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1. Causes of Corruption

Mr. Deepak Narayanrao Kolhe
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Abstract

Corruption is a serious crime against the humanity, nation and ultimately against the entire civil society. Corruption is dishonesty and illegal behavior of public servants in positions of authority or power. It exists where there is community indifferences or a lack of enforcement policies.Corruption in the legal context said as a wrongful design to acquire, because some pecuniary or other advantage.Corruption in India is the connection between politicians, bureaucrats and criminals. Today, corruption has become something, respectable in India, because respectable people are involved in it.

The Researcher in this paper has made an attempt to study of causes of corruption .The prevention of corruption act, 1988 provides for prevention of corruption and for matters connected therewith.

Keywords - Corruption, Social, Economical, Administrative.

Objectives -The objective of this paper is to study the concept of causes of corruption and the law of prevention of corruption act.

Research Methodology

The research methodology of this research paper is doctrinal.the study of this topic has been ranging from researching books, case laws, articles and commentaries on corruption.

Literature Review

The researcher has referred the following books, articlesfor preliminary understanding of the subject matter

1. Sures kolhi, corruption in India.
2. Bishambha, N.Lal v/s State of Punjab ----AIR 1966 Punj.17.
3. Bryan Garners.Black's Law Dictionary.
4. Clifford walishs The Dictionary of English Law.
5. Mukherjee and Sing, K.K. Law Lexicon.

6. Corruption in Indian Deomocracy, drmangalasabdra.
7. Crime and corruption in India, j.v.vij.
8. Corruption at the grassroots the shades and shadows Narayanasamy,above this books discuss about corruption and causes

Introduction

Corruption is dishonest action which destroys trust of peoples. It mainly focus on the moral understanding .Corruption is an illegal action undertaken by government officials. Selfishness and the greed is the root of it. Corruption increases when the control on public administration is weak and division of power between political execution and bureaucracy is ambiguous

Corruption is a social, legal, economic and political concept enmeshed in ambiguity and consequently encouraging controversy. Various approaches for corruptions are public-interest-centered, market-centered, public-office-centered, and legalistic. Proponents of the public-interest-centered approach considered that corruption is in some way injurious or destructive of public interest[1].

Meaning and Concept of Corruption

The term of corruption means "ill - practices done by people to fulfill their selfish goal." Corruption is an offence of criminal misconduct by a public servant in the discharge of his duty in corrupt or illegal means by abusing his position as a public servant only with intention to obtain

Any valuable thing or pecuniary advantage for him or for any other person. Corruption is major obstaclein the process of economic development countries.[2]

Corruption has been conspicuous obstacle in the developed as well as developing nations of the humanity which deters the progress and prosperity of the people and depreciates the welfare of the public, making it Immoral and unscrupulous

Definition of "Corruption

The meaning of the 'Corruption' is absence of integrity or honesty. Unscrupulous, unethical,untrustworthy. Corruption is benefit to both giver and receivers due to solereason peoples are frustrated with everyday corruption; hence it is very difficult to prove."Corruption" is an offence committed with mutual lunderstanding and carried out under secrecy between the parties.

According to Black's Law dictionary, corruption is depravity, perversion or taint; an damage of integrity, virtue or moral principle; especially the impairment of a public officials duties by bribery."[3]

The Dictionary of English Law define bribe to mean "a gift to any person in office or holding a position of trust with the object of inducing him to disregard his official duty or betray his trust for the benefit of the giver."[4]

According to Law lexicon A public servant said to commit an offence of criminal misconduct in the discharge of his duty if he by corrupt or illegal means or by otherwise abusing his position as a public servant obtains for himself or for any other person any valuable thing or pecuniary advantage.[5]

Factors Responsible for Corruption

There are various factors responsible for corruption. E.g. nature of the human being, moral and spiritual values are not given in educational system, the salary paid to employees is very less and as a result of which they are forced to earn money by illegal ways, the punishments imposed on the criminals are inadequate. The political leaders may damage the society completely.

Causes of Corruption

Causes of corruption may vary from place to place, situation to situation, and society to society. The following are some of the causes of corruption.

1. Administrative Causes

Discretionary Power

Many government officers abuse the discretionary power. they use the discretionary power in their hands to act in favor of the person who will pay them.

Red-Tapism

Red Tapism means strict adherence to official formalities .it refers to excessive regulation or rigid conformity to formal rules .corruption has also increased due to redtapism**.**

Post-Retirement Benefits

When the salaries of government servants are not enough and there is hardly anything left to save for life after retirement, there is possibility of government servants to decent expectations like a strong temptation among the government officials to grant illegal favors to corrupt politicians and bureaucrats in lieu of re-employment after retirement. Corruption is caused as well as increased because of the change in the value system and ethical qualities of men who administer .old ideas of morality, service and honesty are regarded as anachronistic.[6]

2. Social Cause

Nepotism

Nepotism is a natural thing with most of the people and a person in an office feels that he should earn enough not only for himself and perhaps seven generations which is the basic motive behind the enormous accumulation of wealth by the corruption in our country today. Nepotism is the unfair use of power in order to get jobs or other benefits for family or friends.

Illiteracy

In India like in many other developing countries, the permissive attitude of the society, low rate of literacy and the low level of citizen's awareness promote corruption.

Social change - Evil Social Practices

Evil social practices such as dowry system also promote corruption. Many officers also do corruption to spend a lot of money on their daughters marriage and pay dowery.

Modernization

In modernization every person is corrupt to get high standard of living and high quality service facilities.

Urbanization

Less facilities like transportation, education and access to all basic requirements in rural areas made the people to migrate to urban areas where the cost of living is high which may lead to corruption.

Costly Education System

It is a great incentive for self-financing colleges who charge a lot of donation fee and most of it is collected in black. Corruption in the education system is another social factor contributing to corruption in system.

Lower Expected Punishment

Corruption rapidly spreads when bribes are large and probabilities of being caught are small. And even penalties and punishments are negligible for both givers and takers. A contributory factor to growth of corruption in India is that the cases relations to corruption are often handled in a casual and and clumsy manner.[7]

Lack of Morality and Ethics

The most significant factor promoting a culture of corruption is the discerning erosion of moral and ethical values in public life as a consequence of growing material.

3. Psychological Cause

Some people have the mentality to commit corruption. Corruption is committed only by the people. Hence it has close link and depend on the psychology of that person who administer. Corruption is antisocial activity which is depend on the psychology of public servants.

4. Economical Cause

- Many employees commit corruption because of low salary . many government employees do not get their salary from the government on time ,so they resort to corruption to meet their household financial needs.
- Economic inequality provides a background for corruption and it may leads to further inequalities.
- **Poverty and Corruption:**The corrupt activities of many public officials and private business people contribute significantly to the perpetuation of poverty and the continuation of the under development of nations.[8]

5. Political Cause

Political corruption is also known as ‘kleptocracy’, which literally means ‘Rule by thieves’. Corruption in Indian Politics is a major problem. There is a virtual crisis of leadership in India .A leader, head and shoulders taller than his contemporaries in fighting out corruption ,like Mahatma Gandhi or Jaya Prakash Narayan ,is yet to be found .leaders are not on a moral pedestal to fight against tendentious phenomenon of corruption, since they themselves are corrupt.[9]

Political leaders give money to voters to win elections , steal ballot boxes ,take over polling center .political leaders eat money from government schemes by colluding with officers.

The main reason of corruption is weakening the political body and damaging the supreme importance of the law governing the society. Political corruption ‘is the abuse of power by political leader for its private gain’ and is the mother of all kind of Corruption. Politicians are most corrupt and play very important role in promoting criminal misconduct.

6. Religious Cause

Religious institution is one of the biggest sources or cause of acorruption in India which are playing with sentiments of the people. Our government has also given special treatment to this religious institution and it becomes a mode of converting black money into white money.

7. Legal Cause

Our judicial system is also failed to maintain integrity and independency of criminal justice of prevention of corruption "judges should maintain dignity of their business "Our Indian criminal justice system is based on three important pillars [police, judiciary, prison]these are inter connected and depend on each other. Structural engineering state that if one of the pillar damage or become in efficient then everyone knows its consequences. "Justice Delay is justice denied" in short justice must be served without undue delay or text long time to decide the cases only with object to preserve rights of fair trial of accused person.

Effect of Corruption

- It hurts everyone.
- Corrupted People Degrades Self and Society.
- Corruption Widening the Rich-Poor Gap.
- It impacts on economic growth
- Also have effect on political system, administrative system

Prevention of Corruption Act, 1988

As per prevention of corruption act, section 7 covers the offence of public servant taking gratification other than legal remuneration in respect of official act .This accused shall be punished not less than 3 years which may extend to 7 years punishment, section 9 deal with offence relating to bribing a public servant by a commercial organization, and section 12 deal with punishment for abetment of offence, section 13 deal with criminal misconduct by a public servant, section 14 is for punishment for habitual offender, section 15 for punishment for attempt. The prevention of corruption act is law that works to reduce the incidence of corruption. But still corruption is not reducing. Laws will not solve the problem.it should be properly implemented and criminals should be punished.

Observation /Finding

Peoples are responsible for corruption .Mental condition of people; economical, psychological, political factors are responsible for corruption.

Conclusion

As discussed ,there are number of causes of corruption .In the simple manner, it may be defined corruption or misuse of public position or power for the fulfillment of selfish motive or to gain personal gratification ,the most common causes of corruption are administrative causes, social causes, economical causes, political causes to create corruption.

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2. Application of Fixed Point Theorem to Nonlinear Integral Equations

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Abstract

Nonlinear integral equations have been a topic of great interest among the mathematicians working in the field of non linear analysis since long time. Krasnoselskii [5] and references given therein. Nonlinear functional integral equations have also been discussed in the literature.

e.g. Subrahmanyam and Sundersanam, Ntouyas and Tsamtos and Dhage and Regan etc.

Introduction

In the present paper, we study a nonlinear functional integral equation of mixed type for the existence result. In particular given a closed and bounded integral J = [0,1] in R, the set of all real numbers, we discuss the following nonlinear functional integral equation (in short FIE)

$$x(t) = q(t) + \int_0^{\mu(t)} k(t,s) f\big(s, x(\theta(s))\big) ds + \int_0^{\sigma(t)} v(t,s) g\big(s, x(\eta(s))\big) ds \qquad (1.1)$$

For $t \in J$. here $q : J \longrightarrow R$, $k, v : J \times J \longrightarrow R$, $f, g : J \times R \longrightarrow R$ and $\mu, \theta, \sigma, \eta : J \times J \longrightarrow J$.

The FIE (1.1) is general in the sense that it includes the well-known Voltera and Hannerstein integral equations as special cases which have been extensively studied in the literature for various aspects of the solution. The existence for the FIE (1.1) is generally proved by using a fixed point theorem of Krasnoselskii [5], but here in the present paper we obtain the existence result via the following nonlinear alternative recently developed by Dhage and Regan [2]. See also Dhage [1].

Theorem 1.1

Let B(0,r) and B[0,r] denote respectively the open and closed balls in a Banach space X and let A, B : X ⟶ X be two operators satisfying

a. A is contraction, and
b. B is completely continuous Then either

i. The operator equation Ax + Bx = x has a solution in B[0,r], or

ii. There exists an element $u \in X$ with $||u|| = r$ such that

$$\lambda A\left(\frac{u}{\lambda}\right) + \lambda Bu = u$$

For some $\lambda \in (0,1)$.

1.1 Main Result

Let M(J,R) and B(J,R) respectively denote the spaces of measurable and bounded real-valued functions on J. we shall seek the solution of the FIE (1.1) in the space Bm(J,R) of all bounded and measurable real valued functions on J define a norm ‖.‖ in BM(J,R) by

$$\|x\| \max_{t \in J} |x(t)|$$

Clearly BM(J,R) becomes a Banach space with this norm. We need the following definition in the sequel.

Definition 1.1

A mapping $\beta : J \times R \longrightarrow R$ is said to satisfy Caratheodory condition or simply is called Caratheodory if

i. $t \longrightarrow \beta(t,x)$ is measurable for each $x \in R$.

ii. $x \longrightarrow \beta(t,x)$ is continuous almost everywhere for $t \in J$, and

iii. for each real number $r > 0$, there exists a function

$h_r \in L^1(J, R)$

such that

$$|\beta(t,x)| \le h_r(t), \quad a.c. \ t \in J$$

For all $x \in R$ with $|x| \le r$.

We consider the following hypothesis in the sequel.

(H_0) The functions $\mu, \theta, \sigma, \eta : J \longrightarrow J$ are continuous.

(H_1) The function $q : J \longrightarrow R$ is bounded and measurable.

(H_2) The functions $k, v : J \times J \longrightarrow R$ are continuous.

(H_3) There exists a function $\alpha \in L^1(J, R)$ such that $\alpha(t) > 0$, a.e. $t \in J$ and

$$|f(t,x) - f(t,y)| \le \alpha(t)|x - y|, \quad a.e. \quad t \in J$$

For all $x, y \in R$.

(H_4) The function g(t,x) is L^1-Caratheodory.

(H_4) There exists a non-decreasing function $\psi : [0,\infty] \longrightarrow [0,\infty]$ and a function $\phi \in L^1(J,R)$ such that $\phi(t) > 0$, a.e. $t \in J$ and

$$\left|g(t,x)\right| \leq \phi(t)\psi(|x|), \quad a.e. \quad t \in J$$

For all $x \in R$.

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3. Awareness and Perception of Women in Amravati District Regarding Female Foeticide Issues

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Abstract

The present study was aimed to assess the awareness & perception regarding female foeticide among women in Amravati district, Maharashtra. The design of study is cross-sectional which is set in 14 talukas of Amravati District, Maharashtra. 40 women (age between 25 and 45 year) are selected as subject from each taluka hence total 560 subjects are selected for getting responses. The subjects were selected by simple random method. A pre-designed and pre-tested questionnaire was used as study instrument for collecting information. Result of analysis showed that significantly high percentage of women absolutely know the meaning of female foeticide, diagnosing prenatal pregnancy is a punishable offense and he Prevention of Female Feticide Act protects a pregnant woman. Furthermore, noticeably high of women have information that in India, the number of girls is less than the number of boys; in our country even today there are cases of female feticide; the incidence of female feticide is on the rise in India; ultrasound technology is used for abortion; the consequences of abortion are devastating and PCPNDT and MTP are laws to prevent female feticide. It is concluded that women in Amravati district are well aware of issues regarding female foeticide. However, there is lack of awareness among women regarding legal aspects of female foeticide.

Key Words: Female Foeticide, Awareness, Amravati.

1. **Introduction**

India is a secular, democratic and a republic country with population of 1.2 billion1. It has made tremendous advancements in scientific, social and economic fields, yet certain social evils like female feticide continues

The preference for a male child and discrimination against the female child are causing the rapid disappearance of female children in India. 35 million females were found to be missing according to the census of 2001, which was 32 million during 1991. As per the census of 2011, the child sex ratio of India has declined from 927 to 914 females per 1000 males, which is the lowest since the country's independence. Female foetuses are selectively being aborted after pre-natal sex determination, thus denying a girl's 'RIGHT TO LIFE' (Metri et al., 2011).

This is only the tip of the demographic and social problems confronting India in the coming years. By considering these issues, government of India has tried to stop this crime, introducing the law of Pre-conception and prenatal Diagnostic Techniques (PCPNDT) Act to prevent sex-selective abortion in 1994 (Onkar and Mitra, 2012). As per the census of 2011, the child sex ratio of India has declined from 927 to 914 females per 1000 males, which is the lowest since the country's independence (Park, 2017).

About 5.7 lakh females go missing every year due to practice of female feticide. Many laws have been implemented to bring a hold on female feticide. Some of them are MTP Act 1991, PNDT 1994 (Regulation and prevention of Misuse) Act, PCPNDT (Prohibition of sex selection) Act 2003. Despite such efforts, numerous clinical ultrasounds and abortions still continue to happen.With this background, the present study was aimed to assess the awareness & perception regarding female foeticide among women in Amravati district, Maharashtra.

2. Review of Literature

Chaudhary et al., (2010) found that the school students had optimum level of awareness about female feticide and almost all of them strongly felt that this harmful practice should be stopped altogether. Manhas et al., (2011) investigated the perception of Anganwadi workers regarding female foeticide they found that majority of the respondents were aware of the prevalence of gender discrimination. They were also aware about the declining sex ratio and repercussions of missing girls. They were not aware about guidelines and legal aspects regarding PNDT. Manhas and Banoo (2013) study the perception and beliefs regarding female foeticide among Muslim community of Jammu. It was found that majority of the parents were aware of the sex determination methods and considered it a right and safe method for having a son. The reason behind this belief was stated to be economic liability, lack of safety and fear of family honor and it was also revealed that major cause of female foeticide in this community was son preference. Shrivastava et al., (2013) observed that female foeticide is still in practice inspite of awareness programmes and existing law. Main reason for it is societal need due to marriage related customs and cultures along with unethical practices by service providers. To increase in self-esteem of women can only reduce the volume of service receiver along with upliftment of moral and ethical values of service providers from the beginning of their medical training can prevent it to happen.

Chaudhary (2014) pointed out that females perceived that male child is more preferred in society. Moreover, majority of subjects have the view that female feticide has harmful impact on the society and should be stopped. The suggestion given by subjects to curb this evil practice included enforcement of strict laws, punishment to people and doctor involved and creating awareness regarding the issue. Nitin Kumar et al., (2014) that higher proportion of participants knew about the prenatal sex determination and it was a punishable offence, still majority of them preferred to know the sex of unborn child which shows the need to implement the act effectively.

3. Methodology

The design of study is cross-sectional which is set in 14 talukas of Amravati District, Maharashtra. 40 women (age between 25 and 45 year) are selected as subject from each taluka hence total 560 subjects are selected for getting responses. The subjects were selected by simple random method. A pre-designed and pre-tested questionnaire was used as study instrument for collecting information. The data was collected by following face to face interview method. The data was compiled on Windows Excel Spreadsheet and analysed using SPSS version 23. The non-parametric chi square test was employed for finding differences among variables. The significant level was kept 0.05 for this study

4. Results

Table 1: Awareness of Women Regarding Female Foeticide Related Issues

Statements Regarding Awareness	1	2	3	4	5	Total	Chi Square	df	P
I know the meaning of female feticide.	232	210	61	25	32	560	362.268	4	<0.05
	(41.4)	(37.5)	(10.9)	(4.5)	(5.7)	(100)			
In India, the number of girls is less than the number of boys.	151	222	119	38	30	560	230.982	4	<0.05
	(27.0)	(39.6)	(21.3)	(6.8)	(5.4)	100			
In our country even today there are cases of female feticide.	158	245	77	43	37	560	280.5	4	<0.05
	(28.2)	(43.8)	(13.8)	(7.7)	(6.6)	(100)			
The incidence of female feticide is on the rise in India.	115	275	85	62	23	560	336.857	4	<0.05
	(20.5)	(49.1)	(15.2)	(11.1)	(4.1)	(100)			
Ultrasound technology is used for	145	194	77	39	105	560	128.714	4	<0

abortion.	(25.9)	(34.6)	(13.8)	(7.0)	(18.8)	(100)			.05
The consequences of abortion are devastating.	178	238	77	42	25	560	302.911	4	<0.05
	(31.8)	(42.5)	(13.8)	(7.5)	(4.5)	(100)			
It is a crime to diagnose prenatal pregnancy.	265	196	39	31	29	560	439.679	4	<0.05
	(47.3)	(35.0)	(7.0)	(5.5)	(5.2)	(100)			
Diagnosing prenatal pregnancy is a punishable offense.	278	169	56	33	24	560	427.911	4	<0.05
	(49.6)	(30.2)	(10.0)	(5.9)	(4.3)	(100)			
The Prevention of Female Feticide Act protects a pregnant woman.	186	169	78	69	58	560	130.768	4	<0.05
	(33.2)	(30.2)	(13.9)	(12.3)	(10.4)	(100)			
PCPNDT and MTP are laws to prevent female feticide.	98	156	110	67	129	560	39.732	4	<0.05
	(17.5)	(27.9)	(19.6)	(12.0)	(23.0)	(100)			
The PCPNDT (Pre-Conception and Pre-Natal Diagnostic Techniques) Act provides for stern action against doctors who diagnose genital mutilation as well as parents who neglect newborns female.	98	194	131	61	76	560	99.804	4	<0.05
	(17.5)	(34.6)	(23.4)	(10.9)	(13.6)	(100)			

1- Absolutely Know; 2- Has Information; 3- Little is Known; 4- Not Enough Information; 5-No Information at all; Chi Square- Chi Square Value; df- Degrees of Freedom; P- P value

(Values in the parenthesis are percentage)

Above Table 1 illustrate information pertaining to awareness of women in Amravati District about female foeticide issue. It is apparent from the information that significantly high percentage (41.4%) (Chi Square – 362.268; df- 4; P <0.05) of women absolutely know the meaning of female foeticide and 37.5% women at least have information regarding female foeticide. Furthermore, significantly high percentage (39.6%) (Chi Square – 230.982; df- 4; P <0.05) of women have information that in India, the number of girls is less than the number of boys and 27.0% women absolutely know regarding this. In addition to this, noticeably high percentage (43.8%) (Chi Square – 280.5; df- 4; P <0.05) of women have information that in our country even today there are cases of female feticide and 28.2% women absolutely know regarding this. Moreover, considerably high percentage (49.1%) (Chi Square – 336.857; df- 4; P <0.05) of women have information that the incidence of female feticide is on the rise in India and 20.5% women absolutely know regarding this. Substantially high percentage (34.6%) (Chi Square – 128.714; df- 4; P <0.05) of women have information that ultrasound technology is used for abortion and 25.9% women absolutely know regarding this. Significantly high percentage (42.5%) (Chi Square – 302.911; df- 4; $P < 0.05$) of women have information that the consequences of abortion are devastating and 31.8% women absolutely know regarding this. Noticeably high percentage (47.3%) (Chi Square – 439.679; df- 4; $P < 0.05$) of women absolutely know that it is a crime to diagnose prenatal pregnancy and 35.0% women have information regarding this. Remarkably high percentage (49.6%) (Chi Square – 427.911; df- 4; $P < 0.05$) of women absolutely know that diagnosing prenatal pregnancy is a punishable offense and 30.2% women have information regarding this. Considerably high percentage (33.2%) (Chi Square – 130.768; df- 4; $P < 0.05$) of women absolutely know that the Prevention of Female Feticide Act protects a pregnant woman and 30.2% women have information regarding this. Substantially more percentage (27.9%) (Chi Square – 39.732; df- 4; $P < 0.05$) of women have information that PCPNDT and MTP are laws to prevent female feticide and 17.5% women absolutely know regarding this. Moreover, noticeably high percentage (34.6%) (Chi Square – 99.804; df- 4; $P < 0.05$) of women have information that the PCPNDT (Pre-Conception and Pre-Natal Diagnostic Techniques) Act provides for stern action against doctors who diagnose genital mutilation as well as parents who neglect newborns female and 17.5% women absolutely know regarding this.

5. Conclusion

Custom of female feticide exists in all types of social order. It cannot be regarded as a problem of particular social status but a problem in the reasoning. Even with a Literacy rate of 74.04% in India (Census of India, 2011) it is still sad that people aren't able to recognize the impacts that female feticide leave on the society. Declining sex ratio will also cause increase in crimes such as rape and abuse against women. It is necessary to maintain the sex ratio for a balanced healthy society. Since 2001 to 2011, the sex ratio has not improved a lot from 933 to 940 (Census 2001, 2011). But yet the child sex ratio (between 0-6yrs) has declined 927 to 914 over past 10 years ((Census 2001, 2011).

Many laws have been implemented to bring a hold on female foeticide Some of them are MTP Act 1991, PNDT 1994 (Regulation and prevention of Misuse) Act, PCPNDT (Prohibition of sex selection) Act 2003 (Majumdar, 2012). Despite such efforts, numerous clinical ultrasounds and abortions still continue to happen. The need of the hour is to stress upon other avenues or alternatives that can strengthen the law and can bring about the desired social change.

One such alternative to increase the awareness in the community about female foeticide, so that people can identify it as a social problem and can further try to limit it.

In this study it is concluded that women in Amravati district are well aware of issues regarding female foeticide. However, there is lack of awareness among women regarding legal aspects of female foeticide. Hence it is suggested to grow awareness among women in Amravati District regarding issues of female foeticide particularly on the legal issues regarding female foeticide.

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4. Treatment of Bhakti Rasa in the Light of Rasadirghika

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Introduction

Bhakti Rasa refers to the sweet taste savored when the body mind and soul of Bhakta is engaged in transcendental or devotional service of the lord. Bhakti Rasa refers to the different states of ecstasy which is a Bhakta experiences in his height of devotion to the lord. In Bhakti Rasa, the Bhakta's ego is merged with the soul, thus he enjoys the eternal, indivisible, supreme transcendental bliss of the divine. The self or Atman reveals itself to the devotee.

It is proposed to discuss and analyse Bhakti-rasa in the text tradition of Sanskrit poetics. At the outset it must be made clear that this is not the first attempt to present and analyse on Bhakti-rasa. There are at least three prominent authorities who have
reflected on Bhakti-rasa.

1. S.K. De in an article as early as 1932 has discussed on Bhakti-rasa in the light of RÚpagoswÁmi's celebrated works BhaktirasÁmªtasindhu and UjjvalanÍlamaÆi. celebrated works BhaktirasÁmªtasindhu and UjjvalanÍlamaÆi.
2. V. Raghvan in his work, Number of Rasas has reflected on Bhaktirasa in the light of the two texts already stated before and on BhagavatbhaktirasÁyana of Madhusudanasarasvati.
3. In the recent years ÏrÍkarapÁtrasvÁmin has composed a full text called Bhaktirasarnava, to re-established Bhakti-rasa in the light of RÚpagosvÁmi and MadhusudanasarasvatÍ. The present paper is a reappraisal of the earlier writings with the additional inclusion of VidyÁrÁma's treatment of Bhakti-rasa in the text of RasadÍrghikÁ. The paper is divided under following heads:
   A. Concept of Bhakti.
   B. Establishment of Bhakti as a Rasa.
   C. Definition of Bhakti Rasa in RasadirghÍkÁ.

Concept of Bhakti

In this context let us see some of the definitions on Bhakti

NÁrada: परमप्रेमरूपा अमृतस्वरूपा च (NÁ.Bha.SÚ.2.3). Which means 'it is the intense love of God and has the nature of nectar'.

SÁÆ±ilya: सा च भक्तिः परानुरक्तिरीश्वरे (ÏÁ.Bha.SÚ.1.2). Love of god with exceeding affection is Bhakti.

VedavyÁsa: अहेतुक्यव्यवहिता या भक्तिः पुरुषोत्तमे (BhÁgavata III.29.12). Bhakti is the selfless love of the Supreme.

RÁmÁyaÆa defines attachment to the supreme, adhika mÁnya viÐeÒa½. Apart from these the definitions or the meaning of the word bhakti is defined by the ViÐiÒÔÁdvaita, RÁmÁnuja, VedÁntadeÐika, and BhÁvaprakÁÐikÁ etc. also PurÁÆas Yoga-vaÐiÒÔha, SrÍmad-BhÁgavata and so on. One of the oldest references to bhakti is found is the SvetÁsvatara UpaniÒad. BhagavatgÍtÁ declares that the follower of bhakti also becomes fit for the attainment of Brahman, as do the followers of karma and JñÁna.

Bhakti (devotion) through prayers with a sense of detachment and sacrifice has been the core philosophy of Indian wisdom. The kin urge towards the search of absolute and enduring pleasure prompts one to discard the transitory sensory happiness and cling to the sacred feet of Almighty surrendering completely, has been time and again emphasized. There are innumerable examples of this in the UpaniÒads, PurÁÆas and Stotra literature etc. They are the best examples of charming expressions often presented in the form of dialogue. In the following are given few selected verses from RambhÁ-Ïuka-Sa¿vÁda whose source can be traced to BhÁgavata-PurÁÆa.

शुक उवाच–

मार्गे मार्गे जायते साधुसङ्गः
सङ्गे सङ्गे श्रूयते कृष्णकीर्त्तिः।
कीर्त्तौ कीर्त्तौ न स्तदाकारवृत्ति–
र्वृत्तौ वृत्तौ सच्चिदानन्दभासः॥

In every street, move the saints and propagates, praise the glory of Lord KªÒÆa, and in every praise there is the transformation of soul and in every transformations is the feeling of Almighty.

तीर्थे तीर्थे निर्मलं ब्रह्मवृन्दं
वृन्दे वृन्दे तत्त्वचिन्तानुवादः।
वादे वादे जायते तत्त्वबोधो
बोधे बोधे भासते चन्द्रचूडः॥

Every holy place has the assembly of sacred seers of Brahmans, Every assembly is busy in the discussion of truth. Every discussion culminates into understanding of truth and in each understanding glorifies Lord Ïiva.

स्थाने स्थाने दृश्यते रत्नवेदी
वेद्यां वेद्यां सिद्धगन्धर्वगोष्ठी।
गोष्ठ्यां गोष्ठ्यां किन्नरद्वन्द्वगीतं
गीते गीते गीयते रामचन्द्रः॥

Everywhere is seen the alter of diamonds assembled by divine musicians engaged in musical concerts admiring the glory of Lord RÁmachandra.

शुक उवाच–

अचिन्त्यरूपो भगवन्निरञ्जनो
विश्वम्भरो ज्ञानमयश्चिदात्मा।
आराधितो येन हृदि क्षणं नो
वृथा गतं तस्य नरस्य जीवितम्॥

Waste is his life who has not worshipped that even for a moment Brahman whose form is beyond ones imagination, who is stainless, who nourishes the whole world, full of knowledge, and the supreme soul.

चतुर्भुजश्चक्रधरो गदाऽऽयुधः
पीताम्बरः कौस्तुभमालया लसन्।
ध्याने धृतो येन न बोधकाले
वृथा गतं तस्य नरस्य जीवितम्॥

Futile is his living who while waking does not remember in meditations the yellow clad adorned with Kaustubha-garland God who has four arms, who carries the wheel, whose arm is a club.

नारायणः पङ्कजलोचनः प्रभुः

केयूरवान् कुण्डलमण्डिताननः।

भक्त्या स्तुतो येन समाधितो न वा

वृथा गतं तस्य नरस्य जीवितम॥

Futile is his living who has not praised with devotion or in meditation lord NÁrÁyaÆa whose eyes are like the lotus, who is the supreme, adorned with ornaments.

विश्वम्भरो ज्ञानमयः परेशो

जगन्मयोऽनन्तगुणप्रकाशी।

आराधितो नाऽपि धृतो न योगे

वृथा गतं तस्य नरस्य जीवितम्॥

His life is of no use that has not worshiped and fixed his mind in meditation in god of gods, who is in the form of knowledge that protects the whole universe that manifests endless virtues.It is observed in these given definition's and examples that bhakti means 'The Extreme love and complete surrender to God'.

This was the concept to be discussed in the philosophical texts only. But in course of time this concept entered to the literary works and by then this concept attained the status of rasa in the text of Sanskrit Poetics in a later period. We can see the list of the various authors and determine when this concept of bhakti attained the status of rasa.

