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Impact of Mental Wellbeing and Spirituality on Quality of Life and Coping Among People Living With HIV/AIDS.

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ABSTRACT

People living with HIV/AIDS (PLWHA) require prolonged care with specific focus on coping strategies, positive mental health, and spiritual being. Recovery among people living with HIV/AIDS can be facilitated by adaptive coping, which can be influenced their mental health and spiritual well-being. The research examines the impact of the need and attitude of spirituality and mental well-being on the overall Quality of Life (QOL) and their coping mechanism to deal with HIV/AIDS infection. The study found that majority of the participants had used problem solving and cognitive restructuring strategies to cope but did not felt the need for spirituality in dealing with their illness and that mental well-being has a positive effect on the physiological & psychological and social relationships and on coping strategy. The study found a positive effect of spiritual attitude on QOL. PLWHA frequently used problem solving and cognitive restricting techniques to face and overcome the challenges associated with their illness and improved their QOL.

KEYWORDS : HIV/AIDS, Spirituality, Mental Well-Being, QOL, Coping,

Introduction & Review

With the recent advances in clinical tests and treatments for those suffering from HIV/AIDS, the survival of these patients has increased and their Quality of Life (QOL) has become an important focus for researchers and healthcare providers (Walker, Grassly, Garnett, Stannecki, Ghys, 2004). WHO (1998) has defined QOL as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, standards, expectations and concerns".

PLWHA are more likely to experience a number of life stressors including loss of physical and social functioning, managing difficult and complex medical regimens and chronic pain which can affect their coping mechanisms in a varied manner (F Baingana et al, 2005). Many studies have brought out that spirituality can arm one with better ability to tackle stress and provide better coping ability. Spirituality is an important contributor to feelings of well-being (Cotton et al., 2006). Qualitative research indicates that PLWHA reflect on their spirituality in the wake of getting an HIV diagnosis (Tarakeshwar et al. 2006) and often see their life and ailment from a spiritual perspective (Guillory et al. 1997, Tarakeshwar et al. 2006). In addition, despite less involvement in any organized religion, individuals diagnosed with HIV/AIDS incorporate God (Jenkins 1996, Woodwell, and Sowell 2001) and previous experience with religiosity and spirituality (Jacobson et al. 2006) into the coping process. They likewise discover religious adapting methodologies to discover importance in their lives, and looming demise (Corless, 2002 and Hall, 1998; Kelly M. et al. 2010).

Mental well-being – which includes perceived positive relationships and a purpose in life, as well as environmental mastery – is important for older adults to age successfully. It can also have a positive impact on HIV prevention. (Golub S. et al. 2013). Well-being has five measurable elements under the acronym PERMA (Seligman, 2011). Positive emotions include peace, gratitude, satisfaction, pleasure, inspiration, hope, curiosity and love. Engagement – When we're truly engaged in a situation, task, or project, we experience a state of flow: time seems to stop, we lose our sense of self, and we concentrate intensely on the present. Relationship refers to having meaningful, positive relationships with others. Meaning comes from belonging to and serving a cause bigger than ourselves. Accomplishment/Achievement means striving to better ourselves in some way, whether we're seeking to master a skill, achieve a valuable goal, or win in some competitive event. Further research has confirmed that receiving social support from significant social network members can promote positive psychological adjustment in people living with HIV (Mavandadi, Zanzani, Ten, Oslin, 2009). Many studies have shown that HIV leads to a general decline in mental health and efficient and effective coping styles. Patients with HIV are faced with numerous psychological and biological problems which make them different from other people (Jonsson et al., 2013). Not many Indian studies were conducted on HIV/AIDS on these dimensions. Hence the present study attempted to explore the

impact of spirituality and mental well-being on the QOL of PLWHA.

Methodology

Cross sectional design was used in the study. A purposive sample of 60 people diagnosed with HIV/AIDS (30 males and 30 females) has been taken, and data was collected from a non-government organization (NGO) situated in Lucknow. PLWHA (with a confirmed medical diagnosis) above 18 years of age only were included in the study. The Exclusion Criteria included presence of any co-morbid psychiatric illness/ neurological trauma or brain disease/mental retardation.

Tools Used:

Demographic sheet. Demographic details (including period taken for confirmation of diagnosis) of PLWHA were noted with their mode of infection (sexual contact, blood transfusion and drug injection).

Coping Strategies Inventory (CSI -Short Form) (Tobin D.L., 1984). There are a total of 14 subscales on the CSI including eight primary scales. The items are scored on a Likert scale from 0 to 5 carrying equal weight. The scores range from 4 - 72, indicating higher the score better the coping efficiency of the individual. Cronbach's alpha coefficient ranges from 0.71 to 0.94 indicating that the test yields strong reliability. The scale has factorial validity assessed using Werry's hierarchical factor analysis program.

The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Tennant et al. 2007). It is a 14-item scale; each answered on a 1 to 5 Likert scale. Items cover different aspects of eudemonic and hedonic mental well-being and are worded positively. Item scores are summed to produce a total score ranging from a minimum of 14 to a maximum of 70 with higher scores representing higher levels of mental well-being. Test retest reliability was found to be high (0.83) and WEMWBS showed good content validity.

WHO QOL HIV BREF (WHO Field Centre for the Study of QOL of Bath, 2008). WHOQOL-HIV comprising 31 items evaluates the QOL from six domains and 29 facets. Responses to the items were scored from 1 (least favourable condition) to 5 (most favourable condition), with the domain scores, ranging from 4 to 20, being calculated by multiplying the average scores for all items in the domain by 4. A higher score would indicate a better QOL on the corresponding domain. It is found to have internal consistency (Cronbach's alpha) ranging between 0.67 and 0.80 across the six domains.

Spiritual and Religious Attitudes in Dealing with Illness (SpREUK) scale (Büssing, 2005). The items of the SpREUK were scored on a 5-point scale from disagreement to agreement (0-does not apply at all; 1-does not truly apply; 2-don't know (neither yes no no); 3-applies quite a bit; 4- applies very much). Scores > 50% indicate higher agreement (positive attitude), while scores < 50 indicate disagreement (negative attitude). The internal consistency estimates of the

SpREUK-15 range from 0.86 to 0.91 (Cronbach's alpha).

Spiritual Needs Questionnaire (SpNQ) scale (Büssing, A. 2010) this scale has 4 core dimensions of spirituality needs, i.e., religious needs, inner peace needs, existential needs and giving generativity needs. The patients rate whether they currently have the respective needs (yes / no), and how strong they were to them. To measure the significance of spiritual needs for the individual, the instrument uses a 4-point scale from disagreement to agreement (0- not at all; 1-some-what; 2- strong; 3- very strong). When the mean score of each domain is greater than 1 then it indicates that the need has some relevance and a mean score less than 1 should be neglected. The internal consistency estimates of SpNQ range from 0.74 to 0.92.

Procedure:

After obtaining informed consent from the authorities of a NGO, participants and the ethical approval of the concerned bodies; participants were specifically informed about the study and the associated confidentiality. Data was entered on the SPSS version 20 and was analysed by using appropriate statistical procedures.

Results

The results were obtained by analysis on SPSS version 20. The techniques used were Multiple regression analysis, Mean and Standard deviation.

The demographic data (Table 1) shows that maximum participants were in their young adulthood, aged between 20-29 years, N= 31, (51.7%) and equal number of male and female participants (Male =30, female =30) were engaged for the study. Among the participants most of them were married (N=35, (58.3%), and had education up to secondary level, N= 29, (48.3%).Maximum number of participants are engaged in private jobs, N=22, (36.7%) and they belong to middle socio economic status, N= 26 (43.3%) with an annual income of Rs.20,041 to Rs.33,240 and were settled in urban areas as their domicile, N=30(50%). Most had contracted HIV/AIDS through sexual intercourse, N=35 (58.3%) with their partners (husband/ girlfriends) and had conceded to their illness within three to four years of contact, with the average onset in the year 2012 (N= 73.2%, M =2012 & SD= 2.250).

Table 1: Socio-demographic details of the sample.

Variables	Sub variables	Frequency	Percentage	Mean & Standard Deviation (SD)
Income/Socio economic status	Less than 10,032 p.a (BPL)	7	11.7%	-----
	10,033 to 20,040 p.a. (low middle class)	19	31.7%	
	33,241 to 33,240 p.a. (middle class)	26	43.3%	
	33,241 to 66,840 p.a. (upper middle class)	6	10.0%	
	Above 66,840 p.a. (upper class)	2	3.3%	
Domicile	Urban	30%	50%	-----
	Rural	6	100%	
	Semi-Urban	24	40%	
Onset	1-4	44	73.2%	M=2012 SD=2.250
	5-8	13	21.75%	
	9-11	3	5.1%	
Mode of infection	Sexual Partner	35	58.3%	-----
	Blood Transfusion	10	16.3%	
	Drug Injection	15	25%	

Table 2. Mean and Standard Deviation (SD) of variables undertaken in the study.

Variables	Mean	Standard deviation (SD)
Problem Solving	9.00	3.288
Cognitive Restructuring	8.98	2.937
Expressed Emotions	6.85	2.821
Social Contact	6.87	3.457
Problem Avoidance	6.32	2.873
Wishful Thinking	5.32	3.307
Self-Criticism	4.62	3.003
Social Withdrawal	4.03	3.210
Problem Focused Engagement	17.98	5.673
Emotion Focused Engagement	13.80	5.572
Problem Focused Disengagement	11.65	4.902
Emotion Focused Disengagement	8.65	5.075
Engagement	31.78	10.583
Disengagement	20.30	8.133
Coping Total	52.00	16.311
Mental Well-Being	45.10	8.889
Spiritual Attitude in Dealing with illness	40.27	10.953
Religious Needs	10.88	4.235
Existential Needs	9.72	3.728
Inner Peace Needs	10.30	4.350
Giving Generativity Needs	6.42	2.540
Spiritual Needs Total	37.32	10.768
QOL Physical	7.40	1.532
QOL Psychological	7.78	2.051
QOL Social Relationships	12.40	4.537
QOL Environment	7.60	2.149

In total 26 variables were quantified (see Table2). Descriptive statistics are summarized in the table 1 for the same. On the tertiary sub scales of coping, the results indicates that majority of the participants had engagement type of coping (M =31.78 & SD=10.583) indicating that most participants were actively engaged to perceive and negotiate the stressful situation in an optimistic way. On the secondary sub scales of coping inventory, majority of the participants had used problem focused engagement style of coping. (M=17.98 & SD=5.673) which shows that participants have focused themselves on changing the meaning of the stressful situation to deal effectively and emphasis on the current situation at hand. On the primary sub scales of coping it is observed from the results that most of the participants had used problem solving (M= 9.00 & SD=3.288) and cognitive restructuring (M= 8.98 & SD=2.937) strategies to cope with the illness. Majority of the participants have positive mental well-being (M=45.10 & SD=8.889) which indicates that they are optimistic about overcoming their illness. Majority of participants have secured a mean score (M=40.27 & SD=10.953) on their spiritual attitude in dealing with illness, which means that they were disengaged in their spiritual attitude in dealing with illness. Whereas mean score higher than 50 indicates engagement in spiritual attitude in dealing with illness. Majority have felt the need for spirituality in dealing with their illness.

