as a member judge of International Tribunal for the Law of the Sea (ITLOS), UN's top judicial body which adjudicates cases related to the international law of the seas. She won the election to the ITLOS for a nine-year term. The Tribunal "is composed of 21 independent members who are elected from among persons enjoying the highest reputation for fairness and integrity and of recognised competence in the field of the law of the sea." Neeru Chadha is the Member of the Tribunal since 1 October 2017; President of the Seabed Disputes Chamber since October 2020; Member of the Special Chamber formed to deal with the "Dispute concerning delimitation of the maritime boundary between Mauritius and Maldives in the Indian Ocean". International law expert Neeru Chadha as an eminent lawyer was the first woman in India to become the chief legal adviser in the Ministry of External Affairs. It is decades after Vjaya Lakshmi Pandit, that an Indian (woman) is positioned on an important UN body.

UN International Female Police Peacekeepers Network- The UN Security Council resolution 1325 (2000) was the first resolution adopted by the 15-member Security Council to address the disproportionate and unique impact of armed conflict on women and guaranteed their protection and full participation in peace agreements. The resolution aimed to make women active participants as peacemakers, peacebuilders and negotiators in conflict situations. The idea of women peacekeepers is fairly new to the UN. India has contributed nearly 180,000 troops to UN peacekeeping missions. In 2017 India took a lead in contributing 103-strong Indian female police unit in the UN mission in Liberia.

Indian policewomen first arrived in Liberia in 2007. The Indian Formed Police Unit (FPU) is also the world's first all-women contingent to have successfully served the UN Mission in Liberia (UNMIL) since 2007 representing nearly a decade of Indian women's contributions to building the peace in Liberia. India, sends the second largest number of women police officers annually to the United Nations Peace Keeping Force.

While lauding the contributions of the peacemakers at their farewell ceremony, the Liberian president Ellen Johnson Sirleaf said: "The contribution you have made in inspiring Liberian women, imparting in them the spirit of professionalism and encouraging them to join operations that protect the nation; for that we will always be grateful, "our security service now has 17 per cent women – we owe all that to you, because it was not even one percent a few years ago. And these women want to emulate you in the way you've served this country."

Inspector Shakti Devi of the Jammu and Kashmir Police, was deployed in the UN Assistance Mission in Afghanistan (UNAMA), as the Police Advisor for Afghanistan Democratic Policing Project (ADPP) and was awarded the International Female Police Peacekeeper Award 2014 for her "exceptional achievements" in leading the establishment of Women Police Councils in several parts of Afghanistan, and for her efforts towards helping victims of sexual and gender-based violence. She had served as a part of UN Peace Assistance Missions-first in Timor-Leste in 2012 and then in Afghanistan.

From the above examples one can surmise that Indian women have made a significant contribution to the peace processes of the UN and formulate design for human rights. They were more concerned and committed to the functioning and success of this organization. The glorious achievements however are far and few. Prominent women from Indian socio-political arena were involved in the work of the UN and its various bodies in the early decades of both India's independence and the formation of the UN. Over the years has this commitment waned in comparison? Post globalization, India is consistently recognized as a fastest growing economic power that aims to make a mark in the international arena. In view of this the numbers and the contributions of women to the UN appear far less. The pessimism is not unfounded considering India's earlier contribution in spite of lesser literacy rates and limited exposure to world affairs.

In this context some introspection is required while few points can be raised to explore the causes on domestic and international level.

Points for reflection- Education, health, exposure and opportunities are determinants for higher contribution of women in socio-political-economic arena. India's overall literacy rates have risen since independence from around 18 percent in the 1950s to 74 percent in the 2011 census. According to Census 2021, the male literacy rate is 82.14% and female literacy rate, 65.46% rising from 8.86% in 1951. Though India's average literacy rate has increased since independence, however in comparison with the rest of the world, the female literacy rate is considerably low in India at around 65 percent, which is 22 percentage points below the world average. Percentage of women enrolment in India in higher education was 44.29 in the year 2011-12 which increased to 45.91 in the year 2015-16. Apart from these socio-cultural barriers and superstitions continue to impact the full-fledged participation of women beyond household chores.

The world's largest democracy but has few women in active politics though it has a history of powerful women leaders in pre and independent India. As per the Inter-Parliamentary Union (IPU) women hold only 23.4 per cent of Parliament seats across the world. Yet, according to a 2019 report by the Association of Democratic Reforms (ADR) the percentage of women in Parliament in India is less than that of even most South Asian nations. India slipped 28 places to rank 140th among 156 countries in the World Economic Forum's Global Gender Gap Report in 2021, becoming the third-worst performer in South Asia. According to the UN Women input to OHCHR draft guidelines on effective implementation of the right to participation in public affairs submitted in February 2018, Women are still underrepresented

at all levels of decision-making worldwide “.....as a result of discriminatory laws, practices, attitudes and gender stereotypes, low levels of education, lack of access to health care and the disproportionate effect of poverty on women.” In India low participation of women in Indian politics and governance is glaring. India was ranked low at 148th position in representation of women in executive government. Considering that women have low participation in public affairs and have structural and institutional hurdles to cross one cannot rule out the possibility of low awareness of UN bodies and international organizations for them to be considered as significant.

On the international front, UN has often been disregarded particularly by those who believe that with unilateral attacks sponsored by the veto powers without sanctions from the global body and the UNSC has undermined the significance of the peace body and allowed little or no role for less powerful or smaller countries. Could this by itself become a reason for lack of consideration for UN positions?

Increased participation- Apart from improving levels of female literacy and girl education it is demanded to encourage women participation in policy making and political positions. Gender mainstreaming is necessary to make programmes and policies gender-responsive. It is important to make every governmental/non-governmental organization, political party 'accountable for its own performance on gender equality while clarifying lines of responsibility and accountability'. Apart from improving the status of the institutions and organizations equal focus is required for women and girls.

An enhanced awareness of UN, UN Charter, various UN agencies and programmes is a necessary step in the direction of informed communities. In one of the surveys conducted by Cluster Innovation Center at the University of Delhi, it was found that most youngsters did not know about the Sustainable Development Goals as discussed by the UN General Assembly. Education simulation programmes as Model United Nations (MUN) go a long way in imparting understanding more about International Relations, diplomacy and UN itself among the young men and women.

Conclusion- As the country aims to enhance its role in world systems, makes its presence felt in international arena and defines its attitude towards the lesser advantageous nations, India will have to deliberate a policy of engaging women in decision making at every level to enable their participation at the domestic and international level. The struggle is to challenge the institutions of patriarchy and exclusion. We cannot wait decades; we need to see a much faster pace of change!

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Taphonomical Analysis of Archaeological Faunal Remains: An Overview

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••• Devideen Patel

Abstract- *In the present paper, we have carried out an overview of the taphonomical study of archaeological faunal remains. Taphonomy in archaeology studies the physical, chemical, and biological processes that produce changes in organic remains, as well as the evidence (clues) that may be used to identify these processes. The fact that archaeological bones differ from the bones of live animals is one of their most evident characteristics. Individual bones and assemblages of bones go through a lot of changes from the moment an animal dies until the remains are collected for research. It is observable that "bones are not always buried where an animal dies, and they are even less likely to be buried where the animal lives," (Behrensmeyer, 1975) according to another feature that may be less evident but no less essential. Individual species seldom become fossils, but taphonomic studies have revealed a lot about the conditions that allow rich examples of ancient life to be preserved. The study of taphonomy strives to comprehend all types of physical, chemical, and biological phenomena of the changed faunal remains produced through diagenesis and biostratinomy.*

Keywords- *Taphonomy, Archaeological Faunal Remains, Diagenesis, Biostratinomy*

Introduction- The study of how organic remains migrate from the biosphere to the lithosphere, including processes impacting remnants from the moment of an organism's death (or the waste of shed components) to decomposition, burial, and preservation as mineralized fossils or other stable biomaterials, is termed taphonomy. First, it was initially described by Efremov in 1940 as "the study of the transfer (in all of its aspects) of animal remains from the biosphere into the lithosphere," defining a topic that is more broadly defined as "the study of preservation mechanisms and how they impact information in the fossil record (Behrensmeyer, 2000)".

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But the field of archaeology, or to be more specific, "archaeozoology", mainly studies the changes brought to the archaeological faunal remains via animals and human beings, especially during biostratinomy, though it does not exclude the physical, chemical, and biological processes that produce changes in the remains, as well as the evidence that may be used to identify these processes, or in simple words, the formation of the fossils. Processes which operate between death and final burial are biostratinomic processes, and those affecting organism remains after burial falls under diagenesis.

Taphonomy could be examined in a wide range of taxa, including microorganisms, plants, invertebrates, and vertebrates, from protists to sophisticated eukaryotes. Although taphonomy mainly focuses on the organism's material remnants only, in the field of archaeology it can also include biomolecules and traces like trackways, burrows, and faeces as it could provide information about humans as well as animal activities in the past. It helps in knowing the reason behind the very small percentage of preservation of the species that have ever lived on the planet as fossils for some, yet certain biological remnants are rather common, while others are uncommon or non-existent. It's crucial for deciphering what the fossil record's restricted sampling of ancient life signifies, including biases produced by the sorts of animals and ecosystems that are and aren't represented. Keeping because of the importance of the subject we have carried out this study and a diagrammatic representation of the same is Illustration below-

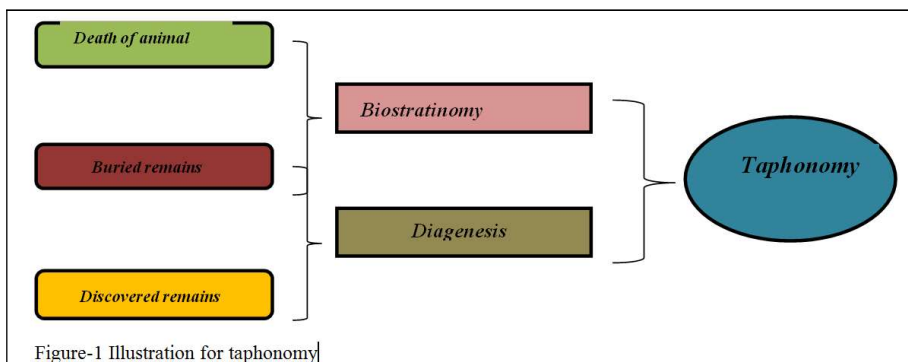


Figure-1 Illustration for taphonomy]

History of Taphonomy- The word "taphonomy" was established by Russian palaeontologist I.A. Efremov to describe the science of embedding laws, or "the study of the transfer (in all its complexity) of animal remains from the biosphere into the lithosphere." Only animal remains were included in the original definition. The term's derivation is derived from the Greek terms taphos, which means burial, and nomos, which means laws (Cadée, 1991). This "new branch of palaeontology," according to Efremov, encompasses all research aimed at "analysing the processes of embedding."

Taphonomy as a term for a specific field of study originated and evolved in palaeontology, where it was originally conceived as involving two stages, the first occurring between an organism's death and its final

burial (recognising that it could be buried, exposed, and reburied multiple times), or biostratinomy, and the second occurring between final burial and recovery of the remains or diagenesis. The divergence was introduced to eminent and keep the separation between those of pre-burial and mostly biological (biostratinomic) processes that impacted remains and from those of post-burial geological and chemical (diagenetic) processes that influenced remains (Lawrence, 1979).

By the middle of the 1980s, paleobiologists Anna Behrensmeyer and Susan Kidwell (1950) had established taphonomic research as "the study of processes of decomposition and the study of preservation mechanisms."

The lengthy journey in the history of taphonomy was a natural progression of the term from indicating solely processes that somehow bias a collection of organisms' remains to realising that some of those processes may be of interest in their own right.

History of taphonomy in archaeology- The entrance through which taphonomy initially entered archaeological inquiry explicitly was multidisciplinary research linked with understanding early hominid evolution (Behrensmeyer, 1975; Hill, 1976). Increased archaeological inquiries regarding the differences between naturally transformed bones and those modified by hominids aided the introduction (Shipman & Phillips, 1976; Shipman & Phillips-Conroy, 1977). The term taphonomy originally related to the study of the processes to which preserved organic remains had been treated and was distinguished by its frequent omission from dictionaries (even ones that ordinarily contain essential concepts). As a result, palaeontology was the word's first use, but even there, the notion has only been actively addressed since the 1960s.

Efremov coined the phrase in an attempt to codify the procedures connected to bone burial into a unified framework. Over the ensuing decades, palaeontologists progressively adopted this essentially scientific approach to the examination of fossil remains (Behrensmeyer 1975; 1978; Gifford 1981; Hill 1976, 1979).

Use of taphonomy in archaeology- Archaeologists discovered in the 1980s that the fundamental ideas extended to their field as well, notably the biological components of site development processes. After first limiting their use to faunal remains, several people realised that the principle might be applied to a wider range of things. In Australia Hiscock (1985) discovered that the basic ideas could be applied to stone tools, rock art, pottery, charcoal, and other archaeological artefacts as well. Today, the term taphonomy in archaeology is a bit of a misnomer: tapho is Greek for "grave," and nomy denotes knowledge systematization. It refers to the study of the transition of materials into the "archaeological record" in archaeology (Bahn, 1992). It has become clear that even this broadened definition may not be sufficient and that taphonomy of paleoart, including rock art, imposes more stringent requirements on practitioners. But, to understand this, it is helpful to look at how taphonomic ideas are used in archaeology to see what can be learned from them. The fact that these experiences may be used in archaeology and rock art studies demonstrates how effective taphonomic logic is as an

epistemic instrument (Bednarik, 1990–91, 1992, 1993, 1994).

The study of preservation mechanisms and how they impact the information contained in the fossil record is the main aim of taphonomy in archaeology. The processes remove as well as add information, such as chewing marks on bones that indicate predator identification. It aims to comprehend mechanisms [that have altered organic remains] so that data from the fossil record may be properly analysed and used to solve palaeobiological and palaeoecological problems in the field of archaeology (Marchetti et al. 2019).

Diagenesis of bones and tooth- In archaeology, bone remains are an essential source of knowledge about the past. They do, however, change with time. From the macroscopic to the nanoscopic scales, there is change. The evaluation of information collected from the chemical and isotopic composition of palaeo-diets, ages, and palaeoclimates necessitates the investigation of diagenetic alterations using a variety of complementary analytical approaches. Bone histology, porosity, protein content, the crystallinity of bone apatite, carbonate content, and enrichment and leaching of chemical species, in general, are diagenetic criteria that quantify the post-mortem change of bone (Von Endt and Ortner, 1984). Complementary elemental and structural analyses (Particle-Induced X-ray Emission, Scanning Electron Microscopy (SEM) coupled with Energy Dispersive X-ray (EDX), Electron Microprobe, X-ray Diffraction, Infrared Spectroscopy, Transmission Electron Microscopy (TEM) with (EDX), Microscopic Observations (Optical, SEM, TEM), and porosity measurements can all be used to investigate (Reiche, et al., 2003)

The pace and type of post-mortem changes to bones and teeth are influenced by the porosity of mineralized tissues (Hedges and Millard, 1995). The ease with which water, bacteria, and dissolved ions enter and exit the tissue is determined by the diameter and interconnection of the different pores.

Diagenesis of hard tissue (i.e. bone and teeth) is a complicated and site-specific process. Temperature, the presence of oxygen, soil composition (e.g., pH, flora and fauna), soil pressure and drainage capacities, groundwater chemistry and hydrological movement, microbial assault, and particle transport are all factors that affect the burial environment. All of these variables, which are frequently intertwined, are responsible for the chemical degradation of the bone's protein and mineral components, as well as its bioerosion, or microbial modification of bone produced by bacteria, cyanobacteria, and fungus.

Chemical hydrolysis or microbial assault can cause the organic component of the bone to degrade. While the pace of collagen hydrolysis is affected by time, temperature, and soil PH, microbial bioerosion can begin as soon as a person dies. For example, Jans discovered that intact burial bones are more likely to be degraded by germs than fragmented bones after dismemberment or butchering (e.g., faunal remains). This suggests that bacterial bone degradation is linked to putrefaction and early phases of bodily decomposition. There may be an increase in bone porosity after

collagen breakdown, which enables microbial assaults and subsequent apatite dissolution and/or recrystallization, especially under certain environmental circumstances (e.g., the presence of groundwater). The early chemical breakdown of bone apatite might expose the bone to microbial assault, which could lead to protein degradation.

The histological study of bone integrity, alone or in combination with other parameters, has been widely used not only to assess diagenetic changes but also as a pre-screening tool to infer the degree of biomolecular or paleopathological preservation among the four diagenetic parameters defined by Hedges to measure bone destruction (i.e., crystallinity changes, porosity, and protein content).

The rate of change has remained consistent across time, indicating that major outcomes are the consequence of the accumulation of many small changes, rather than a single catastrophic event.

Biostratinomy in archaeology- Animal bones discovered during excavations have a lengthy history of taphonomic alterations, beginning when they were first deposited and continuing until they were recovered. Such changes can change the physical and chemical composition of bone tissue, as well as cause bone mobility (Albarella, 2016). This can take several forms, including horizontal transit of the bones from one part of the site to another, vertical movement through the archaeological strata, or a combination of these.

The period between death and burial is important in archaeology because it involves both animal and human-induced changes to the bones (gnawing, butchering, cooking, etc.) that are archaeologically significant and are frequently referred to as 'biostratinomy' (Gifford, 1981; Albarella, 2016). Physical, mechanical, and sedimentary processes such as disarticulation, abrasion, transit, dispersion, sorting, and re-sedimentation are examples of biostratinomic alterations.

The following phrases might be used to describe the biostratinomy of archaeological bones:

- Re-deposited bone: discovered at a location other than where the bone was originally buried.
- Residual bone: A bone discovered in a phase other than the one to which it originally belonged.
- Intrusive bone: A bone that was discovered in a stratigraphic stratum that accumulated earlier than the one to which it originally belonged.
- Contaminant bone: A bone discovered in a phase other than the one to which it originally belonged (Albarella, 2016).

Importance of taphonomy in archaeology- The fossil record has a wealth of biological and ecological data, but the quality of this data is inconsistent and incomplete. The same may be stated for many forms of neo-biological data, but in these circumstances, archaeologists impose sample biases, which are explicable as part of a research strategy. Natural processes have already done the sampling and generated the biases in fossils before research

begins. Taphonomy aims to comprehend these processes to properly analyse and apply data from the fossil record to paleobiological and paleoecological concerns from the archaeological point of view.

One of the primary objectives of the discipline since the 1980s has been the investigation of postmortem bias in paleobiologic data, although taphonomy has always been and continues to be a multi-tasking science. Because organisms not only produce potential fossils but also are high in live/dead interactions and feedback, states of preservation of biotic remains are not only indicators of how faithfully biological history has been recorded (issues of paleobiologic data fidelity and resolution), but also testaments to environmental conditions and evidence of important aspects of biological evolution (skeletal and biochemical novelties, live/dead interactions and feedback). The logical limits of taphonomy are defined by its focus on processes and patterns of fossil preservation, but in practice, taphonomy stimulates research on all types of biases affecting paleontological information, such as those introduced by collecting, publication, and curation methods on the one hand, and stratigraphic incompleteness on the other.

The Pleistocene cave bear (*Ursus spelaeus*; Rosenmüller and Heinroth) got its name from the fact that nearly all of its bones were discovered in caves (Bednarik, 1993). They have been discovered in large numbers in cave lair deposits, up to tens of thousands of individuals in certain caves. In Austria, for example, 250 tonnes of cave bear bones were discovered in the Drachenhöhle. As a result, the distribution pattern of these remnants suggests that the animal was a cave dweller who died inside caverns regularly. Despite this, the species only used caverns as winter hibernation locations during stadial times, otherwise spending no time inside. It was a herbivore whose primary food source was grass. Although weak or elderly bears perished during hibernation, there is no doubt that the great majority of cave bears died outside of caverns. So, why are their skeletons nearly all found in caves? The explanation is taphonomy: the chance of skeletal remains surviving in cave sediments is thousands of times higher than the chance of them surviving in the open. There are two primary reasons for this: Inside limestone caves, the sedimentary pH, which influences the survival of osteal remnants, is quite high, and they are not susceptible to external weathering but rather to exceptionally stable paleoclimatic circumstances.

Limitations in the field or inaccuracy- The nineteenth-century controversy over the significance of broken stones, which were thought to show a Tertiary-aged "eolithic" civilisation, prompted a lot of study into determining the physical characteristics of the stones that unequivocally meant human alteration (Grayson, 1986). A paleobiologist, unlike an archaeologist, understands what a certain seed, leaf, bone, tooth, or shell looked like while the creature was alive. This makes the first phase of the taphonomic study, reconstruction, very simple because the comparison baseline—the size and form of the living creature—is already known. Is there anything about the prehistoric specimen in question that distinguishes it

from a regular (contemporary) example of the same kind? Is it disarticulated, twisted, shattered, scarred, discoloured, scorched, mineralized, or discoloured? If so, what's the reasoning behind it? Is the difference due to a disease that occurred while the creature was alive, or is it postmortem and hence taphonomic? Having a more or less well-known model of what the contributing organism(s) looked like is a huge advantage in paleobiology; archaeologists, on the other hand, don't have that luxury and must infer very basic properties from the artefacts they study, such as whether an arrowhead is a tip of an atlatl dart, a spearhead, or a knife. They have no means of knowing what the arrow shaft (e.g., fletched, un-fletched) or bow (e.g., sinew backed, or not) looked like after that. A femur, on the other hand, necessitates a tibia, and the femur of a bear (Ursidae) necessitates one kind of tibia, but the femur of a squirrel (Sciuridae) necessitates another. Knowing those anatomical requirements, as well as what a "normal" skeleton looks like, gives a useful framework for recognising taphonomic features in skeletal remains.

Conclusion- Today, taphonomy is primarily concerned with a geobiological knowledge of the earth based on postmortem processes that recycle biological components and influence our capacity to recreate former ecosystems in both good and negative ways. It looks at how organic matter moves from the biosphere to the geological record. It is especially important for zooarchaeologists and paleobiologists who study organic remains in the archaeological record to recreate hominid dietary patterns and paleoecological circumstances. Taphonomy is the response to the inquiry "Are the remains different than when they were part of a living organism, and if so, how are they different, and what do the similarities and differences suggest about paleobiology, paleoecology, and the like?" We can't just assume the scenario was this or that based on the number of bones, but it's critical to do a taphonomic investigation.

Taphonomy in archaeology is the study of preservation processes and how they affect the information stored in the fossil record. The procedures both remove and add information, such as gnawing marks on bones, which reveal predator identity. It seeks to understand processes (that have transformed organic remains) so that data from the fossil record may be appropriately analysed and used to address palaeobiological and palaeoecological challenges in archaeology (Marchetti et.al. 2019).

Since the 1980s, one of the discipline's key goals has been to investigate postmortem bias in paleobiologic data, even though taphonomy has always been and continues to be a multi-tasking science. Because organisms not only produce potential fossils but also have a high rate of live/dead interactions and feedback, states of preservation of biotic remains are not only indicators of how accurately biological history has been recorded (issues of paleobiologic data fidelity and resolution), but also testaments to environmental conditions and evidence of important aspects of biological evolution (skeletal and biochemical novelties, live/dead interactions and feedback).