Establishment of Bhakti as a Rasa

Bhakti as a rasa is a very later development in the text of Sanskrit poetics. Bhakti movement started in the south with the popularity of SrimadbhÁgavata and reached its climax in the bhakti movement of Sri Caitanyamahaprabhu in Bengal. RÚpagoswÁmin the chief disciple of ÏrÍ CaitanyamahÁprabhu, gives an elaborate exposition of the medieval sentiment of love, sublimated into a deeply religious sentiment, by bringing erotica-religious ideas to bear upon the general theme of literary rasa, especially the erotic rasa. His two works, BhaktirasÁmªtasindhu and UjjvalanÍlamaÆi embodying what may be called the Bhaktirasa ÏÁstra, constitute a kind of Rhetoric of Bhakti, with all its psychology, conceit and imagery. For a proper understanding of this VaiÒÆava-Bhaktirasa, as expressed in its literary and religious productions, it would be necessary, therefore, to appreciate the presentation of Bhakti as a devotional sentiment. As bhakti is conceived as a rasa, it was essentially of the nature of a subjective emotion. The literary Sahªudaya, as the recipient connoisseur, was replaced by the religious Bhakta, the devotee of nice sensibility. The love of KªÒna (KªÒna-rati)was installed as the dominant feeling (SthÁyÍ-bhÁva) which, through its appropriate excitants (VibhÁvas), as well as ensuents (anubhÁvas) and auxiliary feelings (VyabhicÁrÍbhÁva), was raised to a supreme relishable condition in his susceptible mind as the bhakti rasa. But it is also true that some rhetoricians accepted it as a rasa. Here I quoted some references as given below:

रतिर्देवादिविषयाव्यभिचारीतथाञ्जितः भावः प्रोक्तः।

(KÁpra.4.35:789.1)

मुख्यरसेषु पुराः यः संक्षेपेणोदितो रहस्यत्वात्।
पृथगेव भक्तिरसराट् सविस्तरेणोच्यते मधुरः॥

(UNM.1.2:4.10-11)

वक्षमाणैर्विभावाद्यैः स्वाद्यतां मधुराऱतिः।
नीता भक्तिरसः प्रोक्तो मधुराख्यो मनीषिभिः॥

(UNM.1.3:5.27-28)

विभावाद्यैः स्वोचितैर्विभावानुभावसात्त्विकसंचारिभिः पूर्वग्रन्थ एव
दर्शितलक्षणैः कारणकार्यसहकारिभिः स्वाद्यतां नीता सती मधुरा
रतिस्तन्नामा स्थायिभावो मधुराख्यो मधुरो नाम भक्तिरसो भवेत्।

(UNM(Ànanda).1:6.5-8)

विभावैरनुभावैश्च सात्त्विकैर्व्यभिचारिभिः।
स्वाद्यत्वं हृदि भक्तानामानीता श्रवणादिभिः।
एषा कृष्णरतिः स्थायीभावो भक्तिरसो भवेत्॥

(UNM(Locana).1:6.1-3)

भगवदालम्बनस्य रोमाञ्चाश्रुपातादिभिरनुभावितस्य हर्षादिभिः परिपोषितस्य भागवतादिपुराण श्रवणसमये
भगवद्भक्तैरनुभूयमानस्य भक्ते रसस्य दुरपह्नवत्वात्। भगवदनुरागरूपा भक्तिश्चात्र स्थायिभावः।

(Rasavi.2:27.10-13)

वस्तुतस्तूभयं श्लाघ्यं यो मद्भक्त इति स्मृतेः।
मुख्या भक्तिः पुनर्जीवन्मुक्तिरेवोच्यतां बुधैः॥

(SÁhisÁ.4.135:130.5-6)

भक्तिर्हि द्विविधा मुख्याऽमुख्या च। तत्राद्यायाः आलंकारिकमते शान्तेऽन्तर्भावादन्त्यायाश्च
भावत्वात्तत्खण्डनम्, भक्तमते तु शान्तस्यैव तत्रान्तर्भावादाद्याया एव रसत्वोक्त्या

तन्मण्डनं चेत्यविरोध इति।

(SÁhisÁ.4:131.11-13)

देवादिपूज्यविषयिका च श्रद्धा भक्तिरसस्थायिभावः।

(RG.1:141.15)

तथा सैव देवादिविषया रतिर्भाव इति पारिभाषिकोऽपिभावः स्थायी सन् तत्तद्विभावादिसमवेतो भूत्वा भक्तिरस इति द्वादश रसा भवन्ति।

(Ala¿kau.5:150.10)

भक्तिं स्नेहं तथा लौल्यं केचित् त्रीन् मन्वतेरसान्।
श्रद्धार्द्रताभिलाषांश्च स्थायिनस्तु ते विदुः॥
तदसत् रतिभेदौ हि भक्तिस्नेहौ नृगोचरौ।
व्यभिचारित्वमनयोः नृनार्योः स्थायिनौ तु तौ॥

(SR.7.1530-1531:839.17)

स्नेहो भक्तिर्वात्सल्यमिति हि रतिरेवविशेषाः। तुल्ययोः या परस्परं रतिः सस्नेहः।
अनुत्तमस्य उत्तमेरतिः प्रसक्तिः, सैवभक्तिपदवाच्या।

(KÁvyÁnu(He) 2:81.22)

सर्वोपासनमार्गीयसम्प्रदायानुरोधतः।
भक्त्याह्वयो रसश्चाथ दशमः परिकीर्तितः॥

(RasadÍ.4.1.40)

द्रुतस्य भगवद्धर्माद्धारावगाहिकतां गता।
सर्वेश मनसो वृत्तिर्भक्तिरित्यभिधीयते॥

(BRS.1.3:30.5-6)

Bhakti is related to deva (God). Here cittaraÉjanakatÁ is the ratibhava and that is the sthÁyibhÁva. ÏrÍkªÒÆa is the Àla¿banavibhÁva, his exceptional deeds are the UddÍpanavibhÁvasandhª dayadravÁdi etc. are the AnubhÁvas and Nirveda, Dainya etc. are the VyabhicÁrÍbhÁvas. Of course all the rasas are in him still he is treated as the God of ÏªngÁrarasa and as the colour of this ÏªngÁrarasa is like the cloud so is you God you are the erotic incarnate. Here rati is the SthÁyÍ and UbhayaniÒÔha. The beauty/loveliness (lÁvaÆya) etc. and the secluded place are the UddÍpanaVibhÁvas. Touching the hands etc. are the AnubhÁvas and Ïrama, JadatÁ etc. are the VyabhicÁrÍbhÁvas.

Treatment of Bhaktirasa in RasadirghikÁ

The text RasadÍrghikÁ was written by ÏrÍ VidyÁrÁma, Ed. By GopalnarayanaBahura, published from Rajasthan Oriental Research Institute, Jodhpur, in 1959. He has given details of his birth etc. The author specially devotes one separate chapter, that is the fourth chapter, (CaturthasopÁna) to discuss on bhakti rasa and this is the 10th rasa for him.

सर्वोपासनमार्गीयसम्प्रदायानुरोधतः।

भक्त्याह्वयो रसश्चाथ दशमः परिकीर्तितः॥

(RasadÍ.4.1:40)

Here he puts the oppositions view that why to accept Bhakti as a separate rasa, why not to included this under ÏÁnta rasa? To him it is not so because, the SthÁyÍbhÁva of the ÏÁnta rasa is Nirveda (detachment) i.e. the complete indifference to the worldly objects i.e. Nirveda produced by the TattvajñÁna (spiritual knowledge) can develop into ÏÁnta rasa.

विषयाध्यासमुन्मुच्य दृढप्रेमा य ईश्वरे।

स भाव इति विज्ञेयः पूर्णो भक्तिरसस्तु सः॥

(RasadÍ.4.1:41)

It means, one who is away from the worldly pleasure (ViÒaya) sensed by the sense organs and having extreme love, extreme attachment, complete surrender in ÌÐvara that BhÁva is the Bhaktirasa. To quote :

रतिर्देवादिविषया भाव इत्यत्र देवादिसाधारणपदप्रयोगात् स भावोऽपि साधारणः स भक्तेः स्थायिभावो न भवति तत्र विषयाध्यासनिवृत्तेरभावात्। अतो विषयाध्यासनिवृत्तिपूर्वकं निजेश्वरे दृढप्रेमाख्योऽसाधारणो भाव एव भक्तेः स्थायिभावो न साधारणः। (RasadÍ.4:41.7-9)

So extreme love is the sthÁyÍbhÁva of the bhakti rasa. That to that Prema is viÒayÁdhyÁsanivªtti, i.e. devoid of being occupied by any worldly objects. He further states.

तदेकताननतात्पर्थं स प्रेमा परिकीर्तितः।

भक्तिर्वा सेन्द्रियस्यैकतानता मनसः प्रभौ॥

(RasadÍ.4.2:41)

SthÁyÍbhÁva of Bhaktirasa

Attention fixed or concentrate on his only and all the sense organs are fixed on him is the dª±ha Prema on ÌÐvara and that is the SthÁyÍbhÁva of Bhaktirasa.

विषयाध्यासमुन्मुच्य दृढप्रेमा य ईश्वरे।

स भाव इति विज्ञेयः पूर्णो भक्तिरसस्तु सः॥

(RasadÍ.4.1:41)

VibhÁva of Bhaktirasa

PÚrvapuÆyccaya i.e. the collection of righteous deeds, relation/ staying near a SÁdhu, i.e. righteous/ pious person/soul, visiting many holy places, reading the ÏÁstras are the VibhÁvas of theBhaktirasa.

पूर्वपुण्योच्चयः साधोः सङ्गतिस्तीर्थसेवनम्।
सच्छास्त्राभ्यसनं चास्य विभावः परिकीर्तितः॥

(RasadÍ.4.4:41)

AnubhÁvas of Bhaktirasa

The AnubhÁvas of the Bhaktirasa are the strong full faith on own iÒÔadevatÁ (beloved/ favorable God). Having ardent desire/faith at the service of the God (like giving bath), putting cloth, decorating with flowers, making the sandal paste, etc. Interest to listen the stories related to him (in purÁÆa etc.). Not to move mind for other thing except looking at him and reverential salutation, repeated practice to prepare prasÁda/naivedya for him with great love and observing all the festivals related to him according to the area and visiting the places. And for that purpose there should be the building/making of temples. Garden/grove, water reservoir etc.

Further, with out being or feeling ashamed/ leaving bashfulness in front of him, dancing, playing with musical instruments, singing (prayers), and remembering (his name) etc. in front of him are the AnubhÁvas.

अनुभावस्तु विश्वासो दृढः स्वोपास्यदैवते।
तत्कर्मकरणे श्रद्धा तत्कथायां महारुचिः॥
अनन्यचित्तताभीक्ष्णं तदीक्षणनमस्क्रिया।
प्रेम्णा संशीलनं भोगस्तन्निवेदितवस्तुनः॥
प्रतिपर्वोत्सवस्तस्य क्षेत्रयात्रानुकालतः।
तदर्थं मन्दिरारामनिपानादिविनिर्मितिः॥
नर्तनं वादनं गानमुक्त्वा लज्जां तदग्रतः।
ज्ञेया भक्तिरसस्यैतेऽनुभावाः स्मरणादयः॥

(RasadÍ.4.6-9:41)

VyabhicÁrÍbhÁvas (transitory states) of the Bhaktirasa

HarÒa (joy), Ávega (agitation), sveda (perspiration), pulaka (horripilation), premasa¿plava (submersion in divine love), stambha (stupefaction, aÐru (tears), mati (thought), and moha (loss of consciousness, fainting, swoon) are the vyabhicÁrÍbhÁvas for the bhakti rasa.

In this list of vyabhicÁrÍbhÁvas, it is seen that some of the sÁttvikabhÁvas are included here under vyabhicÁrÍbhÁvas. Those are like sveda (perspiration), stambha (stupefaction), and aÐru (tears) etc.

वर्णो भक्तेर्घनश्यामो दैवतं पुरुषोत्तमः।
भावाख्यः स्थायिभावोऽस्ति दैवो जीवोऽवलम्बनम्॥

(RasadÍ.4.3:41)

On The Basic of What we have Presented, the Following Observations can be Made

1. Majority of the authorities do not accept bhakti as a rasa. It is only after the emergence of VaiÒÆavism that bhakti was included as a rasa by RÚpagosvÁmÍ, subsequently followed by KavikarÆapura and MadhusÚdanasarasvatÍ.
2. Subsequently there is no differences in the treatment of Bhaktirasa in UjjvalanÍlamaÆi, Bhaktirasamªtasindhu, Ala¿kÁrakaustubha, BhaktirasÁrÆava and RasadÍrghikÁ, so far as the VibhÁvas, AnubhÁvas and VyabhicÁribhÁvas are concerned.
3. RÚpagosvÁmi gives few divisions of bhakti like SÁmÁnyabhakti, three divisions of Uttamabhakti, namely SÁdhanÁbhakti, BhÁvabhakti and PremÁbhakti. He states, the VaiÒÆavaÐÁstras are the hetu which are 64 in number.
4. To RÚpagosvÁmÍ KªÒÆarati is the sthÁyi which develops into Bhaktirasa. In this UjjvalanÍlamaÆi he treats Ujjvala as Madhura rasa which he declares as rasarÁja.
5. There is nothing new in the treatment of KavikarÆapura.
6. VidyÁrÁma accepts Bhakti as the tenth rasa.
7. He argues that bhakti cannot be included in ÏÁnta rasa. Because, the SthÁyibhÁva of ÏÁnta in Nirveda, which he defines as "indifferenceness towards the objects by self knowledge", (ÁtmajñÁnenaviÒayeÒuaudÁsinyam) where as BhÁva is the SthÁyibhÁva of Bhakti, which he defines as dª±haprema in God.

8. Even the varÆa, devatÁ, vibhÁvas, anubhÁvas, vyabhicÁribhÁvas are different in ĐÁnta and bhakti rasa.

९. To him the bhÁva of the bhaktirasa is not sÁdhÁraÆabhÁva. SÁdhÁraÆabhÁva is not the sthÁyibhÁva of bhakti– तत्र विषयाध्यासनिवृत्तेरभावात्. He defines bhÁvas follows: विषयाध्यास निवृत्तिपूर्वकं निजेश्वरे दृढप्रेमाख्यः असाधारणो भाव एव भक्तेः स्थायिभावः।

10. The varÆa of ĐÁnta rasa is kaÒÁya where as it is ghanaĐyÁma in case of bhakti; the devatÁ in ĐÁnta is Brahman and in bhakti it is PuruÒottama.

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5. Ethno Veterinary Plants of Darjeeling Himalaya, India

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Abstract

Livestock plays an important role in the life of most of the ethnic communities all around the world.Uses of plant in the treatment of livestockby the ethnic people of Darjeeling Himalaya have been studied. The uses of plant parts, distribution and method of application have been discussed in detail in the present paper.

Introduction

Darjeeling Himalayan region is an integral part of the Eastern Himalaya, lies between 26° 31' 05" - 27° 13' 10" N latitude and 87° 59' 30" - 88° 53' E longitude, and is the northern most district of West Bengal state. The total area covered by the district is 3254.7 sq. km of which 2329 sq.km area is occupied by the hills with an altitudinal variation between 130m to 3636m. The region was first botanically explored by D.Don in the year 1821 and 1825. Other botanists who explored the region include, Thomas Anderson (1832-70), C.B.Clarke (1876, 1885), Robert Pantling (with Sir George King1895) and Sir W.W. Smith (1909). Sir J.D. Hooker explored the region (1848 – 49) and thereby making an immense contribution to the flora of British India.After the publication of the flora of British India, a number of botanists such as A.M.Cowan and J.M.Cowan (1929), H.Hara (1966,1971), H.Kanai(1968, 1971), H.Ohashi (1975), A.P.Das (1986, 1995, 2000), A.J.C.Grierson and D.G.Long (1983-1987, 1991,1999), H.J.Noltie (1984, 2000)and N.R.Pearce and P.J. Cribb (2002) made significant contribution to the flora of this region. Bhujel (1996), Rai (2002) have also analyzed the structural vegetation in Darjeeling hills, which showed the formation of categories like tropical, semi evergreen, riverine, moist sub tropical, moist temperate, mixed broad leaved, sub alpine coniferous, Rhododendron forest and secondary grass land in different parts of the district.

Different groups of people inhabiting in this region from the time immemorial include the Nepali, Bhutia and Lepcha communities (O'Malley 1907). Most of the population of the district is concentrated in the village and far-flung areas, and depend completely on the forest resources for maintaining their day to day needs like medicine, fuel and fodder for domesticated animals. The existence of traditional knowledge on different plant uses is more common to the people living very close to the forest areas. However, the detail account of the uses of plants for the treatment of their domesticated animals of this region has not been documented so far. A few assorted publication on folklore and folk life studies have been made by Rai (2002), Bhujel (1996), Lama (1989),Biswas and Chopra (1956) and Chettri*et al* (1992).In the floristic works of Cowan and Cowan (1929), A.J.C.Grierson and D.G.Long (1983 -1987, 1991, 1999)and H.J.Noltie (1984, 2000)some subsidiary notes on the uses of ethno - veterinary plants have been provided.

Use of medicinal plants for the treatment of various ailments in animals is believed to have started when the animals were engaged in cultivation (Hooker 1887, Chettri*et al* 1992) and transportation. People are found to be concerned to animal health but the development of ethno veterinary science is not found in practice. Only a few individuals were found knowledgeable in this line. However, the common ailments of their domestic animals were known by many of the villagers. In the present work the following information are collected on the ethno veterinary plants-

Materials and Methods

Regular visits to selected areas were made and the people practicing ethno-veterinary medicine were identified, andthey were contacted to develop necessary understandings and close relationship so that they feel free to divulge their traditional knowledge. After the interview the plant specimens in question were spotted and recognized with their help. These specimens were collected, recorded in the field notebook, processed into mounted herbarium sheets (Jain & Rao 1976). The plant identification and matching was done at the NBU-herbarium, BSI-Gangtok and BSI Howrah. The specimens are deposited in the herbarium of Taxonomy and Ethnobiology Laboratory, Kalimpong College, Kalimpong.

Enumeration

The enumeration of the collected specimen has been made alphabetically irrespective of their taxonomic position. The arrangement contents the botanical name, family, field number, local name and their uses. The abbreviations used are: Fn: field number, Nep: Nepali, Lep: Lepcha, Ln: local name. All field numbers are to be treated as “Rai*et*Bhujel”.

1. *Acoruscalamus* L. (Araceae):**Fn: 0459**; Ln:Bojho (Nep.),Ruk-lop/Mong-lop (Lep.).

Local distribution: Mirik, Mungpoo, Kalimpong, Pedong, Yangmakum, 300 – 1600m.

General distribution: Europe, N. Asia, Himalaya (Nepal-Bhutan), Sri Lanka, China, Japan, C & N. America.

Uses: Stem is crushed and the paste is applied externally to the cattle and goat in case of sore and wounds.

2. *Alstoniascholaris* (L.) R.Brown (Apocynaceae) **Fn: 0557**; Ln: Chhatiwan (Nep.), Purbo-kung (Lep.).

Local distribution: Jholung-Gorubathan, Birik, Latpanchar, Mungpoo, Bijanbari up to 1200m. General Distribution: Tropical Asia & Africa.

Uses: Stem bark is mixed with the pig feed and goat feed as a tonic to improve their health.

3. *Ampelocissusbarbata* (Wall.) Planchon (Vitaceae) **Fn: 0695**; Ln: Jarilalahara (Nep.), Mik – Thum-rik (Lep.).

Local distribution: Terai, river Teesta valley, Sevoke, Birik, 200-900 m.

General distribution: Himalaya (Darjeeling-Bhutan), Assam, Meghalaya, Andaman Island, Thailand.

Uses: Stem juice is applied externally to cattle in case of ticks, mites and other parasites infestation.

4. *Asparagus racemosus*Willd. (Liliaceae) **Fn: 0521**; Ln: Satamuli (Nep.).

Local distribution: Badamtam, Peshok, Mungpoo, Mirik, Suruk, 300 – 1850m.

General Distribution: Himalaya (Kashmir-Sikkim), Sri Lanka, Malaysia, Australia.

Uses: About 250 gms.of crushed root is mixed with cattle feed and given to the milchingcow to enhance early lactation.

5. *Bischofiajavanica*Blume (Bischofiaceae) **Fn: 0407**; Ln: Kainjal (Nep.), Sumong – kung (Lep.).

Local distribution: Jholung, Kumai, Gorubathan, Sittong, Bijanbari, 250-1500m.

General distribution: Himalaya, India, East to China, Taiwan.

Uses: The stem bark juice is also administered orally to the cattle in case of poisoning caused by the foliage of *Brideliaretusa*, *Brideliaverrucosa*, *Lyoniaovalifolia* and *Oxysporapaniculata*.

6. *Brassica campestris* subsp. ***Dichotoma*** (Roxb.) Grierson & Long (Cruciferae) **Fn:0654**; Ln: Tori (Nep.).

Local distribution: Cultivated throughout the hilly region up to 1200m.

General distribution: Nepal, India.

Uses: Oil is extracted from the seed is administered orally to the calf in case of indigestion and weakness.

7. ***Cannabis sativa*** L. (Cannabaceae) **Fn: 0101**; Ln: Ganja/Bhang (Nep.).

Local distribution: Lebong, Mungpoo, Takdah, Kurseong, Suruk, Samthar, 150 – 1800m.

General distribution: Probably native of C. Asia, widely cultivated and naturalised in temperate and tropical world.

Uses: Plant is given orally to the cattle and goats in case of food poisoning and indigestion.

8. ***Canariumstrictum***Roxb. (Burseraceae) **Fn: 0570**; Ln: Gokuldhup (Nep.), Narok-kung (Lep.).

Local distribution: Najoke Forest, Guling Forest, Birik, Latpanchar, Jholung, Mungpoo, 200-800m.

General distribution: E. Himalaya (Darjeeling-Bhutan), Karnataka, Andhra Pradesh.

Uses: Gum extracted from the stem bark is dried and is mixed with capsicum fruit. The fumes so produced after burning the mixture are used as smell to cure goat suffering from cough and diarrhoea.

9. ***Colebrookeaoppositifolia*** Smith (Labiateae) **Fn: 0261**; Ln: Dhusrey (Nep.), Kumhyem – kung (Lep.).

Local distribution: Kalijhora, Najoke Forest, Jholung, River Teesta valley, Mungpoo, 250-1200m.

General distribution: Punjab, Himalaya (Kashmir-Bhutan), India, Myanmar, S. W. China.

Uses: Juice extracted from the leaf and young shoots are applied externally on the eyes of cattle in case of poor vision or blindness.

10. ***Curcuma longa***L. (Zingiberaceae) **Fn: 0466**; Ln: Hardi (Nep.).

Local Distribution: Throughout the subtropical regions of Darjeeling Himalaya up to 1600m.

General distribution: Himalaya (Garhwal-Bhutan), Assam, Myanmar.

Uses: Paste prepared from the powder is applied externally in case of bone fracture of poultry fowl, cattle and bandaged for 5-7 days.

11. ***Dendrophthoefalcata*** (L. f.) Etting (Loranthaceae) **Fn : 0371**; Ln: Aijeru/Liso(Nep.).

Local distribution: Kalijhora, Sevoke, Sukuna, Gairibas, Samsing, 200 – 1200m.

General distribution: Himalaya (Kumaon-Bhutan), India, Sri Lanka, Thailand, Australia.

Uses: The whole plant is crushed with the bulbous root of *Kaempferia rotunda*, root of *Laporteaterminalis* and the prepared paste is plastered externally on bone fractures and sprains in cattles and bandaged for 5-7 days. The course of treatment is followed for 21-27 days by changing the paste as required. It promotes the articulation of bones.

12. *Diploknemabutyracea* (Roxb.) H.J.Lam (Sapotaceae) **Fn : 0269**; Ln: Chiwri (Nep.), Yel-kung (Lep.).

Local distribution: Suruk-Kambal, Jholung, Kumai, Mungpoo, Sittong, Kalijhora, 200-1200m.

General distribution: Sub tropical Himalaya (Kumaon-Arunachal Pradesh).

Uses: Dried stem bark is ground into fine powder and applied in the nose of cattle, goat and horse in case of leech infestation. It causes frequent sneezing in them that pushes the leeches out.

13. *Equisetum debile*Roxb. Ex Vaucher (Equisetaceae): **Fn: 0071**; Ln: *Kurkurejhar* (Nep.).

Local distribution: Lebong, Singamari, Dilaram, Kalimpong, 400 – 1600m.

General distribution: Himalaya to S. China, India, Sri Lanka, S. E. Asia, Malaysia to Fiji.

Uses: The aerial plant is used as an effective medicine of urinary troubles to horses.

14. *Hypericumchoisianum* Wall. ex. N. Robson (Hypericaceae) **Fn:0001**; Ln: Mahendiphul (Nep.).

Local distribution: Jalpahar-Senchel, Tonglu-Gairibas, Ramam, Gorkhey, 1900 – 3000m.

General distribution: Pakistan, Himalaya (Kashmir-Sikkim), Bhutan, S. China.

Uses: Filtered juice from the leaves and shoots (about 200-250ml) is administered orally in domestic animals in case of urinary troubles. Sometimes the shoots are directly given in the form of or mixed with fodder grasses.

15. *Hypericumuralum*Buch.-Ham. ex D.Don. (Hypericaceae) **Fn:0449;** Ln: Urilo (Nep.), Tumbomri (Lep.).

Local distribution: Darjeeling - Senchel, Rimbick, Labha, Kafer, Neora valley, 1200-2800m.

General distribution: Himalaya (Kashmir-Bhutan), Myanmar, Thailand.

Uses: Juice extracted from the young shoots and leaves are administered orally to the cattle in case of urinary troubles.

16. ***Imperatacy Lindrica*** (L.) Räuschel (Graminae) **Fn: 0179**; Ln: Siru (Nep.).

Local distribution: River Teesta valley, Sittong, Pedong, Bijanbari, Mahanadi, Yangmakum, 800-1800m.

General distribution: Mediterranean region, C & N Asia, Himalaya, China.

Uses: The Young shoots (3 or 7 in number) with some number of the young shoots of *Thysanolaenalatifolia* is given to the mother cow to smooth the expulsion of placenta when the same is fails to occur in natural way.

17. ***Iris Clarkei*** Baker ex Hook. (Iridaceae) **Fn: 0446**; Ln: Bojho (Nep.).

Local distribution: Tonglu, Kalpokhari, Phalut, Moley, 2500-3700m.

General distribution: Eastern Himalaya (Nepal-Bhutan), S. China.

Uses: Freshly collected stem is crushed and the extracted juice is applied externally on the bruises and wounds of cattle, goat, sheep and horses in the Himalayan region.

18. ***Leucosceptrumcanum*** Smith (Labiateae) **Fn: 0081**; Ln: Ghurpis (Nep.).

Local distribution: Darjeeling, Senchel, Sukiapokhari, Ramam, Baggonra, Labha, 1400 – 2500m.

General distribution: Himalaya (Kumaon-Bhutan), Assam, Myanmar, S. W.China.

Uses: Freshly collected stem bark is mixed with bulb of *Kaempferia rotunda*, roots of *Urticaardens*, *Laporteaterminalis* and aerial parts of *Viscumliquidambaricolum*. It is pounded to make paste which is plastered to the cattle and goat in case of bone fracture, joint dislocation and is bandaged for 5-7 days. The treatment is followed till recovery.

Flower is crushed and the same amount of turmeric powder (*Curcuma longa*) and half the amount of carbon lump (formed by the firewood) is mixed. The mixture is administered orally to the poultry fowl in case of epidemics.

19. ***Millettiapachycarpa*** Bentham (Papilionoideae) **Fn: 0666**; Ln: Karkus (Nep.),Karkus (Lep.).

Local distribution: Mungpoo, Yangmakum, Relli, Gorubathan, Bijanbari, Goke, 400-1200m.

General distribution: E. Himalaya (E. Nepal-Bhutan), Assam, Myanmar.

Uses: Root extract is applied externally on cattle and goat to kill ticks, mites and other parasites.

20. ***PotentillalineataTreviranus*** (Rosaceae): **Fn: 0155**

Local distribution: Tonglu, Gairibas, Kalpokhari, Sandakphu, Phalut, Labha, Neora valley, 2000 – 3600m.

General distribution: E. Himalaya (Kumaon-Sikkim), Meghalaya, W. China.

Uses: The local people give the root to the pigs as a tonic.

21. ***Premnascandens*** Roxb. (Verbenaceae) **Fn: 0379**; Ln:Kalo – gineri (Nep.), Chepchurldum (Lep.).

Local distribution: Suruk, Makum, river Teesta valley, Samsing, Jholung, Garidhura, 300 – 600m.

General distribution: Himalaya (Nepal-Bhutan), India.

Uses: Stem branches are given to the cattle and goats when they are affected by the poisonous plants like *Pierisovalifolia*, *Brideliaverrucosa*, *Brideliaretusa* and *Oxysporapaniculata*. The veterinary witch doctor touches the ailing cattle and goats with this plant. It takes 2-3 days to hasten recovery. However, over feeding of this plant causes poison to them.

22. ***Selinumwallichianum*** (DC.) Reiz. & Saxena(Umbelliferae): **Fn: 0756**; Ln: Bhut kesh (Nep.)

Local distribution: Jalpahar, Tonglu, Meghma, Gairibas, Sandakphu, 2200- 3600m.

General distribution: Himalaya (Kashmir-Bhutan), Meghalaya, Tibet.

Uses: Freshly collected stem is crushed with the bulbous roots of *Kaempferia rotunda*, *Pouzolziahirta* and aerial parts of *Viscumliquidambaricolum.* The prepared paste is plastered in case of fracture in cattle and bandaged for 3-5 days. It is continued for 21-27 days till recovery. Foliage is fed to cattle and goat in case of diarrhoea.

23. ***Stephaniaglabra*** (Roxb.) Miers (Menispermaceae) **Fn: 0121**; Ln: Panhelotamarke (Nep.).

Local distribution: Yangmakum, Guling Forest, Latpanchar, river Teesta valley, 500-1500m.

General distribution: Himalaya (Simla-Bhutan), Assam, Malabar, Myanmar, Thailand.

Uses: Bulbs of the root used as pot for drinking water to poultry, it keeps the poultry free from epidemic diseases.

24. ***Stephania japonica*** (Thunb.) Miers (Menispermaceae) **Fn:0450**; Ln: Tamarke (Nep.), Kantin/Kunthey(Lep.).

Local distribution: Kalimpong, Jaldhaka, Sittong, Latpanchar, 400 – 1500m.

General distribution: Myanmar, China, Australia, Malaysia.

Uses: Small pieces of tuber is mixed with cow feed and given in case of ulcer and diarrhoea in cattle.

25. ***Swertiachirayita*** (Roxb. ex Fleming) Karsten (Gentianaceae) **Fn: 0526**; Ln: Chirowto (Nep.), Ringkin/Rrungkayon (Lep.).

Local distribution: Senchel, Rambi Forest, Dhotre, Ramam, Gairibas, Neora valley, 1800-3000m.

General distribution: Himalaya (Kashmir-Bhutan), Meghalaya.

Uses: Decoction of the whole plant is also given to the local poultry incase of fever and epidemic.

26. ***Tetradiumfraxinifolium*** (Hook.) T.G.Hartley (Rutaceae) **Fn:0306**; Ln: Khanakpa (Nep.).

Local distribution: Senchel, Sonada, Takdah, Rimbick, Tonglu, Labha, Kafer, 1000-2400m.

General distribution: E. Himalaya (Nepal-Bhutan), Meghalaya, Myanmar, China.

Uses: The foliage is given to the cattle in case of stomach trouble.

Discussion

Darjeeling Himalayan region of the country is one of the important habitats of diverse biological species. This region attracted many renowned botanists, foresters, political officers, development workers and the policy makers since past two centuries and the diversity and richness of the plant species within the limit of the Himalayan region is still incomparable with the similar area of other parts of the country as per the floristic records. The tough hill terrain and vast natural barriers force the Himalayan people to depend on these forest resources whereas thelivestock plays important role in the socio-economic arena of people of this Himalayan region. Tradition knowledge system of the ethnic community of this region is also diverse and rich as the plant species.

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6. The Current Scenario of Unemployment in India

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Introduction

Unemployment in India remains a subject of concern since it cons first recognized in 1950s. During that period the Government of India had only few initiatives of employment generation until the First Five your plan was drafted in the 1950-1951. The plan laid the foundation for overall and sectorial development in a medium term prospective for dome achieving the goal of employment growth and increasing the labour force.

The employment has been the almost objective or any would over it is more important to the case of India it is government more so because we have comparatively large population chronic poverty.

The unemployment is characterized as a phenomenon where labours who all equipped for working and scaly to work don't look for some kind of employment. It is communicated as a proportion of the complete number of jobless people to use all out work power. In India the National Sample Overly organization (NISO) and the labour befoul compute work and joblessness.

The issue of Joblessness has been developing since Independence and particularly so for the adolescent. In 2015, over 30% of India's childhood was neither utilized nor in instruction nor preparing perhaps do the most noteworthy rate on the planet.

Objectives of the Study

1. To examine the current scenario of Unemployment in India.
2. To analyze the gourmet initiatives for reducing unemployment
3. To study the impact of Unemployment

Research Methodology

In this research paper used a descriptive Research methodology. Secondary data has collected to vendor’s resources like research paper, books, Journals, magazines, Newspaper etc. as well as reading various online Reports and other published material.

The Several factors have contributed to the Unemployment problem In India these are as follows

1. High population growth.
2. Slow rate of Economic progress.
3. Joint family system
4. Prevalence of Agriculture
5. The slow growth of Industrialization
6. Shortage of electricity coal & said mated to Industrial sectors in India unemployment is a serious problem. It indicates a situations

Where the total number of job vacancies is much less than the total number of job seekers in the country. It is a kind of situation where the Unemployment persons do not find any meaningful & gainful job in-spite of having willingness and capacity to work. Thus Unemployment leads to a huge wastage of labor resources.

The Present Situation of Unemployment in India

In current scenario, India has around 18.3 million on unemployment people in 2017 and 15.6 in 2018. It will remain few high in 2019 approx. 18.9 comparisons than 2017- 2018. ILD Flagship report-2018. In percentage team unemployment rule is 3.5 in 2018.

The rural areas have 21.7% highest Unemployment role comparison than urban areas in India. It is 21.7% at the age of 15 to 29 year in rural and urban areas 18%.

Thus the present situation of unemployment in overall India is major problem. Due to broad knowledge of the educated youth lack of professional skills, training job search ability, they are getting the right job after giving the interviews.

Impact of Unemployment on Economic Development of India

The relationship between economic growth and Unemployment shows that there is a high correlation between economic growth rate and the decrease in Unemployment rates. An increase in the growth rate increases the employment rate.