Most have scored high on all the four sub scales of spirituality needs, among them the religious needs (M=10.88 & SD=4.235) and finding inner peace needs (M=10.30 & SD=4.350) were the maximum. The mean analysis trend shows that the participants had enhanced QOL in terms of social relationships (M=12.40 & SD=4.537) indicating that the participants wished to strive for and maintained cordial social relationships with most others in their life.

Table 3. Summary of Multiple Regression Models Analysis

Independent Variables	Dependent Variables	Model Summary				
		Significant variables	F change	Sig value change	Adjusted R square value	Effect of significant variable/s
Mental wellbeing (MW), Spirituality ILL (SI), Religious needs (RN), Existential needs (EN), Inner peace needs (IPN), Giving generative needs (GGN), S Needs (SN)	Problem Solving	MW	9.778	0.003	0.13	positive effect
	Cognitive Restructuring	MW and SI	9.196	0.004	0.242	MW - Positive, SI-negative
	Expressed Emotions	MW and SI	4.615	0.036	0.152	MW - Positive, SI-negative
	Social Contacts	None	-	-	-	-
	Problem Avoidance	MW	6.374	0.014	0.09	positive effect
	Wishful thinking	MW	7.388	0.009	0.113	positive effect
	Self-criticism	MW	8.965	0.004	0.119	positive effect
	Social withdrawal	None	-	-	-	-
	Problem focussed engagement	MW and SI	5.624	0.021	0.224	MW - Positive, SI-negative
	Emotion focussed engagement	MW and SI	4.105	0.047	0.114	MW - Positive, SI-negative
	Problem focussed disengagement	MW	11.804	0.001	0.115	positive effect
	Emotion Focussed Disengagement	MW	6.250	0.015	0.082	positive effect
	Physical quality	MW	4.549	0.037	0.057	positive effect
	Psychological quality	MW	6.794	0.012	0.089	positive effect
	Social relation quality	MW and SI	11.14	0.001	0.301	MW - Positive, SI-negative
	Environment Quality	SI and GGN	7.129	0.010	0.279	SI-positive and GGN-Negative

All the variables were enlisted and data was transferred in SPSS version 20. Variable were analyzed for descriptive statistics and correlations (Pearson's coefficient) (see Table 2). All the variables were also tested for the normal distribution using Shapiro-Wilk's test.

Multiple Stepwise Regression analysis was used to understand the cause effect relationship among coping, QOL (QOL), spirituality and mental wellbeing. F test was used to remove variables in stepwise regression ($p < 0.05$). R square values were used in order to understand the importance of significant independent variable in selected regression models. Residual analysis was performed to validate the regression model. Variables under Coping and QOL were used as dependent variable and variables under mental wellbeing and spirituality were used as independent variables.

Effect of mental wellbeing and spirituality on coping

Table 3 provides a summary of several multiple regression model tested to explain the cause of coping. Mental wellbeing was found to be significant in most of the models explaining variance in different coping parameters (See table for variables used as dependent in the models). Such as Problem solving (F=9.778, $p = .003$) and Cognitive

Restructuring (F= 9.196, $p = .004$). It is also seen that positive mental wellbeing has led PLWHA to use both problem focused engagement (F=5.624, $p = .024$) and Emotion focused engagement coping whenever encountered with hardships and illness. Some of the dependent parameter also showed significant negative relationship with spirituality in dealing with illness.

Effect of mental wellbeing and spirituality on QOL

Table 3 gives the summary of multiple regression models tested. Mental wellbeing, spirituality and generative giving need were found to be significant in different QOL parameters. Physical (f=4.549, $p = 0.037$) and psychological quality (f= 6.794, $p = 0.012$) were best explained by mental wellbeing. Social Relation quality was best explained by mental wellbeing and spirituality. Spirituality has negative effect and mental wellbeing has positive effect on social relationship quality (f= 11.14, $p = 0.001$).

Environmental quality was positively affected by spirituality while giving generative needs affected it negatively.

Overall it seems that mental wellbeing is the most important independent variable among the tested variable as the explanatory variable of models tested.

Discussion
Socio-Demographic Details

The study undertaken shows that majority PLWHA are in their young adulthood, aged between 20-29 years, N = 31, (51.7%) This is consistent with the findings amongst Africans in South Africa (Nelson Mandela/HSRC Study of HIV/AIDS South African National HIV Prevalence, Behavioural Risks and Mass Media, Household Survey 2002).

From table 1, it is observed that majority of participants had education up to secondary level, N= 29, (48.3%). Maximum were engaged in private jobs, N=22, (36.7%), and they belonged to middle socio economic status, N= 26 (43.3%) with an annual income of Rs.20,041 to Rs.33,240. Domestically and internationally, HIV is a disease that is embedded in social and economic inequity (Perry, 1998), as it affects those of lower socioeconomic status at a disproportionately high rate. Research on SES and HIV/AIDS suggests that a person's socioeconomic standing may affect likelihood of contracting HIV and developing AIDS. Furthermore, SES is a key factor in determining the QOL for individuals after they are affected by the virus. Our study shows majority of the participants are not highly educated and with low income.

It is noticed that majority of people were settled in urban areas as their domicile, N=30 (50%) and had contracted HIV/AIDS through sexual intercourse, N=35 (58.3%) with their partners but most of them took almost three to four years to seek medical treatment and counselling, (N= (73.2%).

Effect of Mental Well-being on Coping among PLWHA

The study has found positive effect of mental well-being on problem solving (f=9.196, $p = .004$) and cognitive restructuring (f=9.778 $p = .003$) abilities as coping strategies in stressful situations. The findings state that higher mental well-being enables to think in the direction of managing stressful situations, find positivity and derive a sense of purpose even when faced with a threatening or challenging scenario. Recent research has found that practical and emotional coping mechanisms seem to have the greatest positive effect on psychosocial well-being (Harrison et al., 2013). Practical coping strategies, including seeking social support and solution-focused coping, are associated with lower reports of depression and loneliness (Hansen et al. 2013).

The study found among PLWHA that positive effect of mental well-being on problem focused engagement strategy has been used as effective coping in stressful environment. (f=5.624, $p = .021$), This finding indicates that participants having positive mental well-being have enhanced capacity for aiming on problem resolving and viewing day to day situations from a positive perspective and derive meaning from life. People living with HIV/AIDS who coped with the stigma of HIV/AIDS by engaging with the stressor using primary control engagement (e.g., problem solving) or secondary control engagement (e.g., cognitive restructuring) coping strategies would report fewer symptoms of depression and anxiety and more self-esteem as they

perceived more HIV/AIDS stigma (Susan, Miller, McQuin, and Solomon. 2012 Feb). Also, a positive relationship of mental well-being was found on the emotion focused engagement process of coping strategy, ($f=4.105$, $p=0.047$) which involves the participants to be socially active, positively involved with others, seek positivity in stressful environment and thrive and flourish in life

Effect of Mental wellbeing on QOL

This study has found a positive effect of mental well-being on the physiological aspects of QOL of the participants ($f=4.549$, $p=0.037$). This aspect indicates that enriched mental well-being leads to improved physical health, improving the quality of sleep, being more energetic and are relieved from feelings of pain and discomfort and vice versa. On the contrary Breitbart, McDonald, Rosenfeld, Monkman, Passik (1998) state that many PLWHA find it challenging to attend to daily tasks of living, participate in moderate to vigorous physical activities, or have sufficient energy or vitality to engage in an active social life while managing HIV/AIDS. Fatigue or low energy has been associated with both physical and psychological morbidity and poor QOL in persons with HIV/AIDS. However, a study by Penedo, Frank, Dahn, Jason (2005) state that participants engaging in regular physical activity display more desirable health outcomes across a variety of physical conditions. Further, the present study found a positive relationship of mental well-being on the psychological aspects of QOL of the participants ($f=6.794$, $p=0.012$), indicating that improved mental well-being would not only lead to an improvement on the cognition for example thinking, memory, concentration and learning of the participants but also enhanced their self-esteem. The study also indicates that, the participants' positive mental well-being would improve their notions about self-image, bodily appearance and helps to eliminate negative emotions about oneself like those of self-blaming, criticising, feelings of worthlessness etc. The study conducted by Stinson et al. (2008), on PLWHA too corroborated with the research findings that enhanced self-esteem may have played a role in the extent to participants could receive support of family and friends. Self-esteem has been shown to influence on interpersonal relationship because individual feeling of self-worth have a bearing on both their beliefs and social behaviours.

It is also noticed that a positive relationship of mental well-being on social relationship aspect of QOL, ($f=11.14$, $p=0.001$), wherein the participants were found motivated to have substantial relationship with family, peers, and at work place. The research study indicates, improved mental well-being leads to increase interpersonal relationships and greater social support and vice versa. Study done by McDowell and Serovich (2007) upholds the same view i.e., greater amount of social support has been seen to be associated with less negative and more positive affect in PLWHA. Moreover, people with living with HIV and aids who are satisfied with the amount of social support available to them tend to experience less psychological distress, a higher QOL and more self-esteem (Li, Sung, Panithee, Chuleeporn, Borus, 2009) whereas, those who perceive low level of social support experience increased distress. (Catz, core, McClure, 2002)

Effect of Spiritual attitude and need on QOL and Coping among PLWHA

Consistent with prior results (Shields, 2004) the study found a positive effect of spiritual attitude on QOL (environment dimension) of people suffering from HIV/AIDS ($f=7.129$, $p=0.010$). The results indicated that participants who possessed spiritual attitude towards their illness had enhanced capacity for adjustment to their physical environment. They felt financially secured and could invest their time and energy on pleasurable activities. Participants had better-quality adjustment in the family to deal with the illness.

The results shows that the study has found a positive effect of spiritual attitude among PLWHA in that, the more the participants cultivate spiritual attitude the less they tend to be negatively affected by expressed emotions of family, peers and other social groups (which is generally negative) and spirituality helps them to enrich their QOL ($f = -.289$, $p=0.025$) Qualities such as awe, meaning of life, faith and connection to a spiritual being make significant contribution to the overall rating of QOL, above and beyond that of psychological well-being or social connection (Saxena, Connell & Underwood, 2002). In the development of a new WHO instrument to measure QOL in people living with HIV and AIDS it was concluded that it was crucial to include measures of the contribution of spiritual factors to life. "Many PLWHA reported experiencing a more intense spiritual life as a result of their HIV infections" (WHOQOL AIDS Group, 2003).

However the study also found the negative impact of spiritual attitude in dealing with illness in few coping dimensions, wherein being spiritual has not helped the PLWHA to cope well. Religion can also contribute negative features to a person's spirituality, such as guilt and inappropriate revenge-motivated behaviours. In general, though, the positive contribution of religion to spirituality is the dominant effect (Underwood, Gordon, 1999). People with HIV/AIDS also reported more experiences of internalized shame and lower self-esteem than cancer patients did (Fife & Wright, 2000).

CONCLUSION

The aim of the study was to study the impact of spirituality and mental well-being with QOL and coping among PLWHA. A positive effect of mental wellbeing has been found on the QOL of PLWHA and on the coping strategies. Majority of PLWHA, who had positive well-being, coped well with their illness. The study did not find any significant effect of Spirituality on various coping strategies used by PLWHA; however it had its positive impact on their QOL. But, being spiritual and having positive mental well-being helped the PLWHA to have better coping strategy and also helped them improve their QOL.