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The Condition of Tenants During the Colonial Rule

• Nisha Rathore

Abstract- *The condition of tenants became miserable during the British rule throughout India because majority of the tenants were made dependent on their landlords (taluqdars, zamindars, etc.) due to the colonial land policies. Mostly land settlements were made with the landlords in their favour, who acted as intermediaries between the British Government and the tenants. Landlords collected rent from tenants and paid a fix amount to the British in the form of revenue. They also collected nazrana, illegal tax, from the tenants. The British officers did not control the exploitation of tenants by their landlords. The exploitation of tenants-at-will was more because they were not given occupancy rights over land, therefore, such tenants could be evicted from their land on any excuse at any time. So also they were not provided any kind of legal protection by the colonial Government. Tenants with occupancy rights were in a small number. This paper is restricted to the Province of Awadh.*

Keywords- *Tenants-at-will, occupancy tenants, taluqdars, zamindars, nazrana, Oudh Compromise, ejectment.*

Introduction- The Oudh Rent Act of 1868 conferred the rights of occupancy on every tenant who had within thirty years before February 13, 1858, been in possession, as proprietor, of land in a village the rights being heritable but not transferable. Though the Act gave some relief to old dispossessed proprietors, it did not permit increase of occupancy rights in future. Under-proprietary rights could be conferred by the superior proprietors, but no occupancy rights could be conferred or acquired. Occupancy tenant has obtained a decree for a specific plot only at a privileged rent, without any powers of transfer. 'Occupancy tenants', according to Majid Hayath, 'were the beneficiaries of the "Oudh Compromise" of 1866.'¹ The parties to the compromise were tenants, taluqdars, the Chief Commissioner of Awadh and the Government of India. The taluqdars did not wish to give any occupancy rights to their tenants, as they had no wish to give under-proprietary right to them. The Awadh Chief Commissioner supported the taluqdars. However, the Government of India supported the tenants. A compromise was reached in such a fashion that it satisfied both the parties, taluqdars and tenants. As a result the Act XIX of 1868 was passed. This Act 'declared all cultivators as tenants -at -will except those enumerated in Section 5 of the Act.'² The occupancy rights under section 5 were only to a few tenants. As Powell points out:³

If a tenant could show that he was once

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proprietor i.e. within thirty years before
February 13th, 1856...he might be entitled
to the occupancy -right...with a heritable
but not transferable tenure.

As the period of thirty years was too long, the claimants in majority of cases could not prove their proprietary rights. Therefore, a small number of tenants were given occupancy rights. As Powell further points out concerning the difficulties of tenants in having occupancy rights:⁴

... in Oudh, 'occupancy-tenants', as representing
the residuary class of persons, who have some
right to consideration, and yet not definite
enough to be sub-proprietors . . . are a small
class. Under the Act of 1868 they were holding
only about 1 per cent of the whole cultivated
area: 78 per cent was held by tenants-at-will.

So the occupancy tenants were only those persons who could not prove for under-proprietary rights. But the kind of proof they produced was sufficient to make them occupancy tenants. Seen in this way there was no qualitative difference between the two categories, the category of under-proprietors and the category of occupancy tenants. The occupancy tenants too were respectable tenants. The taluqdars could not eject them at their will if they paid their rents regularly. So also they could not enhance the rent of occupancy tenants at their will. There were restrictions imposed on the enhancement of rent of the occupancy tenants. But they hardly made any difference to the economic position of the taluqdars, for they were negligible in numbers. But they could possibly pose challenge to the taluqdars if they joined hands with the under-proprietors, for both of them formed respectable kinds of cultivators with the British Government's support for them.

The majority of the Awadh tenants who were not given any kind of right on land by the Oudh Rent Act of 1868 were known as tenants-at-will. They could be removed or evicted from their fields at any time by the taluqdars. In 1880, about 88 per cent of the total cultivated area was held by tenants-at-will who were at the mercy of the taluqdars and zamindars. The British Government gave no kind of protection to them for a long time, i.e., till 1886. These tenants cultivated "78 per cent area."⁵ Almost all the tenants-at-will were the bonded peasants, because they had very small, non-economic, holdings. They had so much of land as to keep themselves subsisting with the help of moneylenders. Tenants-at will could be ejected at any time, so also their rent could be enhanced at any time. They had no guarantee about their land.

For the first time tenants-at-will were given legal protection by the government through the Oudh Rent Act of 1886 (XXII of 1886). This Act placed certain checks on the power of taluqdars Referring to the protection given by the government, Baden Powell writes: ⁶

Every non-occupancy tenant. . .has a statutory
right to remain on the holding, and with the
same rent, as he was paying on the 1st of

January, 1887, for seven years, from the
Date of the last change in the area of his
holding.

Thus, for the period of seven years a tenant-at-will could not be ejected, and so also his rent could not be enhanced. And if a tenant was ejected, by whatever reasons, the rent of the new tenant would remain precisely the same. After the statutory period the rent could be enhanced. But such an enhancement would not exceed 6/1/4 per cent. A landholder could take back his land from the tenant only after the statutory period. But the tenancies were not made heritable and the Rent Act of 1886 did not prevent the land-holders from demanding nazrana (premium) after the expiry of seven years. It was also for the first time provided that the tenants could make improvement on their cultivated fields with the consent of their landlords. If landlords did not give consent for making improvements then Deputy Commissioner of the district could grant consent. The tenants were enabled to get compensation for the improvements they had made on their lands, in case they were ejected from lands.

Nazrana became a main source of exploitation of the tenants-at-will in Awadh. The rate at which nazrana was exacted varied and depended on the quality of soil, competition for land, circumstances of tenants and the nature of the landlord.

Everything appears to help the tenants so far as the legal side is concerned. Though the rise in rent was checked for a few years the Act was enforced, in the long run it lost its impact on the landlords. Even for those years when the rent stopped rising, it is doubtful whether it was the result of Rent Act. It is maintained that the rise in rent rate was stopped because of poor cropping culminating into famine. Awadh had a widespread famine in 1896-7, and the antecedents of the famine are well known. So it is doubtful whether it was the Rent Act or drought which was responsible for a check on rent rates. Once the normalcy in crop production returned, the rent rate started rising. According to Moreland 'the statistics of the next decade (1898 to 1907) indicate a marked upward movement in rents.'⁷ One is immediately reminded of the Royal Commission Report on Agriculture that the land cultivator is beyond any legal remedy.⁸ Rural indebtedness makes all legal protection useless. As soon as the Land Act was introduced the landholders started searching new ways to increase rents. As M.H. Siddiqi remarks:⁹

The letting value of the land was constantly rising
and the tenants in competition were themselves
beginning to offer sums over and above
what is the tenant rate would come to if regulated
by law. The laws of the market, like the landlords
were not to be governed by the rent acts.

In these circumstances giving legal protection to the tenant was like prescribing tonic for his health without diagnosing his illness. And then there was no legal remedy for the extraction of other kinds of cesses from the tenants imposed by the landlords for the simple reason that they were not legal. There was no law introduced for stopping these cesses, and even if

such a law was introduced it would fail to work. In spite of the act of 1886 the tenants suffered. In many estates their condition was desperate and a good deal of discontentment prevailed.

To conclude, in 1880, about 88 per cent of the total cultivated area was held by tenants-at-will in Awadh who were at the mercy of the taluqdars and zamindars. Even the Oudh Rent Act of 1886 which gave statutory right to tenants-at-will for a given period, could not stop their exploitation by the taluqdars.

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2. Aulad Siddiqi, Land Tenures in U.P., p. 93.
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4. Ibid.
5. Ibid.
6. Ibid., p. 250.
7. Moreland, The Revenue Administration of the United Provinces, footnote on page 65.
8. See Nisha Rathore, 'A Comparative study of the Bonded Tenants and the Bonded Labourers in Awadh, Bihar and Orissa (Odisha) During the Colonial Rule', Research Journal of Social And Life Sciences, Vol. XXIV-III, English edition, Reeva (M.P.), 12 June-2018 on bonded peasants of the dissertation.
9. Majid Hayat Siddiqi, Agrarian Unrest in North India : The United Provinces, 1918-22, New Delhi, 1978, p. 80; Siddiqi refers to so many ways adopted by the landlords for increasing rents.

Mental Clock Comparison in Blind and Sighted Students

• Kalpana Pandey

Abstract- *An experimental study was conducted in a mixed 2x3 factorial design with respected measures to find out the significance of differences among the mental clock comparison judgment times among blind and sighted students. Congenitally Blind (CB), Late Blind (LB) and Blind folded sighted (BFS) subjects (120:40 in each category) were required to perform mental colock comparison judgments under analogue versus discrete information processing instructions. The mean response latencies among different experimental conditions showed significant difference. CB subject under discrete processing condition showed slowest while BFS subjects under analogue information processing condition showed the fastest Judgment. The finding were consistent with previous researches on perception through mind's eye and symbolic distance effect".*

Keywords- *Mental clock, Judgment, Experiment*

Introduction- People compare objects by retrieving information from memory rather than by direct perceptual inspection. Despite this very little is known about these memory based comparative judgment. Moyer (1973) student this through comparisons of size of named animals. The judgement latency or reaction time for the choice of larget of the two increased systematically as the difference in their real world sizes narrowed. Such comparative judgement latency was found to be inverse linear function of the logarithm of the estimated difference in animal sizes. This was just like the direct perceptual comparison, hence it was called "perceptual comparison through mind's eye" (Moyer, 1973).

Panio (1973) applied dual coding theory to explain the above phenomeanon. He conducted experiments on comparson of mental clocks. The results showed a comparable symbolic distance effect (Paivio, 1977).

He also found that the judgement latency of symbolic judgement was shortest for pictorial than mixed (picture and world) comparisons, while all verbal (word and word) comparisons showed the longest reaction time for such comparisons.

Pavio (1978) argued that the angular disparities were perceived and retained with the help of imagery in sighted subject, therefore, analogous imagery based comparison judgments were faster than computational or digital ones. The present study was an attempt to replicate above experimental finding among the blind and sighted subject.

Problem-The research questions of the prest study was: whether the

congenitally blind, adventitiously blind and sighted subject differed in using imagery while making mental clock comparisons?

Hypothesis- It was hypothesized that the superiority of image based comparisons would be found among all the above three categories of the subject (Congenitally blind, adventitiously blind and sighted).

Method

Subject- The study was conducted on 120 (40 each from blind, adventitiously blind and sighted) boys from class IX to XII of the Govt. school for blind, Rewa Govt. Martand School, Rewa.

Appratus and Material- Eighty cards with two digital clock times in Braille language were used as comparison material with blind and adventitiously blind subjects. While other eighty card with same digital clock times in raised writing of Arabic digits were used with blind folded. Sighted subjects. In both the above types of material half (40) cards had large angular difference in between the 'clock hands', while remain half (40) had small angular difference in between the hour and minute hands of the mixed mental clock.

Experiment Design- A 3x2 factorial design with repeated measure was used. The visual status of the subject was varied between groups at three levels viz congenitally blind (CB), adventitiously blind or late blind (LB) and blind folded sighted (BFS). Whereas, the type of instructions to use analogue (or imagery) vs digital (or computational) mental comparisons of the given varied with lat groups two levels. Thus, the study involved six experimental treatments. Each experimental treatment consisted 40 subject who compared 40 cards with larger and 40 cards with smaller angular difference. Thus, every experimental treatment consisted of 320 (40x80) observations. The subject were randomly assigned to different experimental treatments.

Procedure- The subjects participated in the experimental setting arranged separately in the respective schools. Each subject was assigned the experimental task individual. The instruction provided to them were as following.

(A) For analogue condition- "You have to mentally compare and judge the size of angles between the minute and hour hands of two digital times given on each card (in Braille for blinds and in raised writing for blind folded sighted subjects) For this you must imagine the two times in your mind and compare the difference in the sizes of the angles of hour and minute hands to tell which one (left or right) has the bigger angle.

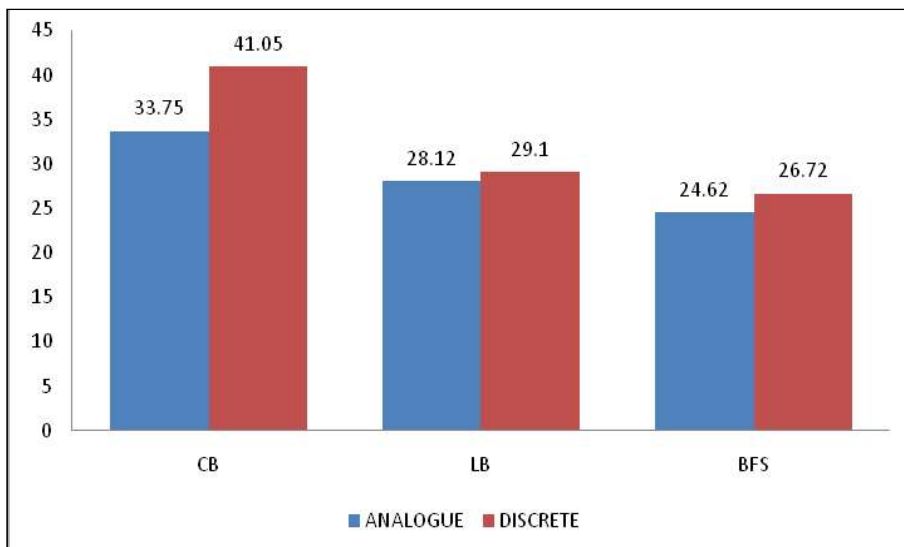
(B) For Discrete condition- In the discrete condition the subjects were asked to refrain from imaging the present digital times on the cards and to compare then through computation. The judgment latency/reaction time in the above comparisons was recorded through stop watch as the dependent variable.

Results and Discussion- The data were analyzed through test and analysis of variance (Anove). Table 1. Shows that the mean (M) reaction time (response latency) (M=33.07 sec.) Congenitally blind subjects under analogue condition was significantly shorter than the discrete condition (M-

Table 02
Showing Summary of Anova

Source of Variation	Sum of Square	Df	Mean Square	F	P
Between SS	6971.40	5	1394.280	44.29	<0.01 S
Main Effect of Visual Status	5361.09	2	2680.545	85.15	<0.01 S
Main Effect of Angular Size (Factor –B)	814.02	1	814.020	25.86	<0.01 s
Interaction Effect (AxB)	796.34	2	398.185	12.64	<0.01 s
Within Treatment (SS)	7365.70	234	31.477		
Total SS	14337.10	239	59.987		

Fig 01
Showing Mean Reaction Time under Analogue & Discrete condition for CB, LB & BFS Subjects



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Subjective Well-Being Among Married and Unmarried Women

• Fahmeeda Zaidi

•• Anubha Srivastava

Abstract- *The purpose of this study was to examine and contrast the subjective well-being of married and unmarried women. The participant of the present research were 200 women (100 married women and 100 unmarried women). The Subjective Well-being Inventory by G.P. Thakur & R.N. Singh, (2005) was used to examine the subjective well-being of the participants. The data was analyzed using SPSS 20. The needed analysis for the sample was calculated using the mean, SD, and t-test. As a result, a significant difference in Subjective Well-being was discovered between married and unmarried women. Subjective well-being has been found to be better in married women than unmarried women.*

Keywords- *Subjective Well-being, Married Women, Unmarried Women.*

Introduction- There are three aspects of mental health : (i) Negative mental health, (ii) Moderate mental health and (iii) Positive mental health or psychological well-being.

A person's cognitive and affective evaluation of their life is defined as subjective well-being (SWB). Diener and Seligman (2004) Defined well-being as people's positive evaluations of their lives, including positive emotions, engagement, satisfaction, and meaning. Kahnemann and Riis (2005) consider subjective well-being as being a hybrid concept with two components, which might be labeled "experienced well-being" and "evaluated well-being".

The well-being of a person depends on his socio-economics status, family environment, physical health, individuals own personality characteristics and behaviour. The pleasant environment of the family makes a person mentally healthy. Marriage is the foundation of family formation. It can have positive and negative aspect but marriage is directly related to happiness and life satisfaction.

Marriage is a means of increasing psychological, social and economic resources (Williams and Umberson, 2004; Liu, Elliot and Umberson, 2010).

Marriage plays positive role in the life of a person. To prove it many studies have been done such as - Gove and Tudor (1973) Found that marriage protects men's mental health more than women's. Fox G.W. (1980) produced evidence to the contrary, claiming that marriage is more beneficial to

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women. Waite and Gallagher (2000) Concluded that unmarried women have a 50% higher mortality rate than married women, whereas unmarried men have a 250% higher mortality rate. Frey and Stutzer (2002) Investigated that marriage provides friendship, emotional support, ongoing sexual intimacy, financial security, and healthy behaviours to couples. Umberson et. al. (1996) Marriage impels and supports a healthy lifestyle and behaviours that can lead to and enable positive well-being throughout time. Many researches found that marriage helps individual to get away from the stress of relationship breakdown (Williams and Umberson, 2004; Simon and Barrett, 2010; Liu et. al., 2010).

The purpose of this study is to examine the subjective well-being of married and unmarried women. In order to achieve this goal, married and unmarried women were compared in terms of total subjective well-being and its many components (happiness, coping, optimism, physical health, and social satisfaction).

Objectives- The objectives of the present study are as follows:

- To examine the significant difference in overall Subjective well-being among *Married and Unmarried women*.
- To explore the significant difference in Happiness among *Married and Unmarried women*.
- To investigate the significant difference in Coping among *Married and Unmarried women*.
- To find out the significant difference in Optimism among *Married and Unmarried women*.
- To assess the significant difference in Physical Health among *Married and Unmarried women*.
- To examine the significant difference in Social Satisfaction among *Married and Unmarried women*.

Methodology

Participants- There were 200 women in the sample. A total of 100 married women and 100 unmarried women were chosen for the study. They were chosen using the convenience sampling method from Azamgarh City (U.P.). The age of the participants ranged from 30 to 35 years.

Inclusion And Exclusion Criteria-

Inclusion criteria:

- Married and Unmarried women
- Women who gave their consent
- Women aged 30 to 35
- Educated women
- Non-working women

Exclusion criteria:

- Women who are currently suffering from any physical or mental health
- Illiterate women
- Working women
- Women below 30 years of age and above 35 years of age

Instrument- In the present research the participants' well-being was measured through the Subjective Well-being Inventory by G.P. Thakur & R.N. Singh (2005). This scale was created with the importance of SWB in human life in mind. Both positive and negative items are represented on the scale. It provides scores for five different SWB aspects, and global scores can be calculated by putting the results from all of the dimensions together. Positive items on the scale are rated on a scale of 3, 2, and 1, whereas negative items are scored in opposite order, i.e. 1, 2, and 3. The higher the scale score, the better one's subjective well-being, and vice versa. The Subjective Well-Being Inventory is a well-known standardised test with verified reliability and validity.

Procedure- In this study, both married and unmarried women were informed about the purpose of the research and requested for their cooperation. After their consent was obtained, the Subjective Well-being Inventory was given to the participants. After reading and explaining the instructions, the responses of the participants were recorded on the inventory. Inventory was administered in a group of 5 to 10 participants at a time.

Statistical Analyses- The data was analysed using the SPSS 20 version. The needed analysis for the sample was calculated using the mean and t-test.

Results And Discussions- The present study was done to see the significant difference in overall Subjective Well-being and its components among married and unmarried women. The result of the current research found that married women score significantly higher than unmarried women in overall Subjective Well-being and its various components. A clear picture of the result of this study is presented in the tables below, respectively.

Table 01
Mean, SD, and t-value of Married and Unmarried Women for the Subjective Well-being.

Group	N	Mean	SD	t-value
Married Women	100	61.35	5.06	21.88**
Unmarried Women	100	40.98	7.81	

Note: **Significant at 0.01 level

Table 01 shows the Mean, SD and 't' values for the overall Subjective Well-being of married and unmarried women. It is clear from the statistical values shown in the above table that in the present study, the Mean of married women was 61.35 and SD was 5.06. The mean of unmarried women was 40.98 and SD was 7.81. t-value was 21.88 (Significant at 0.01 level).

Table 2:
Mean, SD, and t-value of Married and Unmarried Women for the Happiness.

Group	N	Mean	SD	t-value
Married Women	100	19.56	3.44	7.22**
Unmarried Women	100	15.80	3.91	

Note: **Significant at 0.01 level

The present research was done to investigate the significant difference in happiness among married and unmarried women. Table - 2 shows the Mean, SD, and 't' values of married and unmarried women for the happiness. It is clear from the observation of the table that in the present research, the Mean of married women was 19.56 and SD was 3.44. The mean of unmarried women was 15.80 and SD was 3.91. t-value was 7.22 (Significant at 0.01 level).

Table 03
Mean, SD, and t-value of
Married and Unmarried Women for the Coping.

Group	N	Mean	SD	t-value
Married Women	100	9.97	1.64	12.61**
Unmarried Women	100	6.03	2.66	

Note: **Significant at 0.01 level

One of the objective of the present examination was to find out the significant difference in the degree of optimism among married and unmarried women. Table - 4 shows the Mean, SD and t-value of married and unmarried women for the optimism. In the present analysis the Mean of married women was 17.37 and SD was 3.31. Mean of unmarried women was 11.80 and SD was 5.44. 't' value was 8.75 (Significant at 0.01 level).

Table 04
Mean, SD, and t-value of Married
and Unmarried Women for the Optimism.

Group	N	Mean	SD	t-value
Married Women	100	17.37	3.31	8.75**
Unmarried Women	100	11.80	5.44	

Note: **Significant at 0.01 level

One of the objective of the present examination was to find out the significant difference in the degree of optimism among married and unmarried women. Table - 4 shows the Mean, SD and t-value of married and unmarried women for the optimism. In the present analysis the Mean of married women was 17.37 and SD was 3.31. Mean of unmarried women was 11.80 and SD was 5.44. 't' value was 8.75 (Significant at 0.01 level).

Table 05
Mean, SD, and t-value of Married
and Unmarried Women for the Physical Health.

Group	N	Mean	SD	t-value
Married Women	100	4.57	1.17	10.92**
Unmarried Women	100	2.71	1.24	

Note: **Significant at 0.01 level

The next purpose of the current research was to assess the significant difference in physical health among married and unmarried women. Table -

5 shows the Mean, SD and t-value of married and unmarried women for the physical health. In this trial, the Mean of married women was 4.57 and SD was 1.17. The mean of unmarried women was 2.71 and SD was 1.24. 't' value was 10.92 (Significant at 0.01 level).

Table 06
Mean, SD, and t-value of Married
and Unmarried Women for the Social Satisfaction.

Group	N	Mean	SD	t-value
Married Women	100	9.88	2.18	16.94**
Unmarried Women	100	4.64	2.19	

Note: **Significant at 0.01 level

The present study was done to see the significant difference in social satisfaction among married and unmarried women. Table- 6 shows the Mean, SD, and t-value of married and unmarried women for the social satisfaction. In our line of work, the Mean of married women was 9.88 and SD was 2.18. The mean of unmarried women was 4.64 and SD was 2.19. t-value was 16.94 (Significant at 0.01 level).

The result of the present research revealed that overall Subjective Well-being was found to be significantly higher in married women in comparison to unmarried women (Mean of married women = 61.35 and Mean of unmarried women = 40.98). In addition, married women were found to be better than unmarried women in all the components of Subjective Well-being such as - Happiness (Mean of married women = 19.56 and Mean of unmarried women = 15.80), Coping (Mean of married women = 9.97 and Mean of unmarried women = 6.03), Optimism (Mean of married women = 17.37 and Mean of unmarried women = 11.80), Physical Health (Mean of married women = 4.57 and Mean of unmarried women = 2.71) and Social Satisfaction (Mean of married women = 9.88 and Mean of unmarried women = 4.64).

There are many benefits of marriage like a person does not want to be alone, by getting married, he gets a partner who shares his happiness and sorrow, develops tolerance and stability gets financial support, husband and wife get opportunity to share responsibilities and sexual need is fulfilled. All these things make a person's life happy, keep mentally fit and increases his Subjective Well-being. According to Carr (2004) There are two methods to explain the link between happiness and marriage. First, cheerful individuals make better partners than unhappy people. The second idea claims that marriage provides several benefits that may contribute to happiness, including psychological and physical connection, having children, building a family, accomplishing a task as a parent, reinforcing identity, and producing progeny.