The government of the countries Implement some policies do solve the economic problem they consider important by examining this city economic conditions. The Unemployment problem is seen as an important issues for many countries since it has a social dimension as well as its economic implications many counts wimp of reduce Unemployment by ensuring the growth.

In addition to effects on the Individual and sound levels, Unemployment also directory impacts the economy as a whole.

According to the U.S. bureau of labour statistics when people are unemployed they spend lots. The money, which ultimately contributes to less contribution to the economy in selection to services of goods sold or produced. Impact of Unemployment on the individual level but direct or indirectly effect on the Indian economy.

In the present Research paper cover overall the impact of Unemployment on the Indian economic growth as well of development. Unemployment it is majorly problem in the present situation. This the government initiatives planning & policy conduct the reduce Unemployment. in India this work is very important. An increased investment from the government and diversification in the agricultural sector will not only increase employment productivity but also help to reduce Unemployment. These type of efforts are backing for reduce the Unemployment problem. And improve the status of workers.

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6. The Effect of Social-Emotional Competence on Children Academic Achievement and Behavioral Development

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Abstract

In this paper, we explore the importance of the social-emotional competence on children's growth. To develop children social-emotional competence, an interaction between adults and children is critically needed. Teachers have the responsibility to enhance children's development in many aspects, including social, emotional, cognitive, academic, and behavioral skills. A positive relationship between teachers and young students helps those students to have better school achievement and behavioral skills. We review several studies that show the influence that social and emotional competence has on children's learning outcomes and on their ability to engage in good behaviors. We also provide several strategies that help teachers to build strong and healthy relationships with children. These strategies foster children's academic and behavioral success. We define social and emotional learning in relation to school successes to show that competence in these areas increases students' reading, writing, critical thinking, and vocabulary skills. Emotional regulations can also enhance school achievement, both in the present and in the future. Additionally, we provide strategies that teachers can use to foster positive behavioral skills.

Keywords: social-emotional competence, teacher-child relationship, behavioral skills, academic achievement, young children.

Introduction

In this day of high-stakes testing, educators are eager and even anxious to find new policies, instructional methods, and educational practices to improve academic performance.

Take a moment to think about a teacher who had an impact on your life. For most children, their positive or negative educational experiences affect their development. These experiences affect children's academic development, behavior, and social and emotional competence. Thus, in-depth examinations of the teacher-child relationship are essential. In addition, ensuring that these relationships are healthy and strong will help children to develop social-emotional, academic, and behavioral skills. Young children are very sensitive, so most teachers try to help them to build important social skills. The teacher-child relationship must be examined in depth because many researchers have found strong links between these relationships and the children's behavior and academic success. Strong teacher-child relationships help children to develop good behavioral skills and school success, cognitive, social, and emotional skills. To ensure that children are healthy, adults must support the development of their social and emotional skills, which are of great importance to the children's education as well. Social and emotional skills also help children to live healthy and safe lives. Children must develop many skills in their early years, including the ability to do the following: communicate with adults, interact with peers in the classroom, form relationships with others, express emotions, self-regulate, show empathy, be motivated, and engage socially. Children need a long time to develop these skills, so teachers must develop children's social and emotional competence every day through the use of various activities. A good-healthy relationship between the teacher and the child is also needed in the development of a healthy social-emotional competence. When teachers focus on support, they increase children's positive outcomes and help them to develop cognitive skills. Positive teacher-child relationships improve children's psychosocial abilities and their motivation to communicate in the classroom. On the other hand, negative teacher-child relationships affect children's behavior and cause them to dislike interacting with their peers in the classroom. Negative communication between peers impacts children's emotional, social, and behavioral skills.

However, educators and policymakers are also discovering the importance of social and emotional variables for academic performance and achievement. Consequently, they are turning their attention to methods and practices that foster students' social and emotional development. Acknowledging the importance of social and emotional variables is one thing. Teachers have long recognized, and a body of research now corroborates, that facilitating student achievement means addressing barriers to learning. Many of these barriers are social and emotional. Social and Emotional Learning (SEL) Defined Social and emotional competence refers to the capacity to recognize and manage emotions, solve problems effectively, and establish and maintain positive relationships with others. Social and emotional competence and the learning environments that support their development have been shown to enhance academic performance in various direct and indirect ways. SEL programming in schools, when carried out systematically and comprehensively, supports caring classroom environments and helps develop positive relationships. SEL programming also provides students with varied skills that positively affect academic achievement.

Review of Literature

A substantial body of research supports the notion that social and emotional variables are integral rather than incidental to learning (Wang, Haertel, and Walberg 1997). Students emotionally connected to peers and teachers who value learning and high academic performance often adopt similar values (Hawkins et al. 2001). Student perceptions of teacher warmth and supportiveness can accurately predict student engagement (Ryan and Patrick 2001). Similarly, students who benefit from positive relationships and interactions tend to achieve above the average academically (Osterman 2000). Such activities both promote deeper understanding of academic material and help students gain familiarity and ease with SEL skills. Use instructional practices that promote SEL and academic learning. Specific SEL focused classroom-management techniques— cooperative learning groups, academic choice periods, peer tutoring, and service-learning—can improve students' social-emotional competence and academic performance. Such techniques help establish a respectful classroom environment and minimize disruptions. Instruction in interpersonal skills, followed by opportunities to use the skills in cooperative learning groups, teaches students to collaborate on group goals. Service-learning can enhance students' social awareness and commitment to others. Remember that learning is relationship centered.

Hence, this paper is meant to show the impact that social and emotional competence has on children's academic achievement and behavioral skills). 1.1 Social and Emotional Development Social and emotional developments are important to growth in early childhood. These social and emotional skills are associated with the ability to communicate with others in the classroom and outside of school. Social and emotional skills influence how children interact with others, how they deal with their emotions, and how they react to the events that happen around them. In addition, these social and emotional skills are correlated with the ability to properly express emotions such as happiness, sadness, nervousness, and anger; these skills also help children determine how to act when they feeling one of these emotions. In addition, children can learn about their own feelings and identities by practicing social and emotional skills with their peers and teachers.

Many teachers are keen to regularly support their students' development of social and emotional skills. Children with problematic behaviors are likely to experience developmental difficulties, both in childhood and in adulthood.

Thus, preschool and kindergarten are fundament to children's development, as they ensure that children have a good foundation of social, emotional, and behavioral skills. Early-childhood teacher are responsible for supporting children and developing their social, emotional, and cognitive competence; thus, teachers must understand their students' characteristics and use various activities to help them become healthy adolescents.

Teacher-Child Relationships Preschool and kindergarten teachers play an important role in developing young children's skills. These teachers must have specific characteristics, such as honesty, patience; flexibility, fairness, and respect for all children. Teachers with high levels of well-being have a strong influence on their students' social and emotional development. Teacher-child relationships are important part to the education process. A positive relationship is necessary to support children's development. Children personally enjoy interacting with teachers who are kind, patient, flexible, creative, and dedicated. The majority of children interacts with and listens to teachers whom they feel comfortable with. Early-childhood teachers thus need to have high-quality education. Thus, parents always look for the best and kindest teachers for their children, particularly young children. Teachers have many opportunities to build strong relationships with their students. Moreover, teachers can develop relationships with students through the use of various strategies and activities. Making a difference in young children's lives is a great part of this job, and every teacher should take the opportunity to develop children's social and emotional skills, thus changing their behaviors and ensuring their success in life. The dynamic of the teacher-child relationship has a massive effect on children's school lives.

A good teacher-child relationship has many benefits for young children and that these benefits continue for a long time afterward. Children need to feel safe and comfortable with their teachers. Thus, teachers can build a strong relationship with their students over time by showing respect, listening to them, talking to them, and making eye contact with them during everyday communication.

Similarly, children who do not have good relationships with their teachers in early childhood display less interaction with their peers, express more disappointment, and show less tolerance of others, as compared to those with good relationships.

1. Teachers' perceptions have a big impact on how they deal with students.
2. Communication with Peers In the classroom, communication between peers is just as important as communication with teachers. Thus, learning-based collaboration and communication can help children to develop social and emotional skills. Moreover, teachers can help children to communicate with each other through the use of small-group and whole-group activities.
3. The Importance of the Teacher-Child Relationship The teacher-child relationship is important because it forms the foundation for many skills. Healthy teacher-child relationships in early childhood help to create healthy adolescents. Many researchers have found that the teacher-child relationship affects many aspects of children's development. For example, the teacher-child relationship supports the growth of social and emotional skills, as well as academic achievement and healthy behavior.
4. Building Teacher-Child Relationships There are many ways to build healthy teacher-child relationships.
    - Various strategies and activities can encourage children to interact with their teachers and peers:
    - Welcoming each child to class in the morning with a smile.
    - Giving each child a job and the time to complete it.
    - Using a calm voice.
    - Listening to children when they talk and asking them to listen to their peers Giving children attention.
    - Using warm body language.
    - Asking distressed children about what is upsetting them.
    - Encouraging children to welcome each new day.
    - Using eye contact when talking to children.
    - Sitting at the children's level to provide good interactions.
    - Using simple words when talking with children.
    - Addressing the children by their names.

- Applying one-on-one strategies to treat each child as an individual
- Engaging in small-group activities.
- Asking children to participate in collaborative play.
- Encouraging children to interact with others Building a healthy teacher-child relationship is very significant for young children.

Finding of the Study

- Young children who have good peer relationships tend to learn positive behaviors such as social competence, motivation, attention, and perseverance. On the other hand, young children with adverse peer relationships tend to experience lesser peer acceptance and to have various troublesome traits such as hyperactivity and inability to concentrate. Such children, relative to those with good peer relationships, have greater levels of aggression and much lower levels of social accommodation and academic achievement.
- Teacher-child relationships also play a vital role in strengthening positive young children's behavioral skills. Many researchers have noted that close child–teacher relationships serve a governing function for children who engage in problematic behavior—helping, for example, in these children's social interactions. If the teacher-child relationship is not strong, the teacher cannot regulate the child's negative behavior, which could enhance the child's disconnection from social interactions.
- Various research-proven strategies and best practices for enhancing behavioral skills through social and emotional development. 3.1 Art-Based Approaches Children should be encouraged to use art (whether copying, drawing, painting, or sculpting) to interact. Such activities help children to develop new ways of working and interacting.
- It is important for children's overall social and emotional well-being that they have healthy peer interactions. The preschool setting provides young children with many opportunities to interact with their peers and to develop positive behavioral skills.
- Many impact-based interventions exist for training young children in social and problem-solving skills. These interventions also are meant to decrease negative behaviors and increase academic achievement. Effective interventions should enhance young children's problem-solving skills from a multidimensional perspective—including cognition, emotion, and behavior. One such multidimensional program,

which is based on cognitive problem-solving skills, is called I Can Problem Solve; this program addresses behaviors such as impulsiveness, inability to wait, aggressiveness, and frustration while promoting positive prosocial behaviors.

- Parent-Teacher Relationships The parent–teacher relationship supports the regulation of children's achievement and behavior prior to the start of formal schooling. Researchers have shown that children whose parents and teachers both report very good cooperation have better academic and social skills, as well as less extreme behavioral problems, as compared to those whose parents report lesser cooperation.

  In this study, the parents and teachers of 38% of the children in the sample reported having a very good cooperative relationship; 24% had strong cooperation only from the teachers' perspective, and another 17% had very good cooperation only from the parents' perspective; finally, in 20% of cases, neither the parents nor the teachers reported strong cooperation.
- Peer Relationships In this study, we examined the stability of preschoolers' peer-play behaviors across the school year so as to consider the relationships among emotional regulation, receptive vocabulary, and the trajectory of social-competence deficits.
- Their peer-play behavior was moderately stable from fall through spring. At the start of the study, we found that emotional difficulties were consistently associated with maladaptive behaviors and declining social competence.

Furthermore, children who exhibited stable maladaptive behaviors had lower receptive-language skills and worse emotional regulation than did children who exhibited consistent adaptive behavior. The students who had co morbid externalizing and internalizing behaviors during peer play were at the greatest risk of having consistent difficulties or declining social competence over the course of the year, as compared to their peers. This study's results can inform future practices with regard to identifying at-risk preschoolers soon after they begin their early-childhood education experiences. Moreover, the findings suggest that, without effective interventions, such at-risk children are likely to exhibit consistently poor social competence over time. This study also has implications for the use of early interventions for targeting specific behavioral and peer-play problems.

Conclusion

To sum up, social and emotional skills are related to communication skills and the ability to form connections with people, both inside and outside of school. Children need to learn various skills by interacting with their teachers and peers in order to develop their social and emotional competence. Social and emotional skills are fundamental, and the development of social and emotional competence leads to academic success and positive future learning. Moreover, young children with strong social and emotional skills can recognize and handle their behaviors in positive ways. The development of the social-emotional skills will lead to better school outcomes, adaption of future learning, well-being, and ability to manage good behaviors.

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8. Indian Women Past, Present and Future

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Introduction

"The status of women depicts the social, economic and mental condition of a nation" - **Jawaharlal Nehru.**

Women are the primary care taker of children and elder in every country of the world. Rural women also play an important role in supporting their households and communities for achieving food and nutrition security, creating income and improving livelihoods and overall wellbeing. The women perform the role of wife, mother, organiser, administrator, director, re-creator, economist, teacher, health officer, artist and queen of the family at the same time. Apart from this, women play a key role in the socio-economic development of the society.

Women in Past

During the Vedic period, women were treated equally, and as a symbol of spirituality in our scriptures. However, during the medieval period women were considered as inferior and were mistreated and were considered unequal to men and they were facing social evils such as

1. Sati System
2. Parda System
3. Child Marriage
4. Dowry
5. Female infanticide was wildly prevalent in the early age.

The spread of education and self-consciousness among women led to their progress over the period. Some open-minded citizens and re-formers like Raja Ram Mohan Roy, Swami Vivekananda, Eshwar Chandra Vidyasagar, Mahatma Gandhiji and others worked for the well-being of women. Thus, the practices of social evil systems as mentioned above were abolished. Various acts such as child marriages restraint act were passed in this direction. Mahatma Gandhiji also emphasised on the abolition of child marriage.

Women in Present

Women today are eager to take up profession and work. Thus, they enjoy equal respect and dignity in their family and society, Women in free India also enjoy equal pay for equal work in comparison to men. Furthermore, women are provided with equal opportunities under the article 16 of the constitution of India.

Women of today are empowered, also they are gaining advancements and tasting success in each and every field.

Modern India or free India has witnessed some to many developments in the social position and status of women. Many reforms in India have worked for the betterment and upliftment of women's conditions in society. They are educationally, politically, socially and economically progressed and show their active participation. Their active participation is vital for the development of the country and yet there is any room for compliancy.

The government abolishes social practises like child marriage, female infanticide, dowry due to lack of awareness women struggle in freedom. A woman cannot attain complete freedom until she comes forward and organises the power to elevate herself in the society.

Many Parts of rural India still undergo child marriages, do female infanticides and there is still much need to be done regarding the improvement of women status. To combat these women should raise their voice against those who are dominating them. They need to fight against the social evils that restrains them.

The government of India under article 14 of Indian constitution has made education free and compulsory for every girl child up to the age of 14 years only to lift the education as compulsory for all. These days education has occupied significant position in all the fields of society.

But in short, even not a complete change, the current status of India sees a steady transformation of women compared to the past ages. The current status of women notices active participation in politics, military, economy, technology, film industry, judiciary and other various sectors. This shows that Indian women enjoy liberty and equality when compared to earlier times. Women empowerment in India is required to overcome situations of such types and to provide them with their independent rle in Indian society. Empowering women is a necessary right of women, they should have proportional right to contribute to society in all the fields.

There are innumerable challenges and issues that women face in present modern era that concerns physical and mental health. Various problems like lack of education, improper health facilities, gender discrimination, gender pay gap, inequal rights, rape numbers, sexual harassment, dowry related problems and domestic violence etc.,

- **Gender Discrimination:** This is the social process by which men and women are not treated equally. The treatment may arise from distinctions regarding biology, psychology or cultural norms prevalent in the society. It's a situation in which people are treated differently, simply because they are male and female rather than on the basis of their individual skills or capabilities.
- Gender Discrimination has a significant impact on mental and physical health worldwide. It can limit people's access to healthcare, increased rates of ill health and lower life expectancy. There are many examples of gender discrimination like being forbidden to drive, restrictions on clothing, not being allowed to travel, honour killing, female infanticide and lack of legal rights, etc.,
- **Gender Pay Gap:** Around 80% of women work in rural area in the agriculture sector and very few women work in the paid labour market, comparatively unpaid work accounts for only a quarter of the men's time. As a result, the wage gap between men and women.
- According to Moster Salary Index (MSI) published in 2019, women in the country earn 0% less than men and according to gender gap index in 2020 while there is little data from India and other low middle-income countries, numerous studies conclude that female doctors earn 20-29% less than their male colleagues globally.
- **Rape:** This is one of the most heinous crime to the social environment. With the passage time, this issue has created lots of distorted effect. Rape is the 4th most common crime against women in India. According to the 2019 annual report of the National Crime Records Bureau (NCRB), 32033 rape cases were registered across the country, an average of 88 cases daily apart from this, hundreds and thousands of rape cases go unregistered in fear of society refusals.
- **Sexual Harassment:** It is a type of harassment involving the use of explicit or implicit sexual over tones, including the unwelcome and inappropriate promise of rewards in exchange of sexual favours. There are types of harassment

  - Verbal/written
  - Physical harassment
  - Visual harassment
- **Dowry Related Issues:** Dowry system is s social is dilemma. Dowry is mostly prevalent in Indian ceremonies where the bride groom commands money or assets from the parents of the bride. This dowry system is creating many severe problems in society. Poor parents do not get any groom who will marry their daughter without taking dowry. The dowry puts a huge financial obligation for the bride's family as a consequence people started thinking that to have a daughter means losing money and to have a son means gaining money. The wife goes to trauma and mistreatment if the baby conceived is not a male.
- **Domestic Violence:** It is a pattern of abusive behaviour in any relationship that is used to buy one partner to gain or maintain control over another. It intimates partner recognise that victims can include any one, regardless of socio economic, background, education level, race, age, sexual orientation, religion or gender. Many types of abuses are included in domestic violence these include:
  - Physical abuse
  - Sexual abuse
  - Emotional abuse
  - Economic abuse
  - Psychological abuse

Women in Future

The best "thermometer to the progress of a nation is its treatment of its women. There is no chance for the welfare of the world unless the condition of women is empowered" **-Swami Vivekananda**

The status of women social, economic, political and general in India today is much higher than in ancient and medieval periods.

Future of Indian Women is going to be great, in last 25-30 years we have seen a tremendous change and now more and more women are getting educated and are also going to jobs. In next 25 years they will go ahead of men at some places they are already ahead. For India to become a superpower and developed country we need all women to be educated, empowered, treated equally and high status.

Conclusion

If India wants to be a developed country, we need all women to be educated with high status and provide specific laws, policies and rules which provide empowerment to the women needs to be developed. So that they can progress better in different fields, society needs to understand that a woman is key to the survival of human species, she is the backbone of the civilisation, when the status of women improves the quality of life improves for everyone.

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9. Home Gardens: A Key to Sustainable Future

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Humans have been cultivating gardens for thousands of years for both culinary and aesthetic reasons. Growing in popularity and scope in urban and suburban areas worldwide, gardening has a greater environmental impact as global urbanisation accelerates. Gardens not only help your health, but they also support biodiversity by acting as vital homes for a range of native plant and animal species. At the same time, gardening has the ability to influence the water, nutrient, and carbon cycles in urban and suburban regions, thereby influencing environmental changes on a larger scale.

The opposite is also true; gardening may have a variety of negative effects on the environment, such as increased nutrient runoff and risk of eutrophication in aquatic habitats. The water, nitrogen, and carbon cycles in urban and suburban areas can be impacted by gardening, which can also have a greater impact on environmental changes. It's also true that gardening can have a range of harmful consequences on the environment, including increased nutrient runoff and a potential for eutrophication in aquatic ecosystems.

What is House Gardening

The household garden is a small-scale production system that provides food and utilitarian commodities that are either unavailable, prohibitively expensive, or easily accessible through retail marketplaces, field cultivation, hunting, fishing, gathering, and wage labour. For reasons of safety, convenience, and special maintenance, household gardens are typically found close to homes. They work on land that is not used for significant home economic activity and occupy land that is not used for agricultural production. Household gardens are characterised by modest capital input and straightforward technology, as well as ecologically appropriate and complimentary species.

Home Gardening and its Benefits

Adding plants, flowers, fruits, and vegetables to the garden can help the environment in which we live. We improve the quality of the soil and the air when we garden, especially organically. Instead of removing something from the natural environment, we are adding and caring for something green and lovely while also growing our own food and beautifying our surroundings.

- Cleaning the soil and air when gardening: Plants absorb carbon dioxide from the environment and, as a consequence of their respiratory and photosynthetic processes, generate oxygen. By doing this, plants take in any chemicals, bacteria, or other potentially dangerous substances that are floating in the breeze and filter them into helpful waste products like water and oxygen. Additionally, plant roots assist in absorbing any stray pollutants or heavy metals that may be present in your soil. Something that removes CO2 and toxic substances might undoubtedly be viewed as beneficial for the environment, given how large humanity's carbon footprint is today.
- The soil is replenished and preserved via gardening: The earth benefits from plant roots as well. In order to prevent soil from washing away during heavy rains, plant roots help bind the soil together. Extensive root systems prevent topsoil from shifting during periods of severe rain or flooding. You can conserve more dirt in your yard the more root systems it has. Additionally, plant roots can enrich the soil with moisture and minerals. Annual plants wither and disintegrate every year, eventually transforming into nutrients that can be used by other plants the next season. This decreases the need for soil and improves general health.
- The practise of gardening reduces global warming: Carbon dioxide and other greenhouse gases, which trap heat in the atmosphere and contribute to global warming, are in excess. As a result of the broad climate change brought on by this warming, ice caps may melt, sea levels may rise, and there may be more severe storms and wildfires in the future. Even a small number of trees, bushes, flowers, and vegetables planted on your land can lessen this impact. Like any other plant, these garden plants are capable of absorbing CO2. Even a minor difference makes a difference in a circumstance like ours. By reducing the number of journeys, you make to the grocery store, where produce is frequently flown in from considerable distances, growing your own food can also reduce your environmental effect.
- Landfill space is reduced via gardening: Scraps and yard garbage fill 30% of landfills, according to Perfect for Home. Although a large portion of this yard waste is natural, when it accumulates in landfills, it releases methane, a dangerous greenhouse gas that

accelerates global warming. Gardeners may improve the health of their own gardens while reducing the quantity of garbage that ends up in landfills by composting, mulching, or recycling.

- Local pollinators and wildlife are protected through gardening: Your gardening efforts will be appreciated by a variety of wildlife, including birds, bees, butterflies, spiders, and squirrels. Gardening provides animals with a place to feel safe and at home in a time when so many natural habitats have been destroyed. We can give something back to these animals while also taking advantage of their company and the advantages they offer by planting trees and scented flowers.

Community Gardens and Environment

There are many different kinds of community gardens, such as neighbourhood gardens, allotments, communal gardens, and more. They could be used to cultivate food, local plants, or just a relaxing area to sit. Community gardens, according to the charity Greenleaf Communities, can enhance water filtration, minimise trash in the neighbourhood, shorten the distance travelled by food, and boost the richness of plants and animals. Additional advantages to the neighbourhood may result from local environmental changes, such as lessened air pollution and odours.

In addition to cleansing the air and water, community gardens can encourage biodiversity by creating habitats and facilitate environmental education in the neighbourhood. Community gardens may repair unused land and ecosystems, as well as encourage social inclusion, by reusing neglected or abandoned land. Native plant species should only be planted, according to a case study on community gardens and sustainable land use planning, as this is "anticipated to have a positive influence on local biodiversity. By establishing native plants, ecosystems can be enhanced while also supporting and sustaining biodiversity. Strong ecosystems are necessary for and supportive of biodiversity, or biological variety of life.

Community Gardens: are they Durable?

Although most practises in community gardens are sustainable, all participants should be aware of those to avoid, like the use of synthetic chemicals.

The following are some sustainable gardening tenets

- Reducing garbage production and dumping waste in the earth (such as compost heaps)

- Control of resource use
- Planting low-maintenance indigenous plants
- Encouraging involvement and educating others
- Employing organic fertilisers and insecticides instead of synthetic ones
- If necessary, simply solar-powered illumination, or none at all
- Cutting using shears rather than machinery

Perks of Community Gardens

A community garden serves everyone in the neighbourhood. Community gardens improve physical activity, foster social interaction, lessen isolation, and more.

Participating in community gardens is advantageous for kids because it promotes a balanced diet and physical activity.

Being nearer to nature can help adults feel less stressed and have stronger immune systems. This can be related to increasing exposure to sunlight and fresh air, which can both help older persons with discomfort.

Whether the produce is grown for household or communal meals, easy access to veggies from a community garden promotes improved nutrition and culinary knowledge. People who frequently lack the means to purchase veggies would particularly benefit from this.

For its positive impacts on both physical and mental health, gardening has long been seen as advantageous. It can boost self-esteem, encourage heart health, lessen depression and stress, and strengthen your immune system.

Community gardens can therefore provide additional benefits, which is not surprising. Being a part of a community garden might even have additional advantages because you don't have to take care of the plants alone and you can interact with other gardeners.

Community gardens (or urban vegetable gardens), according to a research by the Barcelona city council, have "huge social values" for those who participate. These advantages include fostering interpersonal connections, enhancing quality of life, and advancing environmental knowledge.

Gardening for Mental Health

By promoting emotion regulation and stress alleviation, exposure to nature through gardens and gardening activities can improve psychological well-being. Older studies have shown that looking at nature in photographs or via windows can help the body recuperate from stress by reducing blood pressure and heart rate. Simply being in a garden or watching garden features may bring advantages like relaxation and restoration since natural environments need less effortful concentration and may act as a distraction from daily hassles, especially for weak older persons.

Gardens provide an environment for older people to reflect on the past. the personal narratives of regular people who were asked to write about the "value of their gardens" for social study. Being in the garden brought either actual or made-up recollections of childhood gardens. A person may be transported back to their youth by touching or smelling a specific plant or flower. Older persons may therefore benefit from cultivating emotions of wellbeing through recollections of past gardens, which can be evoked by touch or fragrance in the present in a garden. This is consistent with "nostalgia" literature, which contends that such memories provide life purpose and self-continuity by connecting the past and present through the reconstruction of shared memories and interpersonal ties.

Conclusion

Gardening has a bigger environmental impact as urbanisation is expanding globally, both in terms of popularity and scope in urban and suburban areas. In addition to improving your health, gardens promote biodiversity by serving as important habitats for a variety of native plant and animal species. The water, air and land in urban and suburban areas can be impacted by gardening, which can also have a greater impact on environmental changes.

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10. Impact of Food and Diet on Lifestyle

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It is impossible to overstate the value of a balanced diet for leading a healthy lifestyle. Maintaining a balanced diet and taking into account to fulfil all the important nutrients required by the body will help you live a healthy lifestyle. A good meal plan aids in achieving a healthy body weight and lowers the risk of developing chronic conditions like diabetes, cardiovascular disease, and other cancers.

What is Balanced Diet

Simply put, a balanced diet is one that provides your body with the nutrients it needs to function effectively. The relevance of nutrition is seen in consuming the proper number of calories. When you eat a wide variety of foods high in calories, such as fresh fruits and vegetables, whole grains, and proteins, your body receives the proper nutrition.

Calories serve as a measure of a food's energy content. The calories from the food are then burned off as you walk, think, or breathe. A person may need roughly 2000 calories per day on average to maintain their weight. The number of calories a person consumes generally depends on their gender, age, and level of physical activity. Men also require more calories than women do. Once more, folks who exercise more frequently need more calories than those who do not. It's also crucial to keep in mind that calories' source is just as significant as their quantity. Filling your plate with empty calories, or calories devoid of any nutritious value, is not helpful in any manner.

Feeling wonderful, having more energy, enhancing your health, and elevating your mood are the main benefits of eating a nutritious diet. A person's general health and well-being depend on having a good diet, engaging in regular exercise, and maintaining a healthy body weight.

Healthy food is crucial to your life, there is no doubt about that. If you don't keep a healthy diet for your body, you can be more susceptible to illnesses, infections, or even weariness. The significance of nourishing diet for kids needs to be emphasised in particular because failing to do so could leave them vulnerable to a number of growth and developmental issues. Diabetes, cancer, heart disease, and stroke are some of the most prevalent health issues that result from an unbalanced diet.

Physical activity helps to manage a variety of health issues and enhances mental health by lowering stress, depression, and discomfort. The metabolic syndrome, stroke, high blood pressure, arthritis, and anxiety can all be avoided with regular exercise.

A balanced diet Contains the Following distinct Healthy Food Groups

- Vegetables like red and orange vegetables, legumes like beans and peas, starchy vegetables, leafy greens, and others like eggplant
- Fruits that are entire, fresh, frozen, or canned but not syrup-dipped fruits
- Entire and refined grains, for example. Quinoa, oats, brown rice, barley, and buckwheat are a few examples.
- Lean meat and poultry, fish, beans, peas, and legumes are all good sources of protein.
- Dairy items such soy milk, cottage cheese, yoghurt, and low-fat milk

Each of the five dietary groups should be represented in the recommended amounts of a wide variety of foods. These food sources from each food group offer an equivalent number of important micro and macronutrients to satisfy bodily needs.

50–60% of a balanced diet should be made up of carbs, 12–20% of protein, and 30% of fat. By ingesting the necessary quantity of calories and nutrients to maintain a healthy weight, all the organs and tissues may function properly. A person's general health and wellbeing are reliant on appropriate eating, exercise, and a healthy body weight.

A proper meal plan consists of all the necessary food components, food items, and serving sizes for breakfast, lunch, snacks, and dinner for any particular age group. You only need protein for your blood cells, which carry oxygen and nourishment to your muscles, and muscular mass.

In order to maintain physical health and well-being, the body needs quality carbs, lean protein, vital fats, and water in addition to regular exercise.

These can help you avoid gaining too much weight or keep the weight off, but healthier habits are also linked to better sleep and mood. In particular, physical activity enhances brain function and results.

Similar to increasing your physical activity, simple dietary adjustments can help you reach your target body weight. It's crucial to consume the correct kinds of carbohydrates. The simple carbohydrates in sweets and processed foods are highly favoured by many people.

Natural fibre, vitamins, minerals, and other substances that your body needs to function correctly are abundant in fruits and vegetables. They have little fat and few calories. Unsaturated fats can offer calories and may aid to lessen inflammation.

Healthy Lifestyle and its Importance

Not only a balanced diet, but also healthy eating habits, are sufficient. Among these, you might adhere to the following:

- Eat in smaller quantities – You can achieve this by putting your food in small dishes so that your brain perceives larger servings.
- Eat slowly - Eating slowly can indicate to your brain that you have consumed enough food to support your functioning rather than racing through meals in between other tasks.
- Reduce your snacking - Unhealthy snacks should be avoided because they make you feel less hungry. Changing to wholesome bite-sized food can be beneficial.
- Limit emotional eating because it can be very detrimental. Your health could be impacted if you use it to cope with stress, depression, or anxiety. You can combat unpleasant feelings instead by using better alternatives.

Dietary patterns are meant to depict the group under study's actual dietary practises and access to food. As a result, they make it easier to identify subgroups that adopt dietary practises that are consistent with risk for or protection from chronic diseases and offer reliable scientific justification for creating dietary recommendations.

Most chronic diseases have a primary modifiable variable associated with diet. It is well recognised that sociodemographic characteristics and other lifestyle factors have a significant impact on food decisions. Therefore, knowing the factors that influence food consumption is crucial for analysing how they might affect the likelihood that a disease will be prevalent.

Indeed, research has indicated that a number of individual variables are related to eating habits. Both healthy and unhealthy eating habits can differ based on a person's sex, socioeconomic level, ethnicity, culture, and other characteristics. In addition, they can differ based on the correlations that these factors have with one another. In recent years, researchers have tended to group lifestyle factors. These risk variables emerge in conjunction with other lifestyle risk factors rather than being randomly distributed throughout the population. The lifestyle risk variables are grouped together because they have a stronger correlation with many diseases than we would anticipate from each risk factor alone.

The identification of various lifestyle patterns and associated factors across the nation may be beneficial in identifying high risk subgroups that require suitable interventions since lifestyle groups in a community might be connected with diverse patterns of demographic and social risk factors. For instance, a healthy diet is favourably correlated with age and education (characterised mainly by high intake of fruit, vegetables or fish). Additionally, an unhealthy diet was linked to the connection between smoking, inactivity, and youth. A lower risk of early mortality and a longer life expectancy have been linked to a balanced diet (and its main healthy dietary components), moderate alcohol use, non-smoking status, normal weight, and regular physical activity.