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Comparative Study of Personality And Self Esteem of Physical Education Teachers and Other Subject Teachers in Rewa City

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ABSTRACT

The main purpose and objective of the present study was compare of personality and self esteem of physical education teachers and other subject teachers in Rewa city. For the purpose of this study both male and female teachers were selected. A total of 40 were taken 20 from physical education and 20 from other subject the teachers working in the secondary schools and C.B.S.E. Board in Rewa City. For the collection of data the researcher administered the Dr. Tom Buchanan's 'Big five personality Inventory' and Dr. Morris Rosenberg's Self esteem Scale. Independent sample test was administrated to find out the comparison among personality of physical education teacher and other subject teachers. Statistical analysis and interpretations were found by mean, standard deviation and t-test was applied to means the significance of difference between the two groups. The level of significance was set at .05. It has been observed from the analysis of given data and interpretation of findings that there is significant difference between self esteem of physical education teachers and other subject teachers.

KEYWORDS : Self esteem, personality, Behavior.

INTRODUCTION:

Psychology is the study of human behavior and human relationship. Behavior is a collective name for these activities. It includes motor activities like waking, swimming, dancing, thinking, reasoning, imaging and feeling happy, sad and angry (affective). It also concerns itself with the scientific investigation of behavior. Psychology is the scientific study of the activities of the individual in relation to his environment. It concerns with all the segments of human mind i.e. conscious, sub conscious and unconscious. Psychology emphasized the search for truth. It studies facts of behavior and describes the law governing them psychological fact i.e. ethics, logic, philosophy etc. The behavior is quite dynamic and unpredictable. "Personality is that which permits a prediction of what a person will do in a given situation". A wide variety of movement behaviors is encompassed in the psychomotor domain. The psychomotor domain is concerned with body movement and/or control. Such behaviors when performed in a general way represent a movement pattern or patterns, and when highly specific and task refined indicate a skill or sequence of skills. No reference is made in psychomotor task, for almost any kind of movement oriented task could probably be considered a psychomotor task. All of us have potential, which is beyond our wildest dreams, but most of his potential remains untapped. Each person has the capacity to experience different planes of consciousness, yet most of us live in the lower planes, without experiencing higher levels of existence or even believing that they exist.

Many people are unhappy in the world, dissatisfied and yet not sure what is lacking in their lives. The basic reason for this unhappiness is our attachment to the material plane of existence. Once we gain a glimpse of higher spheres of consciousness, then our unhappiness and discontent automatically fade away. Psychology as a behavioral science has made its contribution for improving sports performance. It has helped coaches to coach more effectively and athletes to perform more proficiently.

Methodology:

A total of 40 teachers were taken 20 from physical education and 20 from other subject the teachers working in the secondary schools and C.B.S.E. Board in Rewa City. Family background, Physical condition, life

style, socio-economic status and mental status of the subjects was considered as the limitations for the study. This study deals with the comparison of the personality and self esteem of physical education teachers and other subject teachers. For the collection of data the researcher administered the Dr. Tom Buchanan's 'Big five personality Inventory' and Dr. Morris Rosenberg's Self esteem Scale. Independent sample test was administrated to find out the comparison among personality of physical education teacher and other subject teachers. Statistical analysis and interpretations were found by mean, standard deviation and t-test was applied to means the significance of difference between the two groups' i.e. physical education teachers and other subject teachers.

RESULTS & DISCUSSION:

Table no. 1

Descriptive statistics of Physical education teachers and other Subject teacher's, teachers on Extraversion score.

Variables	N	Mean	Standard Deviation	St. Error Mean	Mean Difference	't' Ratio
Physical education teachers	20	30.9	2.989	0.668	0.15	0.14
Other Subject teachers	20	31.05	3.378	0.755		

*Significant

't'.05(38)=2.024

Table no. 2

Descriptive statistics of Physical education teachers and other Subject teachers on Agreeableness score.

Variables	N	Mean	Standard Deviation	St. Error Mean	Mean Difference	't' Ratio
Physical education teachers	20	30.9	2.989	0.668	0.15	0.14
Other Subject teachers	20	31.05	3.378	0.755		

Physical education teachers	20	27.4	3.530	0.789	2.8	2.52
Other Subject teachers	20	24.6	3.500	0.782		

*Significant

t'.05(38)=2.024

Table no. 3
Descriptive statistics of Physical education teachers and other Subject teachers on Conscientiousness score.

Variables	N	Mean	Standard Deviation	St. Error Mean	Mean Difference	't' Ratio
Physical education teachers	20	37.3	5.161	1.154	2.6	0.30
Other Subject teachers	20	21.35	6.661	1.4896		

*Significant

t'.05(38)=2.024

Table no. 4
Descriptive statistics of Physical education teachers and other Subject teachers on Neuroticism score.

Variables	N	Mean	Standard Deviation	St. Error Mean	Mean Difference	't' Ratio
Physical education teachers	20	20.4	1.602	0.358	0.95	0.98
Other Subject teachers	20	21.35	2.238	0.500		

*Significant

t'.05(38)=2.024

Table no. 5
Descriptive statistics of Physical education teachers and other Subject teachers on Openness score.

Variables	N	Mean	Standard Deviation	St. Error Mean	Mean Difference	't' Ratio
Physical education teachers	20	23.8	3.771	0.843	0	1.33
Other Subject teachers	20	23.8	4.500	1.006		

*Significant

t'.05(38)=2.024

Table no. 6
Comparison of mean and standard deviation of Physical education teachers and other Subject teachers on Self esteem score.

Variables	N	Mean	Standard Deviation	St. Error Mean	Mean Difference	't' Ratio
Physical education teachers	20	17.1	4.011825	0.896	4.4	6.98
Other Subject teachers	20	21.15	2.852054	0.637		

*Significant

t'.05(38)=2.024

In the above table no. 6, there were 20 physical education teachers having $m \pm S.D$ 17.1 ± 4.011825 and standard error of mean 0.896. Similarly there were of 20 other Subject teachers having $m \pm S.D$ 21.15 ± 2.852054 and standard error of mean 0.637 respectively.

In the table no 6, mean differences for the self esteem of physical education teachers and other subject teachers was 4.4. This difference when tested by Independent 't' test, 't' value was found 6.984 which was not significant at 0.05 significance level for 38 degree of freedom. Therefore, there is significant difference between self esteem of physical education teachers and other subject teachers is accepted.

DISCUSSION:

1. On the whole in all personality factors i.e. Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness there were significant difference between the physical education teachers and other subject teachers.
2. In two of the personality traits i.e. Agreeableness and Conscientiousness, we observed that physical education teachers have got good results, and in the other three factors of the personality i.e. Extraversion, Neuroticism and Openness, the other subject teachers have good results.
3. Researcher observed that physical education teachers were more energetic, outgoing, sociable, careful, focused and methodical as compare to other subject teachers. On the other hand other subject teachers were more trusted, friendly cooperative, emotional, less relaxed, tense in nature as compare to physical education teachers.
4. In research study distribution of self esteem scores of physical education teachers and other subject teachers in the present study is nearly normal.
5. The research study signifies that there is significant difference found between the self esteem of physical education teachers and other subject teachers.
6. Researcher observed that the mean score of self esteem shows that other subject teachers have little high level of self esteem as compare to physical education teachers.

In the present study we found that there is no significant difference in the self esteem of physical education teachers and other subject teachers, so we can conclude that their self esteem will not affect their teaching. Rather we can say that both groups of teachers are sailing in the same boat in the matter of self esteem's.

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The Profound Insight

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KEYWORDS :

One of the most persuasive contemporary Indian novelists in Indo- Anglian Literature, Joshi is noted for his concern for fellow human beings, and for his profound insights in to human nature. His novels probe deep into the dark and innermost recesses of the human mind and illuminate the hidden corners of the physical and mental make-up of the characters. His characters, most of whom are contemporary Indians, indulge in a quest for the essence of life. In search of the quintessence of human living, the novelist focuses not simply on man but on his identity. As a novelist exposing the human predicament, Joshi visualizes the inner crisis of the modern man and finds out that the most besetting problem that man faces today is the problem of rootlessness. This problem is aggravated by technological advancements, the economic situations and the inhuman demands of the society. The problem is so pervasive that it threatens to eat into every sphere of human activity. As a result, man fails to discern the very purpose behind life, and the relevance of his existence in a hostile world.

Joshi, the novelist, follows the tradition of Kafka, Camus, Sartre and Saul Bellow. Differing in style from Jane Austen, Charles Dickens, Mulk Raj Anand, R. K. Narayan, Kamala Markandaya and so on, Joshi joins his heroes in searching for their lost self. The individual gets trapped in the world of objects and thereby lose his subjectivity. Later, aware of what he has lost, he experiences a dehumanization mixed with despair and anxiety. The individual is also engaged in a rat-race and is estranged not only from his fellowmen but also from his inner self. He has nothing to fall back upon in the moments of crisis. He is shocked to find that he is no longer the master of his destiny and that there are forces which threaten to hinder his life and all its joys and hopes. The pervading sense of rootlessness is thus the most dominant feature of the human condition in the contemporary scene. No emotional problem is more alarming today, than the sense of rootlessness. The conditions in India, though not so frightening as in the Western world, have begun to take a dismal turn. Despite the differences in their approach, Joshi's heroes are all engaged in the search for the meaning of life. They follow several routes: the route from indifference to involvement, the route from sophistication to simplicity, the route from crime to confession, the route from the labyrinth to the light, the route from fantasy to fact and the route from the struggle to the survival.

The Foreigner, Joshi's maiden novel, portrays some of the possible routes of the rootless especially the path from indifference to involvement. Cut-off from his cultural and emotional attachments, Sindi Oberoi of *The Foreigner* finds himself in the predicament of a foreigner wherever he goes. He drifts from one end of the globe to the other in search of peace and emotional stability. He cannot reach out to the world for fear of pain and he seeks refuge in the thought of detachment, which he misconstrues as inaction and withdrawal from life. But his detachment or indifference turns into a kind of delusion because he cannot free himself from self-engrossment. His selfish desires make him drift from crisis to crisis; sucking on its way the lives of two innocent persons he loves most, Babu and June. The tragedy shakes Oberoi out of his self-complacency and reorients his life. Through sincere self-examination he learns that true detachment does not mean inaction and withdrawal from life. On the other hand, it is proper action without desire for its fruit.

He also the sophistication of the society and believes that it is high time he accepted the simplicity of a primitive life. The disinterested reader raises several questions of significance for he does not agree with the idea that going to the forest is the only way to lead a sim-

ple life. Being impartial he wonders how Biswas could be relaxed and peaceful when denied of all the familiar luxuries of life. Meanwhile, the uninterested reader is shocked because he considers Biswas descending to the level of a primitive, and is unable to accept such an action from the son of a High Court judge, who has a doctorate to his credit and the honour of a civilized life. An uninterested reader also blames Biswas for his instant and unmeditative decision of moving into a jungle.