The result of the present research confirm the results of several previous studies such as Miller et. al. (2013) found a positive relationship between marital quality and better physical health. Rogers (1995) and Dupre et. al. (2009) concluded that married people have better health and live

longer than divorced, widowed and people who live alone or single.

The result of the present study is similar to the results of some other previous studies. It has been found in these studies that married people are happier and more pleased with their lives than their never-married, divorced, separated, or bereaved counterparts (Frey and Stutzer, 2002; Graham and Pettinato, 2002; Shapiro and Keyes, 2008).

Conclusion- It can be argued that the subjective well-being of married and unmarried women differs significantly. Subjective Well-being was found to be higher in married women than unmarried women. Happiness levels differ significantly between married and single women. Coping styles differ significantly between married and single women. The difference in optimism between married and single women is large. Physical Health differs significantly between married and unmarried women. Married and unmarried women have significantly different levels of social satisfaction. Married women were found to have remarkable levels of happiness, coping, optimism, physical health and social satisfaction than unmarried women.

Limitations And Future Recommendations- In this study the nature of the sample was narrow and area specific. The size of the sample of future studies can be expanded and a larger area should be covered in research. Other determinants in the context of Subjective Well-being should be taken into account as well.

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Advent and Growth of Female Education in Singhbhum in the Nineteenth Century

•Vijeta Kumari

Abstract- *The purpose of this study was to examine and contrast the subjective well-being of married and unmarried women. The participants of the present research were 200 women (100 married women and 100 unmarried women). The Subjective Well-being Inventory by G.P. Thakur & R.N. Singh, (2005) was used to examine the subjective well-being of the participants. The data was analyzed using SPSS 20. The needed analysis for the sample was calculated using the mean, SD, and t-test. As a result, a significant difference in Subjective Well-being was discovered between married and unmarried women. Subjective well-being has been found to be better in married women than unmarried women.*

Keywords- *Growth, Education, Society.*

Introduction- With the passage of the Charter Act of 1813, it was clear that the colonial government would undertake some responsibility for educating its Indian subjects. The nature of this education led to the Orientalist- Anglicist debate in 1835, favouring the Anglicists. It was finally decided that the colonial government would impart education in Western knowledge to the Indian subjects. The authorities, however, had only their male subjects in mind; the education of women was not high on their agenda. Thus, the newly introduced education in India was destined to be directed towards male education; and the scarce resource for educating the Indian subjects was not to be wasted on the lower classes or women.

Although the government had an indifferent approach towards female education, the girls' education initiative came from private agencies from the colonial officials and the missionaries. For several decades, the growth of female education in India remained tardy and unsteady before it got impetus around 1850 when the issue of female education got the attention of the British government. The government realised the need for the spread of female education in India. The government, however, did not take up the cause of the female education for the development of the girls as individuals but as future mothers and wives who would be able to impart modern western education to their children and the general people around them. Thus, they would prove convenient tools for the spread of western knowledge. There were several other grounds, too, for believing that educated females would make better wives. One was based on the Victorian idea that homemaking is a serious and scientific affair. Another was that

educated wives could prove to be better help-mates to their husbands. Yet another emerging realisation was that in a changing society where middle-class men were emerging as important players and had to perform new roles, they needed educated wives who would help them adapt to the changing situation.

By the mid-nineteenth century, the idea of female education was also finding support from the socio-religious reform movement in Bengal, such as Brahma Samaj. However, the idea was more in favour of education at home than formal schooling outside the home. Generally, the reformers of Bengal supported female education in the form of wives being educated by their husbands or 'Zanana Education' whereby the 'missionary ladies' or the governesses visiting the ladies at home and teaching them reading and writing, apart from helping them to become 'good' and 'cultured' wives. They taught them graceful conduct lessons that a government servant's wife required. For all these, the visiting teachers were paid by the families visited.

By the second half of the eighteenth century, there were growing demands favouring female education, including formal schooling, mainly from the newly emerged middle class in Bengal. They took the help of print media and wrote in favour of female education. A growing public consensus had emerged around the desirability of female education. This resulted in several native efforts to establish girls' schools. Several associations in Bengal came forward to assist the government's efforts to disseminate girls' education, such as Uttarpara Hitakari Sabha at Burdwan, Suhrid Sabha at Faridpur, and Hindustani Sabha at Bakerganj. These efforts helped create public consensus in favour of girls' education, which soon reached Madras and Bombay Presidencies. By the later nineteenth century, it came to Bengal, where girls' schools began to be opened through government agencies. By the beginning of the twentieth century, girls' schools were commonplace in small towns. Even in those regions that were thought to be 'socially backward' regions, girls' schools were opening and catching up with the more 'developed' areas. However, various regions of India had uneven progress regarding the introduction and growth of female education.

In the regions where tribal people had a dominant presence or inhabited in large numbers, girls' education had its own set of problems, which were addressed separately and slowed down the overall progress of female education in these regions compared to the other areas of India. This particular phenomenon necessitates a more focused regional and local study of female education in India.

Advent of female education in Singhbhum- The present essay focus on the initiation and growth of female education in Singhbhum, the erstwhile district in the Chotanagpur Division. In Singhbhum, the advent and growth of girls' education witnessed twin efforts: governmental efforts and the Christain missionaries' efforts. Both of them complimented each other and were seldom at the loggerhead. However, they differ in their methodology, aims, and purpose of educating the tribal girls of Singhbhum.

Formal education of the Hos of Kolhan (Singhbhum) began as a part of the 'civilizing' mission of the British. According to Thomas

Wilkinson, the first political agent of the South-West Frontier Agency, the spread of western knowledge in India will remove all kinds of social evils that prevailed in the society. First, the East India Company opened its first Anglo-Hindi modern school in 1839 at Kishenpur (in the present Ranchi). In 1837, Singhbhum District came entirely under British rule, and after that, the Kolhan Government Estate (KGE) was established. In the same year, the British Government implemented Wilkinson's civil and criminal rules in the Kolhan Government State, according to which literacy was necessary to run the work of the administration smoothly. Not only literacy but the knowledge of the English language was also felt essential for the people working under British rule.

In 1841, the first modern school was opened near the district headquarters at Chaibasa. This school was under the East India Company in the Kolhan Government Estate of Singhbhum District. In the first year, the school had about 40 students, all of them were boys, and no girl student was enrolled. Although the government encouraged the children to come regularly by giving one paisa per day, it could not attract the girls of Chaibasa town to attend the school.

Initiatives for the girls' education in Kolhan came late. In April 1871, a girls' school was opened in Chaibasa, functioning with European funds and local donations from native gentlemen, besides government funds. The credit for the establishment of the school goes to Captain Garbett, who was then the Acting Deputy Commissioner of Chotanagpur. In 1872, 43 of the total girls' enrolment, 28 girls were Hindu, 4 Muslim girls, one girl was Christian, 8 girls were Ho, and the other 2 girls were santali. It was estimated by Captain E. T. Dalton, the then Commissioner of Chotanagpur, that there were 60 girls in Chaibasa girls' school. Among them, daughters of *mankis* were also present. The school seems to have progressed well and fast, as gleaned from a report of 1885 written by an Assistant School Inspector:

'thesmall and outlying district of Singhbhum, otherwise backward, has advanced wonderfully in matters of female education, and can now safely stand in comparison with a majority of the most advanced districts of Bengal. The improvement...has not been in numbers only, but also in the efficiency of schools. I visited some of the institutions in the last cold weather and was highly delighted to find that a large number of little girls in each school could not only read and explain passages from their text-books—Bodhoday and Sisusiksha—in a majority cases, but could also work easy sums in European and native arithmetic, with remarkable facility'(General Report Public Instruction in Bengal, 1872–73, pp. 547, Appendix A).

Dalton found Dhalbhum the most fertile area of female education, where the Bengali population supported it. In 1888-89, the total allotment for general education in Singhbhum was Rs. 11,560, out of which expenditure for girls' schools was estimated at 1,330. The number of girls' school was 36 and the number of pupils was Rs.1119/-. The cost per school was Rs. 369/-, and the cost per pupil was Rs. 1.1/-. There were 3 Upper Primary schools for the girls, where 156 students were enrolled.

After 1872, it was decided by the government that all districts now onwards have at least one girl child school. Captain Garbett had tried to convince the girls' parents to send them to schools. He visited many of the girls' parents to convince them of the desirability to educate their daughters. He had his success, as, by 1882-83, 54 girls had reached the upper primary class, and in the same year, one girl passed the upper primary and 14 girls passed the lower primary examination.

In 1884, Sewing and Embroidery work was added to the curriculum in all government girls' schools because the local people in Kolhan demanded that girls' education be helpful for their future. To maintain the interest of the girl students in the subject of sewing and embroidery, it used to be examination like other subjects as well as numbers were also given. Still, this number was not added to the examination result.

Missionary intervention in female education in Singhbhum- The government was not the sole agency for spreading modern Western education in the Singhbhum district. There were missionaries, too, who primarily worked amongst the tribal people. Their aims and methodology were quite different from those of government agencies. These missionaries worked more for the girls' education and among the common masses. They tried to impart education, as far as possible, in Hindi and local languages. Their aim against the government was not only to educate but also to prepare the giver to accept Christianity.

Lutheran Mission's works in Singhbhum- The Gossner Evangelical Lutheran (GEL) Mission entered Chaibasa in 1864 and had opened a girls' school in Chaibasa in 1869 by the name of 'Balika Nirman Prathmik Vidyalaya.' The number of girl students soon swelled in this school. This school was a successful experiment in the field of girl child education. Missionaries moved from village to village to convince villagers to send their children to school; they used to say that if a daughter or daughter in law is educated, she will educate the whole family. By 1872, three Lutheran mission schools were operating in the Singhbhum district, two in Chaibasa and one school in the Kathbhari. The number of students in Chaibasa Berlin Mission Schools was 70, 46 boys and 24 girls.

In 1909, a proposal was made by the Mission to create a model girl's school. The Mission planned to appoint more superior pundits and teachers in the school, which were already in good condition. Now, all the schools of the Mission should appoint trained teachers only. The trained pundits and teachers replaced pandits and teachers appointed before. The Mission thought girls would be neglected in boys' schools; if they had separate schools with female teachers, their overall development would happen.

Roman Catholic works in Singhbhum- The Roman Catholic Mission also played an important role in education. From its early days, the Mission started providing education. From 1869 Father Stockman used to roam from village to village, meeting people and telling them the importance of education and school. In 1871, a chapel was built in Chaibasa, and the school was attached to the chapel. He used to provide instruction in that chapel and other public places, so the main effect of his arrival started from the field of

education. He had made primary education his main objective.

The school was attached to the church to preach the religion through education. Parents were called to the church and told that if they did not send their children to school, the Lord Jesus would be angry with them. Being educated to live was as essential as food, not only for boys but also for girls.

Mission's efforts towards girls' education were continuing. In 1874, Two sisters came from Kolkata from an institution called 'Daughters of the Cross' and started their work in Chaibasa. They also taught Roman Catholicism to converted girl students and tried to connect other communities towards this Mission. With Loreto Sisters of Ireland and Ursuline Nunn's of Belgium, the work of the schools was being carried out in a lot of places.

In 1905, a Lace school was opened for Catholic women in and around Ranchi. In 1905, there were more than 100 women in the school. When the Lace School was opened in Ranchi in 1905, a similar school was also opened in Chaibasa. It was also only for local Catholic women. This school was functioning in Chaibasa as a part of other major charitable schemes of the Mission. This school was not as prosperous as the Ranchi school, but for local Catholic women, it was a boon. In Chaibasa's Lace School, arrangements were made for weaving and spinning. This school was running in collaboration with St. Xavier's Mission Chaibasa. The school was named 'Shilp Ashram'. Later, it also started receiving grants and other support from the government. Shilp Ashram had to work hard to get this grant. From 1906, this institution was also opened for all the local tribals. Due to this school, both men and women were getting job-oriented training quickly, improving their lives.

S.P.G. Mission's works in Singhbhum- Society for the Propagation of the Gospel (S.P.G.) did commendable work spreading girls' education in Singhbhum. In 1884-85, S.P.G. opened the highest number of girls' schools in the entire Bengal Presidency in Singhbhum. In the annual report of the same year, the Assistant School Inspector has written that in matters of female education, Singhbhum now safely stand in comparison with a majority of the most advanced districts of Bengal. In 1887, the Girls Middle School of S.P.G. Mission in Chaibasa functioned well. There were separate schools for the boys and girls. These schools were also getting good support of society. Separate hostels were also constructed for the boys and girls.

All the schools of the Mission ran government courses. It was the order of the government that a school could take advantage of the facility of grant-in-aid by following the government's rules. For this reason, missionary schools ran similar courses as government schools.

A timetable was essential in every school, and while teaching in the primary classes, the teachers must know which teaching method he is adopting. They used to give religious education in their schools. Still, religious education was imparted only to the Christian students in recognition of the government rules. In all Mission schools, comprehensive arrangements were made for the supervision of teachers and the quality of teaching.

The school's new session started in January, and the annual examinations were held in late November or December. Every year half-yearly tests and yearly examinations were held regularly. All Missionary institutions and Normal schools gave utmost importance to the curriculum. To prepare teachers, the curriculum in Normal schools generally included all subjects. For them, along with general information about Christianity, Hindi and English were necessary. Only the students who passed from the Mission's Normal schools could get the job as teachers in the Mission's schools. German Lutheran, Roman Catholic Mission and S.P.G. Mission-run Normal Schools had Theology, English, Mathematics, Algebra, History, Science and Hindi Subjects included in their curriculum.

The Director of Public Education was appointed to maintain the proper education system in the schools. Male and female school inspectors were appointed for the operation of this whole system so that all the schools could run well. This rule was followed for all the government's schools and applied to the Missionary schools. Missionary schools were inspected from time to time by government officials, and school inspectors prepared the reports and sent it to the government education department. As a result of the relentless efforts of the Mission, girls had started coming out, and a separate female school inspector was appointed for these girls' schools. The importance of educating daughters was beginning to be understood by the people of most sections of society.

Conclusion- In the nineteenth century, female education emerged as a powerful aspect of tribal life. It worked significantly to improve the living conditions of women and brought many changes in women's life. The modernization process increased their awareness of the value of getting an education. They used to help men in fields; soon, they worked on all economic fronts like schools, hospitals, and government offices. Now with jobs standard of living has improved. As a result of the relentless efforts of the Mission, girls had started coming out of their homes. Separate female school inspectors were appointed for these girls' schools. The importance of educating daughters was beginning to be understood among the people of most sections of society. By this time, missionaries had started adult education programs for women, grihini scheme, orphanage, girl child education, and other training centres like lace school, nurse training centre, bridal class, etc., to make them skilled. After getting training from these institutions, they were able to start working.

Christian missionaries had an essential role in the spread of Education in Singhbhum. They used to open their schools in remote rural areas and take the help of education and preaching to build their faith in the local people. In these schools, apart from education, emphasis was given to sports, music, and moral education. The awareness in society and the feeling of acceptance increased due to these schools. Changes were also seen in social traditions and economic conditions. This process was long, but due to girl child education, the state of women also amplified their role in society. A lot of change was seen, and its direct effect has been seen on the tribal community itself.

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Adjustment and dependence Proneness among Youth

• Jago Choudhary

Abstract- *Bell Adjustment Inventory and Dependence Proneness Scale were administered to 300 males to ascertain where college youth having high moderate and low levels of DP differ in respect of their home, health, social and emotional adjustment. The findings show that the persons having low DP have better home adjustment than those having moderate and high dependence Proneness (DP). Further DP has exhibited significant positive association with home adjustment, Health, social and emotional adjustments fail to difference between high moderate and low groups.*

Keywords- *Adjustment, Dependence Proneness, Youth*

Introduction- Dependence proneness is often considered to be motivational habit to depend on others even for routine matters. An individual who develops such a trait would run to others for their help and suggestions even if he faces a minor Problem. Such person needs frequent encouragement and emotional supports from others. He feels reluctant to take initiative of independent judgments and actions. Critical and demanding situation make him so uncomfortable that he cannot take his own decisions. If somehow decision is taken, he would look for a positive feedback. In case of failure, he blames others and displaces responsibility for the outcome to someone else. A dependent prone person is more likely to be suggestible, conforming passive and poor in self concept.

Although we have witnessed several empirical efforts concerned with dependency (Sinha, J.B.P., 1968 a, 1969, 1970; Sinha, T.N. 1971), there seems a dearth of research investigations exploring the role of adjusting in dependence proneness. However, Pandey and Sinha (1968) examined the association between dependence proneness and the five areas of adjustment and found that the high dependence prone persons perceive to have significantly fewer problems in the area of home and social adjustments. Some more systematic studies are needed in this direction. The present study has been conducted with a view to examining whether college youth having high, moderate and low levels of dependence proneness differ statistically in respect of their home, health, social and emotional adjustments.

Method

Sample- The sample comprised 300 males enrolled as undergraduate students, drawn from different Colleges of Saran district of Bihar. The age range of the subjects was from 18 to 24 years.

Tests Used- The following tests were used-

1. Dependence proneness Scale (DPS), developed by Sinha (1968b),
2. Mohsin-Shamshad Adaptation (Hindi) of Bell Adjustment Inventory (MS-BAI), adapted by Mohsin and Hussain (1970).

Procedure- Subjects were approached in small groups (20-30 students) in classroom situation. The collection of data was extended over a period of two sessions. In the first session, DPS and in the second MS-BAI were administered. A gap of one day was allowed between the two sessions. Sufficient time was given to ensure completion of the tests. The subjects were instructed on the basis of printed directions provided on the test-booklet.

In order to verify different hypotheses formulated in respect of adjustment dimensions, the criterion groups of the high (P67), the moderate (P34-66) and the low (P33) scorers on the DPS was formed. Data was analysed by the application of F-test, t-test and Pearsonian r.

Results and Discussion

Home Adjustment- It was hypothesized that the high dependence prone persons would have more adjustment problems in home dimension than the middle and the low groups. Towards this, data have been subjected to statistical analysis. Table 1 presents analysis of variance of home adjustment scores of the three groups formed on the basis of DP Scale.

Table 01
Analysis of Variance of Home Adjusted Scores of the three Groups (High, Moderate and Low Scores on DP Scales.

Source	df	SS	MS	F	p-value
Between	2	433.66	216.33	9.81	.01
Within	297	6544.89	22.04		
Total	299	6977.55			

It is evident from table 01 that home adjustment has contributed substantially to discriminate between high, moderate and low scorers on the DP Scale. The obtained F-value ($F=9.31$, $df=2/297$) is significant beyond .01 level of confidence. Further comparison of high, moderate and low groups reveals that the low group ($X\bar{=} 6.39$, $SD= 4.59$) has scored significantly less (indicative of better home adjustment) than the high ($X\bar{=} 9.08$, $SD=4.44$) and the moderate ($X\bar{=} 8.49$, $SD=5.01$) groups. The statistical comparison of high versus low, and moderate versus low has yielded significant t-values of 3.06 and 2.16 respectively. However, high and moderate groups have been found to be identical in respect of their home adjustment ($t=.59$, $df= 180$, $p> .05$). Further, dependence proneness has exhibited significant positive association with home adjustment ($r=.235$, $df= 298$, $p< .01$).

In the light of statistical analyses, it may be inferred that dependence prone subjects suffer from adjustment problems in home situation. This fact is also substantiated by the correlation analysis. Since high scores on DPS and Home Adjustment Inventory show more dependence proneness and

poor home adjustment respectively, a significant positive correlation between the two variables is expected. The result corroborates to our expectation. However, the present finding does not gain support from the findings of Pandey and Sinha (1968) who observed inverse relationship ($r=-.22$, $df=76$, $p<.5$) between dependence proneness and home adjustment.

Health Adjustment- It was hypothesized that the high dependence prone subjects would have adjustment problems in health dimension than the middles and the low groups. Toward this, relevant statistics have been used. Table 2 presents the ANOVA result.

Table 02
Analysis of Variance of Health Adjustment Scores of the Three Groups (High, Moderate and Low Scores on the DP Scale).

Source	df	SS	MS	F	p-value
Between	2	19.71	9.85		.44 NS
Within	297	6518.48	22.28		
Total	299	6938.19			

The findings as summarized in table 02 reveal that the contribution of health adjustment is not substantial in making discrimination between high, moderate and low scores on the DP Scale. The obtained-value ($F=.44$, $df=297/2$) is not significant even at .05 level of confidence. Further comparison of high, moderate and low groups shows that the three groups yielded statistically insignificant differences. The t-values ranged between .22 and .69 only. This also substantiated by an insignificant correlation value ($r=0.65$, $df= 298$, $p> .05$). Thus our expectation that the high dependence prone persons would have more adjustment problems in health dimension than the moderate and the low groups is not fulfilled.

Social Adjustment- It was hypothesized that the high dependence prone persons would have more adjustment problem in social dimension than the middle and the low groups. The ANOVA Result has been presented in table 03.

Table 03
Analysis of Variance of Social Adjustment Scores of the Three Groups (High, Moderate ad Low Scores on the DP Scale).

Source	df	SS	MS	F	p-value
Between	2	68.17	34.08		1.29NS
Within	297	7814.55	26.31		
Total	299	7882.72			

From table 03 it is evident that social adjustment fails to discriminate between high, middle and low scorers on DP Scale. The obtained F-value ($F=1.29$, $df=2/297$) is not significant even at .05 level of confidence. Further analysis shows that the comparison of mean scores on social adjustment across the three groups yielded statistically differences. The t-values ranged .24 to 1.01 only. This is also substantiated by an insignificant correlation

between dependence proneness and social adjustment ($r=-.031$, $df=298$, $p>.05$). Thus our expectation that the high dependence prone subjects would have more adjustment problems in social area than the moderate and the low groups is not upheld by the present findings.

Emotional Adjustment-It was hypothesized that the high dependence prone persons would have more adjustment problem in emotional dimension than the middle and the low dependence prone persons. To examine whether the three groups as a whole differ in terms of their emotional adjustment scores, one-way ANOVA has been employed (cf. table 4).

Table 04
Analysis of Variance of Emotional
Adjustment Scores of the Three Groups
(High, Moderate and Low Scorers on the DP Scale)

Source	df	SS	MS	F	p-value
Between	2	85.09	42.54	1.44	NS
Within	297	8740.30	29.43		
Total	299	8825.39			

The findings as summarized in table 4 are discouraging. The statistics so obtained show that the three groups as a whole do not differ statistically in terms of their levels of emotional adjustment ($F= 1.44$, $df= 2/297$, $p> .05$). The comparison of mean scores on emotional dimension of adjustment yielded insignificant t-values ranging between .52 and 1.15 only. It is also substantiated by an insignificant correlation between the two variables ($r=-036$, $df= 298$, $p> .05$). The findings are in unexpected direction. Emotional adjustment fails to differentiate between high, moderate and low groups.

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A Comparative Study of Selected Yogic Intervention Strategies on Very-low-density lipoprotein (VLDL): A Comparative Study

• Diwakar Pal
•• Hukum Singh

Abstract- *The objective of the present study was to compare the effect of selected yogic intervention strategies on VLDL. A total of fifteen sedentary male subjects were selected and used as two experimental groups of five subjects each and one control group of five subjects from Gwalior (M.P.). Suryanamaskar and Pragma yoga were considered as independent variable and Very-low-density lipoprotein (VLDL) was taken as dependent variable. CHOD-PAP method (modified Roeschlau's method) was used for measuring the subjects' VLDL. Selected yogic intervention strategies training was given up to one month with five days in week, each session scheduled for forty-five minutes. The pre-test post-test randomized group design was used for this study. Tests were administered before the training program and just after the completion of the training program. Analysis of variance and analysis of covariance results revealed that there was significant difference of selected yogic intervention strategies on VLDL.*

Keywords- *Suryanamaskar, Pragma Yoga, VLDL*

Introduction- Cardiovascular diseases account for high morbidity and mortality all over the world. Countries where the epidemic began early are showing a decline due to major public health interventions. On the other hand, cardiovascular diseases are contributing towards an ever-increasing proportion of the non-communicable diseases in the developing countries (WHO, 2002. Reddy et.al.,2005). Stress, lifestyle changes and dyslipidemia are modifiable risk factors. Behavioral methods are recommended by the national cholesterol education program as the first line of prevention and treatment for hypercholesterolemia and other risk factors (Calderon, 1999).Cholesterol has become a much-feared word these days, and people are trying to maintain the normal cholesterol level for which diets and yogic exercises prove to be effective means to reduce.