Drawbacks of Poor Diet and Unhealthy Lifestyle

Acne, bloating, and weight gain are a few physical changes that can occasionally be seen as a direct result of bad diet. Obesity and related disorders can be brought on by certain poor diets, such as those connected to consuming too much fast food. The Centres for Disease Control state that being overweight or obese can raise your chance of developing diabetes, heart disease, osteoarthritis, stroke, and a host of other illnesses. Not everyone experiences blatant bodily changes. However, just because the consequences of poor diet aren't immediately apparent doesn't imply they don't exist. Major problems that are faced world wide are:

- Being overweight or obese
- Tooth decay
- High blood pressure
- High cholesterol
- Heart disease and stroke
- Type-2 diabetes
- Osteoporosis
- Some cancers
- Depression
- Eating disorders.

Ways to Adapt a Healthy Lifestyle

This is a Nice Place to Start

- Every day, eat a good selection of nutritious foods from the five dietary groups. View the pages on Healthy Eating Tips and Healthy Eating for Different Ages and Stages for further details.
- Daily fruit and vegetable serving goals should be two and five, respectively.
- Eat sugary, fatty, or salty foods only occasionally and in moderation.
- Substitute drinking fresh, clean tap water for sugary beverages.
- Plan your meals in advance and buy healthy products. Switch to tasty and healthy recipes.
- Without any distractions, such as television, take pleasure in preparing and eating nutritious cuisine with loved ones or friends.

Conclusion

Your health and how you feel now and tomorrow are impacted by what you eat every day. Your ability to lead a healthy lifestyle is greatly influenced by your ability to eat well. Your diet can help you achieve and maintain a healthy weight, lower your chance of developing chronic diseases like diabetes or heart disease, and improve your general health and wellbeing when combined with physical activity.

Healthy eating habits don't have to be difficult to establish and keep up. You may significantly alter your eating pattern and establish enduring, healthy eating habits if you start by implementing little modifications into your everyday routines. By adding one new objective each week, try to incorporate at least six of the eight following goals into your diet.

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11. Values in New National Education Policy 2020

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Introduction

Manpower is the basic principle of overall prosperity of the country. This cultural heritage of conservation and transmission of human virtues has been preserved by society today. But according to the situation it kept changing and some values remained eternal from the beginning to the end and were cultivated as eternal values. Efforts are made to preserve and promote such values because constructivism in human tendency is the key to national and global progress. A great contribution of Indian historical literature can be found in these of our epic stories, dramas, Smriti, Puranas, Upanishads are the inspiration of values. Bhagavad Gita describes the qualities of sattva, raja, tama. While in the Buddhist era, emphasis is placed on the qualities of good deeds, virtue, tolerance, non-violence etc. The same ideals were cultivated in the medieval devotional period as well. Such virtues in human culture have created the term value. Cultivation of hand virtues and their transmission to others is preservation of values.

The value of human power in social life is unique. In the making of human beings there is a legacy of social culture. There is evidence of the teaching of such culture-enhancing values in the Indian education system. A study of the history of India reveals that India had a very rich and high-quality system of education and it was not only recognized but minded throughout the world. Weapons, agriculture, adventure, art, physical health, politics, social causes, policies and values were developed to the students on the basis of language and knowledge to create culture-protecting citizens. With time, the needs changed, the standard of living changed, the goals and objectives of education changed, and the education system changed accordingly. And in modern times, under the British rule, the very core of the original Indian education system was changed. The objectives of the educational system implemented by them changed, though detrimental to the country, the same educational system was continued even after independence. Therefore, the Indian society continued to be formed as expected by the British. Therefore, today's social reality and the state of education as well as the results look frightening.

Main Objectives of Education

The main objective of education in any era is to create a society inspired by the spirit of nationalism, sustainable, with human values, not ashamed of labour and endowed with high taste. Many of Bharatbhu's children (Indians), who were philosophers, thinkers, literary social reformers of India at that time, thought and philosophically thought about education, education method, goals and objectives of education, which is very valuable in the new national education policy. Because he tried to reconnect the broken umbilical cord of Indian education tradition since the British rule. Spiritual attitude is the foundation of ethics, virtues like truth, service, sacrifice, humanity, faith, selfless attitude are included in ethics, so education should create the qualification of prudence and comprehensive thinking through which the youth is trained for radical social and economic transformation. All Indian philosophers have said that the highest goal of education is the cultivation of morals and integrity of character.

Through the process of education, we should preserve the valuable elements of our culture, we should abandon what is out of date, education should also bring conservation and change, for the youth to become good citizens of the country, family institutions and religious institutions used to work in the society. An urgent need has arisen. Against this backdrop, the Indian government has planned to bring drastic changes in today's education system to develop national unity and global community based on the values of language, culture, knowledge and loyalty. In the new National Education Policy, holistic development of students is expected and the first national saint of India, Tukdoji Maharaj, has written in relation to the change in the education system, it is,

"**If the nation wants to rise, it should change the education or practice**
Let everyone work, let the youth change their pain"

The thoughts of the great Indian philosophers as well as the saints of the nation about the Indian education system are exactly in line with the new national education policy.

Overall Quality and Quality Education

All teachers, parents, students must understand this new National Education Policy, which will be implemented from the academic year 2023-2024. After a total of 34 years, the above policy will be implemented for India's bright future. Although the government adopted the first education policy in 1968 and the second education policy in 1986, the English education system has not been left behind, but the present national education policy is completely Indian based and is based on the background of national development and universal brotherhood. Every element of the society has been considered in this. The focus of NEP 2020 is to develop the overall quality of students not only socially, economically but under this skilful education system by 2040. This is the third national education policy after independence and a scholarly policy has been designed for the development of the nation in a proper manner according to Indian tradition and value system. A future-oriented transformational education system is being created for schools as well as higher education. For this, emphasis has been laid on the restructuring and strengthening of quality universities, colleges and institutions. Quality academic research will be promoted through the new National Research Foundation. It has been decided to transform the regulatory system of higher education by creating a conducive environment for the purpose of holistic and multidisciplinary education and to create effective management and leadership in the institutions. So that the students in the college get quality education.

Objectives of NEP

Hon'ble Prime Minister Narendra Modi has implemented the National Education Policy 2020 after 34 years. The following objectives have been set for this new education system to achieve developmental success by transforming the higher education system.

1. Holistic development
2. Skill development
3. Development of new ideas
4. Indian value development in language, culture, knowledge etc

Life Values Education

Today in the country there is an urgent need for culture and culture conservation, we need education that builds life, builds human being, builds character and imbibes good thoughts. Also, the education which creates a new generation of humanistic education, preserves the culture and traditions of the country, and brings about the development of the nation through conservation, will be given to the students through the new national educational policy.

Today's children are the pillars of tomorrow's India and therefore along with book knowledge, patriotism, labour donation, philanthropy, brotherhood, love of nature, self-reliance are also emphasized on technical and vocational education. Education which will achieve holistic development of the child academically, physically, mentally and culturally. Through such education, selfless, honest, service-oriented rulers and officials will definitely be created.

Rashtrasant Tukdoji Maharaj in his book Gram Gita in chapter 19, says about higher education, the idea of holistic aspect of education which is included in the present educational policy.

"**Not just higher education, it is a thing of the past**
Now be hardworking, strong son of India"

He has expected that education should be the source of livelihood through education itself. It is further said that education is the life's work, it is better to have a combination of both (Life and Education)

"**All the necessities of life, every means of subsistence**
Comprehensive knowledge of the relevant subject, is must in educational content"

Which means along with book knowledge, industry education should also be given, the educated youth of the village should make new inventions, use new technology in industry, business, agricultural production, it is necessary to develop the mind, hands and heart of the youth, which is included in today's new education system. Due to this, all-round development of the individual will contribute to the development of the nation, besides, special emphasis is being laid on the curriculum for the students to acquire various skills. From different stages of education, technology, science, industrial, mathematics, language, art, culture, cooperation, democracy, patriotism, universal brotherhood, along with life education to live a happy and beautiful life, a cultured young progressive society and a developed nation will definitely be created. To achieve this objective, there will be courses that are complementary and compatible with the social and cultural environment, mainly mother tongue has been given priority for ease of education. Especially since Indian culture is rooted in spirituality, the study of spiritual values is also going to be a guide for the world and a curriculum is being created in which the students will be inculcated in doing economic, political and cultural work ethically.

Yogi Arvind Ghosh, Swami Vivekananda, Rabindranath Tagore, Mahatma Gandhi, Acharya Vinoba Bhave, Philosophers such as Dr.Radhakrishnan has explained that education means, preparation for real life in a proper way and priority is given to life education.

Social Science Education

This new national education policy has also brought about changes in line with social science. There is also a special deliberation on the curriculum and teaching methods of social sciences. Social sciences include sociology, anthropology, political science, economics and history. They are taught as separate subjects for academic and professional convenience thus students acquire limited knowledge in this context. Add-on courses are being offered to help students become employable along with emphasis on imparting new skills to complement their abilities as knowledge acquisition or employability skills are not sufficient. For example, if Political Science students take two add-on courses like Diploma in Enterprises Media Studies, Social and Human Ethnology etc. it will help them compete successfully for jobs. Similarly, a course on Indian society will be useful and value-added for students aspiring to work in non-governmental organizations (NGOs). Students of History can opt the add on courses for Geography to work in sector of Tourism as a job opportunity. Economics students who take one or two add-on courses in International, Political, Economy Indian Political Institutions and Foreign Trade Policy will be successful in employment in public and private international organizations and professional journalism. Just as journalism students would benefit from taking a course on the study of voting behaviour to effectively wreak havoc on history, patriotism plays a central role in history education. All the parts of human life are consulted through history. Religious, economic, cultural, linguistic, social and political balance is achieved. Through this, reasoning power, imagination and ethics increase in the students. Biographies of great heroes, their noble lives, selfishness and wonderful deeds done by them are included in history. And it helps to create a sense of service. Therefore, it is seen that the modern nations have given an important place to history in their education field inspired by their own knowledge. It is very important to teach children about history. Since patriotism is a priority in history education, we can achieve the noble purpose of patriotism. Based on this, various aspects of the past events of the motherland which are stimulating, inspiring, utilitarian and pointing to the bright future will be included in the history education under the new educational policy. As it also includes how all the advanced nations have played an important role in the promotion of knowledge and arts in order to create goodwill and sympathy towards all the countries of the world for world brotherhood, the study of history can be given to the students on how the ancient tradition of Indian culture can be rooted in the present as well as in the future by coordinating it with the national history. Also, the skills of how to create a world religion of humanity can be learned from history, because history is the invention of the overall life of the society, for the development of the individual, society and nation, many historical examples can be given to instil the value of life and national values from history. Under this subject, the reputation of the country comes first, mercy, forgiveness, compassion for the fulfilment of duty is set of qualities recognized as eternal values at the global level, as well as business service, religious service, good service and self-service for spiritual strength. It will be useful for the prosperity of the present and future. Our religion, culture, epistemology, language, values were venerable in the world to restore its profundity from history.

Overall, the Government of India has implemented a new National Education Policy 2020 to provide quality education, innovative education, research facilities to the population of India in order to make India Knowledge Superpower and to overcome the shortage of manpower in science and technology education and industrial sector. In order to implement this policy in the state, as per the approval given to this policy in the cabinet meeting on 27th January 2022, a curriculum plan has been prepared as per the recommendation of Dr.Mashelkar committee as per the changes in higher education. In that regard, the National Education Policy 2020 will be implemented effectively and uniformly from the academic year 2023-2024. From the point of view of history education, the brilliance of Indian culture through the new curriculum will definitely help to take root according to the Sopan theory (Indian Theory of Seeping knowledge into layer to layer of society).

Skill development along with holistic development of students has been considered central so that every element of the nation can live life easily and beautifully and to develop a charitable attitude towards the nation.

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12. Impact of Covid 19 on Church Pastors and Churches in Maharashtra

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Abstract

Background: Covid 19 pandemic and lockdown has brought about a change in various aspects of the social and religious life of communities around the globe. The Church was not exceptional to the impact of Covid 19. The church has been affected by Covid 19 in various ways and it has implications for Church Leaders and Members.

This paper is aimed at noting various impacts on the Church in terms of Gathering, Finance, Spirituality and Rituals impacted by Covid 19 pandemic and the lockdown imposed nationally and regionally to prevent the further spread of the virus.

Keywords: Church Pastor, Church Leaders, Church, COVID-19, Lockdown

Introduction

The newly identified Virus named COVID-19 has affected all segments of the world. The first case was recognized in December 2019, and by February 2020, COVID-19 was spread in all countries. Due to the rapid growth of the virus, it was announced as a global epidemic and countries began to impose lockdowns to stop the spread of the virus. The Indian Government declared a lockdown on 22 March, 2020. COVID-19 and the lockdown affected the social, economic, and religious segments of the country. It attacked society at its core.

The COVID-19 pandemic and the lockdown imposed affected various parts of the society and community. The Church affected by COVID-19 cannot be neglected. The Church consists of Church Pastors, Church Leaders, and Church Members and they too got affected due COVID-19 pandemic and the lockdown. They faced different challenges. To this end, in-depth interviews with Church Pastors were initiated to understand their experience during COVID -19. These interviews provided a detailed picture of COVID-19's impact on Church Pastors, Leaders, Church Members and different elements of the Church. This research throws light on the Physical Gathering of the Church, Financial breakdown, Pastor's Financial weakened conditions and their Spiritual state.

Murff (2020) announced that the world is entering an unprecedented new era for the Church. The magnitude of the COVID-19 impact has been felt physically, emotionally, financially and spiritually. This article is more concerned with the impact of COVID-19 on Church Pastors, Leaders and Church Members.

Review of Literature

Several studies have been conducted in different parts of the world to examine the impact of Covid – 19 on Pastors and the Church and most of the studies have been carried out in the United States and Africa. Leslie J. Francis, Andrew Village (2022) examined the impact of Covid – 19 on Fragile Churches, they concluded that Covid 19 will lead to key lay people stepping down and being difficult to replace. (Malolos GZ, 2021) studied The Impact of COVID-19 on Church Gatherings in the Philippines: A Policy Analysis, they concluded that a high percentage of people expected to observe Church services and religious practices despite the pandemic. (Rimamsikwe Habila Kitause, 2021) Rimamsikwe Habila Kitause and Alapa Peters Odugbo investigated the Impact of Covid 19 on Churches in Nigeria. They observed that the pandemic period had both positive and negative impacts on the Church which in one way or the other aided Church advancement and expansion. Jerry Pillai investigated the shift after the Covid – 19 in Church and concludes the significance of the Church in the changing world scenario.

Objectives of the Study

The following are the objectives of the Study.

- To study the Impact of Covid – 19 on Physical Gatherings of Churches
- To study the Impact of Covid – 19 on Finances of the Church
- To study the Impact of Covid – 19 on Church Sacraments & Ordinance
- To study the Impact of Covid – 19 on Spirituality among the Church
- To study the Impact of Covid – 19 on Church Pastors/Leaders

Hypotheses

- H_1: Covid – 19 significantly affected Physical gatherings of Churches
- H_2: Covid – 19 significantly reduced Finances of the Church

- H_3: Covid – 19 significantly affected Church Sacraments & Ordinance
- H_4: Covid – 19 significantly impacted Spirituality among the Church
- H_5: Covid – 19 significantly affected Church Pastors/Leaders

Methodology

A structured and self-administered questionnaire on a five-point Likert scale ranging from '1 = Not at all' to '5 = Extremely' was floated via google forms among the target population to determine the predictability of the phenomenon. 38 respondents have been taken into consideration for the primary data survey to attain the research objectives of the current study. The respondents for the primary survey have been selected based on non-probability convenience sampling. The reason why this kind of sampling is chosen, is because of the impact of COVID-19 which has been on the country as a whole. It was quite difficult to approach every pastor in the target population because of which the questionnaire was floated online via google forms. The analysis was done on 38 responses.

Limitations

Christianity in Maharashtra is in minority and hence not much study has been carried out by researchers in this area, also many have not come forward to study the impact of COVID-19 and the lockdown.

The review articles for this review have been selected when the Churches have just begun to reopen and streamline, not much research and survey is being conducted so far as concern over the impact of COVID-19 on the Church.

The survey conducted for this review is much less as compared to Christian communities and Churches in Maharashtra.

Analysis and Interpretation

The researcher attempted to analyse the questionnaire for analysis and interpretation of the results. The researcher developed the questionnaire for the Pastors of the Church. The data was collected with the help of a 5-scale structured questionnaire. The format was in Likert scale to aid in tabulating data and determining analysis in the light of the research hypotheses.

A total of 38 respondents were contacted and asked to complete the research questionnaire and were considered for the research under the study. The respondents completed and returned the survey and provided feedback using the response sheet regarding the survey and the process.

Once the surveys were returned, the data was compiled, studied, and analysed according to the research purpose and related research hypotheses. The data obtained from the Likert type responses were compiled and the descriptive statistics was computed using the statistical analysis tools provided in Microsoft Excel. The Mean, Standard Deviation were calculated to determine patterns in the responses. The Chi-square Test was used in accordance with the research hypotheses. The researcher also keenly observed the Church Functioning, Organization and Management during the Covid-19 period. The observations and interviews were also considered for analysis and interpretation of the results.

The Impact of Covid – 19 on Physical Gathering

The Covid 19 stopped physical gathering in Churches. Mass Gathering is an essential element in the Church. The members of the Church were unable to visit the Church and meet their fellow Church members and even the Pastor of the Church. Due to a lack of gathering the sharing of sorrows and hardship to fellow Church members and the Pastor stopped completely. Sharing of sorrows and hardship gives some sort of relief and Church members often find prayers of one another, encouragement and motivation to get along with the troubles, suffering and difficulties of life.

The Covid 19 stopped the visitation of Pastors to the family of Church members where the Pastor counsels about life issues, he prays and encourages the Church member. The Churches conducted their meeting online, the services were broadcasted over Social Media platforms such as Facebook, YouTube and Zoom. The online Church has its drawback.

During the peak hour of the pandemic, the hospitals were full and ran out of beds and oxygen and many people lost their near ones, the fear was immense among the people, and in order to reduce the fear, the Church offered online prayer meetings where people were counselled, encouraged, talked about the issue of sin, the God's sovereignty over the crisis – offering hope to the fearful and broken world and strengthening their will-power.

The Impact of Covid – 19 on Finance

Every Sunday or in the mid-week whenever there is a gathering, there is an opportunity for Church members to give an offering. One of the parts of service is offering, where Church members give in terms of money it could be their tithe, thanksgiving offering, or donations to Church. Due to the lockdown, the Church gatherings were stopped and the offering has also been stopped. Many Church members have lost jobs which is the reason they are unable to give to the

Church. It has resulted in the financial breakdown of the Church. Various projects of the Church have been put to hold due to the financial breakdown in the Church. Few Churches have arranged online giving where the Church members can give through internet banking or various other mobile platforms.

The Impact of Covid – 19 on Church Sacraments & Ordinance

The Church has various religious sacraments and ordinances. The sacraments and ordinance of the Church are Lord's Supper, Baptism, Child Dedication, Marriage and Funeral. Apart from these sacraments and ordinances depending upon the Church system there could be additional sacraments and ordinances. Covid-19 has stopped these Sacraments and Ordinance of the Church. The sacraments and ordinances of the Church are something that takes place in the presence of the Church members as a witness. Baptism is a sacrament of public declaration of accepting the Lord Jesus Christ as the Personal Saviour and Lord. Such sacrament took place in the presence of the Church members since it is a public declaration. The marriage is also the taking of an oath in front of the Church members. The funeral service is carried out in Church before burial in the Cemetery where the Church members get the opportunity to express their memory of the deceased or eulogy, due to lockdown the funeral services were not held in Church, they were held in Cemetery with very less people to share in the grief and sorrow of the grieving family. The lockdown kept the Churches closed and it resulted in the stoppage of the Church sacrament and ordinance.

The Impact of Covid – 19 on Spirituality

The lockdown impacted the spirituality of the people. For many people, it was a time of strengthening their belief and faith. Their time of devotion, worship and prayerful life was shaped during the lockdown. Church Members sought God by reading Bible, Prayer and Meditation and thus they experienced peace in their life. Many Church members testified about how their belief and faith got impacted during the time of Covid – 19. Some families resulted into giving up Faith in God as they lost their loved ones. The shattering of emotions caused them to walk away from God. This was the negative impact of Covid – 19 on the Spirituality of the People.

Impact of Covid - 19 on Church Pastors/Leaders

Online Church: The Church Pastors remained at home as the lockdown was imposed but their ministry to the members was continued through different media platforms such as Mobile

Phones, and WhatsApp. Some Pastors started online Prayers over Zoom, Facebook and YouTube, explaining the crisis from the Biblical perspective and appealing to members to repent of their sins which is the central theme of the Bible.

Moral & Righteous Living: As there was fear, the people adhere to moral and righteous living. The Church Pastors and Leaders promoted Holiness and Purity through their sermons and teaching. Abandoning the sinful, immoral and unrighteous lifestyle was being proclaimed and as the result, many responded to this call of the Pastors and Leaders in the Church. There was an awakening in the consciousness and conviction of guilt and wrongdoing.

Growth in Spiritual Life: During the lockdown, the Pastors had plenty of time to meditate and spend time in Worship, Devotion and Prayer. This was the time they used to evaluate their spiritual life and remove drawbacks if any. Reading the Bible gave them much knowledge and insight into God and His Sovereign Authority in the events of the earth and Human beings. Thus, their Faith was strengthened during this time.

Financial Condition: In Maharashtra majority of Church Pastors are “Independent Pastors” which means they are not associated with mainline Church denominations or any Christian Organization. So, they do not receive the salary or benefits which the Pastors associated with or work under Association or Organization. The Independent Pastors have Churches in various rural areas and villages of Maharashtra. For such Pastors, the primary source of income is Church Offerings and House Visitation. Due to COVID – 19, the Churches were closed and hence there was no offering collection and no house visitation which resulted in the Financial Breakdown of the Pastors. The Pastors were not able to meet their basic needs such as Groceries, House Rent etc.

Rise of False Teaching: As online Platforms such as You-Tube, Zoom were available easily and at a very cheap cost. People with no Theological and Biblical knowledge began to deliver sermons through various online media platforms. Many of the sermons and teaching delivered were not authentic and the Bible was interpreted wrong in various contexts. Such teaching had no sound doctrine and was irrelevant in the context of the Bible. During the Lockdown spread of wrong teaching took place on a large scale. The rise of such wrong teaching and unsound doctrines added to the ongoing problem of uneducated Theological Pastors and Leaders.

Table 1 Test Statistics

	Has covid 19 significantly affected the Physical Gathering	Has covid 19 significantly reduced the Finances of the Church?	Did covid 19 affect the Sacraments and Ordinance of the Church?	Has Covid 19 affected Spirituality in the Church	Has Covid 19 affected Church Pastors & Leaders?
Chi-Square	10.421a	24.632a	11.474a	18.842a	4.368a
DF	4	4	4	4	4
Asymp. Sig.	.034	.000	.022	.001	.358

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 7.6.

Table 2 Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Physical Gathering	38	3.3158	1.50863	1.00	5.00
Finance of Church	38	3.9474	1.25089	1.00	5.00
Sacraments and Ordinance of the Church	38	3.4474	1.30896	1.00	5.00
Spirituality in the Church	38	3.0789	1.26024	1.00	5.00
Church Pastors & Leaders	38	2.9737	1.55071	1.00	5.00

As evident from the above table, each statement is having Standard Deviation greater than 0.5 and mean scores are distinctly different from 3.00. Therefore, it can be concluded that there were no unengaged responses.

Table 2 illustrates the Descriptive Statistics of the variables- independent, dependent and control. These findings show the central tendency and the dispersion of the indicators. The calculated mean of the Physical Gathering is 3.3158, Finance of the Church is 3.9474. The mean for Sacraments and Ordinance of the Churches, Spirituality among the Churches are 3.4474 and 3.0789 respectively.

Hypotheses Testing

1. **H_1: "Covid – 19 significantly affected Physical gatherings of Churches"**
   Asymp value is 0.034 is less than 0.05 hence Alternative Hypothesis, "H1: Covid – 19 directly impacted Physical gatherings of Churches" is accepted.
2. **H_2: "Covid – 19 significantly reduced Finances of the Church"**
   Asymp value is 0.000 is less than 0.05 hence Alternative Hypothesis," Covid – 19 significantly impacted the Finances of the Church" is accepted.

3. **H_3: "Covid – 19 significantly affected Church Sacraments & Ordinance"**
   Asymp value is 0.022 is less than 0.05 hence Alternative Hypothesis," Covid – 19 significantly affected Church Sacraments & Ordinance is accepted.
4. **H_4: "Covid – 19 significantly impacted Spirituality among the Church"**
   Asymp value is 0.001 is less than 0.05 hence Alternative Hypothesis," Covid – 19 significantly impacted Spirituality among the Church" is accepted.
5. **H_5: "Covid – 19 significantly affected Church Pastors & Leaders"**
   Asymp value is 0.0358 is less than 0.05 hence Alternative Hypothesis," Covid – 19 significantly impacted Online Church" is accepted.

Conclusion

The study was conducted to understand how the COVID-19 pandemic and related restrictions have impacted the well-being of the Church Pastors and Leaders in Maharashtra. The financial crisis, absence of physical Gatherings and wrong teaching impacted various elements of the Church. The Pastors and Leaders were no exception to this. The Pastors were not able to fulfil their Pastoral duties during the COVID-19 pandemic. The Pastors faced the financial challenge during the pandemic. The financial strain experienced affected their lives and families.

A positive impact was also observed. The Pastors experience growth in their Spirituality. The Pastors responded positively to the challenge in terms of Spirituality. It was a time of reorienting themselves. The Church leaders were able to spend longer time with their family members.

The faith of Church Members also increased during the pandemic. Their Spiritual life was affected positively. The negative impact the Church members had was the fear in their emotional and mental state. There was an increase in

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13. Plagiarism and Copyright Issues

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Abstract

Copyright is a form of intellectual property protection granted under Indian law to the creators of original works of authorship such as literary works (including computer programs, tables and compilations including computer databases which may be expressed in words, codes, schemes or in any other form, including a machine readable medium) dramatic, musical and artistic works ,cinematographic films and sound recordings. Information is increasingly being captured, processed and produced in digital form in recent times. Digital information can be copied at almost zero cost-at lightning speed, and without any loss of quality-making information available in digital form can be unattractive both for authors and distributors. A key problems in electronic publishing is that areas. In some cases, strict application of law in its current form can even result in severe restrictions that eliminate advantages brought by technology. Of course, it is possible to reinterpret existing law in its application to intellectual property right and permissions to the materials they hold. Permission seeking for selected materials begins immediately after selection. One of the serious problems in creating digital libraries is ti acquire copyright permissions.

Introduction

Knowledge is defined as what we know knowledge involves the mental processes of comprehension understanding and learning that go an in the mind and only in the mind, however much they involve interaction with the world outside the mind, and interaction with others. Whenever we wish to express what we know, we can only do so by uttering messages of one kind or another-oral, written, graphic, gestural or even through body language. Such massages do not carry knowledge, they constitute information, which a knowing mind may assimilate, understand, comprehend and incorporate into its own knowledge structures. Management support/ sponsorship demonstrating business value change management implication keeping up with new technologies security. In modern era information and Knowledge are playing important role for development of society and have become important productive factors for the modern economic system. Here a question arise hoe did we manage information?

Copyrights Challenges for Digital Libraries

Information is increasingly being captured processed and produced in digital form in digital form in recent times. Digital Information can be copied at almost zero cost-at lightning speed, and without any loss of quality making information available in digital form can be unattractive both for authors and distributors. A key problem in electronic publishing is that current legislation does not deal with the intricacies of computer-based, networked systems, resulting in many gray areas. In some cases, strict application of law in its current form can even result in severe restrictions that intellectual property rights and permission to the materials they hold. Permission seeking for selected materials begins immediately after selection. One of the serious problems in creating digital libraries is to acquire copyright permissions.

Fair Dealing in an Electronic Environment

Joint Information Systems Committee (JISC) and Publishers Association (PA) UK set up a working party to study the application of the fair dealing and library privilege permissions in digital environment. They published their guidelines for Fair Dealing in an Electronic Environment in 1998, which can be adopted in Indian context. Following are the “Fair use and not fair use” instructions given by JISC and PA.

Fair Use

a. Any incidental copying involved in the viewing of part or all of an electronic publication.
b. One accesses an electronic journal available on a Web Site or from university/Library network using the PC in his office. The browser automatically copies the article to his hard disk cache when he views the article.
c. A librarian can print onto paper one copy of part of an electronic publication at the request of an individual.
d. An individual can copy onto disk part of an electronic publication for permanent local electronic storage, where the disk is either a portable medium or a fixed medium accessible to only one user at a time but not for all of an electronic publication for permanent local electronic storage proper licensing is requires for it.
e. One can’t download an entire electronic journal or an issue to his PC, It needs permission from the copyright owner.

Not Fair Use

a. To scan the article into electronic form. It needs the permission. If granted, would cover whether the library could retain a copy permanently.

b. Transmit by computer network of the whole of an electronic publication for the purpose of permanent local electronic storage, reading on screen, and printing on individual request.

c. All the articles of conference proceedings transferred to are-writeable CD-ROM disk in a CD-ROM drive attached to one's computer so he can keep and read them at home.

d. To post part or all of an electronic publication on a network or WEB site open to the public.

e. To put an interesting group of journal articles up on the Department Web site for his colleagues to read. He must get permission of the copyright owners first.

The Future of Copyright in India

The copyright laws in India are set to be amended with the introduction of the provisions for ant circumvention and Right Management Information in the Indian copyright regime although India is under no obligation to introduce these changes as it is not a signatory to WCT or WPPI With the amendment of the copyright. Act in 1994. Which came into force on 10 May 1995, the situation with regard to copyright enforcement in India has improved. According to Ramdas Bhatkal of Popular Prakashan, Bombay. "We had problems of piracy relation to medical textbooks before the law was amended. At that time we found that while the law may be on our side, it was necessary to get a court order could be implemented. Therefore we preferred to accept the situation and did nothing. Since the changes which make copyright violation a cognizable offence it has been possible to use the legal mechanism as a deterrent"

Copying a book is similar to stealing somebody's jeweler. Large scale organized copying is like robbing a jeweler's shop or a bank. But then, there is a major difference. In the case of a bank robbery the newspaper are full of sensational news and the whole might of the state, especially the police, jumps into catch the culprit, there is pressure of public opinion even on the judge trying the case. The effect is electric. On the other hand, in the case of book pirate, the police justify their inaction by pointing to murder dockets: the state deflects the desperate appeals of Copyright owners with nonchalance and the judge sits with a so what attitude while the man on the street remains in stark oblivion.

The purpose of copyright law is it to balance the rights of creators to earn a living from their works against the need for public access to their work. This is done by providing copyright exceptions that allow fair dealing with copyright works. It is through such exceptions that prescribed libraries have the right to copy extract of copyright works for individual users.

Copyright

Copyright is defined as a legal term describing rights given to creators for their literary and artistic works. Copyright is a form of protection provided by the laws of any country to the authors of original works of authorship, including literary. Dramatic, musical, artistic and certain other intellectual works. Copyright is a statutory term, defined in dictionary as the exclusive legal right to the publication, sale etc. of a literary or artistic work.

Classes of Copyright System

To keep pace with the dynamic environment, a number as changes have made in the copyright Act as 1957 by the Amendment Act of 1994, which came into force from May 1995, copyright law provided protection for the following classes as works.

1. Literature Work refers to written or printed matter. The definition of literary work was amended to include computer program, table and compilation including capture database.
2. Dramatic Work includes any piece of recitation Chorographic work or entertainment the dumb show, the scenic arrangement or acting form, which it fixed in writing or otherwise but does not include a cinematograph film.
3. Musical Work mean a painting, a sculpture, a drawing an engraving or a photograph wheather or not any such work possesses artistic craftsmanship.
4. Artistic Work Mean a painting, a sculpture, a drawing an engraving or a photograph wheather or not any such work possesses artistic craftsmanship.
5. Cinematograph Film mean any work visual recording on any medium produced through a process from which a moving image may be produced by any mean and includes a sound recording accompanying such visual recording.
6. Sound Recording means a recording as sound from which such sounds may be produced regardless of the medium on which such recording it made or the method by which the sounds are produced.

Another area of copyright infringement which needs to be tightened up relates to protection of author's vis-à-vis the assignee or the licensee. There is need to develop a model contract, too, which should also provide protection for the author's rights in the fast changing scenario of publishing and Internet, etc.

Conclusion

The provisions of the abovementioned two enactments show that the Copyright protection in India is strong and effective enough to take care of the copyright of the concerned person. The protection extends not only to the Copyright understood in the traditional sense but also in its modern aspect.

Thus, on-line copyright issues are also adequately protected, though not in clear and express term. To meet the ever-increasing challenges, as posed by the changed circumstances and latest technology, the existing law can be so interpreted that all facets of copyright are adequately covered. This can be achieved by applying the "purposive interpretation" technique, which requires the existing law to be interpreted in such a manner as justice is done in the fact and circumstances of the case. Copyright is a serious problem for developing digital libraries. Indian Copyright act is silent about the copyright application in digital environment. In USA, digital millennium copyright act has been interpreted in the context of digital libraries. For Indian context one is going to design their digital library first he needs the permission from the copyright holder with some conditions, which is beneficial to the copyright holder. Copyright protects the copyrighted materials for certain period. After that period the public has to enjoy freely that intellectual material. Now in the case of India, we a great reservoir of valuable literature handed down to us from ancient time, which is freely available. National Library should digitize all those documents, which are already coming under the public domain.