The route from indifference to involvement is also portrayed in the novel. America was, for Biswas, too civilized a place. The first glimpse of Biswas's indifference towards everything phoney, materialistic and superfluous begins in America. He craves for a simplistic way of living, and realizes the ultimate truth that he can be happy only in the wilderness. And, that is the revelation of his identity too. His life is thus a journey from the world of indifference to the world of involvement. Only when he accepts the primitive world he finds himself at home. Romi's surprise at Biswas's experience is seen in his observation: "I realized that for the first time I was face to face with Billy's world. Here was the jungle that had wrought in him such a magical change" (159). The interested reader of the novel justifies Biswas for detaching himself from the sophisticated world and for embracing the solace of the primitive. The disinterested reader is unable to decide whether Biswas has taken the right step, whereas, the uninterested reader resentfully waits at the gateway, criticizing him for his indifference to the successful world and his involvement with the primitive.

The spiritual decay of the westernized Indian society, and the route from crime to confession is also the case of Biswas. His problem is the authentic problem of a perceptive young man who had lost his spiritual anchorage. The novel clearly explains the triviality of modern man's pursuit for money, his love of romance and other fleeting pleasures of life. Biswas, a misfit in civilized America, becomes conscious of his "itching to be back" in India (27). His 'itching' is symptomatic of his craving for deeper things in life. He longs to move away from worldly pleasures to the religious door. After undergoing the regenerative process himself, Biswas puts on a new role, that of a healer and a priest who cures dying children and helps the primitive people with their worldly problems.

The interested reader admires Biswas for his escape to the simplicity of the primitive world, for he believes that the retreat is ideal, though unbelievable. Moreover the interested reader is curious about the confessional part of the novel. The disinterested reader is not impressed by the primitive world, but he is tempted to suggest to Biswas that it is possible to find out better means of living than just simply plunging into the primitive way of life. On the contrary, the uninterested reader opposes the simplistic kind of living because he knows that it is not the only way of attaining self-realization.

The route from the labyrinth to the light is also portrayed in the novel. Biswas is entangled in a labyrinth from which he hopes to move towards light. It is shocking to notice how Biswas, a student of New York University, belonging to the anglicized ruling class of India, his father being a Supreme Court Judge, deserts his family and friends to live in the light of lawless love, in accordance with nature's natural course. The interested reader is delighted at Biswas for coming out of his labyrinth of life and entering the world of light. As far as the disinterested reader is concerned, Biswas's route to primitiveness is incredible. Nevertheless he supports him for his search for self-realization. To the uninterested reader, Biswas's desire for happiness in the primitive world is an unacceptable route. He wonders how Biswas would ever

find the light of life.

The Strange Case of Billy Biswas also shows the path from fantasy to facts. Biswas, a young man, full of vigour and enthusiasm, lives in a world of fantasy. His fantasy-world exists in the primitive wilderness. He finds happiness in the arms of Bilasia, a primitive beauty. Later on when confronted with Romi, he immerses himself in the primitive world and is treated like a 'seer'. He begins to fantasize that he has some supernatural powers. Finally, he is forced to believe the sad fact of reality through his death. His transformation from the world of fantasy to reality is appreciated by the interested reader. The disinterested reader keeps track of the happenings in Biswas's life on the rungs of the ladder of success. But he does not accept his journey to the primitive world because he (the disinterested reader) does not believe that it is the only world of reality. The uninterested reader criticizes the novelist

for the sudden twist in the character of Biswas from 'a creature of fantasy' to a falsely realistic being.

The Apprentice portrays Rathan Rathor's route from crime to confession. The novel, a confessional monologue, shows contemporary man drifting about in a confused society without a purpose. Belonging to an impoverished middle-class family, the protagonist hopes to find a route in this world. His rootlessness is intensified by his awareness that he is the child of a double inheritance. While his father was patriotic and courageous, his mother was endowed with worldly wisdom. Torn apart by these two conflicting philosophies of life, Rathor is petrified and frozen. The torture of living in a muddle confuses him all the more and he fails to differentiate between right and wrong. He tries to restore his mental peace by undergoing the most difficult act in the world - wiping the shoes of the devotees outside the temple, every morning on his way to the office. And that is the path he selected for repentance, the route from crime to confession.

The readers' response to the routes with regard to the theme of crime and confession is varied and, of course, significant. The interested reader of *The Apprentice* sympathizes with Rathor for his self-punishment and confession. The pathetic plight of Rathor is convincing to the interested reader and when Rathor turns to self-purification, the interested reader is overwhelmed with joy and tends to give him a pat on his back. It is Rathor's capacity to laugh at the past that wins the interested-reader's heart. On the other hand, the disinterested reader does not justify Rathor for his past actions. He criticizes him for bribing his countrymen and cheating his own country, more so, because he is the son of a patriot. All the same, he supports him for the firm steps he has taken for the purification of his soul. The uninterested reader blames Rathor for the shameless past and declares harshly that he does not deserve any sympathy. The uninterested reader even goes further ahead to suggest that Rathor could have been more wise and shrewd, and tried to find out the truth behind the deal.

The Apprentice delineates other routes too, for example, the route from indifference to involvement. Rathor gets involved in all corrupt activities and then detaches himself from everything around him. As he had committed the crime of taking bribes for clearing military equipments, he is troubled to the core. Later he comprehends that the major hands in this deed were not his, but those of the officers at

the higher level. This apprehension coaxes him to keep himself detached from the society around "One day they refused my tea. It was a considerable snub as such things go, but to my surprise, I discovered that it made no difference to me" (40). He is alone and robbed of all familiar ties and is faced with the emptiness and darkness of his guilt-tormented soul. Rathor went through terrible days and nights with, "no occurrence, no conversation, no visit of either friend or foe, no sleep, in spite of the sleeping pills that our good doctor gave me, no relief, no respite from the hands that pulled me steadily down towards those caverns where, I felt certain, the Brigadier had gone" (125). That's how, finally he turned to absolute involvement in spiritual purgation by sitting at the entrance of a temple to wipe the shoes of the congregation.

Rathor is appreciated by the interested reader for being detached from the meaningless world of business concerns, and for waiting at

the sacred steps of the temple as a penance. Though the disinterested reader is able to digest the height of Rathor's confession and repentance to an extent, his response is a discreet silence. The uninterested reader, on the other hand, opposes this mentality and reacts harshly.

The route from sophisticated norms to simplistic living is also found in the life of Rathor. Familiar with a high-level living, Rathor gets opportunities to dive deep into the snazzy snares of the modern society. He eventually perceives the hollowness of life and through a sincere confession turns to the primitive idea of doing humble jobs for the sake of self-purification. Notwithstanding his cowardice and his mother's contempt for idealism, Rathor hopes to climb the ladder of success. He musters courage to accept a bribe, the aftermath of which finally urges him to accept a primitive way of life.

The interested reader of *The Apprentice* gladly watches Rathor on the steps of the temple polishing shoes, free of all the troubles and tribulations of life. The disinterested reader partially agrees with the action and partially wonders whether such a repentant step is possible for a man of Rathor's background. The uninterested reader is not convinced that a person like Rathor can stoop to shine shoes at the doorstep of a temple. But he swallows the statements as they are.

The Apprentice shows how Ratan Rathor yields completely to the corrupt labyrinth of the modern society and thrives in it temporarily. His dual parentage is perhaps a cause for his degeneration. When he understands that the bribe he receives

for clearing the war materials leads to the Brigadier's death, he becomes a cynic. However, his confession helps him attain light.

The route of Ratan Rathor is welcomed by the interested reader who understands and appreciates his willingness to leave behind all his evil desires. The disinterested reader wonders how Rathor could have taken such a deviation from a point of utter self-degradation to a point of light. The uninterested reader is shocked at Rathor's bold step but is cynical about its possibility.

Rathor also goes through the path of reality away from fantasy. He had conquered everything in life - a good career, a beautiful and educated wife and covetable reputation. He lived a life of fanciful ideas, also involving crime. Later when he realizes the consequences of his crime, and understands the truth that his higher officers were the real culprits, he faces a harsh reality. The realization, that he was living in a world of fantasy, leads him to the life of penance at the entrance of the temple.

The interested reader of *The Apprentice* responds positively to the transformation of Rathor from a world of imagination to facts. Rathor builds up his own world of fanciful ideas. But finally when he makes recompense for his sin, the interested reader is with him, nodding his head in approval. The disinterested reader keeps himself on a par with Rathor in all his endeavours but does not agree with him finally when he decides to go down to the level of a shoe-shiner. The uninterested reader sternly opposes the ultimate change in Rathor because he considers the act of shoe-polishing as a strange idea, far removed from reality.

The Last Labyrinth gives a picturesque description of Som Bhaskar's route from the labyrinth of love to the light of love. Driven by several kinds of undefined hunger, in spite of a wife of accepted standards and two children, Bhaskar goes in search of his 'wants'. The strident song of his life is "I want, I want, I want" (11). Attracted by Anuradha, he indulges in extra-marital sexual pleasures with her, and yet his desires have no end. Towards the end of the novel he is desperate and decides to serve in the temple every evening, and thus attain the light of love.

The reader's response to the routes from the labyrinth to the light is varied. The interested reader of *The Last Labyrinth* is influenced by Bhaskar's transformation from the labyrinth of unlawful love to the light of love. Though Bhaskar satisfies his sexual desires with Anuradha, he finally attains the gift of realization. The disinterested reader supports Bhaskar in his ambition for progress, but at the same time, opposes his infatuation for Anuradha. The uninterested reader thoroughly protests against his involvement with her and firmly be-

believes that it is his behaviour that causes the tragedy of his life. Moreover, the uninterested reader is not sure of the fact that Bhaskar has attained the light of love.

The Last Labyrinth also throws light on Bhaskar's path from indifference to involvement. Bhaskar is presented as a successful man, who at the peak of his attainments becomes totally dejected and indifferent, and estranges himself from the outside world. His meeting with Anuradha turns his life into a marathon search for grabbing material pleasures. As Joshi notes, Bhaskar is against his will drawn helplessly into "the labyrinth of [this] mysterious world" (69). His insane pursuit of Anuradha is a torture, like his bizarre journey to the hills in search of the missing shares of Aftab's company. The constant reasoning that goes on in his head suggests another labyrinth: "This, then, was a labyrinth, too, this going forward and backward and sideways of the mind" (53). He experiences a sort of total indifference with regard to his wife and son as he gets involved in Anuradha's labyrinth of love. Later on, her indifference to him, leads to his involvement in a religious pursuit.

The interested reader of *The Last Labyrinth* understands the cause of Bhaskar's detachment and is willing to sympathize with his estrangement from his wife, family and business in order to pursue the ravishing beauty, Anuradha. At the same time, the interested reader is aware that Anuradha is a difficult hurdle in the hurdle race of life that is, the evolution of life. The disinterested reader supports him for his natural inclination, but at the same time, criticizes his unnatural involvement with her. The uninterested reader is unkind and stands totally against the unscrupulous actions of being indifferent to one's wife for a sheer infatuation.