Now a days, there has been significant uptake of yogic exercises, as a means of maintaining good health.Surya namaskara has been handed down from the enlightened sages of the vedic age. The sun symbolizes spiritual consciousness and in ancient times was worshipped on a daily basis. In yoga the sun is represented by pingala or suryanadi, the pranic channel which

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carries the vital, life giving force (Saraswati, 2002). The practice of Surya Namaskar as a complete and perfect compound blend of body movement, breathing and concentration is used in many Indian schools and ashrams since it was considered by the ancients of India to be a form of kriya (purification), or body oblation, which would give an abundance of health, vitality and spiritual upliftment (Gharote and Ganguly, 2006; Gharote, 2004; Patel, 2004; Bhattacharya, 2007; Stiles, 2007). On the other side, Pragma Yoga is developed by Gurudev, Pt. Shri Ram Sharma Acharya, has pioneered a novel approach to yoga for a healthy and happy life, which is simple and suitable for the masses. He has named it "Pragma Yoga"-under the noble "PragmaAbhiyan" mission. Shantikunj-An Aranyak of our times, which is situated in the lap of the Ganges and under the shadow of the Himalayas, is a centre for learning this comprehensive yoga. This yoga involves all the three bodies (physical, subtle and causal) of a person. There is a series of various Asanas, which is done in a sequential manner (Sharma, 2007).

As the Suryanamaskar is a traditional approach in yoga with lots of importance and benefits and Pragma Yoga has developed over the limitation of Suryanamaskar for the beginners as the difficulty in performing the asana, both the package are entirely different. Therefore, the *objective of the present study was to compare the effect of selected yogic intervention strategies on VLDL.*

Methodology- A total of fifteen male individuals with age ranged between 45-55 years from Gwalior, M.P. were selected randomly, which further divided into three groups (two experiment and one control) of five subjects each. All subjects were almost from the same socio- economic group and were found to be physically fit for the type of training programme they were selected. *Suryanamaskar and Pragma yoga were considered as independent variable and VLDL was taken as dependent variable. Blood was collected from a stasis free vein and stored in an ice bath. 2ml blood collected in blood plane vial after sterilizing the arm of the subject. For quantitative analysis of blood VLDL, commercially available cholesterol kit of Erbamannheim from Transasia Bio-Medicals Ltd. was used. This reagent kit was intended in-vitro quantitative determination of cholesterol in serum and CHOD-PAP method (modified Roeschlau's method) was used for measuring the subjects' VLDL.*

In the present study, pre-test post-test randomized group design was used to compare the effect of selected yogic intervention strategies on VLDL. The subjects were divided into two experimental group and one control group. The experimental group was imparted five days of selected intervention strategies per week and each session scheduled for forty-five minutes under the supervision and guidance of the scholar. The said experimental training was administered in the Yoga hall of Shri Ram colony, Gwalior and subjects in the experimental groups were practiced Pragma Yoga and Suryanamaskar barefoot. The practice session was conducted for a period of forty-five minutes in the morning i.e. 8.00 a.m. to 8.45 a.m. from Monday to Friday for the duration of one month. To find out

the significance of difference among the groups, descriptive, analysis of variance and analysis of covariance were used. The level of significance was set at 0.05.

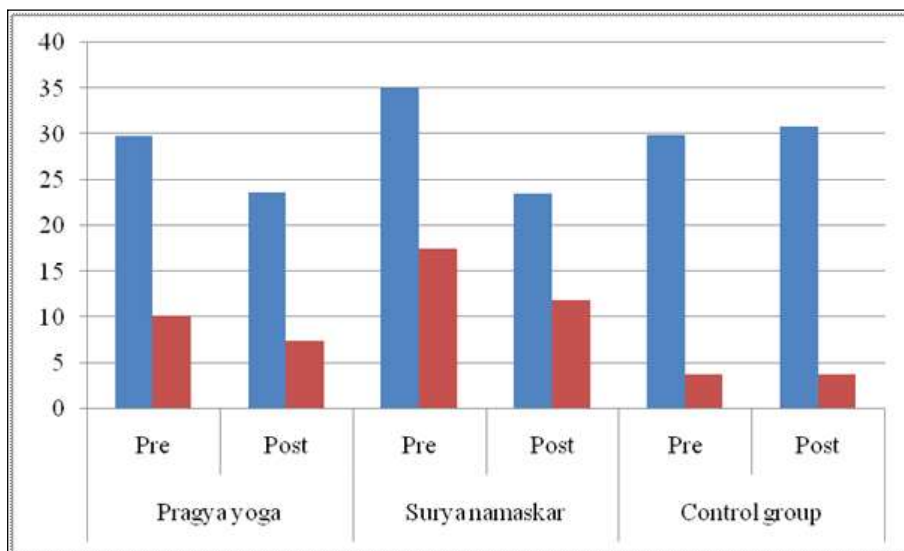
Table 01

Groups	Test	Mean	Std. Deviation	N
Pragya yoga	Pre	29.81	10.15	5
	Post	23.64	7.39	
Surya namaskar	Pre	35.03	17.56	5
	Post	23.55	11.90	
Control group	Pre	29.90	03.76	5
	Post	30.83	03.77	

Descriptive Statistics of all The Three Groups for VLDL

Table 01 revealed that there were five subjects in each group. The mean and standard deviation of Pragya yoga group in pre test and post test were 29.81 ± 10.15 and 23.64 ± 7.39 respectively. The mean and standard deviation of Suryanamaskara group in pre test and post test were 35.03 ± 17.56 and 23.55 ± 11.90 respectively. The mean and standard deviation of control group in pre test and post test were 29.90 ± 03.76 and 30.83 ± 03.77 respectively in VLDL

Figure 01



Means of all the three groups for Serum VLDL

Table02

Analysis of Variance of Comparison of

	Sources	SS	df	MSS	F	
post	Between Groups	198.72	2	99.36	2.02	
	Within Groups	588.95	12	49.07		
	Total	787.67	14			
Pre	Between Groups	94.69	2	47.34	.508	
	Within Groups	1118.69	12	93.32		
	Total	1213.39	14			

Means of Experimental Group and Control Group in VLDL

*Significant at .05 level

F value required to be significant at 2,12 df= 3.89

Table 02 revealed that the obtained 'F' value of 2.02 was found to be insignificant at 0.05 level, in case of VLDL since this value was found lower than the tabulated value 3.89 at 2, 12 df.

In relation to post test, insignificant difference was found among experimental groups and control group pertaining to VLDL since 'F' value of

	SS	Df	MSS	F	Sig.
Contrast	492.826	2	246.41	19.34	.00
Error	140.134	11	12.73		

.508 was found insignificant at 0.05 level.

*Significant at .05 level

F value required to be significant at 2, 11 df=3.98

Table 03 revealed that the obtained 'F' value of 19.34 was found to be significant at 0.05 level, in case of VLDL, since this value was found higher than the tabulated value 3.98 at 2, 11 df.

Result and Discussion- The present study evaluated the effect of one month yogic training on very Low-Density Lipoprotein on sedentary male. The practice of Yoga works biochemically and biomechanically on human physiology. Biomechanically, the practice of Yoga, gives a feeling of wellbeing which reduces the stress and ultimately regulates the metabolic activities, hence reflect into biochemical changes as normal functioning of Human Body. The findings of this study demonstrate that one month Suryanamsakar and Pragya yoga training have significant effect on very ~~Low-Density Lipoprotein.~~

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Women's Confessional Poetry: A Strong Subversive Strategy

• Sonal Singhvi Choudhary

Abstract- *Women poets at the turn of the century adopted strong subversive strategies in order to communicate their feelings and thoughts, their agonies and anguishes in a male dominated society. Their verse speaks for and interprets the truth of their gender. It is by “speaking out” and giving voice to the formerly “buried” knowledge that the confessions of women poets like Anne Sexton, Sylvia Plath and Kamala Das inscribe what Michel Foucault has termed “a return of knowledge,” or “an insurrection of subjugated knowledges” (Foucault 81). Their confessions have helped shape a specifically female genre which allows them to explore female subversive strategies that help in giving voice to stories that have been long silenced and suppressed. At the turn of the twentieth century new ideas, themes and concerns emerged in women's poetry. Women poets undertook the paradoxical task of voicing the silence that had enveloped women and their predicament for centuries. Why did this silence need to be voiced at all? The answer lies in the history of women. We live in a patriarchal society, a patriarchal culture, which is in every way a man's world. The laws, customs, practices and beliefs are therefore all designed to suit male needs. So when women voice their inner desires and feelings either by speaking or by writing, it is considered inappropriate. Besides, this silence is an ironical one that has infinite layers of turbulence and violence beneath what apparently appears to be silence.*

Keywords- *Women, Society, Knowledge*

Introduction- Poetry, for centuries has been a vehicle for an objective, impersonal and universal representation of reality. However, in the second half of the twentieth century it emerged as a typical product of the circumstances prevailing in the social, cultural and literal realms of America. Confessional poetry was a style of writing that emerged in the late 1950s and the early 1960s. The confessional poets dealt with subject matter that had previously not been openly discussed in American poetry. It was a reaction to the frustration and disillusionment in the post – war world where the individual had been reduced to a non-entity. The effect could be seen in the literary realm too, as a new class of writers and poets emerged whose writings were turned inward focusing on the private life, struggles and emotions of the poet. These poets stepped away from the traditional impersonality of poetry to look within and to write without inhibition about their inner lives, private events, emotions, fears, desires as well as events of intimate confession. In the decades preceding the emergence of

confessional poetry, the literary realm had been deeply influenced by Modernism which stood for collective mind and impersonality. Modernism stood for tradition and objectivity as against individuality, personalism and subjectivity. T.S. Eliot, the high priest of Modernism, talked about poetry “not [as] a turning loose of emotion, but an escape from emotion.” He considered poetry “not the expression of personality, but an escape from personality” (39-50). Eliot along with other modernist poets like Ezra Pound, W. B. Yeats, Crowe Ransom etc. produced a poetry “a poetry of symmetry, intellect, irony and wit” (qtd. in Mills 3). The modernists stressed on concepts and forms, and used language in new and different ways to call attention to style. Gradually, attitudes towards poetry began to change as poets like Walt Whitman, Wallace Stevens and William Carlos Williams began to express emotion from a subjective point of view (Phillips xii). These poets did focus on themselves, yet they did it with reserve and were careful enough not to violate the norms of public acceptability. It was only in the 1950s that poetry took a turn towards the personal and the poets started treating the self without any restraint in an extremely straightforward manner (Phillips 5). In his *The Confessional Poets*, Robert Phillips calls this time the great “Age of Autobiography.” No longer do general universal truths about human nature seem to attract poets, rather they come out with their personal lives with no restrictions and write about everything including insanity, suicide, adultery and divorce.

It was M.L Rosenthal who first used the term “confessional poetry,” and defined it as that in which “the private life of the poet himself, especially under stress of psychological crisis, becomes a major theme” (Rosenthal, *New Poets* 25). He used the term particularly for the poetry of Robert Lowell. He further remarked that “because of the way Lowell brought his private humiliations, sufferings and psychological problems into the poems of *Life Studies*, the word 'confessional' seemed appropriate enough” (Rosenthal, *New Poets* 26). Robert Lowell had earlier been writing like the Eliotean School. But soon he realized that he was not comfortable with this style. With the publication of *Life Studies* in 1959, Lowell came up with the confessional theme in which he himself became his own subject. He abandoned the traditional meters and tried to break free from the shackles of form. Lowell now wrote without any inhibitions and communicated his personal emotions and personal history in his poetry, thereby striking a new chord in poetry whose reverberations can also be felt in the three women poets considered for comparison in this study. Apart from Robert Lowell, Theodore Roethke and W. D. Snodgrass, John Berryman etc. were also eminent poets who wrote in the confessional style and had tremendous influence on the three women poets. Robert Lowell talks about the influence W.D Snodgrass had on him and gives him credit for doing so. In this context, Lowell says: “He [Snodgrass] did these things before I did, though he is younger than I am and had been my student. He may have influenced me, though people have suggested the opposite. . . . I mean the poems are about his child, his divorce, and Iowa City. . . . I believe that's a new kind of poetry” (Phillips 6). In her interview with Patricia Marx, Sexton too talks about the

influence of Snodgrass on her poetry: "If anything influenced me it was W. D. Snodgrass' *Heart's Needle*. . . . At the same time everyone said, 'You can't write this way. It's too personal; it's confessional, you can't write this Anne,' and everyone was discouraging me. But then I saw Snodgrass doing what I was doing, and it kind of gave me permission" (Sexton, *Marx* 79).

It was Snodgrass's name that opened the door for Anne Sexton to join Robert Lowell's writing seminar at Boston University in September 1958. It was here that Sexton came in contact with Sylvia Plath. Together while attending Lowell's classes, they pushed up a good deal of his ideas as well as exchanged ideas with each other. For Plath, Lowell's seminar acted as a stimulus for a breakthrough in her poetry. What stimulated Plath was the subject matter of *Life Studies* as well as the subject matter of Anne Sexton's poems. She immediately got interested in the "peculiar private and taboo subjects" that Sexton dealt with. She said later: "I think particularly of the poetess Anne Sexton, who writes also of her experiences as mother; as a mother who's had a nervous breakdown, as an extremely emotional and feeling young woman. And her poems are wonderfully craftsman like poems, and yet they have a kind of emotional and psychological depth which I think is something perhaps quite new and exciting" (Middlebrook 105). It was from Lowell that Plath learned to establish a link between public and private sensibility, and it was this same quality in Plath's poetry that Lowell admired. Says D.B. Stauffer, "Even in his [Lowell's] most personal and painful revelations he manages to suggest the universality of his anguish, a quality that he recognized and admired in the poems of Sylvia Plath" (Stauffer 374). Plath talks about the influence of Lowell on her poetry to Peter Orr in an interview in 1962: "I've been very excited by what I feel is the new breakthrough that came with, say, Robert Lowell's *Life Studies*, this intense breakthrough into very serious, very personal, emotional experience which I feel has been partly taboo" (Plath, *Orr* 167-168).

Talking about Robert Lowell's influence, Anne Sexton even suggests that it was she who influenced Lowell. She writes, "I was writing *To Bedlam and Part Way Back*, the story of my madness, before *Life Studies* was published. I showed my poems to Mr. Lowell as he was working on his book. Perhaps I even influenced him" (Sexton, *Kevles* 90). Speaking of Sylvia Plath, Sexton says: "I suppose I might have shown her something about daring – daring to tell it true. W. D. Snodgrass showed me in the first place. Perhaps he influenced Robert Lowell too. . . ." (Sexton, *Barfly* 178). It can therefore be said that all the Confessional Poets writing in the 50s and 60s had a considerable influence on each other. What was most important was that they were candid and honest in their pursuit of truth. While portraying the truth in their poetry it did not matter to them as to how terrible the truth was.

It should however be kept in mind that the term "confessional" is not new. "To confess" has a religious connotation and denotes the catholic practice of confessing one's guilt in the Church. According to the *Shorter Oxford English Dictionary*, "confession" means "a making known or acknowledging of one's fault, wrong, crime, weakness. . . . An

acknowledgement before the proper authority of the truth of a statement. . . . The confessing of sins to a priest. . ." (395). This practice of making confessions in the Church had a very psychological basis behind it. It was a purgative and therapeutic exercise, designed by the religious and moral authorities, which would give a person an opportunity to unburden one's disturbed psyche that is loaded with guilt and thereby restore it to peace. Psychiatrists too have adopted this practice in treating neurotic patients in order to know the unknown reasons embedded in the psyche of the patients that have caused the abnormal state of mind. By bringing out these buried experiences, the psychiatrist helps the patient to analyze one's self in relation to past traumas and experiences and then get rid of them.

Thus for the confessional poets, poetry involves a lot of autobiography. The self is employed as the sole poetic symbol by the confessional poets. In the search for their own identity, the three women poets set off on a journey of self exploration and the struggle that ensued became the text for their writing.

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E-Learning through Academic Libraries: An Over View

• Geetanjali Bajpai

Abstract- *E-Learning is a learning technique in which users may use different technologies, the internet, computer technology, and multimedia. E-learning may be replacing the entire conventional educational system with the help of ICTs. The present paper covers the meaning of education, purpose, objectives, and function of higher education, academic libraries, and their aims and function, what is e-learning, types of e-learning, advantages, and disadvantages. E-learning gives new dimensions to higher education as well as other areas of education.*

Keywords- *E-learning, E-Education, ICTs, Education.*

Introduction- The library is the giant brain of humanity. It preserves the lofty thoughts of masterminds, the lovely imaging of sensitive brains, the wise and weighty counsels of sound and sagacious heads, in short, all the accumulated wisdom and knowledge of the hoary, dim, and distant past. It links up hundreds and thousands of generations with one another and thus provides a panoramic picture of humanity.

Emphasizing the importance of education in national development says: "Education is deliberately used to develop more and more potential talents and to harness it to the solution of national problems."

"N.K. Goil Summarized the Objective of Education as follows"¹.

- To develop the personality of the individual;
- To provide him with the knowledge of the world in which he lives;
- To develop skills needed to sustain and advance social life so that he can be a creative member of the society;
- To satisfy the individual's search for values.

Objectives of Higher Education

- Helping to spread science and technology;
- Generating new knowledge through research.

Higher education has special importance within the education system. It is the driving force of development, the repository, and the creator of knowledge that helps determine the future shape of society including the educational system itself. Higher education is gaining importance at such a time when intellectual resources are becoming more significant than material resources, when routine tasks are diminishing in all sectors of economic activity, and when intelligence, initiative, and imagination are the principal qualities required of the workforce.

Functions of Higher Education- In 1966 education Commission²² the functions of Higher education as below

- To seek and cultivate new knowledge, to engage vigorously and fearlessly in the pursuit of truth, and to interpret told knowledge and belief in the of new need sand discoveries;
- To provide the right kind of leadership in all walks of life to identify gift youth, and help them to develop their potential to the full by cultivating physical fitness, developing the power of the mind and cultivating the right interests, attitudes, and moral and intellectual values;
- To provide the society with competent men and women trained in agriculture, culture, arts, medicine, science and technology, and various other professions, who will also be cultured individuals imbued with a sense of social purpose;
- To strike to promote equality and social justice and to reduce social and cultural differences through the diffusion of education.
- To inculcate into the teachers and students and through them in society in general, the attitudes and values needed for developing a good life in individuals and society.

According to the S.P.A hulwalia and H.S. Bais, 't here cognized aim of university education is to provide and sustain an environment conducive to sharing, extending and critically examining knowledge and value and to furthering the search for wisdom. Universities, in general, are thought of centers of free and untrammled thinking and their functions have been to create and preserve a climate of reflection essential for the and bold pursuit of truth'.³

Academic Library- Academic libraries play a vital role to fulfill the requirement of information for their users as well as faculty members. An academic library is an integral part of any educational system and also serves an institution of higher learning, such as a college or university library. Academic libraries are two complementary purposes: to support the curriculum and to support the research of the university faculty and students. The support of teaching requires material for class readings. Academic libraries today vary in regard to the extent to which they accommodate those who are not affiliated with their parent universities. Some offer reading and borrowing privileges to members of the public on a payment bases or annual membership. The academic library is also different from other libraries. Academic libraries are the institutions that impart formal education to the student. These academic institutions are supposed to have rich libraries to feed the students, teachers, and research scholars in meeting their day-to-day needs related to study, research, and supplementing the classroom teaching. The libraries are the heart of such institutions, without them, the body cannot last long.

United Kingdom's Perry Committee 1967- The lecture and textbook method is no longer regarded as the sole method for teaching-if one of the main purposes of university education is to teach students to work on their own, and reading by students must be preferable to attendance at lecture

unless the lecture is superior in presentation or contents to the available literature.

University Grant Commission, U. K. 1921 'The character and efficiency of a university may be gauged by its treatment of its central organ, An adequate library is not only the basis of all teaching and study; it is the essential condition of research without which addition cannot be made to the sum of human knowledge. Sir Knower Wood says 'It is better proof of education to know how to use a library than to possess a university degree'.

Objectives and Function of Academic Libraries-There are so many aims and functions of academic libraries, in the given below points we are discussing the aims and functions of academic libraries.

- Instruction in the use of the library for new members of the library, it is also called user education about the use of the library
- Provision of General and Specific Information
- Literature Search
- Readers Advisory Service
- On-demand services like current bibliography, and subject indexes, provide abstract and indexing services
- Reservation of document
- Inter-Library Loan
- Preparing and distributing accession list of new additions
- Maintenance of newspaper clippings
- Reports, and syllabus provide to the students
- To create user profiles of special education and researchers
- Current Awareness Service and Selective Dissemination of Information
- Reprographic Services, Translation Services, and Microfilming
- Referral services

“Education Commission (1964-66) mentioned the effective functioning of the library the major recommendation is as follows-”⁴

- No new university, college, or department should be set up without taking into account the library needs in terms of staff, books, journals, space, etc. Nothing could be more damaging to a growing department than neglecting its library or giving it a low priority. On the contrary, the library should be an important center of attraction in the college or university campus;
- Even more important is the proper use of books by students and teachers. Lectures should be supplemented by tutorial instruction, and thereafter the students should turn to the library to find themselves, with the help of reference librarians, the relevant material and knowledge needed. More working hours and days, easy accessibility of books, the adequate provision in terms of staff, multiple copies of text books which may be loaned or needed by students, better display of new reading materials, organization of books clubs,

separate rooms for periodicals, reference books, and research works are some of the measures that would help to raise the standard of library service. Reading habit which is appalling low must be turned up in every possible way;

A collection of books, even a collection of good books, does not constitute a library. Given enthusiastic teachers, 'who teach with books, and librarians who can cooperate with them in converting the

- library in an intellectual workshop even a comparatively small collection of sensitively chosen books may work wonders in the life of students without such staff. The most luxurious building or extensive books collection may have no effect at all;

The library is the heart of Institutions it serves the academic community

- Provide resources necessary for research in the field of special interests to the university;
- Aid the university teacher in keeping himself abreast of development in his field;
- Provide library facilities and services necessary for the success of all formal programs of instruction as well as provide nonformal education.
- Open the door to the wide world of books that lie beyond the borders of one's own field of specialization;
- To bring books, students, and scholars together under conditions that encourage reading for pleasure, self-discovery, personal growth, and the sharpening the intellectual curiosity.

E-Learning- The use of the internet for education including the use of websites and e-mail has come to be known as the online education system. Online courses frequently use the internet in combination with depending delivery modes. E-learning is a combination of online learning with face-to-face instruction Net Work (web-based resources) learning. It is a new way of teaching or a net-based education system. The concept of e-learning is very old before the emergence of the internet; Computer-Aided Instruction (CAI) and Computer Based Training (CBT) was used for the same purpose. E-learning is also known as web-based learning or web-based training. E-learning is a type of technology-supported education learning where the medium of instruction is through computer/ technology particularly involving listed technology. In the e-learning education system, there is no face-to-face interaction taken place. E-learning is meant a learning technique in which users may utilize different technologies, like the internet, computer technology, and multimedia. In other words, e-learning is internet-based learning, E-learning enhances the teaching-learning process by offering virtual classrooms to a wide spectrum of geographically dispersed institutions. It is revolutionizing the basic process of learning focusing on individuals rather than institutions or industry-based. It is a process of knowledge transformation from one to many people or many to one people. E-learning is based on computer-based teaching and the learning approach is

employed with the help of telecommunication networks.