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14. New Validated AS Tool to Investigative Prevalence of Bullying Amid Secondary School Students of Mumbai, India

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Abstract

Bullying is a repetitive violence perpetrated among peers and is considered to be a public health problem that affects the development and learning teaching process of school-aged children and teenagers. Bullying can have multiple consequences with both short and long term effects like anxiety, loss of self-confidence, sleep disorder, depressive disorder, social phobia etc. The new validated AS tool (with 42 questions) was used to study on secondary school students. Sample used for study was 600 students among that 312 were boys and 288 girls of different parts of Mumbai, India. Bullying tends to increase throughout the elementary years, peak during in primary adolescent middle school years and decline somewhat during later adolescent high school years, indicating that middle school is the setting with the highest prevalence. The verbal bullying like called by names shows highest percentage of bullying in various schools which is in the range between 24 to 26%, Whereas few schools shows highest prevalence of verbal bullying (26%). Few schools showing 19.3 % of bad comments type of bullying. The physical bullying like hitting, kicking shows that the schools showing high percentage of bullying ranging from 25 to 27.3%.

This paper describes the new validated AS tool to addressing prevalence of bullying between secondary school students of Mumbai, India. The overall bullying shows in direction like Spread Rumors/Told Lies > Hit/kicked > Called by Names > Bad Comments.

Key Words: Bullying, Secondary School students, Violence, AS tool.

Introduction

School bullying has been identified as a major problem in many countries. Bullying among children as a repetitive negative act by one or more students against one another. There are many studies to find out prevalence of bullying, but it should be found out by every four years to check the extent of bullying suggested by World Health Organization (WHO). Schools, parents and government should update and know what is the percentages of school bullying so that at the time action can be taken.

The present study is about finding prevalence of bullying among secondary school students of Mumbai. For that researcher took 600 students from all over 12 school from different parts of Mumbai. Among 600 students, 312 students were boys and 288 students were girls.

Objectives of the study was to examine the prevalence of bullying[1] among secondary school students and to study the types of bullying prevalence among secondary school students (table no.1).

Results and Discussions

Table No. 1: Bullying Percentage Data with different Options in different Schools (All values of table no. 1 are in %)

School Name / Options	A	B	C	D	E	F	G	H	I	J	K	L
Never	55.56	70.81	67.83	62.75	33.65	63.87	62.65	75.64	66.62	25.86	25.86	46.24
Sometimes	23.77	14.81	12.75	20.37	34.58	29.96	24.21	19.81	28.48	37.70	37.69	28.19
Often	10.88	2.95	5.15	4.86	17.34	4.84	3.39	2.89	2.52	28.05	27.91	19.48
Always	9.77	11.43	13.66	12.01	14.90	1.33	9.74	1.02	2.24	8.48	8.47	6.09

The researcher took data from nearly 12 schools from secondary school students. For simplification school s were given code. It is found that bullying is happening in all schools but the percentage varies. It is seen that more than 50% students saying that no bullying is happening but nearly 14 % students saying it is always happening in school. Sometime happening bullying is ranges from 12% to 37 % which is also considerable amount and often happening bulling is found to be 2 % to 28%. Most of the studies use survey data from students in grades 5 through 12, thus emphasizing middle and high school settings; although several studies focus on elementary grades.[2]

Some times and often happening bullying is more than always happening bullying this is may be due to that such type of bullying may not happen intentionally it may be reaction of some action. Always happening bullying is constantly taking place because some students trying to give trouble to other students. This shows that secondary schools are having highest prevalence[3] of bullying. This may be due to adolescent stage of development.[4] All students are enthusiastic there for some times it may happen vigorously, but not with intention therefore this percentages is high. Students do bullying intentionally is showing low percentages but it is happening constantly. [2] These studies have established bullying's prevalence among school-aged youth, leading researchers to assert that bullying is a significant public health concern.[5,6,7]

Bullying is mainly divided in to two parts direct bullying and indirect bullying (fig. no.1). In direct bullying verbal bullying and physical bullying is counted.

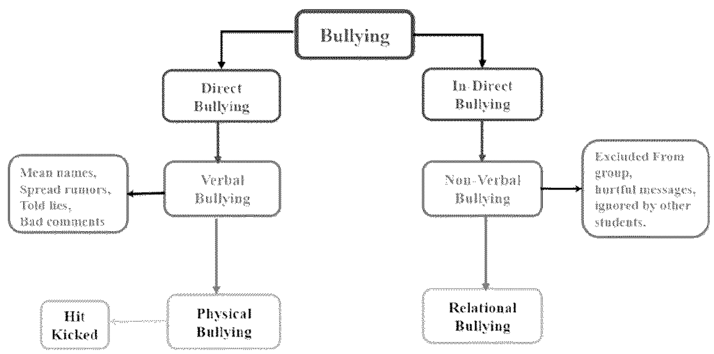

Fig. No. 1: Block Diagram of Bullying and different Forms of Bullying

The Direct Bullying includes verbal bullying includes called by mean names, spread rumors, told lies, bad comments and physical bullying is like hit, kicked. Whereas indirect bullying contains Non-Verbal purposely left out students or excluded from group, hurtful messages, ignored by other students. The relational bullying is like locked indoors. By Non-teaching staff money or thing taken & damaged, threatened to do unwanted act.[8] The verbal and physical bullying studied in schools and types of bullying is mentioned in table no.2.

Table No. 2: Verbal and Physical Bullying Percentage in Different Schools

Types	Verbal Bullying percentage			Physical Bullying percentage
School	Called by Names	Spread Rumors/Told Lies	Bad Comments	Hit/kicked
A	16	12.6	15.3	16
B	16	13.3	7.3	10
C	18	20	9.3	8
D	24	22.6	12.6	16
E	26	26	15.3	25.3
F	4.6	8.6	8	16.6
G	18.6	17.3	12	12
H	6.6	10	5.3	8
I	10	8	8	8.6
J	24	33.33	19.3	27.3
K	24	33	19	27
L	10	10	14.6	16.6

(All Values of Table no. 2 are in %)

The verbal bullying like called by names shows highest percentage of bullying in 4 schools in the range between 24 to 26%, Whereas School E shows highest prevalence of verbal bullying, and it is about 26% . In these 2 schools showing more percentage of bullying. The school J showing highest prevalence among remaining schools and it is about 33%. At the same time, only one school like I, which shows 8 % of such type of bullying.

Here also two schools showing highest percentage of bad comments. The school J shows 19.3 % of such type of bullying and one school showing least percentage of this type of bullying (School H shows 5.3% of such type of bullying).

The physical bullying like hitting, kicking shows that approximately 3 schools showing high percentage of bullying ranging from 25 to 27.3%. The school J shows 27.3% of physical bullying which is highest among all schools and two schools showing least percentage i.e. 8% of physical bullying in school C and H. The verbal and physical bullying in different schools is graphically presented in fig.no.2

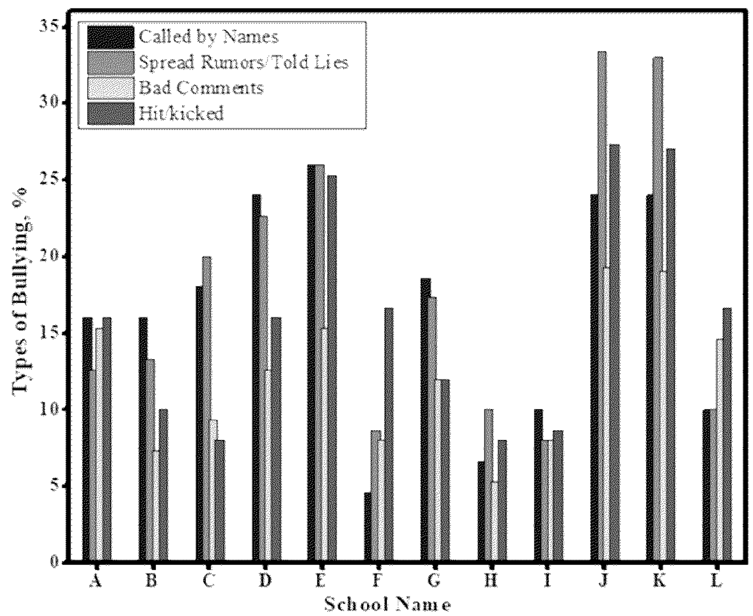

Fig. No. 2: Graphical Presentation of Verbal and Physical Bullying in Different Schools

The indirect bullying is one of the most important as like as physical bullying. The indirect bullying study was studied in different schools and the data is mentioned in table no.3. Bullying gave trouble to victim but indirectly like purposely excluded from group and ignored by other students.

Table No. 3: Indirect bullying percentage in different school.

School	Purposefully Left out/Excluded from Group	Ignored by Other Students
A	12	17.3
B	5.3	13.3
C	8	14
D	10	15.3
E	25.3	28
F	5.3	10
G	8	11.3
H	9.3	10.6
I	17.3	14.6
J	24.6	30.1
K	24	30
L	8	13.3

(All values of table no. 3 are in %)

It is observed that, school E shows high percentages i.e. 25.3% and two schools J and K show nearly same percentages ranges from 24-24.6 %. Completely ignored by other students is also indirect type of Bullying. The two schools like J & K shows higher percentage of bullying nearly 30 %. It is also seen in all schools it is happening more or less but considerably.

The graphical presentation of indirect bullying shown in fig. no.3

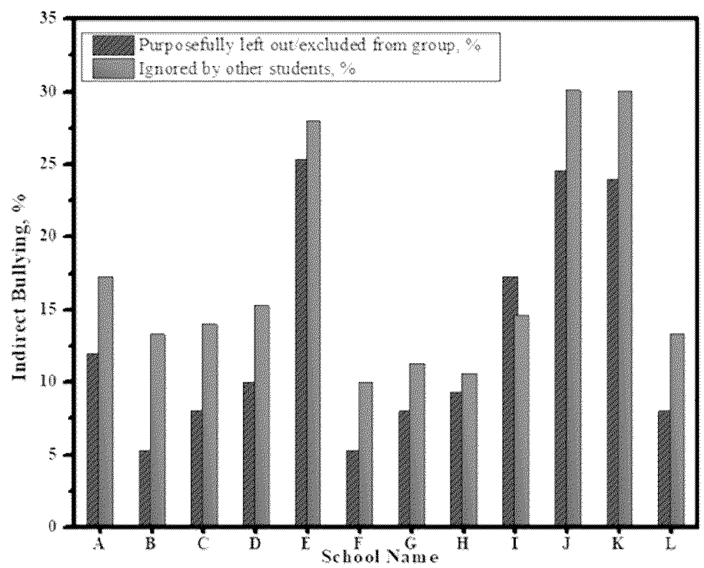

Fig. No. 3: Indirect Bullying in different Schools

Findings

On Prevalence 20-29% of students are involved in bullying (either as a bully, victim, or bully-victim) at least once per year. More recently, however, the U.S. Department of Education (DOE) (NCES, 2017) has reported on data collected in 2015 and has found a 21% prevalence rate of bullying, which marks a decline from Nansel and colleagues' 29% figure, as well as the U.S. DOE's own figure of 28% from 2005

- Bullying occurs throughout the all schools during adolescent [3] middle school years.
- Forms of bullying include traditional (physical, verbal, relational) and cyber.
- There are no measurable differences in bullying prevalence between schools from Mumbai and Mumbai, suburban area.
- When considering consequences of bullying and victimization, context must be taken into account, only surface bullying incidents are not helpful in understanding bullying's prevalence.
- Peer norms play a significant role in bullying prevalence

Bullying tends to increase throughout the elementary years, peak during early adolescent middle school years, and decline somewhat during later adolescent high school years, indicating that middle school is the setting with the highest prevalence.

Methodology of Study

Tool used for this Study was Made by Researcher

Olweus bully questionnaire used by many researchers including abroad and in India, but for effectively use we must change or convert tool in Indian scenario. The tool used for present study was" AS bully victim Questionnaire" The tool is validated for study, researcher collected data from many students and calculated reliability of tool by Cronbach's Alpha. It shows following results. In the present study, Cronbach's alpha (α) is 0.863, which indicates a high level of internal consistency for scale. Formula used for calculating percentage is -

Percentage= Number of students giving opinion divided by Total number of students in to 100

Conclusion

The tool used for study shows better reliability and validity. It gives picture of prevalence of bullying happened. It also gives idea about bullying type that is direct bullying or indirect bullying. Overall bullying happening is ranges from 20- 29 %. It need to be taken in consideration.

Consequences of Bullying were Declined self-esteem , Social isolation , Self-harm , Increased negative perceptions of school climate , Depression, Poor academic performance, Anxiety , Increased suicide ideation and attempts , Physical health problems over time , Poorer emotional and social adjustment over time , Increased anxiety disorders in young adulthood. Therefore studying prevalence of bullying is most important task now a days . Bullying in schools, in any form or with any frequency, represents both a public health concern and a human rights violation. Schools have a responsibility to understand, address, and prevent bullying with research-supported data, which will lead to more effective interventions.

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15. A Study on Customers Awareness Regarding Complaint Management System in Banks

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Abstract

Customer satisfaction is the key to the success in the service industry. Banks provide various types of retail and corporate services to clients. Customers expect perfection in the services offered by banks. The slightest mismatch of expectation and actual receipt of services causes dissonance among the customers. For that purpose, banks shall have complaints management systems in their banks. Also, the complaint management system is one of the customer retention strategies. To analyze the level of awareness among bank customers regarding the complaint management system, a descriptive research design has been followed. The present study is based on the Primary data collected through a self-administered & structured questionnaire and secondary data collected through reference books, journals, newspapers, websites, etc. The research work has been carried out on bank customers in the Mumbai & Thane district in the state of Maharashtra, India for which Random probability sampling and non-probability purposive sampling have been used. The collected data have been analysed by using relevant descriptive statistical tool Percentages. The result of the present study indicates that the excepted level of awareness among the customers of the bank regarding the complaint management system is quite satisfactory. But still, banks shall spend more time and effort in identifying the problem areas and give solutions for the same accordingly to raise customer satisfaction To raise the level of awareness, display the complaint management system on the branch offices' website, ATMs, and the welcome kit is highly recommended along with regular advertisement awareness campaigns, messages and emails to the customers.

Keywords: Customer awareness, Grievance redressal, Satisfaction level, Complaints, Banking Ombudsman, banks.

Introduction

In this present era of competitive banking excellent customer service is the most important tool for sustained business growth. The bank emphasizes customer delight and customer satisfaction. Customer complaints are an inevitable part of a business concern especially if it is a part of a service industry like banking. A complaint management system plays a strategic role in the success of the business. Complaint management attracts attention primarily as it is often used as a tool to retain an existing customer. Customer dissatisfaction would spoil the image of the bank. It is of paramount importance for any bank that their customer should be well aware of the procedures of the redressal system prevailing in the banks.

Review of Literature

- Several studies have been conducted on analysing the level of awareness regarding complaints procedures & banking ombudsman schemes among bank customers
- Mahesh Baburao: (2011), points out that the awareness provided by the Reserve Bank of India is much low and still awareness has to be created. He also points out that if there is an individual ombudsman for each urban cooperative bank, then objectives would be satisfied.
- Patil: (2011), in his study pointed out that the awareness of the Banking Ombudsman Scheme provided by RBI is much low and the need is to create awareness of the scheme. The most specific observation the study rendered was that if the individual Urban Co-operatives Banks have their own Ombudsman for speedy settlement of the customers' grievances
- Ghosh and Kailash (2010) have strongly argued that customer knowledge is also one of the most important factors which can affect satisfaction
- Kavitha (2015) in her paper aims to study consumer awareness and factors affecting online shopping. The study has used Qualitative and Quantitative research methods to study the impact of demographic factors of consumers on online shopping, respondents' behavior, awareness of the rules and regulations of online shopping, and benefits and services of online shopping. Results of the study reveal that online shopping in India is significantly affected by various demographic factors like age, gender, marital status, family size and income.
- The author Uppal's (2010) in his paper analyses the extent of complaints in three types of bank groups, namely: public sector banks, Indian private sector banks and foreign banks. The number of complaints is maximal in public sector banks and the maximum

complaints are related to deposits, credit cards and housing loans. The study was related to 2006 - 2007 and 2007 - 2008. However, the paper intends to solve these complaints with different methods.

Research Objectives

1. Primary Objectives

a. To study & analyze the level of awareness among bank customers regarding the complaint management system

b. To generate a profile of the bank customer with the knowledge and without the knowledge of the complaint management system on the basis of socio-economic parameters such as gender, age, income level, occupation level, literacy level, etc

2. Secondary Objective

- To give suggestions on the basis of the study for the effective spread of awareness among customers using different tools & techniques.

Research Methodology

- **Research Design:** Descriptive research design has been followed within which the research was conducted to obtain the objectives of the study.
- **Area of the Study:** The research work has been carried on in the Mumbai & Thane district in the state of Maharashtra, India.
- **Target Population:** All bank customers of Mumbai & Thane districts belonging to all age groups, categories, income groups & all clusters of the society were the target population of the study.

Methods of Data Collection

1. **Primary Method:** The primary data was collected through a self-administered and structured questionnaire which was based on socio-demographic variables, awareness of complaint procedures, and satisfaction level of bank customers.
2. **Secondary Method:** The secondary data related to the conceptual framework and review of the literature was collected through reference books, journals, newspapers, websites, Banking Ombudsman Scheme, annual reports, etc.

Sample Selection

All categories of banks operating in the Mumbai & Thane district form the sampling population of the study. Random probability sampling and Non-probability purposive sampling have been used.

- **Sample Study -** A cross-sectional survey was conducted among different bank customers of different age groups. Questionnaires were forwarded to the customers digitally and the number of respondents were 141.
- **Pre-testing / Pilot Study -** The questionnaire developed was subjected to pre-testing and during pretesting, the questions were analyzed to check the reliability and comprehensibility of the questionnaire. Required corrections were made in the questionnaire. Mainly corrections were in regard to the wording and instructions provided.

Research Instrument

- A suitable and structured questionnaire was designed and administered for collecting responses from the bank's customers in relation to the level of awareness of the complaint management system in banks.
- Statistical Tools: The collected data have been consolidated, tabulated and analyzed by using relevant statistical tool Percentages.

Data Analysis and Interpretation

A Social and Economic Profile of Respondents

The socio-economic variables of the bank customers are framed in **Table 1** as per six factors gender, age, marital status, educational qualification, occupation, monthly income as these factors influence the degree of customer satisfaction with regard to the products and services offered by the bank.

TABLE 1 Distribution of Samples as Per Demographic Variables

Factors	Options	Number	Frequency %
GENDER	Male	78	55.3
	Female	63	44.7
AGE	Up to 20 years	18	12.8
	21-30 years	76	53.9
	31-40 years	20	14.2
	41-50 years	20	14.2
	Above 50 years	7	5
MARITAL STATUS	Married	60	42.6
	Unmarried	81	57.4
EDUCATIONAL QUALIFICATION	Upto Plus 2	8	5.7
	Under Graduation	29	20.6
	Graduation	48	34
	Post-Graduation and above	56	39.7

OCCUPATION	Government employee	2	1.4
	Private Employee	69	48.9
	Businessmen	17	12.1
	Student	28	19.9
	Others	25	17.7
MONTHLY INCOME	0-15,000	52	37.7
	15,000-25,000	34	24.6
	25,000-50,000	30	21.7
	50,000-1,00,000	8	5.8
	Above 1,00,000	17	10.2

Source: Sample Study

The above table reveals that the majority of the respondents in the present study out of 141 were male 78 i.e 55.3%. Whereas females were 63 i.e 44.7%.The age of respondents is the important demographic characteristic of bank customers i.e 53.9% were in the age group 21-30, age group 31-40 and 41-50 (14.2%) respectively. Up to 28 years, there were 12.8% of respondents. Only 5% were above 50 years.

In the present study, 57.4% of the total respondents were unmarried as opposed to 42.6% who were married. From the above table, it is observed that 39.7% were highly qualified i.e post graduate and above. Further, occupation-wise 48.9% of respondents were from the private sector followed by students who were 19.9% of the total respondents. Other categories were 17.7% and businessmen were 12%. Out of the 141 respondents, only 2 respondents were government employees which account for 1.4%.

Table 2 Distribution of Samples as Per Bank-Related Variables

Factors	Options	Number	Percentage
Type of banks	Nationalised bank	58	41.1
	Co-operative bank	20	14.2
	Private bank	61	43.3
	Foreign bank	2	1.4
Type of account	Saving	127	90.1
	Fixed	3	2.1
	Current	11	7.8
	Recurring Deposit	Nil	Nil
Transactions with banks	Daily	37	26.2
	Weekly	25	17.7
	Monthly	26	18.4
	When required only	53	37.6
Number of years you have been a customer of the bank	Upto one year	17	12.1
	1-5 years	51	36.2
	5-10 years	34	24.1
	More than 10 years	39	27.7

Source: Sample Study

Table 2 indicates the distribution of samples accounting to bank related variables. In the present study, it can also be inferred that the ratio between private banks and nationalized banks are more likely equal percentage (43:41)Most of the account holder were having saving account (90%)Majority of the respondents deal with banks, and as and when required (daily or weekly or monthly) The data also indicates that most of the customers had a relationship with the banks for 1 to 5 years. More than 5 years and more than 10 years are more likely equal percentages (24:27)

Table 3 Distribution of samples as per customer's level of Satisfaction

Factors	YES		NO	
	Number	Percentage (%)	Number	Percentage (%)
Are you satisfied with the services provided?	128	90.8	13	9.2
Any complaints with the bank?	29	20.6	112	79.4
Have you got any response to your complaints?	109	77.3	32	22.7
Do you intend of shifting your account to another bank?	19	13.5	122	86.5

The analysis based on customer level of satisfaction is dealt with in table 3. The result depicts that around 91% of customers were satisfied with the services provided. Only 20.6% of customers have complaints with the bank and the remaining 79.4% of customers don't have any complaints with banks. It can be correlated with the result that 86.5% of customers do not want to shift their accounts to other banks. Also, 77% of customers have got responses to their complaints which add to the reason for not shifting.

Table 4. Level of Awareness Regarding Complaint Procedure

Sources of Information	Number	Percentage
Newspaper	33	23.4
Bank staff	48	34
Bank's website	62	44
Bank brochures/ other publications	27	19.1
Family, Friends or relatives	55	39
Exhibition and awareness camps by banks	14	9.9

Banks website is the crucial source of information regarding complaints procedure and other details relating to it. 44% of respondents look up to the website followed by 39% who get the required information from family, friends, or relatives. For 34% of the respondents, the contribution of the bank staff in the dispersal of awareness regarding complaint procedures was significant.

Table 5 Distribution of Samples as per the nature of complaints

	Yes		NO	
	Number	**percentage (%)**	**Number**	**percentage (%)**
Any Complaints Against				
Credit card	19	13.48	122	86.52
ATM /Debit card	32	22.70	109	77.30
Navigation through bank website/ bank application	28	19.86	113	80.14
Passbook updating (through the auto machine)	40	28.37	101	71.63
Availability of forms	22	15.60	119	84.40
Interest / other charges	36	25.53	105	74.47
Loan details	25	17.73	116	82.27
Any other issues	24	17.02	117	82.98

The above table indicates the nature of complaints customers have under various categories. The majority of the customers 28.37% had complaints about passbook updates (through auto machines). As per the present study, the other two categories which should be a matter of concern for banks are Interest / other charges (25.53%) and ATM /Debit cards (22.70%).

Table 6 Distribution of Samples as Per Mode to Register a Complaint

Mode to Register a Complaint	Yes	No
Helpline	69	48.9
Email to the customer care	48	34
Use of official website	27	19.1
Complaints/ suggestion box at the branch	14	9.9
Contact personally at the concerned branch	76	53.9

It can be observed from Table 6 that the maximum number of customers i.e 54% prefer to contact the branch personally. The second preference was the helpline (49%) followed by an email to the bank (34%) and the use of the bank's official website (19.1%). The last preferred mode of the complaint was the complaints/ suggestion box at the bank.

Table 7

What do you do when you have a Complaint?	Yes	No
Never feel like complaint	27	19.1
Complain to the bank only when loss of money is involved	38	27
Complaint for other problems	33	23.4
Don’t have complaint	43	30.5

Data in table 7 demonstrates that 30.5% customers don’t have any complaints whereas out of remaining customers 27% customers complaints to the bank only when loss of money is involved and 23.4% complaints for other problems. 19% of the respondents never feel like to complaint i.e keep their grievances to themselves.

Conclusions and Suggestions

The result of the present study indicates that the excepted level of awareness among the customers of the bank regarding the complaint management system is quite satisfactory. It demonstrates that the required efforts are taken by the banks and RBI to raise the awareness level. But there is a scope for improvement bank shall spend more time and effort in identifying the problem areas and give solutions for the same accordingly to raise customer satisfaction.

Banks shall improve themselves to mitigate the complaints of the bank customers, or else their survival will become difficult in the competitive era. Also, the reserve bank of India (RBI) has instructed all the banks to solve the complaints of the customers at the earliest. Each and every bank should establish a customer care center to solve the complaints of the customers.

To raise the level of awareness of complaint management, it is recommended to display the step-wise complaint management system. In the branch offices in the public domain i.e website and ATMs Also, it should be a part of the welcome kit provided to the customer while opening their account in the bank. In addition to this on a regular basis awareness campaigns, outreach activities and advertisement campaigns shall be planned and executed. Information regarding the complaint management system can be disseminated through messages and emails at regular intervals.

Limitations

1. The researcher requested respondents to be honest in answering the questionnaire however there is an emotional issue often attached to monetary aspects that make respondents reluctant to express themselves.
2. Narrow geographical sample of respondents filling out the survey.
3. The study has been conducted only on the basis of 141 respondents in Mumbai and Thane district. The sample size is relatively small so some caution would be needed before generalizing the results to the entire population.
4. The result is based on primary and secondary data which has its own inherent limitations.

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16. Synthesis and Comparative Optical Study of Pure and Mg^2+ Doped ZnS Nanoparticles Prepared Via Chemical Co-Precipitation Method

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Abstract

In the present study, zinc sulphide (ZnS) nanoparticles were synthesized using simple chemical co-precipitation method. As-synthesized nanoparticles were compared by doping magnesium chloride ($MgCl_2$) in simple reaction between zinc chloride ($ZnCl_2$) and sodium sulfide (Na_2S). The prepared nanoparticles were confirmed using ultraviolet-visible (UV-Vis) absorption spectroscopy and X-ray diffraction (XRD) analysis. Moreover, from UV-Vis optical spectroscopy study, the band gap of the nanoparticles was determined. The particle size of as-synthesized pure and Mg^{2+} doped ZnS nanoparticles were calculated by Debye-Scherrer formula according to XRD spectra. Both the characteristics exactly match with each other from broad peaks of UV-vis. and XRD spectra. The particle size of as-synthesized Mg^{2+}-ZnS nanoparticles was found near about 4.3 nm.

Keywords: Nanoparticles; Mg^{2+} doped ZnS; UV-Vis spectroscopy; X-ray diffraction (XRD).

1. Introduction

Nanocrystalline materials have attracted much attention in recent years due to the change, at nanoscale, which occurs when their crystallite radius becomes comparable to the exciton Bohr radius. Zinc sulfide is among the widely studied II–VI group semiconductors because they show significant quantum confinement effects which influence their electrical and optical properties [1, 2]. They have found applications particularly in photovoltaic, photonic, and optoelectronic devices and sensors [3]. Nanometric semiconductor particles exhibit novel properties due to the large number of surface atoms and the three dimension confinement of electrons [4]. Many methods have been used to synthesize ZnS nanoparticles such as sol - gel, electrochemical deposition, Sonochemical, hydrothermal technique.

First time, Bhargava et al. [4] reported that Mn^{2+}-doped ZnS shows extraordinary photoluminescence (PL) efficiency which lead to extensive studies of doped ZnS NPs and search for their potential applications in display devices and field emission devices [5-9]. Dopant ions interact with host atoms and may bring electronic state within the band gap rendering peculiar properties to the material [10, 11]. The location of dopant in the host material produces changes in properties of ZnS NPs. Nowadays, various transition metal ion and rare earth metals are popularizing as dopants due to their spectroscopic properties and potential application in the development of lasers, phosphors and up-conversion lasers.

In the present study, we report synthesis of Mg^{2+} doped ZnS NPs by chemical co-precipitation method. The possible effects on optical properties of ZnS NPs are studied. The synthesized NPs were characterized by powder X-ray diffraction (XRD) and ultraviolet–visible (UV–Vis) spectroscopy.

2. Experimental

2.1 Materials and Methods

All chemicals, zinc chloride ($ZnCl_2$), sodium sulphide (Na_2S), and magnesium chloride ($MgCl_2$) of analytical grade purity purchased from Sigma-Aldrich Germany, are used as received without any further purification. Double distilled water is used in the synthesis process.

2.2 Synthesis of Mg^{2+}-ZnS NPs

ZnS NPs were synthesized by using chemical reduction method. About 0.5 M stock solutions of ZnCl2and Na2S was prepared. About 0.5 M solution of $ZnCl_2$ added into the round-bottom flasks containing 100 ml double distilled water. In total 1wt % solutions of $MgCl_2$ were added drop by drop into round-bottom flasks. The mixtures were stirred for 10 min continuously using magnetic stirrer. The chemical reaction occurs as follows,

$$\mathrm{ZnCl_2 + Na_2S \rightarrow ZnS + 2\ NaCl} \ldots\ldots\ldots\ldots\ldots \text{(a)}$$

Finally, 0.5 M Na_2S solution used as reducing agent was added drop by drop to the mixtures under continuous stirring. Color of solutions turned to milky white that confirmed the formation of ZnS NPs. Stirring continued for 2 h to yield white precipitate. The precipitates were centrifuged for 25 min at 3,500 rpm. Final product washed several times by double distill water and dried optically at a temperature 40 °C for 16 h to remove water and other volatile organic by-products formed during synthesis process. The samples in powder form used for further characterizations.

2.3 Characterization

The prepared NPs were characterized by UV–Vis spectrometer (Black-C-SR, Stellarnet, USA) to record the absorption and transmission spectra covering wavelength range from 190 to 1,000 nm.

Powder XRD spectra were recorded using Rigaku rotating anode (H-3R) diffractometer (MinFlex II) with irradiation from Ka line of copper (k = 1.5418 A °) and angle 2θ ranging from 20° to 80°.

3. Results and Discussion

3.1 XRD Studies

Figure 1 shows the indexed XRD pattern of pure and Mg^{2+} doped ZnS nanoparticles. From Fig. peaks are observed at 2θ = 28.86, 32.134, 45.871, 48.78, 56.87 and 66.594 corresponding to crystal planes (0 1 2), (1 0 21), (0 1 45), (1 0 46), (0 1 58) and (2 0 41) respectively, which match those of hexagonal primitive crystal structure given in the literature (JCPDS PDF No.72-9270). The broadness of peaks indicates formation of very small-sized NPs. We have not found any diffraction peaks of dopant Mg^{2+} suggesting that the dopants ions have entered into ZnS NPs as substituent which enhance the purity of sample. From the x-ray patterns the broadening of the diffraction peaks of the nanoparticles is obvious [12-14] which is characteristic of nanosized by applying Debye- scherrer formula [15, 16].

—— ………………….. (1)

Where D is the mean particle size, λ is the wavelength of incident X-ray (1.5406 °A), θ is the degree of the diffraction peak, and β is the full width at half maximum (FWHM) of the XRD peak appearing at the diffraction angle θ. The broadening of the absorption spectrum could be due to the quantum confinement of the nanoparticles. The mean calculated crystallite size of the ZnS nanoparticles as shown table (1).

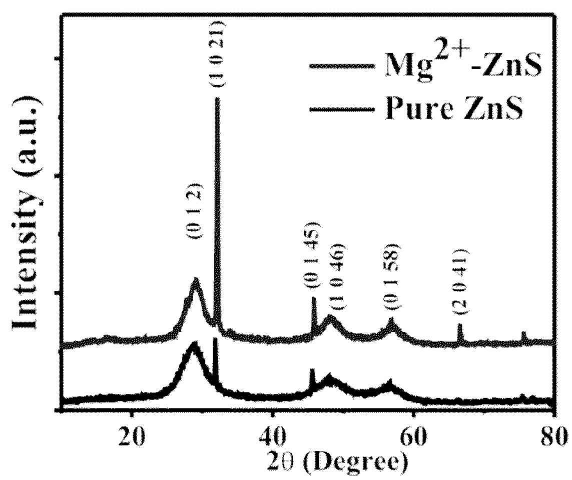

Fig.1. Powder XRD spectra of a pure and Mg^{2+} doped ZnS nanoparticles.