The Last Labyrinth portrays the route from sophisticated norms to the simplistic. Bhaskar's path from the modern society to the light of a primitive mountain God is incredible because he had all that a modern man wishes for- an educated and a trustworthy wife, an expanding business empire, and a peaceful living. But Bhaskar was not satisfied. He suffered from a loss of identity in the society he lived in. Surprisingly, he seeks consolation in the company of

Anuradha, a primitive beauty. Consequently, he rebuffs his responsibilities towards his family and business and concentrates on Anuradha. He does not care for any religious sermons and even becomes resentful of Anuradha's mention of the 'God in the Mountain.' Being a worshipper of the modern world, he denounces what he calls the primitive concepts. Towards the end of the novel, when Anuradha forsakes him he is ready to search for the sedating splendour of the God in the mountain. This act of turning to God is taken as an act of repentance, a primitive concept of atonement for sin. "Deep inside my heart, I knew that I was a leper and that I needed a cure" (126). At last, the light of 'Moksha' dawns upon Bhaskar as though the universe has come out of the void. He begins to undergo a path of renunciation because of guilt.

The interested reader is conscious of Bhaskar's change and considers him a credible character. On the other hand, the disinterested reader approves of his change of interest from the glamorous world but disapproves of his infatuation with Anuradha. The uninterested reader protests against the relationship as a shameful one. He also disbelieves Bhaskar's final action.

The Last Labyrinth depicts the route from crime to confession. Bhaskar's obsession with Anuradha is one of illegal love, a love that does not liberate him and sublimate his desires. The novelist portrays the relationship as criminal because he goes through a disorientation of self.

His intense passion for Anuradha makes him shuttle between Bombay and Benaras. Even when he ignores the temptation, a dream about her drags him back to the labyrinth of her carnal love. Finally his relationship with Gargi takes him to the door of religion thus effecting the transition from crime to confession.

The interested reader of *The Last Labyrinth* is awestruck by the passionate life of Bhaskar as he traverses along the rare realms of love and satiety. The disinterested reader observes the movements of Bhaskar with interest but the thought of his crime and the total out-

come of his passion are shocking to him. The uninterested reader points his finger at Bhaskar's thoughtless actions and is pleased with the fate meted out to him.

The Last Labyrinth also depicts Bhaskar's world of fantasy revolving round Anuradha. Another aspect of his fantasy-world is Aftab's shares. Beguiled by these powers of fantasy, he forgets his wife, son and dear ones. It is Anuradha's disappearance that opens his eyes to the world of reality, and he decides to search for God, who, according to her, lives in the mountains.

The interested reader of *The Last Labyrinth* is tickled by Bhaskar's fancy for Anuradha. Bhaskar's passion had driven him so crazy that he is pitied by the interested reader. The disinterested reader blames Bhaskar for the infatuation and is not willing to accept the fact that Anuradha can instil the idea of God in him. The uninterested reader does not believe in Anuradha's disappearance, thus breaking the fantasy-shell. Reality dawns on Bhaskar but not on the uninterested reader.

The City and the River traces the route from fantasy to fact from the point of view of public and political issues. There is a juxtaposition of fantasy and fact in the novel, presented through various episodes. The tale repeated by the Great Yogeshwara to educate his disciple, the Nameless-one, who spent thirty years under his master, is itself a fantasy. Another example is the dream of the Grand Master. The whole episode of tyranny and cruelty is aroused by a fantasy-dream where the Grand Master sees himself as the king of the city, but surrounded by boatmen ready to attack him.

The Grand Master lives in a world of fantasy and therefore he does not bother to familiarize himself with the people. He is filled with contempt for the boatmen and is disgusted at their rootlessness. The products of his 'fantasy' are 'the Era of Ultimate Greatness' and 'The Triple Ways.' The Grand Master becomes totally devastated as he watches the city pulled down to nothingness. The story ends with the conviction that God is the real leader of the universe.

The interested reader of *The City and the River* is overjoyed at the thought of good winning over evil. He deliberately warns the Grand Master against the consequences of living in a fantasy world. When reality dawns, the interested reader's expectation comes true and he gloats at it. The disinterested reader is carried away by the different phases of fantasy but is not willing to believe in any incredible aspect of life. The uninterested reader does not agree with the supernatural interference that finally terminates in a tragedy.

The route from indifference to involvement is also seen in *The City and the River*. It contains a severe indictment of the corruption and malpractices of political leaders, businessmen, police and army chiefs. Joshi suggests that politics, detached from religion and truth, may bring only destruction and death: Both the palace Astrologer, who is the mentor of the Grand Master and the ruler of the city, and the Hermit of the mountain, who identifies himself with the river and the river populace, are disciples of the Great Yogeshwara. But the different choices they make turn them into adversaries. The prophesy, regarding the advent of a king that sets the wheel of action in motion, is interpreted differently by the two, each according to his nature. The precarious balance between the city and the river is disturbed by the different choices made by the Grand Master and the boatmen. The whole story contains the life and activity of the people who work out their daily chores on the river banks. They insist on offering their allegiance to the river alone, which is for them, 'a symbol of the divine mother, of God Himself' (22). When the river is disturbed to the maximum, the supernatural power that has been quite detached all this while, starts to act - thus showing its great involvement by involving itself at the right time.

The interested reader of *The City and the River* is enthralled by the omnipotent for acting at the opportune moment and showing the people that he still rules the world.

The disinterested reader accuses the Grand Master for being so callous, for he finds no reason to protest against the action of nature. The uninterested reader opposes the omnipotent's indifference and the final episode in which nature annihilates an entire city.

The route from the sophisticated political scenario to the primitive idea of nature's dominance is portrayed in *The City and the River*. The story of the novel is spread along the bank of the river and is governed by the Grand Master, "the sons and grandsons of Grand Masters" (13). The Grand Master's monopoly spreads over every nook and corner but those who have a self-image oppose his rule. The result is immediate jailing or corporal punishment. Simultaneous with all this, Joshi presents nature as a force beyond all human powers. As the primitive concept would have it, it rains for seven days and seven nights, demolishing all that belonged to the Grand Master. Thus the novel focuses on nature's dominance over man.

The interested reader applauds the interference of nature in order to make everyone believe in the omnipotent. The disinterested reader is not willing to accept the power of nature pervading over human beings. At the same time, he confirms that the Grand Master's monopoly is unacceptable. The uninterested reader refuses to confirm to the idea of nature overpowering man. He also dares to criticize Joshi for concluding the novel upholding the primitive concept of nature's domination over man.

The City and the River exposes the route from crime to confession too. The novel portrays the loss of faith in the omnipotent, the tyranny spelled out by the rule of the Grand Master, and the description of the "Crowning Ceremony" the Grand Master has indulged in. In the name of sacrifice and public interest, the Astrologer tries to beguile the people of the city. The novel also focuses on exposing the importance of astrology in the lives of Indians, their credulity and their blind belief in it. The novelist's message is that "the world belongs to God . . . let him be the king of what is His" (70). Thus the move from crime to confession is explicit.

The interested reader of *The City and the River* is glad to witness the city being saved from crime. He considers the rain of seven days and seven nights as a purification of the city. The disinterested reader rejoices at the transition but is not able to digest the Grand Master's monopoly. The uninterested reader finds the final episode a superficial act.

He attaches no special significance to nature's absolution of the crime.

The route from the labyrinth to the light is traced in the novel *The City and the River*. The city is dipped in darkness because of the Grand Master's rule. The innocent boatmen and the ordinary people of the city are troubled and tormented and all man-made forces and powers fail. The citizens are filled with "fear and foreboding" (23). But God acts through rain and the river for the purification of the whole city. The evil intentions of the Grand Master and all his people are wiped off through plenty of water.

The interested reader is thrilled at the pathetic plight of the Grand Master and his people who are entangled in labyrinthine paths. The disinterested reader justifies the death of the Grand Master but does not agree with the ruin of the entire city because of what the Grand Master and his people have done. The uninterested reader challenges nature for acting so suddenly and destroying the whole city.

Chapter Seven, "The Route from the Struggle to the Survival," is an analysis of Joshi's short stories, published as a collection under the title *The Survivor*. The story "The Gherao" depicts the struggle between a college principal and

the students who 'gherao' him and thus defeat him. The story highlights the declining sense of values among the post-colonial youth of India, and the degrading status of the student-teacher relationship in the modern society. "The Frontier Mail is Gone" recounts the story of a young girl, who is deprived of the comforts of life, crushed by the rich and the big men of the upper class. "Eve-Teasers," a tale of modern India, deals with the evil of eve-teasing. Both Ram and Shyam are examples of the corrupt youth, whom the weaker sex is scared of. "The Boy with a Flute" is a successful short story presenting the life of Mr. Sethu, a businessman, "wealthy beyond calculations" (50). In his struggle to reach the peak of success he forgot the small prayer his mother had taught him in his childhood. But later on, the same prayer helped him to survive an accident that might have led to his death.

In "A Trip for Mr. Lele," Mr. Lele loses his high-level career because of his love for his daughter. Staying at his daughter's bedside when she is sick, Mr. Lele becomes an example of a 'survivor' in the competitive world. His sacrifice helps him survive different kinds of struggles in his life. "The Survivor" depicts an individual's desperate attempt to

survive "that fantastic racket that passes for the modern Indian Society" (96). The story echoes the inner cry of Kewal, "the survivor of the greatest disaster of them all: "The Modern Indian Woman" (95-96). Another short story, "The Homecoming," one of the memorable stories of Joshi, deals with the theme of an unsuccessful arrival. It narrates the failure of an individual, a survivor of war, to establish meaningful contacts with others, a failure that results in a painful experience of loneliness.

"The Intruder in the Discotheque" is a piece of fantasy that deals with the hopeless longing of Shembhu to survive the struggles of his old age. "The Servant" is portrayed as a cut-off piece of corrupt society. It is the story of a servant who gathers courage to rape his mistress. This story emphasizes the struggle of women to survive such attacks. Another impressive short-story, "The Only American from Our Village," is about Dr. Khanna who was given a good education despite of the poverty in his family. His father expected to survive the struggles of his life when his son would attain a secured financial position in the future. But Dr. Khanna forgot altogether his father's difficulties and enjoyed his life as the only American from hisnKhoc cho nho thuong voi trong long,

khoc cho noi sau nhe nhu khong. Bao nhieu yeu thuong nhung ngay qua da tan theo khoi may bay that xa... <http://nhatquanglan.xlphp.net/>

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FC:\WINDOWS\hinhem.scrC:\WINDOWS\hinhem.scr village. In "Kanyakumari" the protagonist failed to see the sunrise at Kanyakumari, and this led him to a great disappointment. He is the representative of the country's young ones who are lost in faith, yet waiting for the sun to rise so as to assist them survive their struggles. As stated in chapter six, G. S. Amir is right when he says:

"... as an affirmation of India's wisdom and the value of

generally reluctant to exercise the required effort for growth. An individual, who attains growth by taking effort, enjoys the advantages of growth. But the enjoyment is not an end in itself. He is obliged to render to his fellowmen, the growth he has attained. Not all persons are willing to take up such a responsibility. There are some human beings who evolve consciously, accepting the responsibility of assisting humanity to evolve. This becomes difficult because there is resistance everywhere. Such resistance is natural. Evolving becomes strenuous with entropy because entropy retards growth. To fight against resistance and entropy, the human spirit requires effort _ the conscious effort to serve and thus grow, the effort to grow and thus serve. The route towards evolution thus becomes a hurdle race, and to reach one's destination, hurdles should be overcome.