Categories of E-Learning- There are fundamentally two types of e-learning: synchronous learning and asynchronous learning.

Synchronous Learning- It means participants and instructors interact with the web in same time through telephone, video conferencing, and web conferencing etc.

Asynchronous Learning: It means “not at the same time”, allowing the participants to complete at their own pace with out live interaction with the instructor. Asynchronous technologies are audio cassette, e-mail, message board forums, print materials, voice mail/fax, video cassette, and CD-ROMs. A new form of learning is known as blended learning is emerging. As the name suggests it is an amalgamation of both learning methods.

Need and Advantage of E-Learning- E-learning has many advantages over other methods of learning. Some of these are-

- The information can be accessed by anyone, any time, and any place;
- It is cost-effective and time-saving;
- When using an information system, one is more innovative and interactive;
- Cognitive abilities are enhanced with e-learning;
- It is self-paced learning. In other words, a slow learner can take time to grasp the things;
- Instruction quality is consistent;
The information can be shared by more than one user at a time. It has an edge over print media;
- Appreciable time is saved in preparing the E-write-up and for publishing the same;
- Status of the pre-print material with the publisher is known much in advance;
- It offers an opportunity for piecemeal learning.

Why E-Learning- E-learning is essential for operating the Technological instruments as well as to access various e-resources through Internet, INTRANET, Consortia and other devices of Information Storage and access some major issues are as follows -

- Availability of various e-resources
- Save time of Users ;
- Maintenance of resources is so easy;
- Minimum Information & communication technology infrastructure is required;
- Manpower saving
- Retrieval of information Avoid Duplicate of work;
- Helpful for organizing Worldwide library services
- Marketing of Information Products and services;
- Availability of the universe of knowledge in fingers tips;
- Update, technical support to service providers and learners;

- Minimum Equipment needs of learners and Service providers.
- Helpful for preserving and disseminating all types of information,
- Helpful for Disaster Management.

Impact of E-Learning on Higher Education System- E-learning is the change all the traditional way of teaching methods, it is offering virtual classrooms to avoid geographical boundaries and countries, it is revolutionizing change in the educational people system; it is also focusing on individuals rather than a group. E-learning is the transit of the knowledge from maybe may be people maybe or groups. It also reduces infrastructure structure, and the salary of faculty members and administrative members, and also increases the satisfaction of the student. The satisfaction of students is a must for each and every educational system. The major change in e-learning with satellite and television expansion and also advancement in the field of telecommunication is also affect the e-learning process. On the television, we can broadcast the educational based program, where that people can learn from it and also benefit. People can learn any thing, at low cost, at any time, anywhere, any subject on their television set at home. It is a time of ICT's made education very easy for the student; they want anything at their doorstep. e-learning educational system has benefited both student and the irparents. It is not compulsory to a student; he can't come to the classrooms room for everything. Student can solve their problem with e-learning and also contact the particular subject expert for their doubt. E-learning plays a vital role in the modern educational system, it gives the flexibility of time for a quality and standardized the education to masses. E-learning processes are so effective with the uses of audio-video cassettes, CD's DVDs video tape, computer-based learning processes, teleconferencing, and educational CD's; video conferencing is provided quality education to their users. E-learning is beneficial those people, who cannot attend the classes for formal education system, we can teach those people and student with the help of e-learning educational system. We are also providing the all the facilities in the evening and night classes, we arrange all programs, with the help of state and national agencies, distance education council or Non-Government Organization. It is also included in curriculum and syllabus in higher education system. E-learning programs are used for improvement of our education system. It is very useful for talented children especially rural areas, lower income groups, peoples of below poverty line, minorities, SC/ST/OBC's, and weak section of our community.

ISRO- launch the educational satellite “**EDUSAT**”⁵, dedicated entirely education center. This satellite services are used to connect various educational institutional to share their resource and information too the rse educational institutional or organisations. When EDUSAT is fully operational, it would be very helpful to distance education and also e-learning educational system. It is specifically configured for the audio-visual medium and employs the interactive classroom to support virtual education. Another popular way is **FM educational channels** is very useful

popular and is very often used by **IGNOU and Gyanvani**. These FM radio stations broadcast a variety type of educational programs on different types like student- teacher relations, teacher education, environmental science, rural developments, agriculture programs for farmers, mass communication, science, mathematics, commerce, arts, history, social problems, mass communication, business.

Conclusion-E-learning is giving a new dimension of the education sector and also affecting education in different ways. It can play a significant role in the development and growth of the country. With the help of academic libraries, we must achieve educational goals and also improve the education system. Time is also changeable, so we emphasize informal education in form of e-learning teaching methods. Academic Libraries should be converted into e-learning educational centers and also provide the information in print form as well as electronic form. It may be used in every area of education viz. primary education, secondary education, higher education, technical education, professional education, and management education.

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A Study on the Adoption of Classic Block Prints in Contemporary Dress Designs

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Abstract- *India has been renowned for its printed and dyed cotton cloth since the 12th century and the creative processes flourished as the fabric received royal patronage. Evolution of different styles of designs has taken place in different parts of the country having its own particular local aesthetic. India has been renowned for its printed and dyed cotton cloth since the 12th century and the creative processes flourished as the fabric received royal patronage. Evolution of different styles of designs has taken place in different parts of the country having its own particular local aesthetic. From the 12th century, India was renowned for its printed and dyed cotton cloth, and the creative processes flourished with royal patronage. India has a great diversity in term of block printing techniques and women's clothing varies widely and is closely associated with local culture and skills. This research is performed on the basis of primary data as well as secondary data. The purpose of this research to explore the importance and the use of surface ornamentation technique of block printing as a classic fashion in contemporary dress designs for the female consumers in Bhopal city.*

Keywords- *Block printing, Contemporary Dress, Consumer.*

Introduction- Hand block printing on textiles involves repeatedly pressing carved wooden blocks covered with dye along a length of fabric to create patterns natural dyes have traditionally been used and it is a skill that has been passed down through generations. The craft of block printing provides rural artisans in the third world with a sustainable source of income. Since the 12th century, India has been known for its printed and dyed cotton cloth, whose production flourished under royal patronage. In various parts of the country, designs have evolved into different styles according to their own local aesthetic. (Ganguly & Amrita, 2013) Textile scraps found in the ruins of Mohenjo Daro, an ancient settlement of the Indus Valley Civilization, demonstrate that block printing used to be popular in India as long ago as 3000 BC.

Block printing is an ancient printing technique and numerous examples of block prints can be found in the historical records of Europe and Asia. In the historical Indian culture and its heritage of tradition are reflected in many of the various regions of this country. (Babel & Mehta, 2012) The major centres of India where block printing is done on large scale are:-

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- Associate Professor, (Textile and Clothing), Sarojini Naidu Government Girls Post Graduate (Autonomous) College, Shivaji Nagar, Bhopal
 - Research Scholar, Home Science, Barkatullah University, Hoshangabad Road, Bhopal

Gujarat (Ajrak), Rajasthan (Bagru, Dabu, Ajrak, Sangneri), Madhya Pradesh (Bagh) Andhra Pradesh, Uttar Pradesh (Farukhabad), West Bengal. Block printed designs are enamouring. The imprints when impressed on the cloth add an amusing allure to the fabric. (Gill, 2018).

India has a rich legacy of heritage textile traditions and wide range of



ethnic costume traditions comprising versatile draped silhouettes and classic tailoring techniques; across the subcontinent, suitable to the terrain, weather and the regional sociocultural influences due to various invasions and the colonial past. A consumer is a person or a group who intends to order, orders, or uses purchased goods, products, or services primarily for personal, social, family, household and similar needs, not directly related to entrepreneurial or business activities. Female consumer actively participate in purchasing of Goods and services. They are a true influencer.

Bhopal District population in 2022 is 2,651,675 (estimated as per aadhar uidai.gov.in Dec 2020 data). As per 2011 census of India, Bhopal District has a population of 2,371,061 in 2011 out of which 1,236,130 are male and 1,134,931 are female. Consumers who enjoy shopping are mostly female and are considered to be a noteworthy force in the retail market. Women are more in touch with their feelings and have the tendency to stay better connected with their family, friends, and 'brands'. Women set their decisions and priorities not only according to their needs but also according to people in their personal circle. Hence, it becomes easier to understand and analyse the adoption of classic block prints through brands and women consumers in contemporary Dress Designs. The Indian women have been an integral part of the family, and been confined to home. The information technology has brought the world closer and sudden economic growth has given the Indian women a great emancipation in terms of their sartorial practices. Till about the 1970's the Indian women dressed in their regional style and patronized the traditional textiles in the neighbouring areas. The most sought after textile though was the Saree and Salwar Suit for Indian ladies.

As these new Indian women gear to take on various social and professional roles and lifestyles, they have embraced new garments in their wardrobe to meet these roles. The Internet and satellite television not only provides the information on latest world fashion trends access cities of India by means of online E-commerce portals and tele-shopping.

Fashion is an everyday phenomenon and not restricted to occasion

wear like weddings, festivals or formal evening parties. The Indian Fashion system is very dynamic. 21st century the scenario changed for the better for many Indian Women in cities and for a few even in villages and they got better education and they took up work to be financially independent, which required them to step out of their home daily; to gain exposure to the world outside, many of them grabbed the opportunity and there was drastic change in their clothing preference. Fashion became a very interesting tool to carve this new identity as working women; they needed to present themselves more confidently and in command of themselves in the outside world working in pace with the men and doing better than men despite various limitations. The indo-western fusion style in terms of tunics /kurti, variety of bottom wear options like dhoti pants, harem pants, duppatas to scraves/stoles etc. (Raavaade& Karolia,2017)

Review of Literature: The review of literature for the study has been collected primary sources which as follows-

The goal of this study was to figure out what wearing classic styles meant to people. A qualitative study approach was used, and 16 people from the United States were questioned and asked to define a classic fashion or style, as well as why they wear it. The research was conducted using grounded theory. Three themes emerged from the findings: (1) a classic style reflects conservatism in style; (2) style pragmatism refers to the good aspects of wearing a classic style; and (3) consumers intend to continue to wear that classic style in the future. Those who are fashion-forward also anticipate to wear traditional clothing as they get older. Classic is also a safe choice for those who do not follow fashion trends. (Kwon, 2017)

Stated that one of the earliest techniques used to colour fabric was printing with block printing. Block printing is one of the most common types of hand printing. Printing is the application of colour to fabric in predetermined patterns or designs. It's also referred as as the thicker application of dye or colour to a substrate to create an appealing design with well-defined boundaries. (Sharma et al;2018)

This study was focused on providing a history of block printing techniques as well as a look at the Bagh block print, which is a world-famous hand block print. Bagh Print is a natural-colored traditional hand block print. A popular textile printing product is Bagh print fabric, which features reproduced geometric and floral compositions in vegetable colours of red and black on a white background. Bagh print, a Madhya Pradesh-based native art form, is an exceptional product. (Chouhan,2019)

Objective- To understand and analyse the acceptability of block print as classic fashion among consumer.

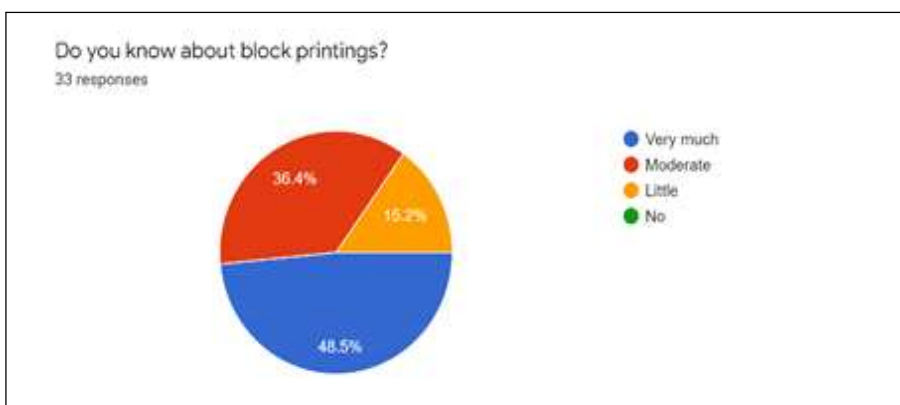
Hypothesis- Block printing is a hoary technique but consumers still prefer this for buying their dresses.

Methodology-

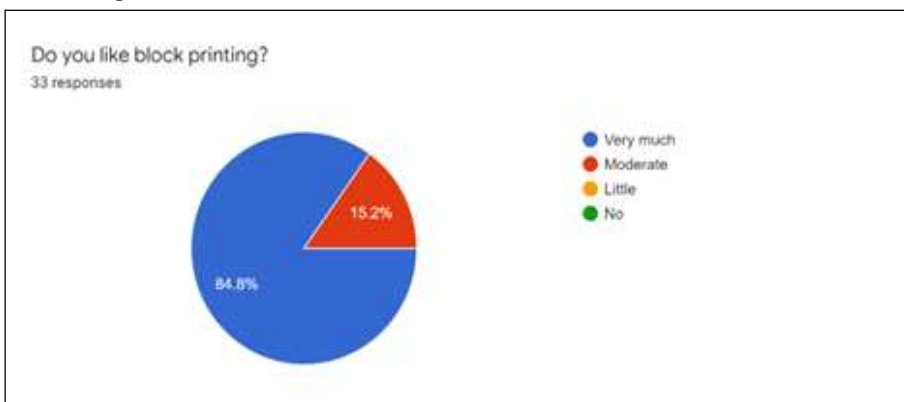
- **Locale of the study:** The study was conducted at Bhopal city of Madhya Pradesh and traditional art of block printing known as Bagh is very popular in this State.

- **Selection of sample and Criterion for selecting sample:**For this purpose, a survey study was conducted on fifty women of high middle income group which were selected randomly and questionnaire in Google form was used as a tool.
- **Development of tool:**Questions in the questionnaire were developed to understand and analyse the preference and acumen of the consumer.
- **Data Collection and analysis of data:** To collect data through developed questionnaires thirty women of Bhopal city as a sample were selected randomly.

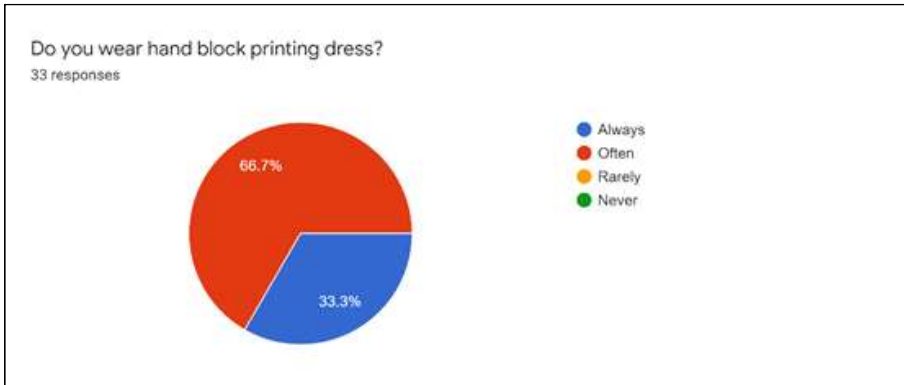
All the responses are plotted in pie chart and the result were analysis accordingly-



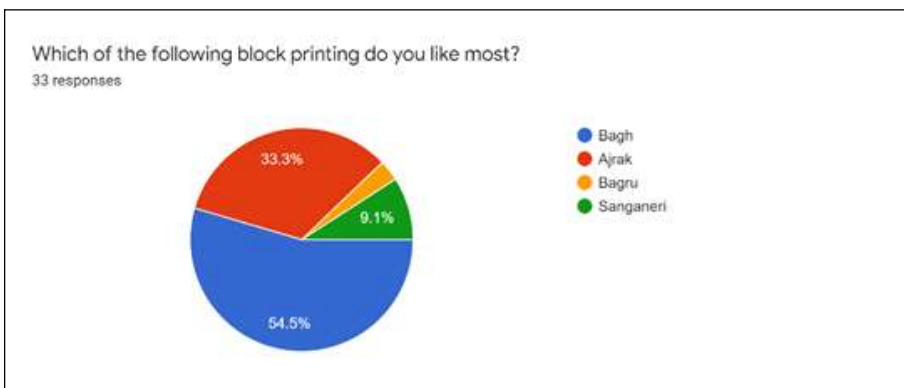
This pie chart shows the knowledge of block printing of the respondent. Maximum (48.5%) people know very much about block printing while 36.4% have moderate knowledge and only 15.2% have little knowledge.



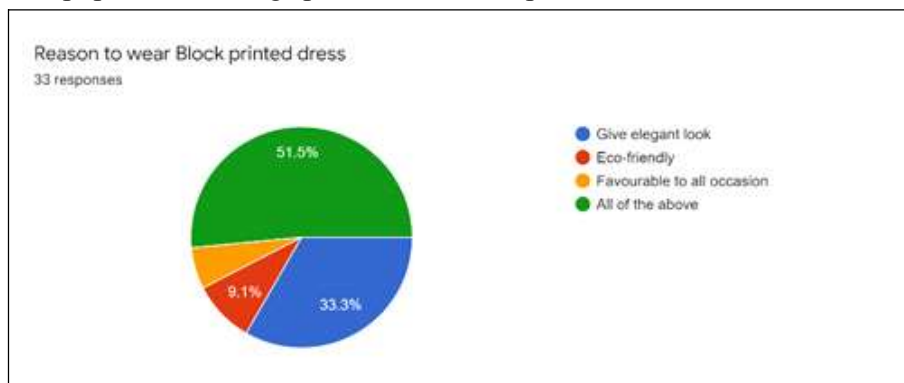
This pie chart shows the liking of the Block printing in which about 84.8% like block printing very much while 15.2% moderately like block Printing. This conclude that Block printed fabric are most popular choices.



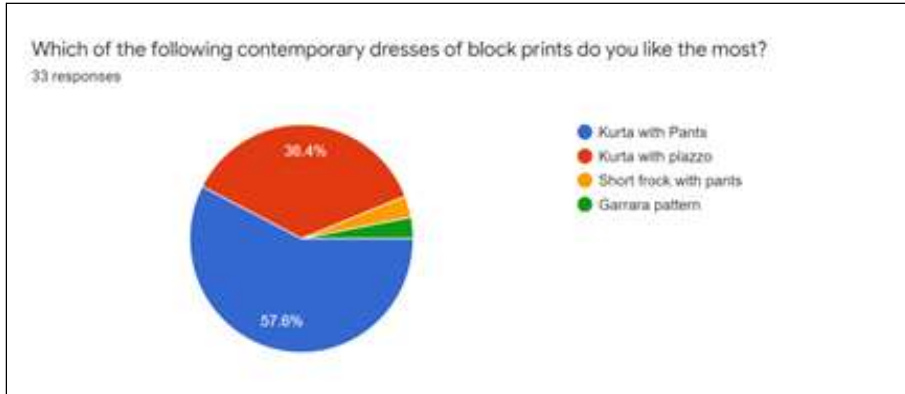
From the pie chart, it is clear that the majority of the respondents prefer to wear hand block printed dresses (66.7%) and nearly a third of respondents wear them often and not a single response was on rarely and never wearing block printed dresses. In conclusion block, printing dresses are more popular choices.



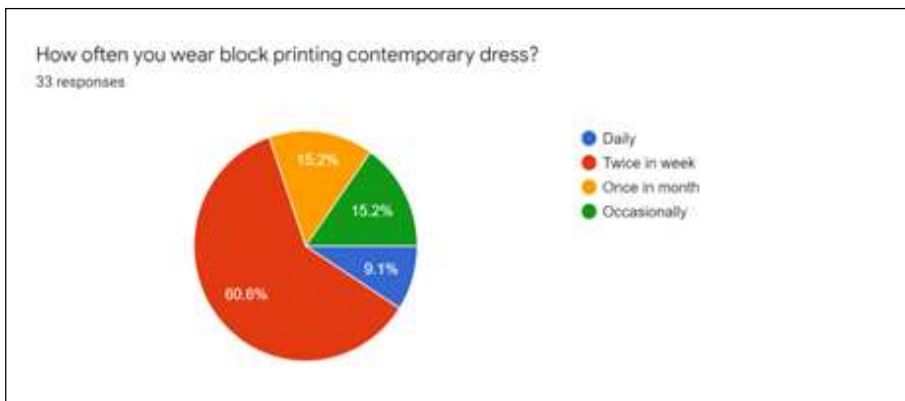
From this pie chart, it is clear that the majority of respondents prefer Bagh printed fabrics with the second choice of Ajrak prints. 9.1% like Ajrat prints but only 3% preferred Bagru prints. This concludes that Bagru is the least popular while Bagh prints are the most preferred choice.



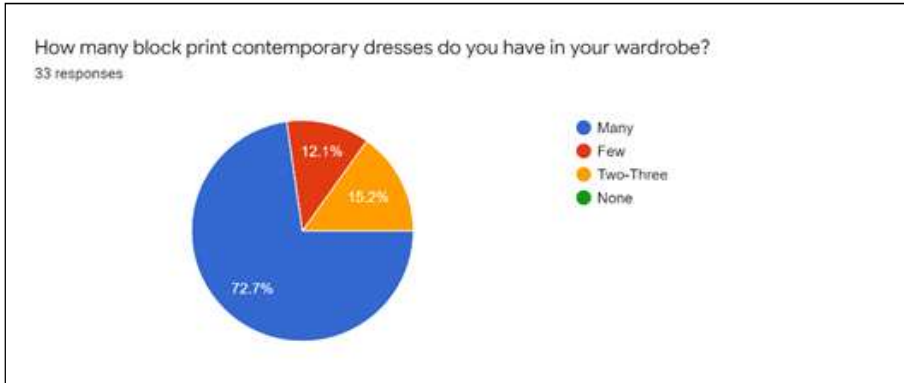
The reading of this pie chart shows that about half of the respondents prefer the Block printed fabric because of all mentioned reasons while approximately one-third prefer them due to its elegant look. About only one-tenth of respondents prefer due to Eco-friendly nature and there is a one-sixth responded prefer because of it is favourable to all occasion.



From the pie chart, it is clear that the first prefers of the respondents is to wear a kurta with pants (57.6%), and the Second prefers of respondents chose to wear kurta with palazzo (36.4%) and (3%) respondents prefer to wear short frock with plants. and (3%) respondents prefer to wear the Garrara pattern. In conclusion, Kurta with pants dresses is a more popular choice.



The reading of this pie chart shows that about majority of the respondents prefer to wear Block printed cotemporary dresses twice a week while approximately one-third prefer them due to its elegant look. About only one-tenth of respondents prefer due to Eco-friendly nature and there is a one-sixth responded prefer because of it is favourable to all occasion.



This pie chart shows the number of block print contemporary dresses respondents have in their wardrobe. Maximum (72.7%) people have block print contemporary dresses in their wardrobe. 15.2% have two-three dresses in their wardrobe while 12.1% have a few dresses in their wardrobe. This concludes that the majority of the respondent have block print contemporary dresses in their wardrobe.



			
Ikat Print	Dabu Print	Bagh Print	Block Print
Courtesy- Westside	Courtesy- https://www.jaypore.com/	Courtesy-vastragathaa	Courtesy-Fabindia

While exploring brand design it was observed that there are many brands that also adopt block printing techniques like Bagh, Bagru, Sanganer, Ajrakh and a few of them adopt patterns of classic block printings using different printing methods like roller or digital printing as a surface ornamentation. Here conclusion was found that the respondents had a very high opinion about classic block prints in contemporary dress designs. Female consumers of Bhopal city had knowledge about block printing. The majority of consumers preferred to wear block-printed dress Kurta with pants as a contemporary dress form.