Table 1 Crystallite Size of as-synthesized nanoparticles

Sample	**No. peak**	**2θ$_{(deg)}$**	**FWHM (β)**	**D (A°)**	**Crystalline Size (nm)**	**Average Crystalline Size (nm)**
Pure ZnS	1	28.51	3.128	4.11	2.63	4.26
	2	48.08	1.891	5.01	4.60	
	3	56.69	1.622	4.87	5.57	
Mg^{2+}-ZnS	1.	28.86	3.091	3.21	2.66	4.30
	2.	48.78	1.8654	2.72	4.68	
	3.	56.87	1.618	1.95	5.58	

3.2 Williamsone-Hall methods

Strain-induced broadening arising from crystal imperfections and distortion are related by . A remarkable property of Eq. (1) is the dependency on the diffraction angle θ. The W-H method does not follow a 1/cosθ dependency as in the Scherrer equation but instead varies with tanθ. This fundamental difference allows for a separation of reflection broadening when both micro structural causes -small crystallite size and micro strain -occur together. The different approaches presented in the following assume that size and strain broadening are additive components of the total integral breadth of a Bragg peak [21]. The distinct θ dependencies of both effects laid the basis for the separation of size and strain broadening in the analysis of Williamson and Hall. Addition of the Scherrer equation and results in following equations:

…………… (6)

—— ….. (7)

Rearranging Eq. (7) gives

— …… (8)

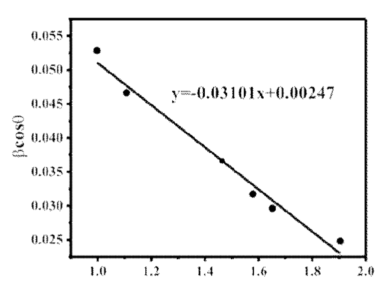

Fig. 2. The W-H analysis of Mg^{2+}-ZnS NPs. Fit to the data, the strain is extracted from the slope and the crystalline size is extracted from the y-intercept of the fit.

Eq. (8) represents the UDM, where the strain was assumed to be uniform in all crystallographic directions, thus considering the isotropic nature of the crystal, where all the material properties are independent of the direction along which they are measured. The term (β cosθ) was plotted with respect to (4 sinθ) for the preferred orientation peaks of Mg^{2+}-Zns NPs. Accordingly, the slope and y-intersect of the fitted line represent strain and particle size, respectively. The plots showed a negative strain for the Mg^{2+}-Zns NPs. This strain may be due to the lattice shrinkage that was observed in the calculation of lattice parameters. The results of the UDM analysis for the Mg^{2+}-ZnS NPs are shown in Fig. 2.

3.3 UV–Vis. Spectroscopy

The optical properties of prepared nanoparticle are determined from absorbance measurements in the range of 200-800 nm. Fig. 3 shows the UV-visible absorption and fig. 4 shows the transmission spectra of nanoparticle of pure and Mg^{2+} doped ZnS at the room temperature. The spectra show UV absorption excitonic peak at 269 nm and 256 nm for pure and Mg^{2+} doped ZnS respectively. From the absorption peak the optical energy band gap of ZnS nanostructure has been calculated using the formula,

$$E_{gn} = h\nu_{gn} = hc/\lambda_{gn} \quad \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where h=plank's constant and E_{gn} = energy band gap of the semiconducting nanoparticles in the optical spectra .The calculated band-gap value of then nanoparticles was 4.61 eV and 4.79 eV for pure and Mg^{2+} doped ZnS, which is blue shifted from that of bulk ZnS (340 nm, Eg = 3.65 eV). Increasing of band gap energies of ZnS nanostructures could be an indication of the quantum confinement effect due to decreasing size of structures. The average particle size present in the nanocolloid can be determined by using the mathematical model of effective mass approximation [17-19].

$$\Delta E_g = \left[\frac{h^2}{8\mu r^2}\right] - \left[\frac{1.8e^2}{\varepsilon_\circ \varepsilon_r . r}\right] \ldots\ldots\ldots\ldots (3)$$

Where $1/\mu = 1/m_e^* + 1/m_h^*$ is the reduced mass of electron hole effective mass, $m_e^* = 0.34m_0$ and $m_h^* = 0.23m_0$ and $\varepsilon_r = 8{:}76$ is the permittivity of the sample. The above equation derived, describes the particle size (r, radius) as a function of peak absorbance wavelength (λp) for ZnS nanocrystals [20,21].

$$r(\text{nm}) = \{-02963 + \left(-40.1970 + \frac{13620}{\lambda_p}\right)^{\frac{1}{2}} /\{-7.34 + \frac{2481.6}{\lambda_p}) \ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

The particle size obtained from this sample is 3.1 and 2.8 nm for undoped and Mg^{2+} doped ZnS, which is good agreement determined by XRD.

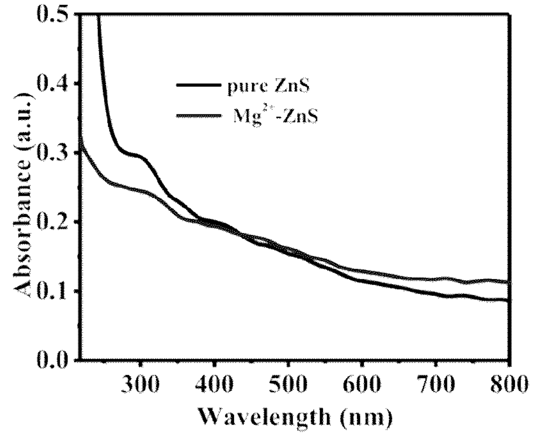

Fig.3. UV–vis absorption spectra of pure and Mg^{2+} doped ZnS nanoparticle.

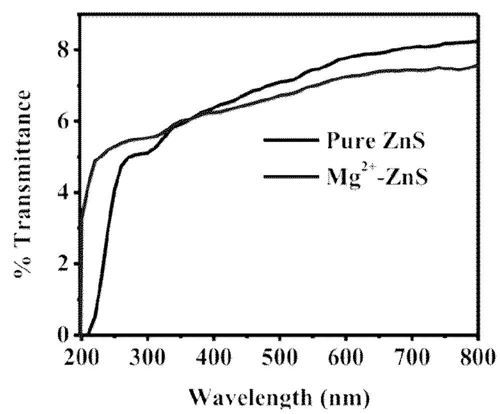

Fig.4. UV–vis transmission spectra of pure and Mg^{2+} doped ZnS nanoparticle.

Table 2. Band gap and size of as-prepared nanoparticles.

Sample	Band gap (eV)	Size estimated from (nm)	
		EMA method	Powder XRD
Pure ZnS	4.61	3.1	4.26
Mg^{2+}-ZnS	4.79	2.8	4.30

4. Conclusions

In summary, this paper presents synthesis, characterization and analysis of Mg^{2+} doped ZnS NPs by chemical reduction method. The influence of dopant on linear optical properties has been studied. UV–Vis spectra exhibit that absorption edge at 256 nm showing huge blue shift from the bulk ZnS absorption peak 340 nm (3.7 eV) which confirm the strong quantum confinement of excitons. The band gap of Mg^{2+}-ZnS NPs estimated as large as 4.79 eV. The

XRD results show that the NPs possess a hexagonal structure with average particle size 4.3 nm. These results strongly suggest that our sample possesses a high potential in optoelectronics device applications.

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17. A Study on the Concepts of Servant Leadership in Christian NGOs

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Abstract

The article explores styles and attitudes of Leadership carried out in Christian NGOs. Servant Leadership was originated by Jesus Christ on his earthly mission. Servant Leadership focuses on humility and service to men and women. This paper provides marks of servant Leadership such as humility, and servanthood. Also, this paper differentiates between secular leadership and servant leadership.

Keywords: Leadership, Servant Leadership, Biblical Leadership, Christian Leadership

Introduction

NGOs are playing an effective role in tackling world issues in recent decades, from poverty to human trafficking these NGOs are working on the ground to break the cycle and bring transformation in the lives of the people and community at large. The success and effectiveness of these NGOs lie in their leadership. It depends upon the leadership and how the organization is being driven and led. It is the leading cause of the organization to fulfil the purpose of the organization. Various NGOs have efficient funds, skilled human resources, broader vision and even effective programs and activities. But it is the leadership which drives these all factors.

Christian NGOs nowadays are adapting corporate patterns of leadership. Many organizations hire workers, staff and executives from the corporate background in their teams to accomplish the mission. And as a result, these human resources apply the corporate way of culture in Non-profit organizations. To some extent, the corporate culture is useful because Christian NGOs have their different organizational culture with the aim to serve the people and the community at large. While the Corporate culture is of getting served by the people. The pattern of Christian NGOs is of serving others in corporate culture it is the opposite of it.

This article aims to focus on and explore the Leadership style carried out in Christian organizations. This article will describe the Leaders of the Church, the dimensions of leadership in the church and the challenges of Church leaders.

Review of Literature

Huizing expressed concern that there is a strong need for leadership that is biblical and Christ-like to properly guide a Christian organization. Christian leaders must be concerned that their biblical beliefs are woven "into every context of life, including leadership" (Huizing, 2011). As presented by Kouzes and Posner (2017a), the Five Practices of Exemplary Leadership are: Modeling the Way, inspiring a Shared Vision, Challenging the Process, Enabling Others to Act, and Encouraging the Heart (J.M. Kouzes, 2017). According to Mullen, a leader must live out one's work among the people one is serving, and this is referred to as leading by the presence (S.A.Mullen, 2018). According to Pierce and Sims, workers can be encouraged and empowered to act when leaders give them opportunities to take initiative in their work, encourage the thinking of the workers, encourage teamwork, encourage self-development, allow workers to participate in goal-setting, and encourage self-reward (Pearce & Sims, 2002). Sathye described good leadership as supporting "unity and cohesion upon decisions up and down the line" (Sathye, 2004).

Objectives of the Study

The present study has been undertaken to analyse the difference between Corporate Leadership and Biblical Leadership in Christian NGOs. Therefore, the specific objectives are

i. To study Servant Leadership from a Secular Perspective
ii. To study Servant Leadership from a Biblical Perspective
iii. To study the Marks of Servant Leadership
iv. To differentiate between Servant Leadership and Corporate Leadership

Christian Leadership - a Servant Leadership

Christian Leadership is a Servant Leadership as demonstrated by Lord Jesus Christ. Lord Jesus being the Master and Teacher of his Disciples he served them and laid the example of what the servant leadership is.

Niewold (2007) stated that Christians have accepted servant leadership as the form of Christian leadership that should be followed because it is the type of leadership that Jesus displayed. Greenleaf (1977) explained that the starting point for servant leaders is that they must desire above everything else to be a servant first. Servant leadership "is a conviction of the heart that constantly manifests whenever there is a legitimate need to serve in the absence of extenuating personal benefits" (Sendjaya & Pekerti,2010, p. 645). Patterson (2003) explained that servant leadership is an extension of transformational leadership and is characterized by (a) love, (b) humility, (c) altruism, (d) vision, (e) trust, (f) empowerment, and (g) service. Patterson's model of servant leadership explains that servant leaders always act with the best interests of followers in mind.

Christian leadership is a dynamic relational process in which people, under the influence of the Holy Spirit, partner to achieve a common goal - it is serving others by leading and leading others by serving (Christian Leadership Center, n.d.).

Christian Leadership is exercised in Church, Parachurch Organization or Christian Organization, where the humanitarian or social work is carried out on the principles of the Bible and the teaching of the Lord Jesus Christ. D'Souza comments: "Leadership focuses on purpose" (D'Souza, 1999). The major difference between general leadership and Christian leadership is that the latter is centred on God and seeks to glorify him in all its formats. While general leadership may be concerned with doing the right things (Morenammele & Schoeman, 2020). Over and above all, Christian leadership is a call and appointment from God, not from men (Sanders, 2005). Christian leaders should lead others from the position of a Servant Leader and follower of God as demonstrated by the way Jesus 15 led (Philippians 2:6-8; Mark 10:42-44) (Shaw, 2006).

Christian NGOs

Christian NGOs are the secondary institution of the Church. Such organizations are also called Parachurch Organizations. These Organizations work outside and across denominations to engage in social welfare and evangelism. Parachurch organizations seek to come alongside the church and specialize in things that individual churches may not be able to specialize in by themselves (Parachurch organization, 2021).

Servant Leadership from a Secular Perspective

Servant leadership is a line where a leader serves followers, not vice-versa (Greenleaf, 1977). Servant leadership stresses increased service to others and encourages the personal, professional, and spiritual growth of followers (Greenleaf, 1977). The central idea of servant leadership theory is that the servant-leader is first a servant. The servant leader's primary objective is to serve and meet the need of others, which optimally should be the prime motivation for leadership (Russell & Stone, 2002). Greenleaf (1977) explained that the servant-leader is a servant first. It begins with the natural feeling that one wants 1 to serve. Then conscious choice brings one to aspire to lead. The best test is: Do those served grow as persons; do they, while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants?" (Convey, 2002) said that "the servant leadership concept is a principle, a natural law, getting our social value system and personal habit aligned with this ennobling principle is one of the great challenges of our lives"

Dr. Paul Wong describes Servant Leadership as follows: "Servant leadership is characterized by the desire to serve and empower followers and the belief that the best way to achieve organisational goals is through developing the potential of workers." Wong and Page (2003) identified twelve attributes of servant leadership to be integrity, humility, servanthood, caring for others, empowering others, developing others, visioning, goal setting, leading, modelling, team building and shared decision making (Page & Wong, 2000). Servant leaders encourage collaboration and teamwork among individuals (Spears, August 2005).

The Servant Leadership from Biblical Perspective

Servant Leaders is Leader being Servant, and Servant Leadership originated from Lord Jesus Christ. Lord Jesus Christ modelled Servant Leadership, he laid down the principles of Servant Leadership to his disciples through his ministry and Teaching. The night before His crucifixion, Jesus demonstrated service to others by taking a towel and washbasin and washing the feet of His Disciples. Nothing was to stand in the way, not attitude, pride, or position. God. The more one serves others, the more Christian leadership is exercised (Dykstra, 1999).

The teaching of Lord Jesus Christ on Servant Leadership.

Lord Jesus said, "For even the Son of Man did not come to be served, but to serve, and to give his life as a ransom for many." Jesus contrasted the desire for power and prestige of the Gentiles and the Jewish leaders to the servant values (Dykstra, 1999).

Lord Jesus Christ taught his Disciples the principle of Servant Leadership He said to them, "You know that the rulers of the Gentiles lord it over them, and those who are great exercise authority over them. Yet it shall not be so among you; but whoever desires to become great among you, let him be your servant. And whoever desires to be first among you, let him be your slave — just as the Son of Man did not come to be served, but to serve, and to give His life a ransom for many."

Here Lord Jesus Christ states that Leaders are not to oppress and overpower others with their authority as the Gentiles practised. Instead, leaders serve others and serving means becoming Humble. To serve one does not have to leave his leadership. Servant Leadership is mainly an attitude of serving nature. Without *Humility* one cannot serve, one cannot have *Pride* and *Serve*. Both do not exist. Prideful people cannot *serve*, they are not the servant.

Jesus Christ in the Role of Servant Leadership

Lord Jesus Christ was another greatest Leader on the earth but that does not keep him away from being Servant. Lord Jesus Christ washed the feet of His Disciples, his followers. Lord Jesus Christ was a Teacher and even though he was their teacher, he washed the feet of the disciples who followed after him. He laid down an example of serving one another in Humility. Lord Jesus Christ said, *"You call me Teacher and Lord, and you are right, for so I am. If I then, your Lord and Teacher, have washed your feet, you also ought to wash one another's feet."* Further, He says, *"For I have given you an example, that you also should do just as I have done to you."* He carried out Servanthood by remaining in the position of His Leadership.

Being a Leader does not change the nature of a Servant. Lord Jesus Christ, carried out the role of Servant Leadership successfully. His teaching to His Disciples was that – *He did not come to be served by others, but he came to serve others.* His model of Leadership was different from what is being seen today by the world. Jesus describes servanthood as more a matter of attitudes than actions (Dykstra, 1999). Lord Jesus Christ said, *"whoever would be great among you must be your servant."*

The Holy Bible records that, "*Jesus Christ who thought he was in form of God, did not count equality with God a thing to be grasped but emptied himself by taking the form of a servant being born in the likeness of men and being found in human form, he humbled himself by becoming obedient to the point of death.*"

Lord Jesus Christ did not count himself equal to God but he emptied himself and took the form of a Servant. He came to serve humanity and to not get served.

Marks of Servant Leadership

- **Shepherd:** Christian leaders' lives should be marked by love, showing evidence of God's love for them and their love for others (Strawbridge, 2009).

- **Integrity:** Integrity is an important component of Biblical leadership because it "serves as a magnet to draw others who listen and respond to the leader" (Lawrence, 1987).
- **Trust:** Trust is an important part of Biblical leadership as it is built upon authentic relationships that do not abuse power (Kretzschmar, 2002).
- **Humility:** Servant Leaders are Humble; they do not carry pride in their position. Humility is misunderstood as a weakness in today's society. Without humility, leadership cannot serve society.
- **Stewardship:** Christian leaders must focus on others while developing followers (Strawbridge, 2009). Servant leaders understand that they are the stewards of the resources and not owners of the resources.
- **Servant Hood:** Servant leaders serve and do not get served. Their focus is on their mission and not on themselves.
- **Motivated by Love:** Servant Leaders are motivated by Love. Love is found in their words and their action. They are driven by Love.
- **Forgiving:** Servant Leaders tend to forgive; they extend grace and kindness to People. They correct the faults in love.
- **Peace-making:** Biblical leader helps to bring that peace to organizations and relationships.

One characteristic of Christian leadership exemplified by Jesus is service to other people (Mark 10:45).

Servant Leadership and Corporate Leadership

Corporate leadership is aimed towards growing business, fulfilling targets, expanding business in terms of customers, and merely earning profits in terms of money, while Christian Leadership is aimed towards serving the needs of others.

The corporate leadership treat the workers and staff intending to pursue their business goals which is earning profits, while the Christian leadership treat the workers and staff with dignity and respect.

In Corporate Leadership the leader is self-focused, concerned about his position and power and refusing to let go of the power, while in Christian Leadership the leader is concerned about serving others and his motives are selfless and sacrificial.

Northouse stated that people continue to ask what makes a good leader and noted that people want information on how to be effective as leaders. Leaders of corporations seek employees with good leadership skills because the corporate leaders believe employees having good leadership skills will bring special assets additive to the strength of the organization and, in effect, improve the organization's bottom line (Northouse, Leadership: Theory and practice, 2016). Maxwell stated that a leader's leadership ability, whether good or bad, will always define the leader's level of impact and effectiveness within the leader's organization (Maxwell, 1998).

Results from Reave's research indicated, "Spiritual values such as integrity, honesty, and humility have been repeatedly found to be key elements of leadership success. Personal integrity, for example, is the most important element for engendering follower respect and trust" (Reave, 2005)

The Bible clearly states that leaders are to model the way for their followers. Jesus demonstrated a model of servanthood throughout his life, and he encouraged his followers to also live a life of service. (Hackett, 2019).

Conclusion

- A servant attitude should be demonstrated by the leaders while working in the organization.
- Humility should be expressed in deeds and conduct while serving.
- The biblical pattern of leadership should be adapted for a fruitful organization.
- While adapting corporate culture it should be seen that the main purpose and aim of the organization remain unchanged and the organization is not diverted from it.

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18. Cotemporary Environment HIV/AIDS in Goa

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Abstract

Goa is one of the famous tourist spot in the world and it is charming and tourist paradise most of the tourist attracts towards sea banks one thing is point out that is tourism industries in tourism is always focused on the sea shore and natural beauty of sea so the peoples are flood from tourisrt destination in the counrty, both for domestic and foreign tourist about this tourist hub few years before Goa had a low profile in socio-economics development but due to their natural scenic beauty golden and silvery beaches, waterfall anicent temples and churches, greenery and cashew and coconut palm very friendly and hospitable people in Goa develops a positive tourism profile and become a tourist paradise.

If we heard the word HIV or AIDS we feel very horrible and dangerous desease but it is a small fragil virus which lives in sexual fluid of infectedd person such as a semen, vaginal secretion and blood which spreads randomly but trasmitted as a consequence as a behavioral pattern present study is based on primary and secondary information collected by news paper, generals, NGOs, GSACS (Goa State AIDS Control Society) very few HIV cases were detected before 2000 but cased are steadily increasing due to increasing in foreign tourism.

Introduction

Goa is the 25th state of the country bears the population of 1.35 million situated on the west coast of the country so tourist come here and enjoys. In the study of common information of tourist some foreign tourist and some domestic tourist comefrom different culture. Tourist enjoy Rave Parties, Trans Music, Night Parties so the local peoples as well as tourist attracts towards things.

Goa state AIDS control society has noted in its study that between the age group of 15 to 49, one female for every three males is infected but in the 15 to 29 age bracket the ration stand at 1:1 as per the study area, the number of HIV cases has risen from near zero in 1987, 13806 upto 2011 June and till growing at the rate of 4.5% at every next year. The threat to the local population from foreign tourist is also another important reason for the rapid spread of this disorder Others include those belonging to other states, foreigners as also those not specified.

Table: Sex –Wise HIV/AIDS Cases Detected /Reported in General Population to Feb)

Year	No. of Blood Samples Tested	HIV Cases				Positivity	No. of AIDS Cases		
		Male	female	TS/ TG	Total	Rate	Male	Female	Total

Source: Goa State AIDS Control Society Data

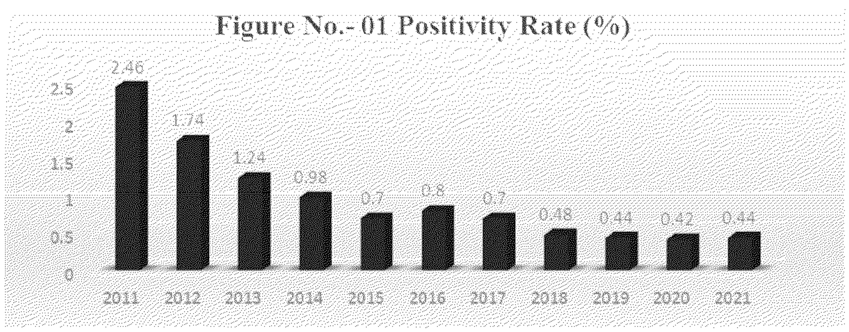


Table: Taluka wise percetage disribution of HIV+ cases detected in general population in Goa to Dec)

Taluka	Proportion (%) of HIV Positive Cases detected									
										Dec)
Tiswadi										
Barder										
Pernem										
Bicholim										
Satari										
Ponda										
Salcete										
Mormugao										
Sanguem										
Quepem										
Canacona										
Dharbandora										
Others										
Total										

Source: Goa States AIDs Control Society Data

Figure No- 02
Sex –Wise HIV/AIDS Cases Detected /Reported In General Population

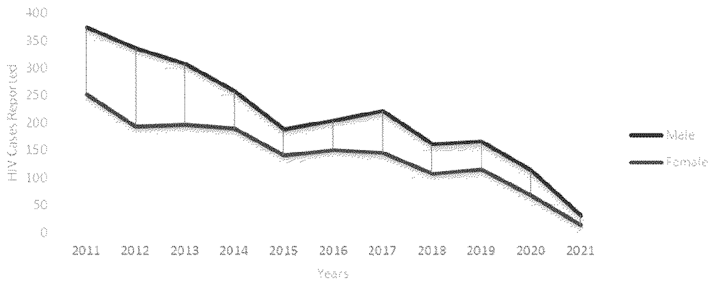


Table Taluka wise Distribution of HIV+ Cases detected in General Population in Goa to

Taluka	Proportion (%) of HIV positive Cases Detected									
Tiswadi										
Barder										
Pernem										
Bicholim										
Satari										
Ponda										
Salcete										
Mormugao										
Sanguem										
Quepem										
Canacona										
Dharbandora										
Others										
Total										

Source: Goa States AIDs Control Society Data

Figure No-03 Taluka wise distribution of HIV+ cases detected in general population in Goa 2011 to 2015

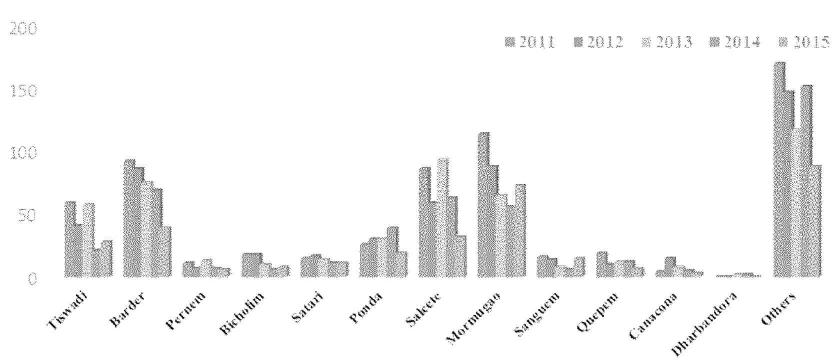
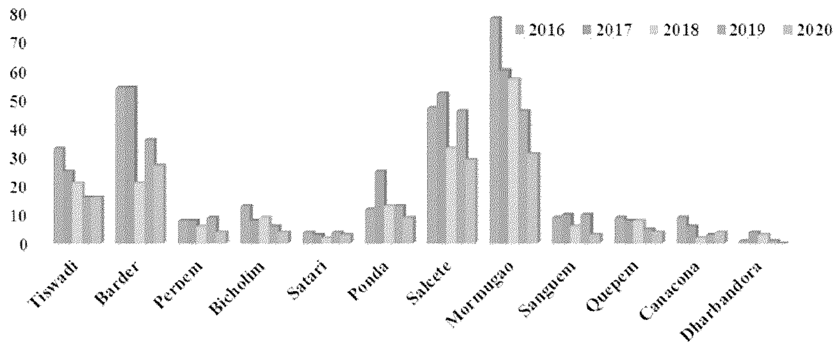


Figure No-04 Taluka wise distribution of HIV+ cases detected in general population in Goa 2016 to 2020



Number of Blood Samples Tested

Goa has become tourist traffic fromearly times, numbers of tourists visited to Goa from over all world. The survey of Goa States AIDS control society Date – inthat given data of sex wise HIV/AIDS cases detected reported in general population to Feb). The data show of table – is the number of blood samples tetsted then distribution HIV+ cases and number od AIDS cases in both male and female HIV+ cases are more than the years , , and HIV+ cases positivity rate also decreased from to in above three years positivity rate suddenly decreases same situation also occurs number of AIDS cases. Number of AIDS cases rapidly decreases in years , and in year come on O. It is very good thing the reason is behind that lockdown due to Covid- in various country of world.

Goa states AIDS control society also present data of taluka wise percentage distribution of HIV+ cases detected in general population in Goa from to Dec) table- show that proportion of HIV+ cases detected from to cases was more but in year and peercentage of HIV+ cases is decreases.

In table- the data about the taluka wise distribution of HIV+ cases detected in Goa to The data show that the numbers of HIV+ cases taluka wise if we observed table every tehsil cases are more from year to but in year to cases are rapidly decreases in every tehsils.

It was the very ugly face o f beautiful study region increasing mortability rate of tourist growing healthy image of Goa for tourist upto but from year tourist not came to Goa due to the lockdown of Covid-

So the mortability rate and unnatural death of tourist also decreases in study region of tourist also decreases in study region because due the lockdown ban on tourist rave parties at night, Tran music and dance show.

Conclusion

1. The cases of HIV/AIDS in study area is more but in year 2019, 2020 and 2021 in this years numbers of cases is rapidly decreases one region behind that lockdown due to Covid-19.
2. The HIV/AIDS is more common in male than in females. The cases increases in the area but one thing suggest that the numbers of cases was more is coastal located tehsil/taluka upto 2018 but then from year 2019, 2020 and 2021 (Feb) numbers of cases rapidly drcreases.
3. We can say that after observing data/survey of GSACS that the numbers of cases of HIV/AIDS is directly proportional to arrival of tourist.

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19. Environmental Sustainability and Development: the Way for Future

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Abstract

Environment, development, and sustainability is an international and multidisciplinary aspect of the environment that impacts of socioeconomic development of any country. It is also concerned with the complex interactions which occur between development and the environment. Its purpose is to seek ways and means for achieving sustainability in all human activities aimed to provide happiness and development to all.

The livelihood of more than half of the economically active population in the developing world directly depends on the environment through agriculture, as well as animal husbandry, hunting, fishing, and forestry, etc. In recent years, economies have increasingly focused on the important implications of environmental issues for the success of development efforts.

This research shows the relationship between the environment, sustainability, and sustainable development. Thereafter, the paper highlights the issues and government initiatives to sustain the both environment and development.

Keywords: Environment, Sustainability, Development, Issues.

The poorest developing countries will be hit the earliest and hardest by climate change, even though they have contributed little to causing the problem.

--Nicholas Stern, The Stern Review on the Economics of Climate Change, 2006

The old notion of “development versus environment” has given way to a new view in which …better environmental stewardship is essential to sustain development.

--World Bank, World Bank Atlas, 1997

Introduction

The term ‘environment’ refers to the natural setting in which we live, which is bestowed to us by our ancestors. It encompasses the interaction between biotic (the living components, including plants, animals, birds, etc.) and abiotic components (land, air, water, etc.) that co-exist to form this natural setting. The term *sustainability* reflects the need for a careful balance between economic growth and environmental preservation. The goal of environmental sustainability is to conserve and improve natural resources by reducing pollutions and environmental degradation. Interrelation of environment and economy is very crucial. The environment performs four important functions such as (a) it supplies renewable and non-renewable resources for production and consumption; (b) provides a life support system (water, air, etc.); (c) acts as a sink to absorb waste from production and consumption activities and (d) it has aesthetic value like natural sceneries, mountains rivers, etc.

Objective of Research

1. To overview the environment, sustainability, and development;
2. To assess the key points of sustainable development;
3. To focus on certain issues, Government Initiatives and way forward

Methodology

This study is descriptive in nature that has been collected from various national and international reports, journals, magazines, and websites, etc. which are used to support our analysis.

Overview of the Environment, Sustainability, and Development

Environment considered a non-economic factor is so powerful that it has changed the idea of economic development in the form of sustainable development where a balance is needed between the pace of economic progress and environmental protection. Thus, the development is not at the cost of environmental loss because it will ruin our future development. Since the time of Malthus, there was a potential debate on biophysical limits to economic growth. In view of *Malthus*, exponential population growth is the major determinant of such limits, whereas, *Ricardo* attributes the limits to a gradual decrease in the quality of the land. *Ehrlich and Commoner* considered population, technology, and per capita consumption as the main determinants of environmental degradation and eventually limits to growth, *Malthusian* doubted the ability of technology to circumvent biophysical limits because they considered that technology is subject to diminishing returns and in the long-run cost of technology in many cases is the major culprit in modern environmental crisis.

The Environmental Kuznets curve hypothesis says higher real per capita income due to higher growth increases the demand for improved environmental quality. So economic growth is more likely to be good than bad for the environment. But it is argued that past trends in technology growth may not justify the claim that the trend will continue in the future which is the reality of the present.

The Kuznets hypothesis was first proposed by Simon Kuznets in the 1950s and 1960s. The environmental Kuznets curve is a hypothesized relationship between various indicators of environmental degradation and income per capita. Kuznets hypothesized income inequality first rises and then falls as economic development proceeds. The environmental Kuznets curve or inverted "U" shape relation between environment and income, suggests that environmental damage increases at lower income levels reach a maximum level, and declines thereafter. The X-axis shows the per-capita income and the Y-axis inequality is shown in Fig. 1.

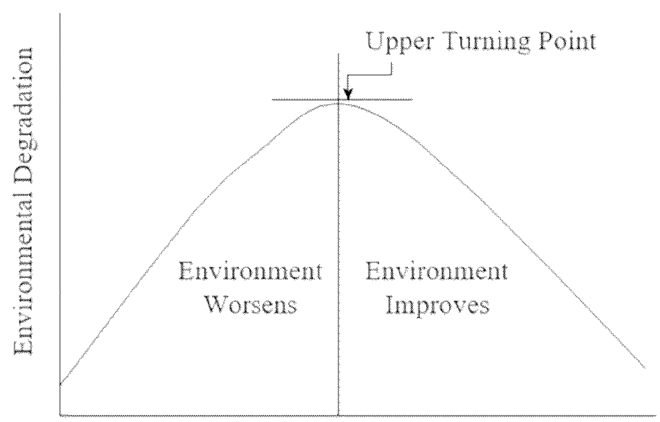


Fig. 1 (Per-Capita Income)

Implications of the Environmental Kuznets Curve

1. The environment of pre-industrial and agrarian economy is usually clean and untouched by pollutants from industrial economic activities.
2. As the economy shifts towards development and industrialization, the environment is at a higher risk of being harmed by pollution and the depletion of natural resources.
4. The curve then returns to a cleaner environment when economic growth continues, and people choose to spend their incomes on improving the environment by cleaning water and improving air quality.