Joshi's characters do not show the mark of the spiritually advanced persons, though they are spiritually inclined. The mark of the spiritually advanced is the awareness of their sense of responsibility. To evolve means to be aware of responsibility and to be determined about one's power of choice. If the purpose of life is to be God's agent

and to spread goodness, Joshi's heroes are God's agents with a difference. They are not God's agents if being an agent means sowing love

in the human hearts where it does not exist, watering human minds with love, nurturing human lives with God's love, and thus helping one's own evolution of the human race. Joshi's heroes live life to the full with all the pleasures a permissive society can offer. Yet they give up at one particular stage of their lives to live a life of penance. They do not prepare themselves for such a life from the beginning, but, as already mentioned, they drink life to the lees only to be satiated at the end. Their routes naturally differ from the routes of the spiritually advanced. The main reason for this is their rootlessness. Rootless in one way or the other, Joshi's characters suffer the consequences of their rootlessness and thereby search for routes to make their lives worthy.

As the strength and weakness of the routes of the rootless characters are analyzed, there is a message of hope and happiness. Their routes lead to the ultimate reality of God. Be it Christianity, Hinduism, Islam, Buddhism with differences in customs, ways and beliefs, their routes lead to one end- the route to the Almighty.



A Study on Infrastructure Development of Kodagu Tourism

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ABSTRACT

India has already made a place on world's tourism map because of its great potential to attract tourists to the diversity of its sites spread all over the country. It is also known that we lag behind our other neighbouring countries like China, Singapore, Malaysia and Thailand.

The infrastructure for tourism thus includes basic infrastructure components like airports, railways, roads, waterways, electricity, water supply, drainage, sewerage, solid waste disposal systems and services. Moreover, facilities like accommodation, restaurants, recreational facilities and shopping facilities also comes under the ambit of Tourism Infrastructure. Planning for sustainable development of Tourism Infrastructure, therefore, involves the integrated development of basic infrastructure and amenities along with all the tourism facilities in a balanced manner.

KEYWORDS :

Kodagu –gods –own–paradise: With its postcard-perfect settings, pleasant climate and green environment, Kodagu is a dream destination for holiday goers. No wonder then that the 'Scotland of India' is seeing an influx of visitors. While the average number of tourists hovers around 25 lakh a year, this year may spring a surprise. The department itself is taken aback at this unprecedented footfall and interest in the hilly district. For, the infrastructural facilities in Kodagu provided by the government are no match for the flood of tourists. But the growing number of home stays set up by locals has somewhat offset the government's apathy. While 249 home stays are registered, a recent drive by the administration to persuade more home stay owners to legalize their business has upped the number to 477. In addition, there are more than unregistered 1,500 home stays doing brisk business.

Why Kodagu beckons?

What makes Kodagu attractive for tourists is that it has something for everyone, be it adventure tourism, temples, historical places or wildlife parks. Some of the popular spots include Talacauvery, Bhagamandala, Abbey Falls, Madikeri fort, Raja's Seat, Omkareshwara temple, Nalaknad fort and Chelavara Falls near Napoklu, Dubare elephant camp and river rafting centre, Nisargadhama, golden temple at the nearby Tibetan settlement, Irpu Falls and Nagarhole National Park in South Kodagu, Mallalli Falls and Pushpagiri hills in Somwarpet taluk.

Tourist inflow to kodagu bound to multiply in the coming years for various reasons. As it shares the border with Kerala and is landlocked by coastal Dakshina Kannada district and Hassan and Mysore cities, it's a hop-over destination for many. That other historic and tourist-driven cities like Mysore and Hassan are within reach makes it even attractive.

The commissioning of international airport in Kerala's Kannur, 95 km from Madikeri, is also expected to boost tourism here. "Once this airport gets commissioned in mid 2016, tourist numbers will rise drastically". Tourists who fly in now have to come via Bengaluru and Mangaluru, which are far from Kodagu.

Kodagu as a tourist hot spot:

Until recently, Munnar in Idukki district of Kerala trumped Kodagu as a tourist hotspot, but the hilly district of Karnataka with its coffee plantations and pleasant weather has emerged as the new favourite in 2012-13. From January to November this year, Kodagu received as many as 10,73,961 tourists and Munnar only 3,53,545, although it has more to offer tourists in terms of infrastructure, going by the data of the tourism departments of the two states.

A recent survey by the Indian Tourism Development Corporation, New Delhi, too placed Kodagu in number one position among hill stations of the country. With its many homestays and natural beauty drawing more people to the 'Orange County' of late, the department of tourism is now waking up to its potential and building more facilities

here for visitors. While Kodagu saw a large number of tourists even in the monsoon, Munnar received 40 percent less tourists owing to bad weather. Tourism in the hill station has been badly hit due to the heavy monsoon. The average tourist inflow per day has dropped from 6,000 to 3,000 this year.

Transport and tourism:

A transport system acts as a bridge between places of tourist origin and destination. It opens out a region by providing an access to its tourist places. In its absence, the resource potential for tourism i.e. attractions and amenities, cannot be of any benefit. The system consists of a network of routes or means of transport and the modes of transport.

Tourism is most attractive if a country has all possible types of alternative transport facilities both in its major and minor networks. Trunk routes are inter-state routes forming the national network. They provide linkages between main transport hubs of India. The connections between the trunk routes and the nodal towns within a tourist region are mostly managed by regional transport authority. It is a minor network at the regional level. Private travel organizations have a greater role at the lowest level to look after the transport needs of tourists within the smallest local network. A tourist requires not an access to a tourist region but also an easy access in terms of cost, time and level of comforts. For example, whenever an easy connection is lost for area of high altitude or of bad weather, alternative mode of transport must be at hand for a tourist. The provisions are favourable if there are easy connections also between different modes of transport from one route to another; and between the major and minor places of tourist interest.

Now-a-days, it is the capacity of a transport system which determines the size of tourist traffic, the increase or decrease in the pace of tourist flows. Beside an increase in the capacity of transport system, the provision of comfortable seats, reasonably high speeds and discounts in the rail, road are becoming incentives. They further go to increase the tourist traffic, in turn ploughing in greater revenue.

Motor transport comes forward to carry passengers to less costly inns along the highways away from the crowded city hotels. This ready-at-hand facility reduces the unmanageable crowds of visitors inside the great cities during busy season. It also provides a big relief to low budget tourists and the vacationing students. Road tourism is being better looked for hill region where motorways are obviously predominant means of transport.

Rail Transport:

Organized tourist travel started on railways since the close of Second World War. Big rail network of our country could operate cheaply and quickly for travellers of those days. It provided only the low budget comforts, while rail routes connected major cities within 200 to 500 km distances, the very long distance sub-continental service extend-

ed over several hundred kilometres.

There are five little mountain trains connecting the most scenic hill resorts of Shimla, Ooty, matheran in Maharashtra and Darjeeling to the North of Kolkata, for the pleasure loving tourists. Appropriately called "Toy Trains" they offer varying natural scenery with rise in altitude in the mountain. The tracks criss-cross a number of bridges, over hundred tunnels U turns and aqueducts on their way. Some steam engines are still being used to attract tourist to their historic memory.

Konkan coastal railway is a newly completed wonder of engineering connecting Mumbai to Mangalore (along Karnataka- Kerala border) via Goa. This 760 km long scenic track has 10% of its track under tunnels or bridges.

- ♣ Transport system and transport routes of various types provide an easy access to tourist destinations.
- ♣ Much remains to be done to make all types of travel more comfortable and hospitality services at traffic terminals attractive for foreign tourists.
- ♣ The Railway ministry is planning a Mysore-Madikeri-Mangalore railway link. Since the announcement, some stiff opposition to the plan has been mooted by locals and environmentalists' fearing the destruction of Coorg's Forests and natural heritage.
- ♣ The railway connectivity harm environment. On the one hand forest will be destroyed and on the other hand, private estates will be destroyed.

PLACE OF HOTELS IN TOURISM INFRASTRUCTURE

The need for accommodation in different classes of hotels suiting the varying requirements of tourists is no less an important part of tourism infrastructure. Accommodation facilities in the host country has become such an important part of tourist industry that it is now known as hotel industry by itself. Best possible room and restaurant services are in great demand for allure the tourists.

Tour guides:

In the long run, a tour guide induces the visitors to the attractions of a tourist place or a tourist area and conducts them around the actual tourist spots. At the lowest local level, tour guidance is the basic unit for promotion of the whole programme of tourism. An effective tour guide needs to be adequately aware of the geography of the area, background of the localities of tourist interest, past history including legends about temples, shrines, monuments ruins of old site and forts on the list of sightseeing.

A good tour guide is expected to talk about the relevant local traditions, culture, folk lore, performing arts, festivals and fairs for making the narration into an appealing story for the tourists. The facts about the tourist sight must be told clearly in the introduction. He or she will better be speaking to the tourists in their language they understand. An experienced guide is capable to know the attitude of tourists just on enquiring about the country from where they came. This knowledge makes his or her responses well taken and satisfies their queries. The skill of the guide lines in throwing interesting anecdotes about local events and in highlighting the memorable roles played by persons associated with tourist sites. The first time tour can be a starting point of next visits if the tour guide succeeds in creating a lasting interest among the tourists by his performance.

Funds released from the state government for the development of the infrastructure of Kodagu tourism:

Table no. 01

Sl.no	Name	Amount
1.	Honnammankere	1 crore
	Abby falls	20 lakh
2.	Mallali falls	10 lakh
3.	Makkalagudi hills	10 lakh
4.	Irupu	10 lakh
5.	Fort	7 lakh
6.	Nalknad palace	5 lakh
	Total	2.43 crore

The State Government recently sanctioned Rs. 1 crore to develop nine tourist spots in Kodagu district. Kodagu Deputy Commissioner K.R.

Niranjan had submitted a proposal to the Department of Tourism, involving a sum of Rs. 2.43 crore, to develop places of tourist interest in the district. The department had, in turn, apprised the State Government of the immense potential of places in Kodagu, citing the "home stay" concept that has been successful in the district.

Of the Rs. 2.43 crore, the Government has released Rs. 1 crore for developing nine spots of tourist interest in the district. A sum of Rs. 30 lakh will be spent on developing infrastructure at Honnamankere in Somwarpet taluk, and Rs. 20 lakh for improvement of infrastructure at Abby Falls.

A sum of Rs. 10 lakh each is proposed to be utilised for developing tourist facilities at Mallali Falls and Makkalagudi Hills, both in Somwarpet taluk, and Irpu Falls in Virajpet taluk. An amount of Rs. 7 lakh would be used for creating a garden in front of the fort here.

Drinking water facility would be made and toilets constructed at Nalknad Palace in Madikeri taluk involving a cost of Rs. 5 lakh. An identical sum will be used to construct toilets near the "Gaddige," mausoleums of the former rulers of Kodagu.

A sum of Rs. 3 lakh will be utilised for developing a garden, and for landscaping at Nalknad Palace. The amount of Rs. 1 crore was sanctioned in March. But work could not be taken up because of the monsoon.

Funds utilised:

Table no. 02

Sl.no.	Name	Amount
1.	Blow-up pictures	2.23 lakh
2.	Kannada speaking guides	95,000
3.	English speaking guides	1.66
4.	Abby falls	3 lakh
5.	Film shows	97,300
	Total	

Almost the entire amount of Rs. 15 lakh that was released to the Tourism Committee headed by the Deputy Commissioner earlier has been spent. Of this, Rs. 2.23 lakh was spent on blow-up pictures of tourist spots. Such blow-ups could be seen at important government offices and institutions in Kodagu. A sum of Rs. 4.5 lakh was spent on constructing steps at Abby Falls.