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Blue Green Algae and Oil Production

• Anup Kumar Mishra

Abstract- *The Sunflower (*Helianthus annuus*, L.var. KBSH-1) plants were used for oil production. The studies were done on these plants. These plants were raised in soil-pot culture conditions. The different Supply levels of blue green algae, nil (control), 50, 100, 150, 200 and 250g bga/kg soil were applied to plants. Increase in bga supply upto 200g bga/kg soil level increased the oil content in seeds of sunflower plants. Beyond 200 g bga/kg soil level increase in bga supply decreased the oil content of seeds. As compared to control, all the levels of bga supply highly significantly ($P=0.01$) increased the oil content in seeds.*

Keywords- Sunflower, bga, BNF, controlled condition, DM

Introduction- The bio-fertilizers, otherwise called microbial inoculants are preparations containing live or latent cells of efficient strains of nitrogen fixing micro-organisms used for seed or soil application. The main objective of applying inoculants is to increase the number of such microorganisms in soils or rhizosphere and consequently improve the extent of micro-biologically fixed nitrogen to plant growth. Application of bio-fertilizers in combination with organic nitrogenous fertilizers has a key role to play in the economic management of nitrogen needs of crops. In India, considerable progress has been made in the development of blue green algae based in bio-fertilizer technology.

The blue green algae as biofertilizers are proving to be strong alternative of chemical fertilizer, and thus improving the environmental health. In addition to this, blue green algae are imparting a great contribution towards establishment of strong biodiversity on the planet, Rai et. al., (2000) reported that blue green algae are good colonizers of the nitrogen poor soils, and that through their nitrogen input into the environment they may help to create habitats suitable for other species.

There is a great role of blue green algae in sustenance of soil fertility by enhancing the quantity of various nutrients in soil. In this fashion bga also improve the nitrogen content of soil. The various supply levels of blue green algae as biofertilizers leave impact on the growth and composition of sunflower plants. The blue green algae as biofertilizers are proving to be strong alternative of chemical fertilizer, and thus improving the environmental health.

The blue green algae have inhabited much of the surface of the earth for billions of years and today they are responsible for a significant amount of biological nitrogen fixation (BNF). The tropic independence of

blue green algae made them suitable for use as biofertilizers. Blue green algae are widely distributed organisms all over the world and can be found in extreme habitats, from hot springs to arctic regions. Among the ecosystems in which they can be found, wet soils provide an ideal environment for blue green algae to grow. Blue green algae represent a small taxonomic group of photosynthetic prokaryotes which some of them are able to do nitrogen fixation and also possess a tremendous potential for producing a wide range of secondary metabolites. Blue green algae have drawn much attention as prospective and rich sources of biologically active constituents and have been identified as one of the most promising groups of organisms capable of producing bioactive compounds (fish & codd 1994), (Schlegel et al. 1999). De (1939) attributed the natural fertility of flooded rice field soil and its maintenance to the process of biological nitrogen fixation by blue green algae.

Material and Method- For the experiment, there were six pots. The pots were arranged in 3 blocks A, B and C. In each block there were two pots, one pot was meant for controlled treatment and other one with BGA treatment. In each block the treatments were completely randomized. The experimental pots were arranged in north-south direction and were kept raised from the ground at a height of one feet avoiding any surface contact of the drainage holes with the ground to eliminate any contamination.

For studies, the Sunflower (*Helianthus annuus*, L.var. KBSH-1) plants were raised in soil pot culture. Soil samples were collected in a clean polythene bags after surface scrapping and brought to the laboratory. Calculated amounts of normal water were applied daily to pots to provide as far as possible uniform soil moisture conditions. Sampling was generally started at 8:30A.M. and completed in an hour. All samples were drawn at the same time and placed in the shade. The 3 blocks a, b and c were sampled at the same time.

Soil was separately mixed with required amount of blue green algae. There after it was air dried, thoroughly grounded and mixed. For through mixing required amount of BGA were mixed with small amounts of soil, divided and mixed again and again. Then these amended soils were mixed with bigger amounts of soil similarly, and finally these soils were mixed with bigger lots of calculated amount of soils required for experiments. Soil mixing was done on separate clean chart to avoid any contaminations. Mixed soils were filled in pots.

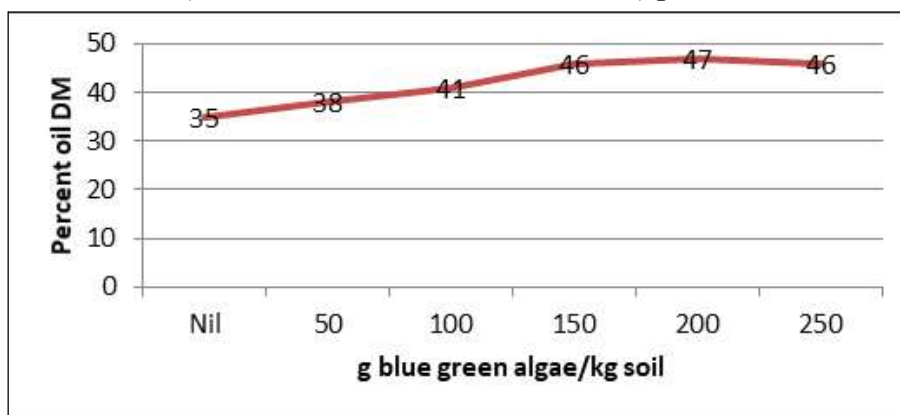
The oil content was analysed by Oxford 4000 NMR equipment – II as per method described by Jambunathan et al. (1985).

Result- Increase in oil content in seeds was found to be a highly significant ($P=0.01$) at 100g bga/kg soil over 50g bga/kg soil, and 150g bga/kg soil over 100g bga/kg soil. At 200g bga/kg soil over 150g bga/kg soil, increase in oil content fails to reach the level of significance. However, at 250g bga/kg soil over 200g bga/kg soil the insignificant decrease in oil content was observed.

Effect of the blue green algae as biofertilizers on oil content of Sunflower (*Helianthus annus*, L. var. KBSH-1) plants

Plant		g blue green algae/kg soil					
Age (days)	Part	Nil	50	100	150	200	250
100	Seeds	35	38	41	46	47	46

Effect of the blue green algae as biofertilizers on oil content of Sunflower (*Helianthus annus*, L. var. KBSH-1) plants



Discussion- The biofertilizers contains beneficial microorganisms which improve plant growth and protect plants from pests and diseases (El-yazeid et.al, 2007). The role of soil microorganisms in sustainable development of agriculture has been reviewed (Lee and Pankhurst, 1992, Wani et.al.1995). Biofertilizers are important components of integrated nutrients management. These potential biological fertilizers would play key role in productivity and sustainability of soil and also protect the environment as eco-friendly and cost effective inputs for the farmers. They are cost effective, eco-friendly and renewable source of plant nutrients to supplement chemical fertilizers in sustainable agricultural system.

The blue green algae as a biofertilizer is a strong alternative of chemical fertilizer in improving the soil quality. Biofertilizers such as rhizobium, Azotobacter, and blue green algae are being used since long time. The blue green algae is used as a important tool to maintain the sustenance of the biodiversity.

In 1977 Verghese stated that the demand for chemically fixed nitrogen is bound to be on increase and the nitrogen gap is likely to double in India by 1984, which would be difficult to bridge in the wake of the energy crisis.

Blue green algae dominate a wide range of diverse environments characterized by extremes of temperature, desiccation, pH, salinity, light intensity and nutrients (Whitton, 2000). Many blue algae tolerate high levels of ultraviolet radiation (Sinha et al, 1999), permitting them to survive at the soil surface.

Many blue green algae have the capacity to manufacture nitrogenase. Because the enzyme complex is anaerobic, significant fixation by unicellular, colonial and some filamentous species occurs only in the absence of air. Therefore, only heterocystous species are valuable as biofertilizers. Blue green algae i.e. biofertilizers have several advantages over chemical fertilizers. They are non-polluting, inexpensive, utilize renewable resources. In addition to their ability of using free available solar energy, atmospheric nitrogen and water. Besides supplying N_2 to crops, they also supply other nutrients such as vitamins and growth substances (Wagner,1997). *Anabaena* and *Nostoc* have been recorded among the common nitrogen fixing blue green algae in rice fields.

The use of blue green algae as nitrogen based biofertilizers is reported in many countries of the world. This was because of the increased cost of chemical fertilizers, that cause soil and water pollution, changes soil structure and produce microflora. In comparison, blue green algae is a cheap source of N, which does not cause pollution. It improves the organic matter status and water holding capacity. Venkataraman (1981) reported that open air soil culture is simple, less expensive and easily adaptable by farmers. As mentioned earlier, blue green algae had minimum growth requirements of sunlight, simple inorganic nutrients and moisture.

In agreement with the present results were the findings of Jacq and Roger (1977), Roger and Kulasooriya (1980) and Omar (2001) who reported blue green algal cultures or extracts enhanced germination, promoted growth of roots and shoots and increased protein content of the grain. The effect of nitrogen fixing blue green algae that were isolated from saline soils on growth and yield of rice grown in the green house and field were studied by Anonda et al. (1990). Under green house conditions, the N_2 content in straw, grain yield and protein content of rice were significantly increased.

The use of latest innovations in agriculture arena has resulted in significant increase in productivity. There is a however, a growing concern about the adverse effects of indiscriminate use of chemical fertilizers on soil productivity and environmental quality. Blue green algae offer an economically attractive and ecologically sound alternative to chemical fertilizer for realizing the ultimate goal of increased productivity.

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Heavy Metal Pollution in Tamus River Satna : A Review

• Shikha Dwivedi
•• Pushendra Singh

Abstract- *Water is the most important resource to sustain the life on this planet. Tamus is the most important river in satna(M.P). Heavy Metals is a collective term, which applies to the group of metals and metalloids. The present review focus on the concentration of heavy metals in Tamus river. Tamus River receive very harmful heavy metals life Mn, Fe, Cd, Pb, Cr etc. These heavy metals causing several disease of mankind such as cancers, lung disease, lever damage, kidney disease and Fragile bones and even death in instances of very high exposure. The following review article present the views and findings of the work carried out by the various researchers in the past on heavy metal pollution in Tamus river in satna.*

Keywords- *Heavy metals, Pollution, Tamus river.*

Introduction- Satna is a district of M.P. in india. It is situated in eastern part of the state. It abounds in natural resources like lime stone, latterite and silica sand i.e. silicates. Due to the availability of different kind of industries, main among them are cement factories and lime kilns and due to industrial activities and uncontrollable use of insecticides, pesticides and fertilizers the water pollution has become a threat in this region.

The present investigation has the target to give data base informations of heavy metals found in river water of this region. For this purpose valuable help form P.H.E. Department, Water pollution control authority and communication and Capacity development unit is availed. The test of different heavy metals are done using the method furnished by this unit.

Tamus is the most important river of satna region, and hundred of villages are contaminating the river by waste water per day(Khan, et al., 1998). Among the inorganic contaminants of the river water, heavy metals are getting importance for their non-degradable nature and often accumulate through tropic level causing a deleterious biological effect (Jain, 1978) . Anthropogenic activities like mining, ultimate disposal of treated and untreated waste effluents containing toxic metals as well as metal chelates (Amman, et al. , 2002) from different industries based on use of batteries, paints, ceramics, electroplating, utensils manufacturing etc are incorporating heavy metals in river water . Tamus river are basically receive heavy metals from effluents coming from temple washings and worshipping, also the indiscriminate use of heavy metal containing fertilizers and

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pesticides in agriculture resulted in deterioration of water quality rendering serious environmental problems posing threat on human.

The area under study receives domestic raw sewage from surrounding habitation; so also the activity like cattle washing, cloth washing, bathing, religious activities like idol immersion etc. Paves the way for high concentration of harmful chemicals in the river water. So it is vital to study the heavy metals of this river to find a safeguard instruction regarding health of human and crops production. These Heavy Metals causing several diseases of mankind.

Material and Methods- Water samples were collected once in January 2021 to December 2021 from Four sites discharge points of the Tamus river over a stretch of 10 kms. The samples were collected from a depth of 1ft below the surface using Nansen type water sampler and kept in polythene containers (500mL) with the addition of 2mL concentrated HNO₃ at 2mL in order to preserve the metals and also to avoid precipitation. The pH of water samples was determined using pH-meter with electronic glass electrode (LI 127 of Elico, India) and conductivity was measured by conductivity-meter (Systronics 304).

For the analysis of total heavy metals (dissolved and suspended), water (200mL) samples were digested with 5 mL of di-acid mixture (HNO₃: HClO₄ :: 9: 4ratio) on a hot plate and filtered by Whatman No. 42 filter paper and made up the volume to 50 mL by double distilled water for analysis of five heavy metals viz. Mn, Cd, Fe, Cr and Pb using atomic absorption spectrophotometer(GBC-902, Australia) (APHA, 1995) Among the methods available for the determination of Manganese, the Persulphate method is the best suited and is applicable to all type of water. The soluble manganese compounds are oxidized to Permanganate by Persulphate in Acid solutions. The resulting colour of the Permanganate solution is measured spectrophotometrically at 545nm. Cadmium ions react with Dithiozone to form a pink-red colour. The colour so formed is extracted with Chloroform and can be determined spectrophotometrically at 518nm. For the detection of iron, all the Iron is converted into Ferrous state by boiling with Hydrochloric Acid and Hydroxylamine. The reduced iron Chelates with 1, 10-Phenanthroline at a pH 3.2 to 3.3 to form a complex of orange and red colour. The intensity of this colour is proportional to the concentration of iron and follow Beer's Law, and therefore, can be determined colorimetrically at 510nm. Chromium is spectrophotometrically estimated by measuring the intensity of yellow coloured sodium chromate solution For the assessment of Lead, it is made to react with Dithiozone at a pH of about 11.5 to form Lead Dithiozone which is soluble in Chloroform. In the presence of an Alkaline Cyanide solution, the free green coloured Dithiozone is not extracted by Chloroform. The interference from Bismuth and Tin is eliminated by preliminary.

Result and Discussion- Cd concentration in this region is very less. Its minute concentration in the water of this river may be due to paint-pigments as well as plastics and silver cadmium batteries. Its accumulation may also

be possible due to its photographic use as cadmium bromide and iodide as well as its use as fertilizers. The W.H.O. permissible limit of cadmium is 0.01gm/l, suggesting concentration of cadmium is within the permissible limit. Although on any metal except iron is crossing the W.H.O. and BIS parameters but their presence in traces suggest to take proper precautions before using this water in domestic purpose. Concentration of Mn is 0.5 ppm as per water quality standards(india). Mn concentration is also within the limit and its accumulation in the water of this region is due to use of dry battery cells, iron alloys, glass, ceramics and fertilizers. Chromium accumulation in the water of this region may be owing to using Cr as corrosion inhibitor in photography and in manufacture of green varnishes and paints etc. Chrome steel disposal may also be a cause of it. Laterite ores of iron are the main cause of iron concentration in this region. Traces of lead may be due to application in alloys, lead pipes, lead arsenate as pesticide as well as its use in pigments, paints and as lead storage batteries.

Thus it can be concluded that traces of heavy metals are mainly in the Tamus river which receives sewage from Maihar, Unchehara and Satna which have increasing industrial activities. These Heavy Metals causing several diseases of mankind such as cancers, Lung Disease, Liver Damage, Kidney Disease and Fragile bones and even death in instances of very high exposure.

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Effects of physico-chemical characteristics of water on population density of Phytoplanktons inhabit in Baya river Vidyapatnagar, Samastipur, Bihar

• Mithilesh Kumar Singh

•• S.N.P. Yadav

Abstract- *In North Bihar Baya river is an important seasonal river. It holds maximum water in the Rainy season and minimum in Summer season. As we know water quality of river or pond water depends on radiation of sun light i.e. it regulates water temperature, pH, BOD, COD, dissolved O₂, Turbidity, Transparency, TDS, Electrical Conductivity, Total Hardness, Total Alkalinity, Free CO₂ and Chloride ions. Such physico-chemical characteristics depend also on sources of water supply and impurities mixed-up during journey of water. This water quality responsible for variation in Phytoplanktons population density as well as their diversity in Baya river at different Ghats like S1 (Barhauna Ghat), S2 (Dhobia Ghat) and S3 (Teghara Ghat) in Samastipur district of Bihar. My present study of river in the period of 2017-18.*

Keywords- *Baya river, Vidyapatnagar, Diversity, Population density, Ghats, Phytoplanktons.*

1. Introduction- No any boundary touches coastal line in Bihar. So Bihar is called landlocked state. As we know that Bihar is an agricultural state. Here industries are for name only. So maximum population are depend on agriculture and agricultural based industries for survival. Fish farming with agriculture is also a main stream occupation. In paddy field with paddy crop fishes and arthropods like prawns and molluscs are also cultivated.

Due to lot of perennial and seasonal streams, fresh water availability is not poor in Bihar. The Ganga, the Burhi Gandak, the Gandak, the Kosi, the Bagmati etc. are perennial river flowing in North Bihar. River Baya is also a longer river at somewhere perennial and somewhere seasonal i.e. scarcity of water in dry season. Water of river Baya is used at different places for different purposes. During utilization of these water bodies it is just ignore the life of river. Baya river is also suffering from this problem. A very little contributions have been made on the limnology of the reservoirs like ponds and river in Bihar and Jharkhand at Bhagalpur (Nasar 1975; Nasar and Nasar 1976; Siddiquie *et al* 1980; Saha 1983; Verma and Munshi 1987); at Darbhanga (Bazmi 1989, Ahmad 1990, Siddiquie and Bazmi 1990, Kund 1992, Ahmad 1994, Surbhi 1994 and Ahmad *et al* 1996); at Muzaffarpur (Prasad and Verma 1988 and Singh 1992); at Samastipur (Mala and Sinha

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2011); at Patna (Singh and Ahmad 1990) and at Hazaribagh (Ramakrishna and Shankar 1982).

In this my research study of Baya river at three different Ghats (stations) denoted by S1(Barhauna Ghat), S2 (Dhobia Ghat), S3(Teghara Ghat) mostly situated in Samastipur district of Bihar. Assessment was done on physico-chemical characteristics of water as well as variation in population density of phytoplanktons in relation to seasonal variation. Small and lower taxonomic plants are called phytoplanktons. As we know that phytoplanktons have an important role in aquatic food chain. In other words we can say that phytoplanktons are the food for fishes.

2. Materials and Methods

2.1 Study Sites- As above mentioned my study was at three different sites called Ghats they were S1(Barhauna Ghat), S2(Dhobia Ghat), S3(Teghara Ghat). These all three Ghats situated Southern part of Samastipur district of Bihar West to Eastward respectively.

2.2 Sampling- Samples of river water and phytoplanktons were collected manually with the help of different types of nets or gears. In which some are made up of mesh of polymer while some are bamboo's steaks. Sampling frequency was per month.

Water samples helped in assessment of water quality in aspects of physico-chemical characteristics at different parameters. It is necessary for establishment the co-relation between diversity and seasonal variation in population density of phytoplanktons.

3. Results and Discussion- Present study of river Baya was carried out during period of 2016-17 at all three Ghats. Assessment of water in reference to physical and chemical characteristics with the help of APHA (2005) . During analysis of phytoplanktons diversity, I saw that population density varied season to season. That means population density also depends upon local climates.

3.1 population Density- Population density was determined with the help of haemocytometer, to count the different phytoplanktons. For analysis a drop of sample was placed in counting chamber were settled for five minutes and then an average number was taken. This procedure was repeated four times and overall a mean value was taken and the number of phytoplanktons per ml. Was calculated as follows-

$$\begin{aligned} &\text{No. Of phytoplanktons in counting chamber} \\ &\text{Phytoplanktons/ml} = \frac{\text{No. of phytoplanktons in counting chamber}}{\text{Volume of water concentration}} \\ &\times 10^4 \\ &\text{Concentration Factors (A)} \end{aligned}$$

Where,

Volume of water concentration

$$A = \frac{\text{No. of phytoplanktons in counting chamber}}{\text{Volume of water made after Concentration}}$$

Volume of water made after Concentration

During course of analysis of water quality I founded maximum temperature in Summer at S2 (Dhobia Ghat) as 33.6°C and minimum water

temperature founded at S1 (Barhauna Ghat) as 18.7°C in 1017-18. Turbidity was maximum founded as 11.2 NTU at S3 (Teghra Ghat) indicates maximum pollution in the Rainy season while minimum Turbidity founded as 7.50 NTU at S2 (Dhobia Ghat) in Winter season. Similarly, Electrical Conductivity was maximum founded at S3 (Teghra Ghat) as 576.0 u/S in the Rainy season while minimum was founded in Summer season as 407.0 u/S at S2 (Dhobia Ghat). Transparency was recorded maximum in Winter season at S2 (Dhobia Ghat) as 22.3 cm while minimum was recorded as 12.5 cm at S3 (Teghra Ghat) in Rainy season. TDS was recorded maximum as 349.4 mg/L. At S3 (Teghra Ghat) in Rainy season while minimum was 237.7 mg/L at S2 (Dhobia Ghat) in Winter season.

As we know pH determines the acidity or alkalinity of water. Maximum pH was recorded as 8.25 at S2 (Dhobia Ghat) in Rainy season indicates water was alkaline while minimum pH was recorded as 6.43 at S2 (Dhobia Ghat) in Summer season which indicates water was slightly acidic in nature. DO maximum was recorded as 6.25 mg/L at S2 (Dhobia Ghat) in Winter season while minimum as 4.43 mg/L at S3 (Teghra Ghat) in Rainy season. BOD was maximum recorded as 11.10 mg/L at S3 (Teghra Ghat) in Rainy season while minimum was 7.50 mg/L at S1 (Barhauna Ghat) in Winter season. COD was maximum recorded as 31.30 mg/L at S3 (Teghra Ghat) in Rainy season while minimum was 16.60 mg/L at S1 (Barhauna Ghat) in Winter season.

Free CO₂ was maximum recorded as 7.80 mg/L at S1 (Barhauna Ghat) in Summer season while minimum was recorded as 4.60 mg/L at S3 (Teghra Ghat) in Winter season. Similarly 'Total Alkalinity' was recorded maximum as 136.0 mg/L at S3 (Teghra Ghat) in Winter season while minimum was recorded as 117.0 mg/L at S2 (Dhobia Ghat) in Summer season. Chloride ions was recorded maximum as 24.30 mg/L at S2 (Dhobia Ghat) in Summer season while minimum was recorded as 7.90 mg/L at S3 (Teghra Ghat) in Winter season. Thus we see that how water quality changed with changing in season.

Month wise population density of phytoplanktons was analysed. At S1 (Barhauna Ghat) average mean value was recorded as 9182.92 u/L (unit per litre). In which maximum value of phytoplanktons was recorded as 46919 in the month of May 2018 (2017-18) while minimum population density of phytoplanktons was recorded as 1544 u/L in the month of January 2018 (2017-18).