The uncontrolled expansion of economic activities has now caused the global warming. Economies often require regulation and government intervention to ensure that the environment is being protected, even as income levels rise.

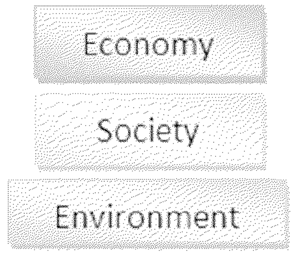
One of the major contributions of ecological economics has been to shift the focus on new thinking of economic development i.e. environment-friendly development and sustainable development. So, up to this point, it became clear that the present process of development cannot be sustained by neglecting the environment. Hence, there are biophysical limits to growth.

The environment is to the brim. It is our collective responsibility to work together for providing a brighter future for the coming generations – a self-sustaining lifestyle, resources that are adequate for all, a development that is not compromising our ecosystem, flora-fauna and wildlife that are in safe hands, and the land, water and air that are fit for humans and other forms of life.

Sustainable Development

Development is a perpetual process enabling humans to expand or realises their potentialities to achieve a greater, better fuller state of living. Sustainable development is the practice of developing land and construction projects in a manner that reduces their impact on the environment by allowing them to create energy-efficient models of self-sufficiency. The main features of sustainable development are an increase in per-capita income, judicious use of natural resources, and preserving the resources for future generations. The utilization of natural resources forms the very basis of sustenance of the human life, while nature has only limited regeneration capacity. Sustainability and development need to go hand in hand. Sustainable development has *three* goals (i) to minimize the depletion of natural resources, (ii) to promote development without causing harm to the environment, and (iii) to make use of environmentally friendly practices.

Since the early 1980s, the term sustainable development has been used rather indiscriminately. The Brundtland Commission's report named *'Our Common Future (1987)*' defined sustainable development, as "sustainable development is a development that meets the needs of the present, without sacrificing the ability of future generations to meet their own needs". There are several key features of this definition. (i) sustainable development is an equity issue so the economics of sustainable development has a normative goal (b) the definition provides a specific ethical criterion that the needs of the present generation are not to be satisfied at the expense of future needs i.e. equity across generations (inter-generational equity) and (c) the concept of needs is related to essential needs of people where priority should be given to poor people. It is the interpretation of three aspects:



When we think of sustainable development we must think of a system where the decisions taken ensure that every component of the system –man, trees, environment, society, wealth, is capable of flourishing without hindering the capacity of the other components to do so, whether in the present or in the future.

1. Key Points of Sustainable Development

1. Economic Dimension

To ensure economic development and sustainability at the same time, we need to look at issues such as fair trade, debt eradication, and mechanism which ensure that everyone gets their due reward and corporations, industries, and governments do not use up resources and put a strain on the environment.

2. Social Dimension

Everyone in society wanted to be healthier, better lifestyle and get rid of diseases, take proper education, avoid inequality, have equal opportunity for all, have food security and peace of mind. We can get it through sustainable development.

3. Environmental Dimension

The environmental aspect is very crucial. Once we understand that the resources, the planet offers are finite. It clear that current methods of consumption are using up more resources than the planet can afford. Human activities have altered the planet which negatively affected *climate change and global warming* recently realized in Europe with excess heat in the temperature and heavy rain in Saudi Arabia, *deforestation* where humans have destroyed a huge amount of trees for agriculture, construction, industry, and housing and *loss of biodiversity*.

Indian Scenario

India's rapidly growing population and fast economic development, pushes a pressure on the infrastructure, and ultimately on the country's environment. Environmental conditions, in terms of degradation of the natural resource base and increasing industrial pollution, continue to worsen. While deforestation, soil erosion, and land degradation are hindering economic development in rural India, rapid industrialization and urbanization in India's metropolis causing serious concerns. In India, factors like rapid growth of population, urbanization, industrialization, and poverty are responsible for harming the environment. Some of the serious environmental *issues* prevalent in India such as:

1. Degrading of air quality index;
2. Rampant environmental degradation;
3. Loss of bio-diversity;
5. Rapid Urbanization in the hilly areas;
6. Loss of resilience in eco-systems;
7. Lack of waste management;
8. Depletion of resources (land, air, water);
9. Growing water scarcity;
10. Discharge of polluting chemicals into the atmosphere that can cause climate change;

Government Initiatives

Rapid environment degradation that has been taking place all over the world including India Most of the economists are now convinced that strong steps are to be taken to preserve environment. Damage to the environment has three potential costs to present and future human welfare namely, (a) it harms human health, (b) it reduces economic productivity, and (c) it leads to loss of amenities. Government can play an important role to find solutions to the problems. In this connection, the government of India has taken various safeguard measures to save the environment. Some of them are as under:

a. Swachh Bharat Mission;
b. Green Skill Development Programme;
c. Namami Gange Programme;
d. Compensatory Afforestation Fund Act (CAMPA)
e. National Mission for Green India
f. National River Conservation Programme;
g. Conservation of Natural Resources & Eco-systems etc.

Conclusion

The concept of sustainable development is not just about the environment it is related to the economy and society as well. Sustainability deals with the impact of human beings through development on the environment. The environmental crisis now-a-days is largely the result of the unsustainable pattern of production and consumption and mismanagement of waste products. Sustainability is related to environmental protection, sustained economic growth, and social justice, taking care of future generations. It is a broad concept of development.

The environment is showing signs of degradation which is bound to affect each one of us. Frequent floods, drought, abrupt weather cycles, crop pattern changes, and receding coastal areas are some of these red flags glaring at humanity. Decades of environmental decay are eventually posing threat to the entire ecosystem we are in – living standards are compromised, health is affected, and above all, it questions the entire existence of the current models of growth and development.

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20. Impact of E-Payment System on the Purchase Decision of Working Women in Ernakulam

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Money may be transferred from one character to any other electronically via diverse digital price structures in India. The projects and steps taken through the Reserve Bank of India has created a robust era primarily based totally machine for digital payments, permitting seamless digital fund switch among events with very minimum transaction cost. Customers and businesses alike are growing more accustomed to utilising new digital technology as India moves toward digitising its e-payments system. Customers enjoy being able to browse and shop anytime, anywhere, with just a few clicks, and as online shopping and eCommerce grow in popularity, so do e-payments. .COVID and the restrictions it has placed on persons who made online payments are necessary. Today, a large number of companies sell their goods and services online. Electronic payments are expanding quickly due to improved telecommunications and easy internet access. Online purchases have begun to take the place of people's traditional payment methods. India recorded a staggering total of more than 40 billion digital transactions totaling over a quadrillion INR in 2021.

Introduction

Methods of E-payment system available in India

- The internet is used to transfer money from one bank account to another via online banking**.**
- Net Banking can be done through NEFT, RTGS, and IMPS.
- Payment via cards is made through electronic payment devices, including debit cards, credit cards, smart cards, stored value cards, etc.
- To make fund transfers easier, some money is preloaded on prepaid cards like gift cards.

- The direct debit method entails transferring money from a customer's account through a third party.
- A type of E-cash makes sure that the funds are kept on the customer's transfer device.
- Within an account, money can be moved via an electronic cheque.
- Electronic wallets (E-wallets) allow transactions to happen quickly, easily, and smoothly by storing information about the customer's account, such as credit/debit card numbers. Wallets are electronic wallets that work like apps on mobile devices. They keep card data on file. E-wallets have evolved into mobile wallets. Payment is simpler, more transparent, and client reliance on cash is decreased with a mobile wallet.
- Payments made via QR code have increased dramatically in recent years. QR codes are digital codes that have a grid of squares or a pattern of rectangular barcodes. They provide details on each section of the code. QR codes can be scanned using mobile devices to make purchases. Information about the businesses, transactional information, and more are contained in the QR code.
- The term "tap and go" refers to these kinds of payments that use RFID and NFC technology. Using RFID and NFC technologies, numerous cards and payment instruments are linked to the terminal.
- The National Payment Corporation of India (NPCI) has created a platform for fast, real-time payments called UPI, which permits mobile payments through a mobile app.
- The use of PINs as a payment method has recently been supplanted by biometric payment systems. Compared to PIN-based transactions, these payments are easier to use and more convenient.
- One of the most popular wearable gadgets for making online payments is a smartwatch. These gadgets enable online payments by connecting to the user's bank account.
- Businesses are increasingly utilising AI-based payments to increase transparency, including Siri, Alexa speakers, chatbots, machine learning tools, and deep learning tools. AI-based solutions are growing in popularity as they are revolutionising industries around the country.
- In this context, the present study has been undertaken to measure the profile of sample respondents of e-payment on the purchase decision of sample respondents. This study is undertaken among the users of e-payment system in Ernakulam, Kerala.

Objectives of the study

1. To study the socio -economic profile of sample respondents among the uses of e-payments system in Ernakula
2. To study the relationship of socio-economic profile on the purchase decision through e-payment system among the sample respondents in Ernakulam.

Methodology

The present study is confined to the working women in Ernakulam and is also limited to the usage of e-payment system among the working women on their purchase decision. The present study is primarily based on primary data and the study is descriptive in nature. A total number of 711 working women were selected as samples by applying convenience method of sampling. The Mean, Standard Deviation, percentage analysis, chi-square analysis and multiple regression analysis were applied to substantiate the research findings.

Analysis and Results

1.2 Profile of Respondents and Their Purchase Decision in E-Payment System

It depicts the distribution of respondents based on purchase decisions on e-Payment system in Table !.2. By using Mean ± SD, the purchase decision in e-Payment system is broken into low, moderate and high levels (Mean value = 37.02 and SD value = 4.62).

Table 1.2

Distribution of Respondents on the Basis Purchase Decision in E-Payment System

Sl. No.	Purchase Decision	Number of Respondents	Percentage
1.	Low Level	180	25.32
2.	Moderate Level	375	52.74
3.	High Level	156	21.94
	Total	711	100.00

Source: Primary Data

Among respondents, 21.94 percent of them bear a high level of the purchase decision, but 25.32 percent of them bear a low level of it in e-Payment system.

1.2.1 Age and Purchase Decision in E-Payment System

The relation between the age of respondents and purchase decisions in e-Payment system is depicted in Table !.3.

TABLE 1.3

Age Andpurchase Decision in E-Payment System

Sl. No.	Age	Purchase Decision			Total	F-Value	Sig.
		Low Level	Moderate Level	High Level			
1.	Below 20 years	27	45	17	89	4.519**	.001
		(30.34)	(50.56)	(19.10)	(12.52)		
2.	21 – 30 years	39	105	53	197		
		(19.80)	(53.30)	(26.90)	(27.71)		
3.	31 – 40 years	47	139	43	229		
		(20.52)	(60.70)	(18.78)	(32.21)		
4.	41 – 50 years	39	52	24	115		
		(33.91)	(45.22)	(20.87)	(16.17)		
5.	Above 50 years	28	34	19	81		
		(34.57)	(40.97)	(23.46)	(11.39)		
	Total	180	375	156	711	-	-
		(25.32)	(52.74)	(21.94)	(100.00)		

Source: Primary Data (The figures in the brackets are percentage to total)

** Significant at 1% level

Among 89 respondents aged below 20 years, 19.10 percent of them bear a high level of the purchase decision, but 30.34 percent of them bear a low level of it in e-Payment system. Among 197 respondents in the age of 21 – 30 years, 26.90 percent of them bear a high level of the purchase decision, but 19.80 percent of them bear a low level of it in e-Payment system. Among 229 respondents in the age of 31 – 40 years, 18.78 percent of them bear a high level of the purchase decision, but 20.52 percent of them bear a low level of it in e-Payment system.

Among 115 respondents in the age of 41 – 50 years, 20.87 percent of them bear a high level of the purchase decision, but 33.91 percent of them bear a low level of it in e-Payment system. Among 81 respondents in the age of above 50 years, 23.46 percent of them bear a high level of the purchase decision, but 34.57 percent of them bear a low level of it in e-Payment system.

The F-value is 4.519 clarifying that a significant difference is there among the age of respondents and purchase decision on e-Payment system. In a sequence, the null hypothesis is not accepted.

1.2.2 Education Andpurchase Decision in E-Payment System

The relation between the education of respondents and purchase decisions in e-Payment system is depicted in Table !.4.

TABLE 1.4

Education Andpurchase Decision in E-Payment System

Sl. No.	Education	Purchase Decision			Total	F-Value	Sig.
		Low Level	Moderate Level	High Level			
1.	Secondary	20	51	15	86	3.610**	.006
		(23.26)	(59.30)	(17.44)	(12.10)		
2.	Higher	30	53	16	99		
	Secondary	(30.30)	(53.54)	(16.16)	(13.92)		
3.	Diploma	33	72	13	118		
		(27.96)	(61.02)	(11.02)	(16.60)		
4.	Under	57.	107	69	233		
	Graduation	(24.46)	(45.92)	(29.62)	(32.77)		
5.	Post	40	92	43	175		
	Graduation	(22.86)	(52.57)	(24.57)	(24.61)		
	Total	180	375	156	711	-	-
		(25.32)	(52.74)	(21.94)	(100.00)		

Source: Primary Data (The figures in the brackets are percentage to total)

** Significant at 1% level

Among 86 respondents with secondary, 17.44 percent of them bear a high level ofthe purchase decision, but 23.26 percent of them bear a low level of it in e-Payment system. Among 99 respondents with higher secondary, 16.16 percent of them bear a high level of t purchase decision, but 30.30 percent of them bear a low level of it in e-Payment system. Among 118 respondents with a diploma, 11.02 percent of them bear a high level of the purchase decision, but 27.96 percent of them bear a low level of it in e-Payment system.

Among 233 respondents under graduation, 29.62 percent of them bear a high level of the purchase decision, but 24.46 percent of them bear a low level of it in e-Payment system. Among 175 respondents with post-graduation, 24.57 percent of them bear a high level of the purchase decision, but 22.86 percent of them bear a low level of it in e-Payment system.

The F-value is 3.610 clarifying that a significant difference is there among education of respondents and purchase decision on e-Payment system. In a sequence, it does not accept the null hypothesis.

1.2.3 Occupation and Purchase Decision in E-Payment System

They depict the relationship between the occupation of respondents and purchase decisions on e-Payment system in Table 4.6.

TABLE 1.5

Occupation Andpurchase Decision in E-Payment System

Sl. No.	Occupation	Purchase Decision			Total	F-Value	Sig.
		Low Level	Moderate Level	High Level			
1.	Government	38	104	38	180	4.138**	.003
	Sector	(21.11)	(57.78)	(21.11)	(25.31)		
2.	Private	83	111	48	242		
	Sector	(34.30)	(45.87)	(19.83)	(34.04)		
3.	Professional	19	56	30	105		
		(18.10)	(53.33)	(28.57)	(14.77)		
4.	Business	25	60	24	109		
		(22.94)	(55.04)	(22.02)	(15.33)		
5.	Retired	15	44	16	75		
		(20.00)	(58.67)	(21.33)	(10.55)		
	Total	180	375	156	711	-	-
		(25.32)	(52.74)	(21.94)	(100.00)		

Source: Primary Data (The figures in the brackets are percentage to total)

**Significant at 1% level

Among 180 respondents working in the Government sector, 21.11 percent of them bear a high level of the purchase decision, but 21.11 percent of them bear a low level of it in e-Payment system. Among 242 respondents working in the private sector, 19.83 percent of them bear a high level of the purchase decision, but 34.30 percent of them bear a low level of it in e-Payment system. Among 105 respondents who are professionals, 28.57 percent of them bear a high level of the purchase decision, but 18.10 percent of them bear a low level of it in e-Payment system.

Among 109 respondents who are doing business, 22.02 percent of them bear a high level of the purchase decision, but 22.94 percent of them bear a low level of it in e-Payment system. Among 75 respondents who are retired persons, 21.33 percent of them bear a high level of the purchase decision, but 20.00 percent of them bear a low level of it in e-Payment system.

The F-value is 4.138 clarifying that a significant difference is there among occupation of respondents and purchase decision on e-Payment system. In a sequence, the null hypothesis is not accepted.

1.2.4 Working Experience Andpurchase Decision In E-Payment System

The relation between the working experience of respondents and purchase decisions in e-Payment system is depicted in Table 1.6.

TABLE 1.6

Working Experience Andpurchase Decision in E-Payment System

Sl. No.	Working Experience	Purchase Decision			Total	F-Value	Sig.
		Low Level	Moderate Level	High Level			
1.	Below 4 years	30	50	21	101	4.382**	.002
		(29.70)	(49.51)	(20.79)	(14.21)		
2.	5 – 8 years	37	100	31	168		
		(22.03)	(59.52)	(18.45)	(23.63)		
3.	9 – 12 years	40	105	49	194		
		(20.62)	(54.12)	(25.26)	(27.28)		
4.	13 – 16 years	32	64	41	137		
		(23.36)	(46.71)	(29.93)	(19.27)		
5.	Above 16 years	41	56	14	111		
		(36.94)	(50.45)	(12.61)	(15.61)		
	Total	180	375	156	711	-	-
		(25.32)	(52.74)	(21.94)	(100.00)		

Source: Primary Data (The figures in the brackets are percentage to total)

** Significant at 1% level

Among 101 respondents bearing working experience of below four years, 20.79 percent of them bear a high level of the purchase decision, but 29.70 percent of them bear a low level of it in e-Payment system. Among 168 respondents bearing working experience of 5 – 8 years, 18.45 percent of them bear a high level of the purchase decision, but 22.03 percent of them bear a low level of it in e-Payment system. Among 194 respondents bearing working experience of 9 – 12 years, 25.26 percent of them bear a high level of the purchase decision, but 20.62 percent of them bear a low level of it in e-Payment system.

Among 137 respondents bearing working experience of 13 – 16 years, 29.93 percent of them bear a high level of the purchase decision, but 23.36 percent of them bear a low level of it in e-Payment system. Among 111 respondents bearing working experience of above 16 years, 12.61 percent of them bear a high level of the purchase decision, but 36.94 percent of them bear a low level of it in e-Payment system.

The F-value is 4.382 clarifying that a significant difference is there among the working experience of respondents and purchase decisions on e-Payment system. In a sequence, the null hypothesis is not accepted.

Conclusion

The findings disclose that 52.74 percent of respondents bear a moderate level of purchase decision on e-Payment system. Significance difference is there between the profile of respondents and their purchase decision on e-Payment system excluding residential area. Almost half of the respondents possess a moderate level of awareness about e-Payment system and higher than half of them possess a moderate level of attitude and perception towards e-Payment system. Usefulness, value for money, risk and peer advice are factors determining the selection of e-Payment system among respondents. Higher than half of respondents bear a moderate level of purchase decision on e-Payment system. Attitude, perception and purchase decision of respondents in e-Payment system is positive and moderately related to each other. The F-value is 4.519 clarifying that a significant difference is there among the age of respondents and purchase decision on e-Payment system. The F-value is 3.610 clarifying that a significant difference is there among education of respondents and purchase decision on e-Payment system. The F-value is 4.138 clarifying that a significant difference is there among occupation of respondents and purchase decision on e-Payment system. The F-value is 4.382 clarifying that a significant difference is there among the working experience of respondents and purchase decisions on e-Payment system.

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21. Role of Corporate Social Responsibility in the Environmental Sector

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Abstract

Environment and environmental concerns have become essential parts of the modern world. The protection of the environment is an essential duty of every citizen of India. Companies are also corporate citizens, so taking care of the environment is a prime duty of companies. Now companies are legally responsible for the adverse impact of business on the environment. Corporate social responsibility is a business initiative that helps a company be socially accountable to itself, its stakeholders, and the general public. Now Companies are conscious of adverse impacts on all aspects of society, including economic, social, and environmental. This article discusses how companies are conscious of Environment Protection and their environmental corporate social responsibility initiatives.

Keywords: Corporate Social Responsibility, Environmental Protection, Degradation, Sustainable development, recycling, emissions.

Introduction

Business activities adverse impact on society and the Environment, environmental pollution increases due to business activities so many problems are faced by society. A negative impact on human beings and many environmental issues, including air pollution, water pollution, soil pollution also loss of wildlife. As a concern about society, the Indian government amended the Companies Act and inserted a new section 135 corporate social responsibility [CSR] was introduced as a statutory obligation for companies under section 135 of the Companies Amendment Act, 2013 and enforced on 1^{st} April 2014, India became the first country to legally mandate it.

Corporate social responsibility is an obligation of the business towards society. Companies use society's resources and earn profit from society, so companies are responsible for contributing to society through CSR. The main object of environmental CSR is to reduce environmental pollution from their business processes. Companies having environmental policies are important for all eco-friendly businesses. A well-organized environmental policy boosts companies' reputation among customers, suppliers, regulators, investors staff, and the local community. The company will also increase employee morale, easier to attract customers, and keep motivating staff. The corporate sector needs time to look beyond the profit and social concerns of the environment into their strategic management to improve their brand value, provide goods and services at reasonable prices and motivate people for the optimal use of resources.

Objectives of the Study

1. To observe the different environmental CSR strategies adopted by the companies and their effectiveness.
2. To analyses the role of CSR in the Environmental Sector.

Concept of Corporate Social Responsibility

A key idea in business is corporate social responsibility, which refers to a company's duty to operate ethically while managing its operations to minimise negative social, economic, and environmental effects. Increase an organization's accountability for the effects of its decisions and actions on the social and natural environment through ethical and transparent conduct that promotes sustainable development, including the health and well-being of society. CSR is a type of corporate activity that is measured by how much social and environmental repercussions are taken into account, as opposed to profitability. Corporate social responsibility is a type of self-regulation that aims to make a good impact on society and be socially responsible. Being environmentally aware is one-way businesses can put their CSR into practice. In the workplace, encourage inclusion, diversity, and equality. Respectfully treat your staff. Contribute to the society. We guarantee that commercial decisions are moral. The major objectives of CSR are for businesses to assume economic responsibility, enhance working conditions, advance fair trade, lessen environmental harm, support local communities, and raise employee satisfaction.[1]

Applicability of CSR

It is in this context that the law regarding CSR in India has to be viewed. Section 135 of the Companies Act, 2013, made CSR mandatory in India for large companies. The law puts the responsibility of CSR on the company's Board and lays down processes for setting up CSR

Committees, having a CSR policy, and most importantly, spending 2 percent of the average profit of the last three years on certain types of development projects. It details what constitutes eligible CSR activities, who can implement CSR projects, what geographical areas should be given preference, how CSR activities must be reported, how they must be evaluated, and the consequences of non-compliance.

The law applies to a large number of companies, Section 135 of the Companies Act, 2013 applies to every company registered under the Act, and any other previous Companies Law, with a net worth of Rs 500 crore or more, a turnover of over Rs 1,000 crore, or a net profit exceeding Rs 5 crore in any financial year. The circular further explains that 'any financial year' implies any of the three preceding financial years[2].

Corporate Social Responsibility and Environmental Impact

Environmental CSR seeks to minimise the negative environmental effects of business operations and activities, including energy consumption, water use, waste disposal, recycling, emissions, and environmental effects of office space and business travel. Our main emphasis is on benevolent laws. A company has the chance to improve its reputation and cut costs through a green CSR business programme or action. Sales can rise as a result of environmental issues. Customers often choose to purchase goods from ethical businesses that participate in CSR initiatives and contribute back to the community. In terms of society, this is crucial.[3]

How to Reduce Environmental Impact through Green CSR

Companies can Reduce business Environmental Impact in many ways some of these are

- The products used every day have come from recycled products.
- Companies can use various marketing strategies in each stage to try to enhance the life cycle of their products.[4]
- Corporate citizenship refers to a company being responsible toward society. The main aim is to produce higher standards of quality and living life for the general public that surround them and still maintain profitability for stakeholders.[5]
- Use packaging materials that are either reusable or recyclable and also avoid packaging to automatically reduce packaging.[6]
- The environment is a burning issue in today's society, and it's up to all of us to take steps to minimize our environmental pollution one easy way you can help is by shopping locally to save money on fuel.[7]

- Making a well-organized network in business can supply resources for company growth. A high-quality business network may provide recruitment leads, opportunities for increased profits, and key industry knowledge.[8]
- Give preference to working with environmentally conscious suppliers and distributors.[9]

Advantages of Environmental CSR

When a company implements a CSR project, there are many benefits for the company, society, and the environment. Environmental CSR focuses on environmental and sustainability projects. These projects improve a company's image, attract media attention, grow the organization, reduce pollution, and make customers prefer to buy products from reputable companies. A key component of environmental CSR is eliminating waste and emissions, maximizing energy efficiency and productivity, and minimizing practices that can adversely affect the use of natural resources by future generations. An increasing number of companies are recognizing the importance of environmental initiatives in their business activities. When companies implement CSR projects that are so many advantages for companies, society, and also for the environment. Environment CSR focus on environmental and sustainability projects and those projects improve the image of a business, attract media attention, growth of the organization, reduce environmental pollution, and customers prefer to buy products from a reputed company. The major components of environmental CSR are the elimination of waste and emissions, maximizing energy efficiency and productivity, and minimizing practices that may adversely affect the utilization of natural resources by coming generations. A growing number of companies are realizing the importance of environmental initiatives in business development.[10]

Therefore, the following are the main advantages of environmental CSR

- Reduce business risk from large corporations to small companies, all businesses face some kind of risk. Some business risks are minor and therefore easy to deal with. Some are more dangerous than others so reduce business risk.
- Green transportation is any means of travel that doesn’t negatively impact the environment so use Eco-friendly transportation.
- CSR allows a company to be aware of its impact on all elements of society, including economic, social, and environmental issues, and being a socially responsible firm can help the image and brand of a company.

- Positive business reputation
- Reducing energy use in business saves money, increases our energy security, and reduces the pollution emitted from non-renewable sources.
- Sustainability is an extremely urgent and universal concern and environmental CSR prioritizes sustainability. It's increasingly important for companies to have a socially conscious image. Consumers, employees, and stakeholders prioritize CSR when choosing a brand or company, and they hold corporations accountable for effecting social change with their beliefs, practices, and profits.
- Improved supply chain efficiency
- Improve the reputation of the company
- positive image of the company attracts media attention
- Reduce packaging waste
- Better brand sales and customer trust
- Water consumption
- Environmentally conscious construction
- Companies need to have a socially conscious image. Consumers, employees, and stakeholders prioritize CSR when choosing a brand or company, and they hold corporations accountable for effecting social change with their beliefs, practices, and profits.
- Organisational growth[11]

Environment Management Principles

Environmental management concepts must be followed when a corporate sector implements CSR programmes. The judge and decision-makers use the concepts of environmental management as aguidance for interpreting the law. The guiding concepts of environmental management are as follows

Precautionary Principle

For the concern of the Environment, the precautionary approach shall be required to apply by states where there are developmental activities threats of serious damage to environmental degradation to stop and prevent such activities.[12]

The Prevention Principle

As per the prevention, the principle requires preventive measures to be taken to anticipate and avoid environmental damage before it happens.[13]

The Polluter Pays Principle

The 'polluter pays' principle is the commonly accepted practice that those who produce pollution should bear the costs of managing it to prevent damage to human health or the environment.[14]

Sustainable development Principle

The principle of sustainable development has been defined by the 1987 Brundtland Report as a development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[14]

The Sovereignty and Responsibility Principle

According to the sovereignty and responsibility principle states have sovereign rights over their natural resources and states should not damage the environment.[15]

Invironmental CSR Initiatives by some Indian Companies Top Environment and sustainability CSR Projects.

CSR project by Companies ITC limited on Waste Management Program [2020-2021]	Project Budget	CSR project	CSR Project object
ITC Limited	INR 45.64 Cr	Waste Management Program [2020-2021]	• To ensure that no garbage is dumped in landfills, the company concentrated on developing reproducible, scalable, and sustainable models of municipal solid waste management that could be utilised across the nation.
United Breweries Limited	INR 11.21	Water Conservation Program (2020-21)	The Company contributed to CSR by focusing on water conservation programs. This project focuses on Integrated water management through rainwater conservation, harvesting, and the promotion of the use of appropriate cropping systems.[16]
Wipro Ltd	INR 37.11 Cr	Renewable Energy Program [2020-2021]	The company contributed to CSR by contributing funds and initiating measures for Water Resource Development & Management, Access to

			Safe Drinking Water, Waste Management, Restoration of Water bodies, Urban Afforestation, and Renewable Energy.
Hindustan Zinc Limited	INR 16.87 Cr	Sewage Treatment Plant (2020-21)	The company contributed to CSR and focused on a Sewage treatment plant this will treat almost the entire sewage of Udaipur city and the recycled water will be used by our plants, significantly reducing our freshwater intake.
IndusInd Bank Limited	INR 23.34 Cr	Water Resource Development & Management	The company contributed to CSR by contributing funds and initiating measures for Water Resource Development & Management, Access to Safe Drinking Water, Waste Management, Restoration of Water bodies, Urban Afforestation, and Renewable.[17]

Sources: https://csrbox.org/Top-Environment-and-sustainability-csr-projects-in-india

From the above table, you know that some companies in India take initiative for environmental protection from new CSR projects. Companies need to have a socially conscious image. Consumers, employees, and stakeholders prioritize CSR when choosing a brand or company, and they hold corporations accountable for effecting social change with their beliefs, practices, and profits.

Conclusion

The companies contribute to CSR at that time businesses follow professional ethics and the path of philanthropy. Today companies are more conscious about society and Environmental Protection. Those companies that contribute to CSR projects have benefited from the CSR projects. Because of CSR initiatives company improves the image of the business, enhances values and earnings, attracts positive media attention, and increases sales and customer loyalty. Like companies, CSR projects benefited the country, and CSR policies play a major role in the development of India. Due to the technological development and day-by-day increase in the population that adversely affects the environment and environment degradation slowly. So today CSR policies play an important role in promoting eco-friendly methods that must be adopted by businesses and that benefit society and the environment.

When the corporate sector contributed to CSR projects at that time, companies followed the principle of environmental management policies and prioritized reducing air pollution, water pollution, soil pollution, noise pollution, and protecting wildlife.

Now some companies contribute to CSR projects mostly focusing on the environment and sustainability CSR projects and those projects are waste management programs, soil and moisture conservation, Renewable energy program, Sewage treatment plants, etc.

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22. A Review on Representative Swarm Intelligence Algorithms

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Abstract

Swarm intelligence algorithms are a subset of the artificial intelligence (AI) field, which is increasing popularity in resolving different optimization problems and has been widely utilized in various applications. In the past decades, numerous swarm intelligence algorithms have been developed, including ant colony optimization (ACO), particle swarm optimization (PSO), artificial fish swarm (AFS), bacterial foraging optimization (BFO), and artificial bee colony (ABC). This review tries to review the most representative swarm intelligence algorithms in chronological order by highlighting the functions and strengths. It provides an overview of the various swarm intelligence algorithms and their advanced prospects in this relatively new research domain are represented to support future developments

Index Terms - Ant colony optimization (ACO), artificial bee colony (ABC), artificial fish swarm (AFS), bacterial foraging optimization (BFO), optimization, particle swarm optimization

I. Introduction

IN nature, groups of thousands, millions, or trillions of individual elementary entities can self-organize into multifarious forms to fit a functional objective, purely through local and ordinary interactions. Examples at different biological levels include the self-assembly of crystals of bacterial flagella at the molecular scale, regular development of multicellular organisms at the cellular scale, and interconnected food searching or risk avoidance (for energy-saving in ants) at the colony scale [1]. Research onbehavioral intelligence has been conducted for a long time; a study regarding Cape bees and “ animal intelligence” was published in 1883 [2].

Throughout nature, different organisms often profit from acting in swarms. Models of the simple collective behavior of individuals indicate that uncomplicated partial interactions are sufficient to produce and present group morphologies.

By studying the characteristics of individuals and their relationships with groups, algorithms for the corresponding mechanism, known as " swarm intelligence" have been formalized. These essentially comprise biologically inspired computations and have been deemed an emerging field and an integral part of artificial intelligence (AI) .

II. Swarm Intelligence Algorithms

From flocks of birds to schools of fish to swarms of insects, biological aggregations displaying collective behavior emerge throughout nature. This self-organized, natural phenomenon has been the subject of intensive modelling for decades, as itit is highly commonly employed in nature to efficiently solve problems and owing to its potential ability as a biomimetic control strategy for engineering systems [7]. In recent years, swarm intelligence has been universally studied in various areas; consequently, many related approaches to collective behavior have emergeII. Swarm Intelligence Algorithms From flocks of birds to schools of fish to swarms of insects, biological aggregations displaying collective behavior emerge throughout nature. This self-organized, natural phenomenon has been the subject of intensive modelling for decades, as it is highly commonly employed in nature to efficiently solve problems and owing to its potential ability as a biomimetic control strategy for engineering systems [7].

A. Ant Colony Optimization

In computer science and operational research, ACO is a probabilistic method for resolving computational problems which could be reduced to searching the optimal paths through graphs. It was first proposed by Marco Dorigo in 1992 based on his Ph.D. research [9], and the inspiration for this basic algorithm came from the behavior of ants finding paths in the procedure of food searching or risk avoidance.