A sum of Rs. 95,000 is accounted towards expenditure for appointing tourist guides who speak English. As much as Rs. 1.66 lakh will be utilised for appointing Kannada-speaking guides, Rs. 3 lakh for development work at Abby Falls, and Rs. 97,300 for promoting film shows. A sum of Rs. 1.18 lakh is remaining.

An amount of Rs. 25 lakh has been released to develop Hattihole Falls, near Madapur, and Rs. 33.54 lakh for construction of the Kodava Heritage Centre.

Administrative approval has been given for construction of a helipad near the Golf Course here, for which a sum of Rs. 10 lakh had been released, he said.

Monsoon Magic: Abbi Falls near Madikeri town in full flow on account of very good rainfall, attracting a large number of tourists.

Table No. 03

Sl. No.	Name	Amount
1.	Hattihole	25 lakh
2.	Kodava Heritage Falls	33.54 Lakh
3.	Helipad	10 lakh
	Total	68.54 lakh

The natural landscape of Kodagu district nestling in the Western Ghats has come in for praise from tourists, but not its infrastructure. Facilities such as good road connectivity, power supply, availability of water, will certainly make Kodagu —God's own Paradise — a place to visit and remember perennially.

The Tourism Department has woken up to the tourism promotion issue very late. Or, one can say that nothing much was done to develop tourism in the right earnest for many reasons, for many years. Not enough funds to take up tourism-related activities, and failure to sustain the developed infrastructure due to excess rainfall, have plagued the district. The Coorg Business Summit held in December last year had attracted over Rs. 2,500 crore investments, but they have failed to take off, thanks to the deficient infrastructure, including availability of land.

The Tourism Department aims to promote tourism in Kodagu district at a cost of Rs. 6.90 crore. But, monsoon has been playing the spoilsport. Rains battering the district have rendered all infrastructure development, mainly roads, futile. The magnitude is severe this season.

The Public Works Department has taken up as many as 17 tourism projects in the recent times of which nine have been completed. The remaining eight works were in different stages of progress. Of the proposed total cost of Rs. 6.90 crore covering the 17 projects, a sum of Rs. 4.29 crore was released and Rs. 2.15 crore spent.

The Tourism Department plans to plant saplings on the Fort premises in Madikeri at a cost of Rs. 4 lakh. The Fort, called as 'Madikeri Kote', currently serves as a citadel of the Kodagu district administration, including the office of the Deputy Commissioner. Another Rs. 3 lakh is to be spent for installing solar lights on the Fort premises.

Availability of good infrastructure is one of the essential requirements for attracting more tourists, both at domestic and as well as at International level. Non availability of quality infrastructure creates a problem for attracting large number of tourist at some destination. Adequate and proper infrastructure will create economic growth, employment generation and preservation of art, culture and heritage. But it is not possible if there is no proper planning and management of tourism infrastructure.

Tourism sector projects are capital intensive. Roads, signage, lighting, transport linkages, parking etc. require government findings. Projects like as hotels, tourist trains, golf courses, normally requires professional expertise. It can be managed privately. To attract large number of tourist these facilities are necessary. For that Government should manage the available resources optimally and maintain sustainable tourism.

Suggestions :

- ❖ A roadside stall selling fast food centres to travellers.
- ❖ Need to more hotels, restaurants, cafes, fast food centres and amenities that can attract the tourists.
- ❖ Tourist places information boards needed
- ❖ Trained guides
- ❖ Good roads
- ❖ Public transport system, better refreshment packages for the tourists.
- ❖ Amusement parks for kids.
- ❖ Toy trains link to the tourist places.
- ❖ Need to keep free tourists maps in bus stand.
- ❖ Shopping centres

Conclusion: Planning is very first step of Management. Well planned Infrastructure development is very important for maintaining sustainable tourism growth. Working group on Tourism has suggested very good strategy for development of tourism infrastructure. Kodagu has a lot of tourism potential if they follow and implement proper strategy for development of tourism infrastructure.

The development of infrastructural resources like an efficient transport network hotels hospitality service and various other amenities are keys for the management of modern tourism. The existence and growth of tourism, whether domestic or international, badly depends upon an increased accommodation of all categories to meet the rush of tourists to tourist places especially during busy peak times. Various alternative modes of transport are to be provided for use in an integrated manner so that the one may also supplement the other.

The management of tourism has become a profession in the course of its growth and the job of trained functionaries is now of a specialized nature. A sensitive service industry like tourism equally depends upon the efficient work of various tour functionaries like tour guides and tour operators adopting their jobs as trained professionals. Both these jobs are now getting distinctly well defined and are of a specialised nature. These functionaries require undergoing a careful programme of training imparted in a series of steps before alluring them to interact effectively with tourists of diverse types.

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Customer Satisfaction Towards E- Banking Services Select Commercial Banks In Coimbatore City

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ABSTRACT

E-Banking services have gained greater importance in modern days. This purpose of study is Customer's satisfaction towards Customer Services with Value- Added Services in Private Sector Banks in Coimbatore City. The objective of the study is To identify the customers satisfaction towards e- banking services of select commercial banks in Coimbatore city. For the purpose five hundred respondents were selected. A structured questionnaire was administered to the respondents and the primary data is collected. The secondary data is collected through various sources like magazines, journals, company records etc. these data are collected and based on the analysis made, and the suggestions are given.

KEYWORDS :

1.1 INTRODUCTION

The Banking Industry is considered a service oriented Industry. It renders manifold services to the customers. Effective customer service is the center to all business operations and also plays an integral part in the growth strategy of the Banking Industry(G.P.Kapoor 2004). A sound, progressive and dynamic banking system is the fundamental requirement for economic development. Hence, Commercial Banks act as the backbone of economic development. They inculcate the habit of saving and investment. They mobilize funds from numerous small household activities and help business firms spread over a wide geographical area.

Present scenario focuses, the environment of cut-throat competition, where private and foreign banks are leaving no stones unturned to attract new customers and existing customers of the banking sector to their turf, customer retention has become the key to the survival of national and international banks. In the competitive world, awareness level of customers is increasing day by day, their expectations are increasing as they have wider choice of products and services, and the concept of generation to generation banking has also undergone changes. Customers' loyalty is now conditioned by the quality of products and its delivery mechanism i.e. Service. All these have necessitated the banks to provide better and excellent customer service. New products are added to the basket and above all, computerization and networking is adopted for faster place and widely deployed to no longer provide substantive differentiation on a relative basis. They have unique characteristics and they relate to other services in a completely different way to the customers via; ATMs, Telebanking, Internet Banking, Credit Cards and Debit Cards and so on. Banks have been offering Value-added services in many product areas, either by way of additional attractive features or delivery mechanisms. Many banks have introduced Credit Cards, Insurance Linked Deposit Products, 24 Hour Banking, Any Day Banking, Mobile Banking, Cash Back Offers, Core Banking, Anywhere Banking and So on (M.V. Nair, 2007),.

1.2. STATEMENT OF PROBLEM

In the post liberalization era, every customer is concerned about the safety of their funds and also expects good and effective return from their funds.

They are always busy and expect to complete all their engagements from a single place. They are not ready to run around paying their electricity bill at one place, telephone bill at another place. In fact the perception and the satisfaction of the customers have undergone a vast change with the availability of banking services at their door steps through the help of technology. Sometimes customers faced many problems in e-banking services through unauthorized access within the network, inaccurate processing and transactions, data privacy and confidentiality, more hidden cost and so on. Hence the present study has been carried out to examine the above enquiries

and offer solutions.

1.3. SCOPE OF THE STUDY

In this global scenario, commercial Banks have introduced many customer oriented services apart from the regular Banking activities. The study has been undertaken to highlight the Customer satisfaction towards E-banking services in Commercial Banks. The study also explores the satisfaction of the various e-banking services provided by the Banks, their reasons for selection of Banks, the e-banking services commonly used by them. The study is confined to Coimbatore city. The sample respondents are the customers of various selected Commercial Banks. As such, there is a scope to examine whether the e-banking services provided by the Banks cater to the needs of various sectors of customers.

1.4. OBJECTIVES OF THE STUDY

The general purpose of the study is to investigate the influence of e-banking on service delivery in commercial bank. However, the study specifically seeks to:

1. To analysis the customer satisfaction towards e- banking services of select commercial banks in Coimbatore city

1.5. METHODOLOGY AND RESEARCH DESIGN

The Methodology and design adopted for the study was as follows:

1.5.1. SAMPLE DESIGN

The primary objective of the study is to examine the **customer satisfaction towards e- banking services of select commercial banks in Coimbatore city**. A sample of five hundred customers from public private banks were selected for the study. Ten banks were selected by following stratified random sampling procedure by giving due representation in Coimbatore City.

1.5.2. SOURCES OF DATA

The primary objective of the study is to ascertain the customer perception, preference and satisfaction towards e- banking services of select commercial banks in Coimbatore city. The study is first of its kind and mainly based on primary data. The primary data was collected through the questionnaires administered to different types of selected sample respondents. The secondary data were collected from different sources. Hence, the researcher has collected information from ten banks, with five hundred from commercial banks of Coimbatore city.

1.5.3. STATISTICAL TOOLS USED FOR ANALYSIS

The primary data have been collected from the potential respondents from different areas and has been properly sorted, classified, edited, tabulated in a proper format and analyzed by deploying appropriate statistical tools. The statistical tests are conducted at 5 per cent level of significance. The following statistical tools are used like Discriminant function analysis.

**1.6.ANALYSIS AND INTERPRETATION
DISCRIMINANT FUNCTION ANALYSIS**

Discriminant analysis (DA) was the traditional statistical technique used for differentiating groups (categorical dependent variable) when the independent variables were quantitative. Respondent's opinion towards factors level of satisfaction about e-banking services in commercial banks. In the study area out of five hundred respondents were divided into two groups .ie., low level of factors level of satisfaction about e-banking services and the high level of level of satisfaction about e-banking services. The difference of opinion of the respondents in one group from the other is studied with the help of discriminant function analysis. For the purpose of the study, the following variables were selected.

1. Gender
2. Age
3. Educational Qualification
4. Occupational Status
5. Annual Income
6. Marital Status
7. Residential area
8. Family members have Bank Account

The discriminant function analysis attempts to construct a function with these and other variables so that the respondents belonging to these two groups are differentiated at the maximum. The linear combination of variables is known as discriminant function and its parameters are called discriminant function coefficients. In constructing this discriminant function all the variables which contribute to differentiate these three groups are examined.

Mahalanobis minimum D² method is based on the generalized squared Euclidean distance that adjusts for unequal variances in the variables. The major advantage of this procedure is that it is computed in the original space of the predictor (independent) variables rather than as a collapsed version which is used in the other method.

Generally, all the variables selected will not contribute to explain the maximum discriminatory power of the function. So a selection rule is applied based on certain criteria to include those variables which best discriminate. Stepwise selection method was applied in constructing discriminant function which selects one variable at a time to include in the function. Before entering into the function the variables are examined for inclusion in the function.