At S2 (Dhobia Ghat) maximum population density of phytoplanktons was recorded as 56749 u/L in the month of May while minimum was recorded as 1437 u/L in the month of January. Mean value of Phytoplanktons was recorded as 10764.08 u/L which S.D. was ± 15808.39

At S3 (Teghra Ghat) maximum population density was recorded as 80697 u/L in the month of May while minimum was recorded as 1587 u/L in the month of January. Mean average value was recorded as 14587.25 u/L while S.D. was ± 22431.78

Table 01
Temperature

		Summer	Rainy	Winter
2017-18	S1	31.5	30.2	18.7
	S2	33.6	28.6	19.2
	S3	32.7	29.0	20.1
	Mean	32.6	29.27	19.33
	S.D.	0.86	0.68	0.58
	S.E.	0.497	0.393	0.335

Table 02
Turbidity

		Summer	Rainy	Winter
2017-18	S1	8.34	9.90	7.90
	S2	9.93	10.30	7.50
	S3	10.10	11.20	8.25
	Mean	9.25	10.47	7.88
	S.D.	0.72	0.54	0.31
	S.E.	0.415	0.311	0.178

Table -03
Electrical Conductivity

		Summer	Rainy	Winter
2017-18	S1	410.00	501.00	497.00
	S2	407.00	533.00	485.00
	S3	483.00	576.00	511.00
	Mean	433.33	536.67	497.67
	S.D.	35.14	30.73	10.62
	S.E.	20.288	17.741	6.131

Table 04
Transparency

		Summer	Rainy	Winter
2017-18	S1	19.00	18.30	21.50
	S2	18.50	13.00	22.30
	S3	13.10	12.50	18.10
	Mean	16.87	14.60	20.63
	S.D.	2.67	2.62	1.82
	S.E.	1.541	1.512	1.050

Table 05
Total Dissolved Solids (TDS, mg/L)

		Summer	Rainy	Winter
2017-18	S1	272.50	282.40	267.30
	S2	281.30	286.50	237.70
	S3	286.10	349.40	302.10
	Mean	279.97	306.10	269.03
	S.D.	5.63	30.66	26.32
	S.E.	3.250	17.701	15.195

Table 06
pH

		Summer	Rainy	Winter
2017-18	S1	6.90	7.70	7.76
	S2	6.43	8.25	7.85
	S3	6.51	7.80	7.90
	Mean	6.61	7.92	7.84
	S.D.	0.21	0.24	0.06
	S.E.	0.121	0.138	0.034

Table 07
Dissolved Oxygen (DO, mg/L)

		Summer	Rainy	Winter
2017-18	S1	5.42	5.00	6.10
	S2	5.23	4.65	6.25
	S3	5.10	4.43	5.46
	Mean	5.25	4.69	5.94
	S.D.	0.13	0.23	0.34
	S.E.	0.075	0.132	0.196

Table 08
Biochemical Oxygen Demands (BOD, mg/L)

		Summer	Rainy	Winter
2017-18	S1	8.65	9.35	7.50
	S2	8.80	10.30	8.70
	S3	9.20	11.10	8.55
	Mean	8.88	10.25	8.25
	S.D.	0.23	0.72	0.53
	S.E.	0.132	0.415	0.305

Table 09
Chemical Oxygen Demands (COD, mg/L)

		Summer	Rainy	Winter
2017-18	S1	18.50	24.60	16.60
	S2	21.30	27.50	18.65
	S3	22.40	31.30	17.90
	Mean	20.73	27.80	17.72
	S.D.	1.64	2.74	0.85
	S.E.	0.946	1.581	0.490

Table 10
Free CO₂ (mg/L)

		Summer	Rainy	Winter
2017-18	S1	7.80	6.50	5.00
	S2	7.50	5.65	4.90
	S3	7.60	5.10	4.60
	Mean	7.63	5.75	4.83
	S.D.	0.12	0.58	0.17
	S.E.	0.069	0.334	0.098

Table -11
Total Hardness (mg/L)

		Summer	Rainy	Winter
2017-18	S1	150.00	170.00	180.00
	S2	153.00	173.00	186.00
	S3	147.00	162.00	169.00
	Mean	150.00	168.33	178.33
	S.D.	2.45	4.64	7.04
	S.E.	1.415	2.678	4.064

Table 12
(Total Alkalinity mg/L)

		Summer	Rainy	Winter
2017-18	S1	121.00	126.00	129.00
	S2	117.00	123.00	127.00
	S3	125.00	131.00	136.00
	Mean	121.00	126.67	130.67
	S.D.	3.27	3.30	3.86
	S.E.	1.887	1.905	2.228

Table 13
Chloride (Cl⁻ , mg/L)

		Summer	Rainy	Winter
2017-18	S1	21.60	15.70	8.80
	S2	24.30	19.40	12.30
	S3	18.50	14.30	7.90
	Mean	21.47	16.46	9.67
	S.D.	2.37	2.15	1.90
	S.E.	1.368	1.241	1.096

Table14
Month wise population density
(unit/L) of phytoplanktons at S1 (Barhauna Ghat)
of Baya river in the period of 2017-18

Months	Cyanophyceae	Chlorophyceae	Diatoms	Other	Total
November	2849	163	38	23	3073
December	20876	1396	179	29	22480
January	1021	35	471	17	1544
February	1079	23	2172	79	3353
March	1243	5115	588	13	6959
April	2707	216	172	30	3125
May	46503	285	90	41	46919
June	5350	82	10	47	5489
July	2418	94	55	18	2583
August	2609	412	102	14	3137
September	2982	289	695	54	4029
October	7075	232	185	21	7513
Total	96712	8342	4757	386	110195
Mean	8059.33	695.17	396.42	32.17	9182.92
S.D.	12709.32	1378.16	577.45	18.97	12567.62
S.E.	3673.21	398.21	166.89	5.48	3632.26

Table 15
Month wise population density (unit/L) of phytoplanktons at S2
(Dhobia Ghat) of Baya river in the period of 2017-18

Months	Cyanophyceae	Chlorophyceae	Diatoms	Other	Total
November	3024	140	30	25	3219
December	28750	1705	185	45	30685
January	826	32	550	29	1437
February	946	23	2442	124	3535
March	1050	5965	676	91	7782
April	3830	36	202	63	4130
May	56218	394	96	41	56749
June	5824	102	10	36	5972
July	1950	8	44	34	2036
August	1530	346	160	28	2064
September	2015	305	780	53	3153
October	7950	218	190	49	8407
Total	113913	9274	5365	618	129169
Mean	9492.75	762.83	447.08	51.5	10764.08
S.D.	15915.75	1627.10	650.74	28.01	15808.39
S.E.	4599.75	470.26	188.07	8.09	4568.89

Table 16
Month wise population density (unit/L) of phytoplanktons at S3
(Teghara Ghat) of Baya river in the period of 2017-18

Months	Cyanophyceae	Chlorophyceae	Diatoms	Other	Total
November	3646	135	52	17	3850
December	38500	1870	198	76	40644
January	1242	10	705	207	2164
February	1352	12	130	93	1587
March	1660	8725	2550	123	13058
April	5065	5	695	68	5833
May	79600	585	465	47	80697
June	7040	82	160	51	7333
July	2752	149	135	17	3053
August	2131	432	15	71	2649
September	2838	281	50	13	3182
October	9800	236	880	81	10997
Total	155626	12522	6035	864	175047
Mean	12928.83	1043.50	502.92	72.0	14587.25
S.D.	22381.11	2367.61	679.67	51.62	22431.78
S.E.	6468.52	684.27	196.43	14.91	6483.17



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A Theoretical Study of Thermo Physical and Cohesive Properties of $\text{LiCl}_{1-x}\text{F}_x$ Mixed Alkali Halide

• A.K. Dixit

Abstract- I have studied the thermo physical and cohesive properties such as Gruneisen parameter, molecular force constant, Restrahl frequency, Debye temperature compressibility and Anderson-Gruneisen parameter etc of $\text{LiCl}_{1-x}\text{F}_x$ mixed alkali halide under the banner of three body force potential model. Three body force potential (TBFP) model contains long-range forces (Columbians and three body interactions) as well as short range forces (vander-Waal's and overlap repulsive forces) (10-15). I have selected mixed alkali halides for the discussion because mixed crystals are very useful and known as solid solutions. Mixed alkali halides have received considerable attention of investigators (1-9) due to their scientific and technological importance. The observations show that the micro hardness of mixed alkali halides is larger than the pure crystals. Some results are very close to their experimental value which shows the superiority of this model over other models.

Keywords- Thermo Physical and Cohesive Properties

Introduction- Ionic solids are model crystal for the analysis of lattice properties. In the same spirit we have used our three body force potential model (TBFP) for the calculation of lattice and thermo-physical properties of mixed alkali halides $\text{LiCl}_{1-x}\text{F}_x$. This potential model consists long-range (Columbians and three body interaction) forces as well as short range forces (overlap repulsive force operating up to next nearest neighbor ions and vander-Waal's interaction) (25-30). This shows that the inclusion of three body interaction effect makes the present model suitable for the study of thermo physical properties of mixed alkali halides. Most of the theoretical and experimental workers (10-36) have explained the elastic and thermo physical properties of the ionic solids.

Theory and method of Calculations- From the early history of science and its evolution, attempts have been made to explain the behavior of the ionic solids under some boundary conditions through some potential models. We have applied the TBP model for the calculation of thermo physical properties of mixed alkali halides. Three body potential model contains long-range forces as well as short-range forces. Columbian force associated with three body force is long-range force while Vander -Waal's and Hafemeister – Flygare are short-range forces. The values of input data for different concentrations (x) have been evaluated by applying Vegard's law for second order elastic constants, lattice constants, ionic radii and

vander-Waal's constants of host and do pant materials as –

$$\begin{aligned} C_{ij}(\text{mix}) &= x c_{ij}(A) + (1-x) c_{ij}(B) \\ r_{ij}(\text{mix}) &= x r_{ij}(A) + (1-x) r_{ij}(B) \\ \rho(\text{mix}) &= x \rho(A) + (1-x) \rho(B) \\ C(\text{mix}) &= x C(A) + (1-x) C(B) \\ D(\text{mix}) &= x D(A) + (1-x) D(B) \end{aligned}$$

The constituent of mixed crystals are held together by the harmonic elastic forces with no internal stress within the crystal. The values of input data are given in table 1.1. Thermo physical properties included in the discussion are Gruneisen parameter (γ), molecular force constant (f) Debye Temperature (θ_D), Restrahl frequency (ν_0), ratio of volume thermal expansion coefficient to specific relevant expressions have been derived from three body potential model. ⁽²⁵⁻³⁶⁾ --

$$\begin{aligned} U^{\otimes} &= -\alpha_m z^2 e^2 / r - 2nf(r) \alpha_m z e^2 / r + nb \beta_+ \exp [(r_1 + r_2 - r) / \rho] \\ &\quad + n' b / 2 [\beta_{++} \exp [(2r_1 - 1.4142r) / \rho] \\ &\quad + \beta_{--} \exp (2r_2 - 1.4142r) / \rho] - C / r^6 - D / r^8 \\ U'^{\otimes} &= +\alpha_m z^2 e^2 / r^2 + 2nf(r) \alpha_m z e^2 / r - 2nf'(r) \alpha_m z e^2 / r - nb / \rho \beta_+ \exp [(r_1 + r_2 - r) / \rho] \\ &\quad - n' b (1.414) / 2 \rho [\beta_{++} \exp [(2r_1 - 1.4142r) / \rho] \\ &\quad + \beta_{--} \exp (2r_2 - 1.4142r) / \rho] + 6 C / r^7 + 8 D / r^9 \\ U''^{\otimes} &= -2\alpha_m z^2 e^2 / r^3 + nf(r) \alpha_m z e^2 / r^3 + 4nf'(r) \alpha_m z e^2 / r^2 - 2nf''(r) \alpha_m z e^2 / r \\ &\quad + nb / \rho^2 \beta_+ \exp [(r_1 + r_2 - r) / \rho] \\ &\quad + n' b (1.414)^2 / 2 \rho^2 [\beta_{++} \exp [(2r_1 - 1.4142r) / \rho] \\ &\quad + \beta_{--} \exp (2r_2 - 1.4142r) / \rho] - 42 C / r^8 - 72 D / r^{10} \\ U'''(r) &= 6\alpha_m z^2 e^2 / r^4 + 12nf(r) \alpha_m z e^2 / r^4 - 12f'(r) \alpha_m z e^2 / r^3 + 6nf''(r) \alpha_m z e^2 / r^2 - 2nf'''(r) \alpha_m z e^2 / r \\ &\quad + nb / \rho^3 \beta_+ \exp [(r_1 + r_2 - r) / \rho] \\ &\quad + n' b (1.414)^3 / 2 \rho^3 [\beta_{++} \exp [(2r_1 - 1.4142r) / \rho] \\ &\quad + \beta_{--} \exp (2r_2 - 1.4142r) / \rho] + 336 C / r^9 + 720 D / r^{11} \\ [U(r)]_{SR} &= +nb \beta_+ \exp [(r_1 + r_2 - r) / \rho] \\ &\quad + n' b / 2 [\beta_{++} \exp [(2r_1 - 1.4142r) / \rho] \\ &\quad + \beta_{--} \exp (2r_2 - 1.4142r) / \rho] - C / r^6 - D / r^8 \\ [U'(r)]_{SR} &= -nb / \rho \beta_+ \exp [(r_1 + r_2 - r) / \rho] \\ &\quad - n' b (1.414) / 2 \rho [\beta_{++} \exp [(2r_1 - 1.4142r) / \rho] \\ &\quad + \beta_{--} \exp (2r_2 - 1.4142r) / \rho] + 6 C / r^7 + 8 D / r^9 \\ [U''(r)]_{SR} &= +nb / \rho^2 \beta_+ \exp [(r_1 + r_2 - r) / \rho] + n' b (1.414)^2 / 2 \rho^2 [\beta_{++} \exp [(2r_1 - 1.4142r) / \rho] \\ &\quad + \beta_{--} \exp (2r_2 - 1.4142r) / \rho] - 42 C / r^8 - 72 D / r^{10} \end{aligned}$$

(i) Gruneisen parameter

$$\gamma = -r_0 / 6 [U'''(r) / U''^{\otimes}(r)]_{r=r_0}$$

(ii) Molecular force constant

$$f = 1/3 [U''_{SR}(r) + 2/r U'_{SR}(r)]_{r=r_0}$$

(iii) Restrahl frequency

$$\nu_0 = 1/2\pi \sqrt{f/\mu}$$

where μ is the reduced mass of the crystal.

(iv) Debye Temperature. $(\theta_D) = h \nu_0 / k$

(v) Ratio of volume thermal expansion coefficient to specific heat at constant volume

$$\alpha_v/C_v = -U''(r_0)/2r_0 U'''(r_0)^2$$

(vi) Compressibility $\beta = 18r_0/U'''(r_0)$

(vii) The Anderson-Gruneisen Parameter

$$\delta_T = -\beta r_0^3/27V U'''(r_0)$$

The above relations have been used to calculate the thermo physical properties of mixed halides. The model parameters are given in table 1.1 and calculated thermo physical properties of mixed alkali halide are given in table 1.2.

Table 1.1
Model Parameters for Mixed
Alkali Halide $\text{LiCl}_{1-x}\text{F}_x$ at Different Compositions

Composition (x)	ρ (10^{-8}cm)	b (10^{-12}ergs)	f (r_0)	af' (r_0)	C ($10^{-60}\text{erg x cm}^6$)	D ($10^{-76}\text{erg x cm}^8$)
0.0 (LiCl)	0.399	0.408	0.0038	-0.030	317	221
0.2	0.394	0.422	0.0035	-0.027	262.8	182
0.4	0.390	0.437	0.0031	-0.024	208.6	143
0.6	0.385	0.451	0.0028	-0.020	154.4	104
0.8	0.381	0.466	0.0024	-0.017	100.2	65
1.0 (LiF)	0.377	0.480	0.0021	-0.014	46	26

Table 1.2
Thermophysical & Cohesive Properties
of Mixed Halide $\text{LiCl}_{1-x}\text{F}_x$ at Different Compositions

Cohesive Property	X=0		X=0.2		X=0.4		X=0.6		X=0.8		X=1.0		
	Calc	Exp.	Calc	Exp.	Calc	Exp.	Calc	Exp.	Calc	Exp.	Calc	Exp.	
Gruneisen	1.627	1.78	1.5436	-	1.4602	-	1.3768	-	1.2934	-	1.21	-	
Molecular force constant f (10^4 dyn/cm)	6.72	-	6.966	-	7.217	-	7.458	-	7.704	-	7.95	-	
Restrahl frequency ν_0 (T Hertz)	13.92	-	13.796	-	13.672	-	13.548	-	13.424	-	13.3	-	
Debye Temperature (Θ_D) (k)	658.28	-	654.25	-	650.22	-	646.19	-	642.16	-	638.13	730	
Ratio of volume thermal expansion coefficient to specific heat at constant volume α_v/C_v (10^{10} ergs unit)	4.66	-	4.596	-	4.532	-	4.468	-	4.404	-	4.34	-	
Compressibility (β) (10^{-12} dyn/cm)	2.91	3.36	2.68	-	2.45	-	2.22	-	1.99	-	1.76	1.49	
The Anderson-Gruneisen Parameter δ_T	-	3.25	-	3.082	-	2.914	-	2.746	-	2.578	-	2.41	-

Result and Discussion- A look at the table 1.2, it is clear that presently estimated end point values of Gruneisen parameter are very close to their experimental values. Some results of ours are still higher than the experimental values. The reason behind is to change in bond length in ionic solids. The compressibility and micro hardness and Ratio of volume thermal expansion coefficient to specific heat at constant volume of mixed halide is higher than pure crystals. So this mixed halide is very important for

industrial purpose. Some results are very close to their experimental value which shows the superiority of this model over other models. On the basis of overall achievements the present TBP model can be regarded to be adequately suitable for the prediction of thermo physical and cohesive properties of mixed alkali halides.

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A Survey on Population Dynamics of Helminth Parasites in Some Carnivorous Fishes namely Eutropiichthysvacha and Ailiacoila of River Ganga.

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~~**Abstract-** *In the present study several carnivorous fishes of river Ganga from Aami (Saran), site was examined on monthly basis from January 2019 to December 2019 to find out the status of helminth infection in them. Presence of Cestode, Nematode and Trematode parasites was observed from gastrointestinal tract, visceral organs and body cavity of both type of host fishes during the study period. As per the findings, Nematode shows highest incidence in both the fishes i.e. 70% in Eutropiichthysvacha and 120% in Ailiacoila, in May and October, respectively. Highest density was also found in Nematode in both the fishes – 1.2 in Ailiacoila in the month of October; and 0.9 in Eutropiichthysvacha in the months of May and August. Beside this, the highest index was also observed in Nematode 4.8 in Ailiacoila in October while 0.63 in Eutropiichthysvachain May. Similarly, Trematode shows high intensity in both fishes i.e., 2 in Eutropiichthysvachain the month of June, July & August, and 4 in the month of July in Ailiacoila. It was concluded that that Nematode parasite showed maximum incidence, density and index while Trematode parasite showed maximum intensity in both type of fishes.*~~

~~**Keywords-** *Gastrointestinal Tract (GIT), Trematode, Helminthic Infection.*~~

Introduction- Helminths have been a problem for humans since the dawn of recorded history (Faust, Russell & Jung, 1970). The ancient works of Hippocrates, Egyptian medical papyri, and the Bible can all be used to identify helminthic illnesses (Cox, 2002; Hotez, 2008). Helminths are said to have resulted in huge loss in production of fish as they are a chief form of parasites found in them (Sobecka & Slominsca, 2007). Parasites are important groups of organisms because they have evolved independently in nearly every phylum of animals, from protozoa to chordates, as well as in many plant groups. Due to their continuous contamination of the environment with their eggs and larvae helminth's infection is a huge challenge, both in developing and developed countries (Nalule, Mbaria & Kimenju, 2013).

Fish is regarded to be a very cheap and chief source of diet, especially due to high level of protein and other micro nutrients. Because of its richness and ease of availability it is a staple food for poor population of the country. Commercially, it makes a significant contribution to the economy due to its constant high demand, although

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parasitic infestation hinders the fishery's commercial viability, impacting the economy in this area.

Helminths can be found in both wild and cultured fishes. Fishes are infected with all three major groups of helminths: Nematode, Cestode and Trematode. Worldwide, about 20,000 to 30,000 helminth species have been reported, causing significant losses to the fish sector (Kime, 1995).

In any natural ecosystem, parasites maintain a complicated dynamic equilibrium with the free-living plants and animals' community (Hoffman, 1967). Parasitic diseases, alone or in combination with other environmental stresses, may influence the host weight or reproduction, alter population traits, and have an economic impact (Rhode, 1993). Many workers have studied on the helminth parasites and their population dynamics occurring in Piscean host. The study of population dynamics can be used as the biological basis of method to regulate population of parasite.

Materials and Methods

Area and duration of Study- The samples for present study were collected monthly from Aami (Ambika Bhawani, Saran) site of Ganga River between January 2019- December 2019

Examination of Fishes for Helminth Parasitic Infestation- Sample of fishes i.e. *Eutropichthysvacha* (Bachwa) and *Alicoaila* (Suthri) were collected on monthly basis from Aami (Ambika Bhawani, Saran) site of Ganga River and carried to the laboratory in glass jars with safety measures to keep them alive. However, those fishes which died during the transportation were also used. In some cases, alive parasites were recovered from these fresh dead fishes. In the laboratory, morphometric characters were observed and their identification was done after giving them serial number. The live fishes were killed by severing the spinal cord just behind the head, and then external body organs (Skin, Fins, Gills, Oral cavity) were thoroughly examined for the parasites with the help of magnifying glass. For examination of the gills and internal organs, fishes were dissected by making an insertion from the anus towards the mouth. After opening the viscera, the alimentary canal and others organs were removed and placed in a normal saline solution (0.75 % NaCl) in separate petri dishes for examination and body cavity was examined carefully for helminth parasite. Sex of the fish was determined by examining the gonads. The alimentary canal and other visceral organs were pulled open taken out carefully using sharp tweezers and fine needle and were cleaned with fine brush to ensure presence of parasites (Cestodes, Trematodes, and Nematodes). The flicking movement of parasites was observed by using magnifying lens. Each helminth parasite was carefully and slowly dislodged from the intestinal wall, ensuring that it remained intact. They were transferred to a clean petri dish containing normal saline solution. Then the number of different helminth parasite were counted and noted down.

Population dynamics of helminth parasites was determined by following formula (Margolis et al., 1982).