The ACO algorithm has characteristics of distributed computing, positive information feedback, and a heuristic search [10]. Its basic idea is to imitate an ant's dependence on pheromones, and to guide each ant's action by using positive feedback among the ants. This algorithm can be utilized to deal with most optimization problems or can be transformed into optimization problems. Ants can leave a type of material called a pheromone in the paths they pass. They can sense the intensity of this material and can thereby guide their own direction of action in the process.

B. Particle Swarm Optimization

In groups of birds acting in a cooperative energy-saving manner, individuals in the group continuously optimize the search mode, in view of the experience of group members.

Based on a study of swarm behavior, Kennedy and Eberhart put forward the PSO algorithm in 1995 [1]. In PSO, a flock of particles retain motion in a constrained parameter space, interact with each other, and update their velocities and positions on account of their own and their neighbors' information, finding the global optimum [2]. The initial state of the algorithm is a group of random particles comprising a particle swarm; it also represents a random solution space. Each particle owns only two properties: velocity and position. Each particle searches for the opening.

C. Artificial Fish Swarm

In nature, fish could discover more nutritious areas by individual searching or following other fish, and areas with more individuals are normally more nutritious. The stochastic population-based AFS optimization algorithm was initially proposed by Li et al. in 2002 [7]. Its main idea is to imitate fish behaviors such as preying, swarming, and following, with a local search of individuals for generating a global optimum [8]. The AFS algorithm possesses attractive features similar to those of a genetic algorithm, but it can reach a faster convergence speed and requires the adjustment of fewer parameters. The AFS algorithm does not include crossover and mutation procedures, so it can be executed more easily. It is also an optimizer in view of population; the system is initialized with a group of randomly generated potential solutions, and then iteratively executes a search for the optimum one [9]. The AFS algorithm acts as a parallel and random search optimization method, with the advantages of a strong global search capacity and an excellent convergence speed.

D. Bacterial Foraging Optimization

The BFO algorithm was first proposed by Passino in 2002.. It models the foraging behavior of Escherichia coli in humans, is relatively new to the family of nature-inspired optimization algorithms. It optimizes through the competition and cooperation among bacterial populations and is utilized as a global random search algorithm. It has characteristics of simplicity and fast convergence, and there is no need to optimize the gradient information of the object during the optimization process [9]. The BFO simulation of the bacterial population contains three steps: chemotaxis, reproduction, and elimination/dispersal, corresponding to the following three processes [5]: in chemotaxis, a bacterium moves by carrying on small steps while searching for nutrients, and a core concept of BFO is simulating.

E. Artificial Bee Colony

A group of honey bees, called as a swarm, could complete different tasks through social collaboration. Karaboga proposed the ABC algorithm in 2005 to solve a multivariate function optimization problem, in view of the intelligent foraging behavior of a honey bee swarm. Bees form groups of insects, and although the behavior of a single insect is extremely simple, a group of single individuals represent very complex behavior. Real bee populations can collect nectar from food sources (flowers) with high efficiency in any environment; they can also simultaneously adapt to environmental changes. In the original ABC algorithm, it contains three kinds of individuals: employed bees, onlooker bees, and scout bees. Each employed bee corresponds to a certain food source (solution vector), and the field of the food source is iteratively searched. More formally, employed bees will search for a richer food source ( ) near the original food source ( ). They will evaluate the fitness and compare it with that of original food source. They would find a new food source by using a process corresponding to (8), as follows:

$$dmi = xmi + \omega mi(xmi - xki).$$

III. Applications and Results

The appearance of swarm intelligence algorithms has provided fast and reliable methods for obtaining solutions to different complex optimization problems. These swarm intelligence algorithms, including ACO, PSO, AFS, BFO, ABC, and other algorithms, reflect their ability in resolving nonlinear design problems in real-world applications thinking over nearly all areas of science, engineering, and industry.

These applications include, e.g., those concerning transport problems (such as those concerning unmanned aerial vehicles (UAVs)), network routing, route planning, robot systems for scheduling problems, power systems, fault diagnosis, parameter optimization, system identification, cluster analysis, data mining, image processing, layout optimization, and signal processing. The purpose of this section is to present some typical and relevant professional applications in which the use of swarm-based optimization algorithms has successfully been made in the literature.

A. Strengths

Swarm intelligence algorithms present advantages as compared to traditional methods, and even as compared to other AI algorithms. Based on the relevant literature, some representative advantages are summarized as follows.

1. The most basic feature of the swarm intelligence algorithms is the flexible number of individuals, facilitating higher scalability. Thus, their control mechanisms are not excessively based on swarm size, as long as it is not too small or too large.
2. They present the capability to realise a relatively large- scale search, and to refine the solutions in a single search process. In the phase of generating the optimal solution, they usually present excellent exploration and exploitation capabilities
3. Several simple individuals interacting locally among themselves can eventually lead to a sophisticated global behavior. Low-level interactions between simple individuals have been represented to make the percolation of information known by only a few individuals throughout an entire aggregate, and to promote the emergence of collective intelligence. This mechanism is particularly suitable for some frontiers in special fields, such as targeted medical therapies, bee colony drones, and geographic surveillance.
4. Basically, the swarm operates without central control, and no specific individual is indispensable for the swarm to keep operation. This means that a malfunction in any part of this system would not increase the risk of a complete failure of the entire swarm system, providing good robustness.

B. Limitations

As concluded in the majority of the papers, swarm intelligence algorithms have proven to be valuable in dealing with various tasks and challenges. However, there are also several limitations worth mentioning, and the representative limitations are summarized as follows.

1. Swarm intelligence algorithms are generally time- consuming processes which are affected by factors such as the size of population, frequency of iterations, and pattern of iterations. Thus, these factors directly affect the efficiency of swarm intelligence algorithms relative to the size of relevant applications, and these algorithms may be worthless when the factors exceed certain sizes.

2. Basic swarm intelligence algorithms can suffer from stagnation or a premature convergence to a local optimum, owing to the lack of central coordination. Therefore, they need to be improved to realise adaptive mechanisms for continuously exploiting and exploring the search space, and for balancing the searching speed
3. Blocking coordination mechanisms increase the calculation time. In particular, an agent has to stay for other agents to be evaluated before it could continue to another position and start exploring the search domain. For example, the basic PSO algorithm is computationally costly, owing to the waiting time between evaluation of the first particle and that of the rest of the swarm before the state could finally be updated.

C. Future Research Directions

The research in swarm intelligence algorithms has shown a positive evolution; in addition, it provides several future research directions that may contribute to further growth in the field of swarm intelligence, as discussed below.

1. Novel extensions of swarm algorithms. The existing swarm intelligence algorithms form an older category of optimization techniques, i.e., immense research has been introduced, and potential application areas have been expanded. These techniques are represented by an adequate number of references in the previous research. Deeper investigation into the normal, possibly universal, features of the collective behaviors of animals, bacteria, cells, molecular motors, and driven granular matter are necessary for extension of the swarm algorithm family. Appropriate and novel application areas are required to be sought out for other advanced and/or simplified, time-effective algorithms, as these are still unexplored and comparatively newer approaches to resolving complicated computation problems
2. Characteristic refinement of individual agent. Future research should also pay attention to the characteristic refinement of each individual agent, to promote the overall optimization performance of the swarm intelligence algorithms. For example, there are two proverbial kinds of interaction patterns: hierarchical, and egalitarian. Some research has indicated that an individual will switch interaction patterns in different situations. This switching mechanism is prospective for potential industrial applications in multi-robot system coordination, unmanned vehicle formation control, and other areas. Within these individual agent-based techniques, there is also immense potential

for fine-tuning, i.e., to further optimize outcomes based on context-specific requirements.

V. Conclusion

Swarm intelligence algorithms mimic the swarm intelligence behavior of biological elements in nature, and have been gradually popular cross-discipline and/or research field in recent years. This review provides a comprehensive survey of swarm intelligence and represents a categorization scheme for analyzing the existing swarm intelligence studies with applications. It is evident from the study that the representative algorithms discussed here (ACO, PSO, AFS and BFO and ABC) are very popular and well-explored, with several literatures relating to each subject. Authors have also expressed details of lesser-known algorithms. among which the cuckoo search, pigeon-inspired optimization, bat, grey wolf optimizer, artificial immune system, and fruit fly optimization algorithms have formed an important and growing category. These algorithms have been utilized in numerous diverse domains for solving optimization problems, e.g., scheduling problems, robots, power systems, parameter optimization, system identification, image processing, and signal processing. Despite the promising results reported so far, there is significant space for further advances. The strengths and limitations are discussed and future research trends are summarised.

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23. Physiotherapy Treatment for Adhesive Capsulitis – A Comparative Study between Mobilization with Exercises and TENS with Exercises

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Abstract

Adhesive capsulitis is one of the most common and disabling orthopaedic disorders for which patient seek treatment. Adhesive capsulitis has been described as a condition of unknown etiology characterized by gradually progressive, painful restriction of all glenohumeral joint motion with spontaneous restoration of partial or complete motion over months to years. The present study is aimed to find out comparison between two types of physiotherapy treatment for adhesive capsulitis i.e. TENS along with exercises and Mobilization with exercises. The study result shows that both the therapies i.e. Mobilization with exercises and TENS with exercises were effective in reducing pain and SPADI score in the adhesive capsulitis patients but Mobilization with exercises showed better results as compared to the other.

Key Words: Adhesive Capsulitis, Mobilization & TENS.

Introduction

Shoulder ache is quite common and significantly morbid. Attempts to conduct epidemiological research using standardised classification systems based on presumptive patho-anatomical origins have been unsuccessful. One of the most prevalent regional pain syndromes, shoulder discomfort affects 18–26% of individuals at any given moment, per demographic surveys (Prevalence, 1974; Chard et el., 1991; Anderson et al., 1993; Walker-Bone, 2004). Aging populations, athletes, and workers are becoming increasingly concerned about shoulder pathologies.

Adhesive capsulitis is one of the most common and disabling orthopaedic disorders for which patient seek treatment. Adhesive capsulitis has been described as a condition of unknown etiology characterized by gradually progressive, painful restriction of all glenohumeral joint motion with spontaneous restoration of partial or complete motion over months to years.

Understanding the role of non-surgical (physiotherapy) ways of treatment for shoulder injuries is the main goal of the current research investigation. In order to fully restore the shoulder, both surgery and non-surgical techniques like physiotherapy have distinct responsibilities to play. The type of therapy needed—surgical or non-surgical, or both—depends on the degree and type of the shoulder injury. While non-surgical procedures aid in rehabilitation and ligament strengthening, surgical methods deal with rebuilding the broken or torn ligament. The present study therefore is aimed to find out comparison between two types of physiotherapy treatment for adhesive capsulitis i.e. TENS along with exercises and Mobilization with exercises.

Aims & Objectives

1. To study the effect of physiotherapy treatment for adhesive capsulitis mainly mobilization with exercises and TENS with exercises.

Methodology

The present study is aimed to find out the effectiveness of Manual Mobilization along with exercises and TENS with exercises in treating the adhesive capsulitis. The present study will be based on comparison between the two techniques on the basis of selected parameters like Pain, and SPADI Index scale. Total 250 patients were selected for the study. The patients were divided into two groups i.e. Group A and Group B. Group A patients are given treatment by Manual Mobilization technique with exercises and Group B patients are given TENS approach with exercises. A team of physiotherapists is selected and oriented to perform the treatment on the patients selected for the study.

Inclusion Criteria

- Patients with adhesive Capsulitis for at least more than three months.
- Generalized loss of functional movements.
- Range of motion at least 50%of the unaffected side.

Exclusion Criteria

- Bilateral shoulder adhesive capsulitis.
- Intrinsic glenohumeral pathology such as glenohumeral arthritis.
- A history of substantial shoulder trauma, recurrent dislocation or subluxation of the shoulder, recent fracture of humerus, scapula or clavicle, nerve injury
- Previous shoulder surgery

- Pathological instability of the shoulder caused by reflex sympathetic dystrophy and rheumatologic disorders
- Patients with cervical spine pathology, malignancy were excluded.

Intervention

A prospective study is conducted in order to find out how effective the above mentioned two interventions are during this six week program schedule.

During the course of study each measurement is taken three times i.e.: Day 1, at three weeks and at six weeks. It was an ongoing study for a period of 18 months.

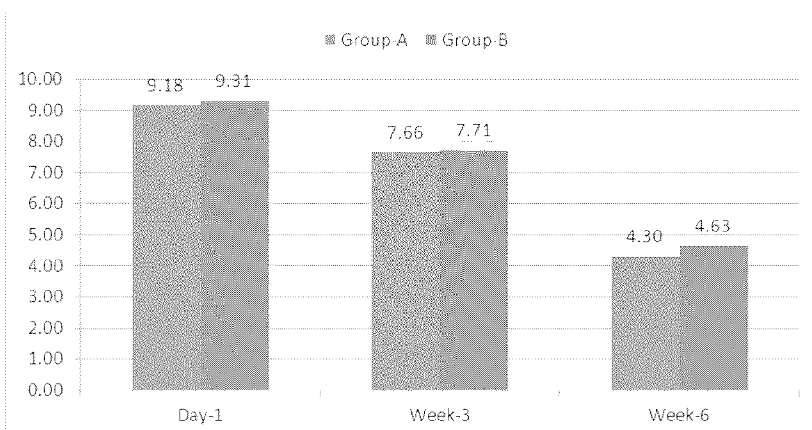
Analysis

Pain (VAS) Scores

Table – 1: Descriptive Statistics for VAS Score

Group		Mean	Std. Deviation	Std. Error Mean
VAS (Day - 1)	Group-A	9.1760	.60992	.05455
	Group-B	9.3120	.64026	.05727
VAS (Week 3)	Group-A	7.6560	1.09326	.09778
	Group-B	7.7120	.89637	.08017
VAS (WEEK -6)	Group-A	4.3040	1.37503	.12299
	Group-B	4.6320	1.30468	.11669
VAS Change	Group-A	52.68	16.821	1.505
	Group-B	49.71	16.325	1.460

Graph – 1: Descriptive Statistics Based on VAS Scores for Both the Groups



Mann-Whitney U test Result

Table – 2: Mean Rank table

	Group	N	Mean Rank	Sum of Ranks
VAS (Day - 1)	Group-A	125	118.13	14766.00
	Group-B	125	132.87	16609.00
	Total	250		
VAS (Week 3)	Group-A	125	124.58	15573.00
	Group-B	125	126.42	15802.00
	Total	250		
VAS (WEEK -6)	Group-A	125	115.58	14448.00
	Group-B	125	135.42	16927.00
	Total	250		
VAS Change	Group-A	125	134.24	16780.50
	Group-B	125	116.76	14594.50
	Total	250		

Table – 3: Mann-Whitney Test Result

	Mann-Whitney U	Wilcoxon W	Z	p-value
VAS (Day - 1)	6891.000	14766.000	-1.811	.070
VAS (Week 3)	7698.000	15573.000	-.209	.835
VAS (WEEK -6)	6573.000	14448.000	-2.255	.024
VAS Change	6719.500	14594.500	-1.930	.054

Interpretations

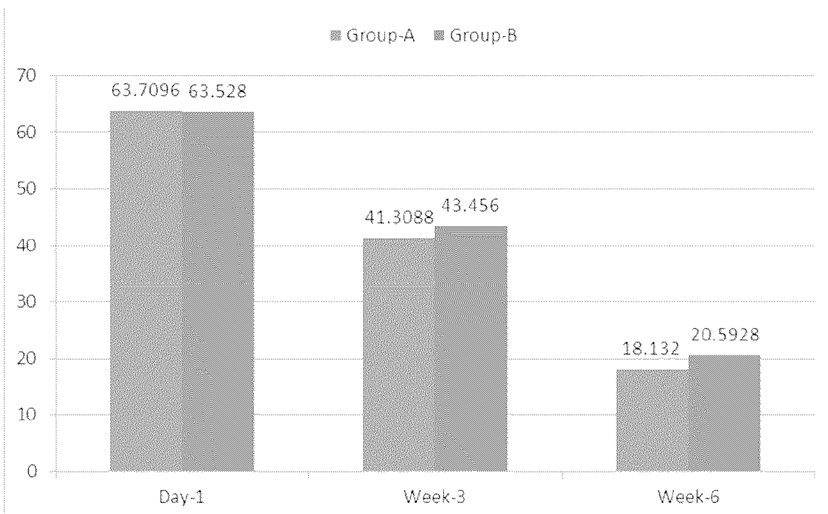
- Since p-value for the Mann Whitney U test is greater than that of 0.05 on Day-1 and Week-3 indicates no significance of difference when compared between Group-A and Group-B.
- Since p-value for the Mann Whitney U test is less than that of 0.05 on Week-6 indicates significance of difference when compared between Group-A and Group-B where in Group A is showing better results as compared to Group B.
- Since p-value for the Mann Whitney U test is greater than that of 0.05 on for change in score of Day-1 to Week-6 indicates no significance of difference when compared between Group-A and Group-B.

Shoulder Pain and Disability Index (SPADI) Scale

Table – 4: Descriptive Statistics:

Group		Mean	Std. Deviation	Std. Error Mean
SPADI (%) DAY 1	Group-A	63.7096	3.98115	.35609
	Group-B	63.5280	4.25068	.38019
SPADI (%) WEEK 3	Group-A	41.3088	6.71564	.60067
	Group-B	43.4560	5.81776	.52036
SPADI (%) WEEK 6	Group-A	18.1320	9.59561	.85826
	Group-B	20.5928	8.82776	.78958
SPADI Change	Group-A	72.0252	13.39858	1.19841
	Group-B	68.0781	11.74563	1.05056

Graph – 2: Graphical representation of descriptive statistics for SPADI scores



Mann-Whitney U test Result

Table – 5: Mean Rank table

		Group	N	Mean Rank	Sum of Ranks
SPADI (%) DAY 1		Group-A	125	131.08	16385.00
		Group-B	125	119.92	14990.00
		Total	250		
SPADI (%) WEEK 3		Group-A	125	111.72	13964.50
		Group-B	125	139.28	17410.50
		Total	250		
SPADI (%) WEEK 6		Group-A	125	115.29	14411.50
		Group-B	125	135.71	16963.50
		Total	250		
	SPADI Change	Group-A	125	135.81	16976.50
		Group-B	125	115.19	14398.50
		Total	250		

Table – 6: Test result

	Mann-Whitney U	Wilcoxon W	Z	p-value
SPADI (%) DAY 1	7115.000	14990.000	-1.223	.221
SPADI (%) WEEK 3	6089.500	13964.500	-3.022	.003
SPADI (%) WEEK 6	6536.500	14411.500	-2.237	.025
SPADI Change	6523.500	14398.500	-2.257	.024

Interpretations

- Since p-value for the Mann-Whitney U test is greater than that of 0.05 on Day-1 indicates no significance of difference when compared between Group-A and Group-B.
- Since p-value for the Mann-Whitney U test is less than that of 0.05 on for score of week-3, week-6 and change from Day-1 to Week-6 indicates significance of difference when compared between Group-A and Group-B wherein Group A showing better results as compared to Group B.

Findings & Conclusion

The study result shows that both the therapies i.e. Mobilization with exercises and TENS with exercises were effective in reducing pain in the adhesive capsulitis patients but Mobilization with exercises showed better results as compared to TENS with exercises when compared between the two groups.

The study results further shows that both the therapies i.e. Mobilization with exercises and TENS with exercises were effective in improving the Shoulder Pain and Disability Index (SPADI) in the adhesive capsulitis patients but there was significant difference among both the groups. Group A i.e. those patients who were given Mobilization along with exercises treatment showed better results as compared to the Group B i.e. those patients who were treated with TENS along with exercises treatment.

The study concluded that it is better for therapists to use Mobilization along with exercises for the treatment of adhesive capsulitis as compared to TENS with exercises.

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24. The Impact of the Funding Procedures on the Performance of Micro Project in Yemen

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Abstract

This research aims to examine the impact of the Funding Procedures on the Performance of Micro Project In Yemen. A descriptive research design was used. The primary data was collected through questionnaires. A size of the sample was (167) respondents has been selected by using the simple random technique. A set of statistical tests was used in Data analysis as descriptive statistics, Pearson correlation and simple regression tests. The results revealed that there are funding procedures for micro projects in Yemen that are carried out to a high degree in the surveyed institutions. And the resuls confirms that there is is a significant impact of funding procedures on the performance of micro projects in Yemen.

Key words: Funding, Procedures, Micro, Project, Performance.

1. Introduction

The issue of small projects has become one of the topics that receive great attention from developing countries, local and international organizations, as well as the interest of economic researchers. Yemen has high population growth, making these projects necessary to absorb employment, reduce unemployment, and supply the national economy with goods and services. The financing problem may be one of the most important reasons that impede their growth and development, as these projects need financing sources, whether at the start of their activity or when expanding or renewing machinery and equipment, and it will not be able to achieve its objectives or ensure its continued survival in the market without sufficient capital to meet its needs. Of the total establishments in any country, it reached 99% in China and Japan and 88% in Qatar). Since the early nineties, this prompted the government and some local and international financial institutions to give some attention to the small projects sector. Its percentage in the industrial sector reached 8.88%, according to the 2009 survey. If we add to it the number of medium enterprises that employ (from 4-9 workers), its percentage will reach 5.97% of the total number of industrial establishments.

The most important problems facing micro project are how to get enough funding that the project needs, and what sources are available to get the funds through it .Therefore the problem of the study is as the following question:

What is an impact of funding procedures on the performance of micro projects in Yemen? The main objective of the research is to study impact of funding procedures on the performance of micro projects in Yemen.

2. Literature Review

The theory of Resource-Based View (RBV) of the firm has gained prominent attention to be the major theory in strategic management (Galbreath, 2005; Liang et al., 2010; Almarri & Gardiner, 2014). The basic argument of RBV is that firm performance is substantially determined by its key and unique resources. When the firm possesses more valuable but scarce resources, it is more likely to create a sustainable competitive advantage and achieve better performance (Barney, 1991; Fahy, 2000). It is also argued that organizations with a combination of these resources can improve special capabilities, which in turn obtain a sustainable competitive advantage and achieve higher performance (Barney, 1991; Barney & Clark, 2007). However, this theory has been criticized for its inability to explain how organizational resources are integrated, developed and deployed to gain sustainable competitive advantage (Priem & Butler, 2001; Morgan, Vorhies, & Mason, 2009; Kraaijenbrink, Spender, & Groen, 2010; El Shafeey & Trott, 2014). Therefore, the resource deployment approach has been introduced in order to overcome such shortcomings (Shin & Aiken, 2012) and there has been an attempt to conceptually connect resources to capabilities, which is expected to improve the other resources in the organization (Ahn & York, 2011; Makadok, 2001). In this view, TQM practices are considered as valuable organizational resources that can enhance organizational capabilities and eventually result in higher performance. Crook, Ketchen, Combs, and Todd (2008), who carried out a study in strategic management, argued that RBV "has emerged as a key perspective guiding inquiry into the determinants of organizational performance". However, the dynamic capability in the form of IT capability is introduced to address the theoretical shortcomings of RBV on the issues of having continual success and sustained competitive advantage in swiftly changing environments (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997; Pavlous, 2004). The complementarity is also used to address the limitation of RBV on the issues of isolation of resources in generating or sustaining competitive advantage rather than on the complementarity of resources (Mueller, 1996; Powell, 1995; Melville, Kraemer, & Gurbaxani, 2004). In a nutshell, this study adopts RBV, dynamic capability and complementarity theories as underpinning theories.

3. Methodology

The purpose of this study is to examine the impact of funding procedures on the performance of micro projects in Yemen. A descriptive, analytical method used, Data collection consisted both primary and secondary Data. The secondary data source, includes extensive desk research through libraries, different published material and world-wide web. The primary data was collected through questionnaires. A Questionnaire was constructed to measure funding procedures for the performance of micro projects. The questionnaire was designed based on independence variable dependent variable. The community of research covered the thirteen institution and programs in Yeme. A total of (167) questionnaires were distributed, (156) were validly filled and returned the questionnaire include (5) questions were developed and five-points Likert scales (1= strongly disagree to 5 = strongly agree)

4. The Hypothesis of Research

H_1There is a significant impact of funding procedures on the performance of micro projects in Yemen.

5. Data Analysis

Descriptive statistics of funding procedures items arranged in descending order according to relative importance;

Table (1)

Items	Level of Agreement						Mean	Std. Deviation	RII %	The trend
		Strongly Agree	Agree	Average	Disagree	Disagree Strongly				
The mechanisms of current financing of fund are friendly	f	95	55	5	1	0	4.56	0.592	91.20	V. high
	%	60.9	35.3	3.2	0.6	0				
The procedures for the disbursement of loans are	f	70	71	10	5	0	4.32	0.736	86.40	V. high

Simple and quick, and repayment terms are easy in practice.	%	44.9	45.5	6.4	3.2	0				
There is a specific mechanism for financing individuals	f	73	56	15	11	1	4.21	0.930	84.20	V. high
	%	46.8	35.9	9.6	7.1	0.6				
Employees were trained to communicate effectively with all clients to ensure their understanding of the financing laws.	f	43	82	23	8		4.03	0.795	80.60	High
	%	27.6	52.6	14.7	5.1					
Sufficient time is given to customers to review the terms and conditions of financing in accordance with rules and regulation.	f	51	62	28	14	1	3.95	0.962	79.00	High
	%	32.7	39.7	17.9	9.0	0.6				
Financing Procedures							**4.21**	**0.516**	**84.28**	**V. high**

Prepared By the Researcher

The respondents see that the mechanisms of current financing of fund are friendly to a very high degree. This statement got the first rank among this dimension statement, with a relative importance 91.20%.

They also agree to a very high degree that the procedures for the disbursement of loans are Simple and quick, and repayment terms are easy in practice. This statement was ranked second in relative importance 86.40%.

As for whether there is a specific mechanism for financing individuals, according to the respondents, it is available to a very high degree in the surveyed institutions. This statement came in the third rank of relative importance 84.20%.

Also, training employees to communicate effectively with all clients to ensure their understanding of financing laws is done to a high degree in the surveyed institutions. This statement came in the penultimate rank with relative importance 80.60%. Respondents report that giving customers sufficient time to review the terms and conditions of financing in accordance with rules and regulations is done to a high degree in the surveyed institutions. This statement came in the last rank with a relative importance 79%.

The general relative importance of this dimension was 84.28 %, which indicates that there are financing procedures for micro projects in Yemen that are carried out to a high degree in the surveyed institutions.

To Test the Validity of the Hypothesis

Table ( )

The impact of funding Procedures on the performance of micro projects

<table>
<tr><th colspan="6">Model Summary</th><th colspan="2">ANOVA</th><th rowspan="4">The Decision</th></tr>
<tr><th>R</th><th>R Square</th><th>Adjusted R Square</th><th colspan="3">Std. Error of the Estimate</th><th>F calculated</th><th>Sig.</th></tr>
<tr><td>0.496</td><td>0.246</td><td>0.241</td><td colspan="3">0.56199</td><td>50.200</td><td>0.000</td></tr>
<tr><td colspan="8">Coefficient</td></tr>
<tr><td>Dependent variable Y</td><td>Independent Variable& the constant</td><td>Beta</td><td>Std. Error</td><td colspan="2">T calculated</td><td colspan="2">Sig</td><td rowspan="4">Acceptable</td></tr>
<tr><td rowspan="3">Performance</td><td>(Constant)</td><td>1.145</td><td>0.371</td><td colspan="2">3.084</td><td colspan="2">0.002</td></tr>
<tr><td>Funding procedures</td><td>0.620</td><td>0.087</td><td colspan="2">7.085</td><td colspan="2">0.000</td></tr>
<tr><td colspan="7">$y = 1.145 + 0.620X^{*} + e$</td></tr>
</table>

* *Significant at 0.05 and less*

The results of the simple linear regression in Table (2) showed that there is a positive impact and statistically significant relationship for funding procedures on the performance of micro projects *($\beta = 0.620$, $t = 7.085$, P-Value = 0. 000<0.05)*.

The value of the Adjusted R Square coefficient is 0.241, indicating that 24.1% of the Performance of micro projects is explained by the funding procedures. The *f-test* indicates that the above regression model was statistically significant, as the value of the level of significance of *f* was at 0.000, which is smaller than the level of significance adopted in this study, 0.05. According to these results, the second main hypothesis of the study is **acceptable**.

Conclusion

The research was aimed to study the funding procedures on the performance of micro projects in Yemen, The results of descriptive statistics revealed that there are funding procedures for micro projects in Yemen that are carried out to a high degree in the surveyed institutions. The test the validity of the Hypothesis found that there is is a significant impact of funding procedures on the performance of micro projects in Yemen.

Recommendation

- In the light of results, the research is recommend that the Provide a more effective regulatory framework for MFIs to mobilize public savings. Availability of funds not linked to specific projects that would provide MFIs with alternative sources of funding for their activities. This will allow MFIs to pursue additional opportunities and develop sustainable programs tailored to target specific market segments based on the organization’s strategic plans and unique characteristics. This will contribute to creating an environment that promotes growth.

- Diversity and innovation.
- An appropriate regulatory and supervisory framework should be implemented to mitigate the risks associated with the exploitation of public savings for microfinance projects. This can be achieved by setting a specific standard that MFIs must adhere to allow them to obtain public financing.
- Currently, the Central Bank of Yemen only regulates microfinance banks, and the Social Fund for Development has shown its unwillingness to formulate regulations for the informal sector. With that, one of the frames can play a pioneer, and it can be likely to be the same as the framework of the October Personnel Agreement, as the level of the head of the finances and the tests and liquidity risks of the international guarantee - and the accommodation of the secondary assembly.
- There is another financing option called for by the World Bank and other international authorities, which obligates or incentivizes the country's prevailing financial sector to allocate part of its assets to finance microfinance activities. This step can help to ensure that savings accounts are cleared. The capital is badly needed by the market, however, and in the case of Yemen, any use of commercial bank funds to finance microfinance programs would need to be approved by the central bank.
- An appropriate regulatory and supervisory framework should be implemented to mitigate the risks associated with the exploitation of public savings for microfinance projects. This can be achieved by setting a specific standard that MFIs must adhere to allow them to obtain public financing.

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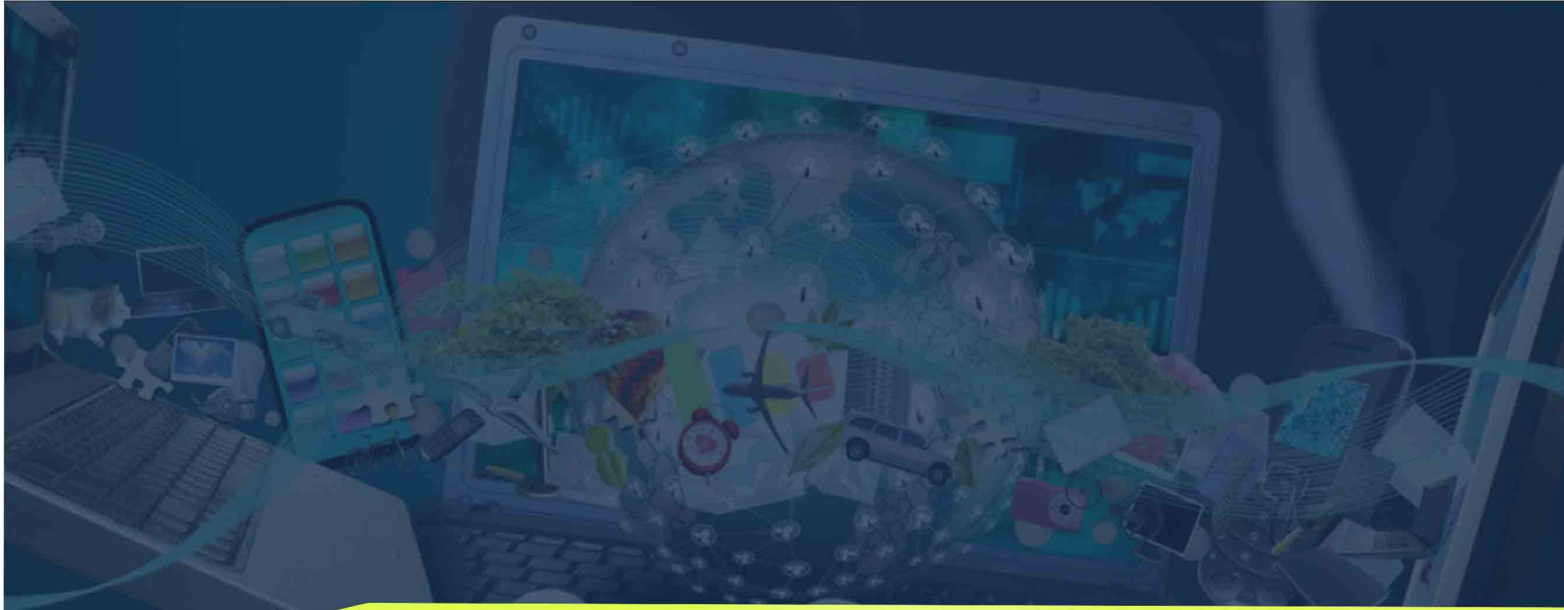

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