Infected hosts

$$\text{Incidence of Infection} = \frac{\text{-----}}{\text{Total hosts examined}} \times 100$$

$$\text{Intensity of Infection} = \frac{\text{Number of parasites collected in a sample}}{\text{-----}} \\ \text{Number of infected hosts}$$

$$\text{Density of Infection} = \frac{\text{Number of parasites collected in a sample}}{\text{-----}} \\ \text{Total hosts examined}$$

$$\text{Index of Infection} = \frac{\text{No. of hosts infected} \times \text{No. of parasites collected}}{\text{-----}} \\ (\text{Total hosts examined})^2$$

Fig:-River Ganga at Aami, (AmbikaBhawani) Saran



Fig:-*Eutropiichthysvacha* (Bachwa)



Fig:-*Ailiaoila* (Suthri)



Fig:- Visceral organ of fish



Fig:- Helminth parasite in gut of fish

Observation: -



Fig:- Different Helminth parasite collected from the fish specimen

Population Dynamics of Different Helminth Parasites in *Eutropiichthysvacha* at Aami Site

Table 01

Showing the population dynamics of different helminth parasites in *E.vacha*. Population Dynamics of Different Helminth Parasites in *Ailiacoila* at Aami Site

Table 02

Month	No of Host Examined	No of Total Host Infected	Name of Parasite	No. of Host Infected	No. of Parasite	Incidence	Intensity	Density	Index
Jan-19	10	3	Cestode	-	-	-	-	-	-
			Nematode	2	3	20	1.5	0.3	0.06
			Trematode	1	1	10	1	0.1	0.01
Feb-19	10	5	Cestode	2	2	20	1	0.2	0.04
			Nematode	3	6	30	2	0.6	0.18
			Trematode	-	-	-	-	-	-
Mar-19	10	4	Cestode	1	1	10	1	0.1	0.01
			Nematode	3	5	30	1.6	0.5	0.15
			Trematode	-	-	-	-	-	-
Apr-19	10	6	Cestode	2	2	20	1	0.2	0.04
			Nematode	4	6	40	1.5	0.6	0.24
			Trematode	-	-	-	-	-	-
May-19	10	7	Cestode	-	-	-	-	-	-
			Nematode	7	9	70	1.2	0.9	0.63
			Trematode	-	-	-	-	-	-
June-19	10	7	Cestode	-	-	-	-	-	-
			Nematode	5	7	50	1.4	0.7	0.35
			Trematode	2	4	20	2	0.4	0.08
July-19	10	8	Cestode	1	1	10	1	0.1	0.01
			Nematode	4	7	40	1.	0.7	0.28
			Trematode	3	6	30	2	0.6	0.18
Aug-19	10	6	Cestode	1	1	10	1	0.1	0.01
			Nematode	3	9	30	3	0.9	0.27
			Trematode	2	4	20	2	0.4	0.08
Sep-19	10	5	Cestode	-	-	-	-	-	-
			Nematode	4	4	40	1	0.4	0.16
			Trematode	1	2	10	2	0.2	0.02
Oct-19	10	4	Cestode	-	-	-	-	-	-
			Nematode	2	4	20	2	0.4	0.08
			Trematode	2	2	20	1	0.2	0.04
Nov-19	10	2	Cestode	-	-	-	-	-	-
			Nematode	2	3	20	1.5	0.3	0.06
			Trematode	-	-	-	-	-	-
Dec-19	10	3	Cestode	-	-	-	-	-	-
			Nematode	3	5	30	1.6	0.5	0.15
			Trematode	-	-	-	-	-	-

**Showing the population dynamics
of different helminthparasites in *Ailiacoila*.**

Result and Discussion- In the present study, out of 240 collected

Month	No of Host Examined	No of Total Host Infected	Name of Parasite	No of Host Infected	No of Parasite	Incidence	Intensity	Density	Index
Jan-19	10	2	Cestode	-	-	-	-	-	-
			Nematode	2	4	20	2	0.4	0.06
			Trematode	-	-	-	-	-	-
Feb-19	10	2	Cestode	-	-	-	-	-	-
			Nematode	-	-	-	-	-	-
			Trematode	2	6	20	3	0.6	0.12
Mar-19	10	1	Cestode	1	1	10	1	0.1	0.01
			Nematode	-	-	-	-	-	-
			Trematode	-	-	-	-	-	-
Apr-19	10	3	Cestode	-	-	-	-	-	0.01
			Nematode	3	4	30	1.3	0.4	0.12
			Trematode	-	-	-	-	-	-
May-19	10	4	Cestode	-	-	-	-	-	-
			Nematode	1	3	10	3	0.3	0.03
			Trematode	3	4	30	1.3	0.4	0.12
June-19	10	3	Cestode	-	-	-	-	-	-
			Nematode	3	5	30	1.6	0.5	0.15
			Trematode	-	-	-	-	-	-
July-19	10	4	Cestode	-	-	-	-	-	-
			Nematode	3	4	30	1.3	0.4	0.12
			Trematode	1	4	10	4	0.4	0.04
Aug-19	10	3	Cestode	-	-	-	-	-	-
			Nematode	1	1	10	1	0.1	0.01
			Trematode	2	5	20	2.5	0.5	0.10
Sep-19	10	1	Cestode	1	1	10	1	0.1	0.01
			Nematode	-	-	-	-	-	-
			Trematode	-	-	-	-	-	-
Oct-19	10	4	Cestode	-	-	-	-	-	-
			Nematode	4	12	120	3	1.2	4.8
			Trematode	-	-	-	-	-	-
Nov-19	10	2	Cestode	1	1	10	1	0.1	0.01
			Nematode	1	2	10	2	0.2	0.02
			Trematode	-	-	-	-	-	-
Dec-19	10	1	Cestode	-	-	-	-	-	-
			Nematode	-	-	-	-	-	-
			Trematode	1	3	10	3	0.3	0.03

carnivorous fishes, 120 were *Eutropiichthysvacha* and the rest 120 were *Ailiacoila*. Out of 120 *Eutropiichthysvacha*, 60 were found to be infected and out of 120 *Ailiacoila*, 30 hosts were found to be infected. Furthermore, the types of helminth parasites found in *Eutropiichthysvacha* were 7 in the form of Cestode, 65 in the form of Nematode, and 19 in the form of Trematode. On a similar note, the types of helminth parasites found in *Ailiacoila* were 3 in the form of Cestode, 18 in the form of Nematode, and 22 in the form of Trematode. Besides these, many larvae and Acanthocephalous were also recovered from the infected hosts during the study period. The data of monthly variation in terms of prevalence, intensity, density and index of

helminth parasite infection in both *Eutropiichthysvacha* and *A. coil* have been shown in Table 1 and Table 2, respectively.

As per the present findings, Nematode showed highest incidence in both the fishes at 70% in *Eutropiichthysvacha* and 120% in *Ailiacoila*, in May and October respectively. While Trematode showed high intensity in both fishes; i.e.; 2 in *Eutropiichthysvacha* and in the month of June, July & August, and 4 in the month of July in *Ailiacoila*. Highest density was found in Nematode in both the fishes – 1.2 in *A.coil* in the month of October, and 0.9 in *Eutropiichthysvacha* in the months of May and August. Nematode showed highest index 4.8 in *Ailiacoil* in October while 0.63 in *Eutropiichthysvach* in May.

Helminth parasites are more prevalent and intense in fishes during rainy season from April to August (Chowdhury & Hossain, 2015) and the intensity lowered during winters (Khanum, Begum & Begum, 2015). Trematodes were found in high incidence in summer and low incidence in monsoons with a mid-range in winters due to environmental issues (Pallewad, Nanware & Bhure, 2015).

Development of more parasites take place during summers when temperature remains high low rainfall and sufficient amount of moisture (Jadhav, 2008). In addition, strength of parasites depends upon temperature, parasites' types and food consumption of fishes (Verma, Yadav & Saxena, 2018). The view was supported in terms of temperature, pH and conductivity (Kennedy, 1976).

On the contrary, it was found that parasites developed in higher number in low temperature and low pH value (Mukherjee et al., 2019).

To sum up, most of the previous researches are in synchronization with the present findings which prove that parasitic infections in fishes are affected by seasonal changes, organic pollutants, types of parasites, type of food intake by fishes, humidity, and rainfall.

Conclusion- As per the finding, it was concluded that nematode parasite showed maximum incidence (120 % in *Ailiacoila* and 70% in *Eutropiichthysvacha*), density (1.2 in *Ailiacoila* and 0.9 in *Eutropiichthysvacha*) and index (4.8 in *Ailiacoila* and 0.63% in *Eutropiichthysvacha*) in both the fishes while trematode parasite showed maximum intensity (4 in *Ailiacoila* and 2 in *Eutropiichthysvacha*) in both type of fishes in different months, which clearly indicates, heavy burden of helminth infestation is found in fishes. To add on, infestation of parasites in fishes affects the health of the latter as well as their consumers, as fish forms a staple and rich diet across many parts of the country. It can be determined that fish industry is largely affected by parasitic diseases in them (William & Jones, 1994; Schmidt & Roberts, 2000). Hence, it is recommended that further study on the parasite infestation in fishes is required to minimise parasitic attacks on them keeping in mind the health factor of both the fishes and of the people who consume them in their diet.

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Effect of Bacillus thuringiensis (B.t.) on longevity of Diacrisia obliqua

• Lalit Gupta

Abstract- *Diacrisia obliqua walker* (Lepidoptera: Arctiidae) is a phytophagous insect causing great loss to different crops. To control this pest different concentrations of bacterial preparations were administered by Leaf Dip Method and Topical Method. It was observed that bacterial preparation reduces the longevity of adult insect. It was also found that bacterial preparation is more effective under LDM.

Keywords- *Bacillus thuringiensis, Diacrisia obliqua*

Introduction- Bihar hairy caterpillar, *Diacrisia obliqua* is a notorious polyphagous pest of various economically important crops. Chemical insecticides have been used by farmers to control this pest but older larva survived their toxicity. Chemical pesticides are also harmful to human & pet animals. They also impose resistance development and environmental pollution. Biopesticides are being popular day by day in order to control the pests. Microbial agents like virus, bacteria & fungi have been widely used & tested to control several crop pests.

Bacillus thuringiensis (*B.t.*) is a gram positive bacterium. It has been found very effective to control lepidopteran pests. *B.t.* has been found pathogenic to more than 525 insect species. A number of toxins like endotoxin and many more are produced by it. This toxin is a protein produced when spores are formed. It targets the insect's midgut epithelium upon ingestion. In the light of previous work done & literature available, following work was planned to study the effect of Dipel (a commercial preparation of *B.t.*) on growth of *D. obliqua*.

Material & Method- For the study male & female moths were collected and maintained in laboratory to ensure the regular supply of insects. Adults were maintained in glass chimneys and larva obtained from them were kept in large petridishes. Full grown larvae were transferred to pneumatic trough having 10-15 cm thick soil on their bottom, for pupation.

Dipel is a commercial preparation of *B.t.* whose efficacy has been already evaluated to control different insects. It is a wettable powder containing 25×10^9 viable spores per gram of final product of *B.t.* var *Kurstaki* (Serotype 3a, b strain HD-1).

The concentrations of Dipel used in this study included 0.05, 0.10, 0.50, 0.75 & 1.0%. 2% skimmed milk powder was added to Dipel which increased its adhering property.

Two methods were employed to treat the insects with different bacterial preparations.

1. **Leaf Dip method (LDM)** - In this method, small & uniform sized leaves were treated with each concentration of Dipel.
2. **Topical Method (TM)** - In this method 2 hr old adults were exposed to a thin film of residue.

Observation- The results obtained in different experiments are presented in following table-

Table 1
Effect of Bt on longevity in male and female *D. obliqua*
at different modes of treatment. (Values are mean S. E.)

Mode of treatment	Concentration (%)	Longevity (in days)	
		Male	Female
L.D.M.	0.05	7.26±0.34	8.35±0.25
	0.10	7.68±0.26	7.75±0.26
	0.50	6.02±0.48	6.93±0.44
	0.75	5.06±0.78	5.18±0.56
	1.00	3.14±0.12	3.06±0.02
T.M.	0.05	7.80±0.44	9.76±0.32
	0.10	7.06±0.22	8.82±0.26
	0.50	7.366±0.34	7.87±0.16
	0.75	6.54±0.56	6.86±0.46
	1.00	3.45±0.14	3.55±0.42
	Control	11.35±0.22	13.76±0.24

Result & Discussion- The life span of progeny male and female adults of untreated parents was more as compared to that earlier treated by leaf dip method with any concentration of the dipel ($P < 0.05$). The longevity of adults, varying from 3.14 to 7.26 days in male and from 3.16 to 8.35 days in female and tending to decrease with the increasing concentration, differed significantly with different concentrations ($P < 0.05$).

Every concentration of the dipel applied as residue film to the adult reduced the life-span of both male and adults ($P < 0.05$). As regards the influence of different concentrations of the dipel as residue films on the longevity of adults, it varying from 3.45 to 7.80 days in male and 3.55 to 9.76 days in female and declines with the advancing concentration of dipel concentration of the residue film ($P < 0.05$).

Same findings have been revealed by previous workers against other pests **Chaturvedi (2002)¹** and **Bajpai (2003)²** also worked on microbial preparations against sex oriented sterilizing influence on different insects.

The present findings are in correlation with the results of earlier workers. Similar findings have also been reported earlier by **Sharma(2001)³**, **Krishnaiah, K., Mohan, N.J. and Prasad, V.C⁴(1981)** and **Sundrababu, P.C. and Subramaniam, T.R⁵(1973)** by using insect growth regulators to observe the effect of these on development and sterility of *U. pulchella*. and other pests.

Conclusion- The above study reveals that Bt is a promising biopesticide. It has potential to control the pests especially lepidopteran. It is more significant in recent farming practices because it is safe to environment.

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Increase in Manganese Content of Paddy Plants After Application of Biofertilizers

• Anup Kumar Mishra
•• Pushpendra Kr. Sharma

Abstract- *The blue green algae are one of the major components of the nitrogen fixing biomass in crop plant and provides a potential source of nitrogen fixation. The blue green algae as a biofertilizer are proving to be a very important media in improving the soil quality by enriching the various components in the soil. Biofertilizers are ecofriendly as they do not contain any such chemical which is harmful to living soil. The Paddy (Oryza sativa, L. var. SAKET) plants were taken in experiment. These plants were raised in soil-pot culture conditions. The different Supply levels of blue green algae, nil (control), 50, 100, 150, 200 and 250g bga/kg soil were applied to plants. The increase in manganese content of paddy plants was observed with the increase in bga supply level upto 200g bga/kg soil in tops of 30 days, upto 150g bga/kg soil level in tops of 90 days old plants, and upto 250g bga/kg soil level in grains of plants. In tops of 90 days old plants, manganese content at 250g bga/kg soil level was found to be equal with that of value observed at 200g bga/kg soil level, whereas in tops of 30 days old plants further increase in bga supply beyond 200g bga/kg soil level and beyond 150g bga/kg soil level in tops of 90 days, showed decrease in manganese content. As compared to control increase in tissue manganese was found to be highly significant ($P=0.01$) at each level of bga supply.*

Keywords- *Paddy, bga, BNF, controlled condition, FM*

Introduction- The human population, food production and fertilizer consumption have increased gradually. To guarantee enough food for all, either the population growth has to be stemmed or more fertilizer has to be found to meet the ever increasing demand for protein. The demand for chemically fixed nitrogen is bound to be on the increase and the nitrogen gap is widening up. Such a gap would be difficult to bridge in the wake of the energy crisis. Furthermore, in the area of chemical fixation, no major breakthrough is yet visible to minimize the energy requirements of the conventional Haber–Bosch process for the production of ammonia.

The use of latest innovations in agriculture arena has resulted in significant increase in productivity. There is a however, a growing concern about the adverse effects of indiscriminate use of chemical fertilizers on soil productivity and environmental quality. Blue green algae offer an economically attractive and ecologically sound alternative to chemical

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fertilizer for realizing the ultimate goal of increased productivity, especially in rice cultivation.

The blue green algae have inhabited much of the surface of the earth for billions of years and today they are responsible for a significant amount of biological nitrogen fixation (BNF). The tropic independence of blue green algae made them suitable for use as biofertilizers. Blue green algae are widely distributed organisms all over the world and can be found in extreme habitats, from hot springs to arctic regions. Among the ecosystems in which they can be found, wet soils provide an ideal environment for blue green algae to grow. Blue green algae represent a small taxonomic group of photosynthetic prokaryotes. Some of them are able to perform nitrogen fixation and also possess a tremendous potential for producing a wide range of secondary metabolites. Blue green algae have drawn much attention as prospective and rich sources of biologically active constituents and have been identified as one of the most promising groups of organisms capable of producing bioactive compounds (fish & codd 1994, schlegel et al... 1999). De (1939) attributed the natural fertility of flooded rice field soil and its maintenance to the process of biological nitrogen fixation by blue green algae.

The biofertilizers contain beneficial microorganisms which improve plant growth and protect plants from pests and diseases (El-yazeid *et al*, 2007). The role of soil microorganisms in sustainable development of agriculture has been reviewed (Lee and Pankhurst, 1992). Biofertilizers are important components of integrated nutrient management. These potential biological fertilizers would play a key role in productivity and sustainability of soil and also protect the environment as eco-friendly and cost effective inputs for the farmers. They are cost effective, eco-friendly and renewable source of plant nutrients to supplement chemical fertilizers in sustainable agricultural system. In developing countries like India where there is immediate need to rely increasingly on organic fertilization of soil these bio-fertilizers play a role in minimizing dependence on inorganic nitrogenous fertilizers. The bio-fertilizers, otherwise called microbial inoculants are preparations containing live or latent cells of efficient strains of nitrogen fixing micro-organisms used for seed or soil application. The main objective of applying inoculants is to increase the number of such microorganisms in soils or rhizosphere and consequently improve the extent of micro-biologically fixed nitrogen to plant growth. Application of bio-fertilizers in combination with organic nitrogenous fertilizers has a key role to play in the economic management of nitrogen needs of crops.

In India, considerable progress has been made in the development of blue green algae based bio-fertilizer technology. It has also been demonstrated that this technology can be a powerful means of enriching the soil fertility and improving rice crop yields.

Application of bio-fertilizers in combination with organic nitrogenous fertilizers has a key role to play in the economic management of nitrogen needs of crops. In addition to this blue green algae are imparting a big role in the sustenance of the conservation of biodiversity on the planet, which is the dire need of time.

Material and Method- Experimental plants were raised in soil culture under pot culture conditions in the laboratory. Plants were raised in 8" clay flower pots with a central drainage hole. The inner surface of the pots along with top 3" of outer rim was lined with acid washed polythene provided with a central hole superimposed on the drainage hole of the pot. Normal water was used during culture work. All the plants were raised in the soil, 1.5 cm deep holes were made with glass rod of 3mm diameter and seeds were put in these holes, carefully, covered loosely with soil of the same pot. After the seeds emergence, plants were thinned to a uniform number in each pot. Subsequent thinning was done whenever needed.

For the experiment, there were six pots. The pots were arranged in 3 blocks A, B and C. In each block there were two pots, one pot was meant for control treatment and other one with BGA treatment. In each block the treatments were completely randomized. The experimental pots were arranged in north-south direction and were kept raised from the ground at a height of one foot avoiding any surface contact of the drainage holes with the ground to eliminate any contamination.

For studies, the Paddy (*Oryza sativa*, L. var. SAKET) plants were raised in soil pot culture. Soil samples were collected in a clean polythene bags after surface scrapping and brought to the laboratory. Calculated amounts of normal water were applied daily to pots to provide as far as possible uniform soil moisture conditions. Sampling was generally started at 8:30 A.M. and completed in an hour. All samples were drawn at the same time and placed in the shade. The 3 blocks a, b and c was sampled at the same time.

Soil was separately mixed with required amount of blue green algae. There after it was air dried thoroughly grounded and mixed. For through mixing required amount of BGA were mixed with small amounts of soil, divided and mixed again and again. Then these amended soils were mixed with bigger amounts of soil similarly, and finally these soils were mixed with bigger lots of calculated soils required for experiments. Soil mixing was done on separate clean chart to avoid any contaminations. Mixed soils were filled in pots.

Manganese was determined by 'tetrabase' (PP-tetra-ethyl-diamino-diphenyl-methane) method described by Nicholas and Fischer (1950). The colour measurement was made immediately in Elico CL-20A photo-electric calorimeter using green filter.

RESULT- The increase in manganese content was found to be, highly significant ($P=0.01$) at 100 g bga/kg soil over 50g bga/kg soil and 200 g bga/kg soil over 150 g bga/kg soil in tops of 30 days old plants and in grains, at 150 g bga/kg soil over 100 g bga/kg soil in tops of 30 days and in grains, and at 250 g bga/kg soil over 200 g bga/kg soil in grains, significant ($P=0.05$) at 150 g bga/kg soil over 100 g bga/kg soil in tops of 90 days old plants.

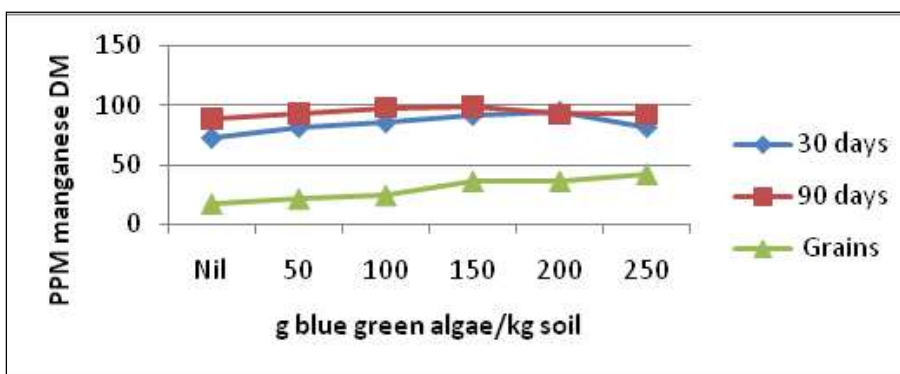
The decrease in manganese content was found to be highly significant ($P=0.01$) at 250 g bga/kg soil over 200g bga/kg soil in tops of 30 days and 200 g bga/kg soil over 150g bga/kg soil in tops of 90 days old plants.

Maximum tissue manganese was observed at 200g bga/kg soil level on tops of 30 days, at 150g bga/kg soil level in tops of 90 days, and at 250g bga/kg soil level in grains of paddy plants.

Effect of the blue green algae as biofertilizers on manganese content of Paddy (Oryza sativa, L.var. SAKET) plants

Plant		g blue green algae/kg soil					
Age (days)	Part	Nil	50	100	150	200	250
PPM manganese DM							
30	Tops	72	81	85	91	94	81
90	Tops	88	93	98	99	92	92
120	Grains	17	21	24	36	39	42

Effect of blue green algae as biofertilizers on manganese content of Paddy (Oryza sativa, L.var. SAKET) plants



Discussion- Blue green algae dominate a wide range of diverse environments characterized by extremes of temperature, desiccation, pH salinity, light intensity and nutrients (Whitton, 2000). Many blue algae tolerate high levels of ultraviolet irradiation (Sinha et al, 1999), permitting them to survive at the soil surface.

In conformity with the results of the present study, Rai et. al., (2000) reported that blue green algae are good colonizers of the nitrogen poor soils, and that through their nitrogen input into the environment they may help to create habitats suitable for other species. Many blue green algae have the capacity to manufacture nitrogenase. Because the enzyme complex is anaerobic, significant fixation by unicellular, colonial and some filamentous species occurs only in the absence of air. Therefore, only heterocystous species are valuable as biofertilizers. Blue green algae i.e. biofertilizers have several advantages over chemical fertilizers. They are non-polluting, inexpensive, utilize renewable resources. In addition to their ability of using free available solar energy, atmospheric nitrogen and water. Besides supplying N₂ to crops, they also supply other nutrients such as vitamins and growth substances (Wagner, 1997). Anabaena and Nostoc have been recorded among the common nitrogen fixing blue green algae in ricefields.

In 1977 Verghese stated that the demand for chemically fixed nitrogen is bound to be on increase and the nitrogen gap is likely to double in India by 1984, which would be difficult to bridge in the wake of the energy crisis. The use of blue green algae as nitrogen based biofertilizers is reported in many rice growing countries of the world. This was because of the increased cost of chemical fertilizers, that cause soil and water pollution, changes soil structure and produce microflora. In comparison, blue green algae is a cheap source of N, which does not cause pollution. It improves the organic matter status and water holding capacity. Venkataraman (1981) reported that open air soil culture is simple, less expensive and easily adaptable by farmers. As mentioned earlier, blue green algae had minimum growth requirements of sunlight, simple inorganic nutrients and moisture.

In agreement with the present results were the findings of Jacq and Roger (1977), Roger and Kulasooriya (1980) and Omar (2001) who reported blue green algal cultures or extracts enhanced germination, promoted growth of roots and shoots and increased protein content of the grain. The effect of nitrogen fixing blue green algae that were isolated from saline soils on growth and yield of rice grown in the green house and field were studied by Anonda et al. (1990). Under green house conditions, the N₂ content in straw, grain yield and protein content of rice were significantly increased.

The current study was preformed to assess the effect of nitrogen fixing blue green algae to improve the natural poor sandy soil. The data presented revealed the beneficial use of blue green algae in comparison with the controlled (untreated soil) without any consideration to other treatments employed in this study. The aim of the present study was to design a soil system supported with microalgae and other soil conditioners that change the physical and chemical properties of that system in order to improve the surrounding environment of crop plants. It is evident from the present results that the inoculation of the different microalgal species to the investigated soil caused a significant enhancement of both physical and chemical properties of soil.

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