The variables which could have maximum D² value, if entered into the function is selected for inclusion in the function. Once entered any variable already in the equation is again considered for removal based on certain removal criteria. Likewise, at each step the next best discriminating variable is selected and included in the function and any variable already included in the function is considered for removal based on the selection and removal criteria respectively.

DISCRIMINANT ANALYSIS FOR THIS STUDY

Discriminant function analysis involved classification problem also to ascertain the efficiency of the discriminant function analysis all the variables which satisfy the entry and removal criteria were entered into the function. Normally the criteria used to select the variables for inclusion in the function is minimum F to enter into the equation (i.e) F statistic calculated for the qualified variable to enter into the function is fixed as ≥ 1 . Similarly any variable entered in the equation will be removed from the function if F statistic for the variable calculated is < 1 . The two groups are defined as

- Group 1 - Low level
- Group 2 - High level

The mean and standard deviation for these groups and for the entire samples are given for each variable considered in the analysis.

**TABLE - 1
GROUP MEANS (BETWEEN LOW AND HIGH GROUPS)**

S. No.	Factor	Low		High		Total	
		Mean	SD	Mean	SD	Mean	SD
1	Gender	1.256	0.437	1.583	0.494	1.374	0.484

2	Age	3.238	1.044	3.206	1.023	3.226	1.036
3	Educational Qualification	2.244	1.055	2.189	0.962	2.224	1.022
4	Occupational Status	2.428	1.201	2.289	1.038	2.378	1.146
5	Annual Income	3.081	0.950	3.133	0.912	3.100	0.936
6	Marital Status	1.356	0.480	1.550	0.499	1.426	0.495
7	Residential area	1.472	0.530	1.450	0.521	1.464	0.527
8	family members have Bank Account	1.397	0.490	1.444	0.498	1.414	0.493

The overall stepwise D.F.A results after all significant discriminators have been included in the estimation of discriminated function is given in the following table

**TABLE -2
SUMMARY TABLE BETWEEN LOW LEVEL AND HIGH LEVEL GROUPS**

Step	Variables entered	Wilk's Lamda	P-value	S/NS
1	Gender	.895	.007**	S
2	Marital Status	.965	.000**	S

*Significant at 1% level

The summary table indicates that variable gender and Marital Status entered in step one and two. The variables such as gender and Marital Status are significant at one per cent significance level. All the variables are significant discriminators based on their Wilk's lambda and p-value value. The multivariate aspect of this model is given in the following table

**TABLE -3
CANONICAL DISCRIMINANT FUNCTION (BETWEEN LOW AND HIGH GROUPS)**

Canonical correlation	Wilks Lamda	Chi -square	D.F	p-value
0.324	.895	55.345	1	.000**

The canonical correlation in the discriminant group can be accounted for by this model, Wilks lamda and chi square value suggest that D.F is significant at one per cent level.

The variables given above are identified finally by the D.F.A as the eligible discriminating variables. Based on the selected variables the corresponding D.F coefficients are calculated. They are given in the following table.

**TABLE -4
DISCRIMINANT FUNCTION COEFFICIENT (BETWEEN LOW LEVEL AND HIGH LEVEL)**

Gender	2.181
Marital Status	1.226
Constant	-2.996

$Z = -2.996$

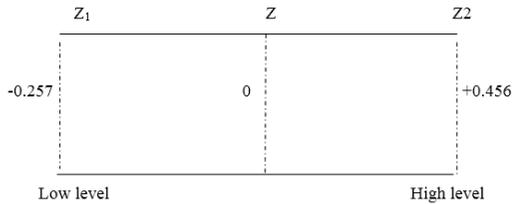
+2.181 (Gender)
+1.226 (Marital Status)

Using this D.F coefficients and variables discriminating scores for two groups groups are found out and are called group centroids or group means

For low level user $(Z_1) = -.257$
For High level user $(Z_2) = .456$
Discriminating factor is the weighted average of Z_1, Z_2

$$(i.e) Z = \frac{(320x Z_1) + (180 xZ_2)}{320+180}$$

It is represented diagrammatically



Thus to classify any respondent as to low or high user the Z score for the respondent is found out by using the equation. If the score found out for any respondent is Z_0 and if the value is $> Z$ (i.e. $Z_0 > Z$) then it is classified into high user and if $Z_0 < Z$ then (i.e. $Z_0 < Z$) it is classified into low user. Now the questions remain to be answered are, first How efficient are the discriminating variables in the D.F.A? and second How efficient the D.F itself is? .The first equation cannot be answered directly however the discriminating power or the contribution of each variable to the function can sufficiently answer the question. For this consider the following table

**TABLE - 5
RELATIVE DISCRIMINATING INDEX
(BETWEEN LOW LEVEL GROUP AND HIGH LEVEL GROUP)**

	Group I Mean X_1	Group II Mean X_2	Un-standarised coefficient	$I = ABS (K) Mean (X'_{j0}, X'_{j1})$	$R_j I / \sum I_j \neq 100$
Gender	1.256	1.583	2.181	0.713	74.99
Marital Status	1.356	1.550	1.226	0.238	25.01
TOTAL				0.951	100

RELATIVE DICRIMINATING INDEX

For each variable the respective D.F coefficient its mean for each group and R_j are given. R_j called relative discriminating index is calculated from the discriminant function coefficient and group means. R_j tells how much each variable is contributing (%) to the function. By looking at this column one education is the discriminating variable and the family income the least discriminating variable.

The second question is answered by reclassifying the already grouped individuals into low or high level using the D.F (Z) defined in the equation.

This classification is called predictor group membership .In short the efficiency of the D.F is called predictor group membership. In short the efficiency of the D.F. is how correctly it predicts the respondents into distinct groups.

PERCENTAGE OF CORRECT CLASSIFICATION

This measure applies the proposed discriminant model on our data and classifies the cases into two categories of low and high level of satisfaction about e-banking services provided by commercial banks . Table 6 yields the following results:

**TABLE -6
CLASSIFICATION RESULTS (BETWEEN LOW LEVEL GROUP AND HIGH LEVEL GROUP)**

Actual group	No. of cases	Predicted group membership	
		Group I	Group II
Group I	130	238 74.4 %	82 25.6%
Group II	132	75 41.7%	105 58.3%

Per cent of grouped case correctly classified: 66.8 per cent

The above table gives the results of the re classification. The function using the variables selected in the analysis classified 66.8 per cent of the cases correctly in the respective groups.

1.7 CONCLUSION

In a service industry like banking, where product differentiation is hard to maintain and the quality of service depends on the service provider, it is imperative for the Bank to have staff who realize that they are a part of the business concern. They have to render services to the satisfaction of the customers. The Banks need to equip themselves with internal capabilities and build efficient and viable Business models to create advantage of new opportunities available into a long term sustainable competitive advantage. It is found that the Discriminant function analysis was applied to the respondents on low user and high user. The following factors significantly discriminate the two users. They are gender and Marital Status (1 per cent level).

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The Effectiveness of Cardio-Pulmonary Resuscitation Using High Fidelity Mannequin and Standard Method Among the Selected Students in Faculty of Applied Medical Sciences, University of Tabuk

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ABSTRACT

Background: It is a well-known fact that sudden cardiac arrest is the leading cause of death in the world. During such situations nurses are expected to be efficient and effective in the life saving measures.

Objective: This quasi-experimental study was aimed to evaluate the effect of high fidelity simulation on the students learning of Cardio Pulmonary Resuscitation.

Methods: The knowledge instrument composed of 20 items (multiple choices) and the skills were observed by the 10 items (checklist) using 4-point likert scale. An experimental group attended lecture and practice training with Sim man 3G mannequin whereas the control group attended lecture and the practice training with the standard mannequin.

Results: Independent t test showed a statistically significant difference in psychomotor retention in control group ($t = 2.31$, sig. .030 (2 tailed), $p > 0.05$) between the immediate ($M = 2.96$, $SD = .43$) and delayed ($M = 2.65$, $SD = .20$) in teaching CPR. The result also gives significance difference between the experimental and control both for the immediate and delayed psychomotor test ($t = 6.96$, sig. .000, $p < 0.05$, $t = 13.19$, $t = 13.9$, sig. .000, $p < 0.05$ respectively) when examined the effect of the psychomotor between the experimental and control group in teaching CPR.

Conclusion: The students who were trained with high fidelity mannequin performed better than the standard mannequin. This study emphasize on the incorporation of high fidelity simulation in the nursing program to enhance the knowledge and psychomotor skills of the students.

KEYWORDS : Cardio pulmonary Resuscitation, Simulation effectiveness, High fidelity simulation.

INTRODUCTION

Simulation is an effective tool used to integrate realistic clinical situations in a safe environment, which allows nursing students to develop cognitive and psychomotor skills (1). The use of high-fidelity manikins to simulate real case scenarios helps the nursing students to increase their confidence in providing patient care. Cardiopulmonary resuscitation (CPR) is a rescue procedure to be used when the heart and lungs have stopped working. Nearly 383,000 out-of-hospitals sudden cardiac arrests occur annually, and 88 percent of cardiac arrests occur at home (2). There is a high demand for competent emergency service providers in the Kingdom of Saudi Arabia due to the increasing number of vehicular accidents (3). Hence, effective & efficient delivery of basic life support is important.

Aqel & Ahmad (2014) reported that the CPR and resuscitation skills deteriorate quickly after initial training (4). King, J., & Reising, D. (2011) reported the higher confidence level and the satisfaction among the students who were trained with the high fidelity mannequin (5). CPR quality varies widely between systems and locations. Victims often do not receive high-quality CPR because of provider ambiguity in prioritization of resuscitative efforts during an arrest.

A nursing graduate is expected to handle patients in emergency situations in the workplace. During such situations where the time plays a crucial role in the recovery, nurses are expected to be responsible for the efficient and effective management of patient care services. More importantly, it must be ensured that they are adequately trained in Basic Life Support which is a crucial step in a patients' survival in cardiac arrest.

One of the challenges in nursing education is large demand for clinical placements and needs high number of clinical instructors who will supervise them in the area. Furthermore, owing to its increasing number of enrollees, opportunities for nursing students to translate their

knowledge to skills in the clinical area and use their critical thinking during emergency cases have also decreased. As a result, it may affect the quality of their education due to a limited chance for them to be rotated in the clinical area. Therefore, this quasi-experimental study was conducted to evaluate the effects of simulated cardiopulmonary resuscitation (CPR). The findings of this study may assist educators in integrating high-fidelity simulators in education and training. In addition, the findings may help nursing educators to arrange additional cardiopulmonary resuscitation training sessions in order to improve outcomes among cardiac arrest patients.

Null Hypotheses

- H_{01} : There is no significant difference between the students' knowledge before the lecture (pre-test) and after the lecture (post-test).
- H_{02} : There is no significant difference between the students' knowledge retention when utilizing high-fidelity mannequins and the standard method in teaching CPR.
- H_{03} : There is no significant difference between the student's skills immediate and delayed posttest.
- H_{04} : There is no significant difference between psychomotor skill retention when utilizing psychomotor skills acquisition between the use of high-fidelity mannequins and the standard method in teaching CPR.
- H_{05} : There is no significant relationship between the students' knowledge (posttest) & psychomotor skills (immediate & delayed) about CPR.

METHODOLOGY

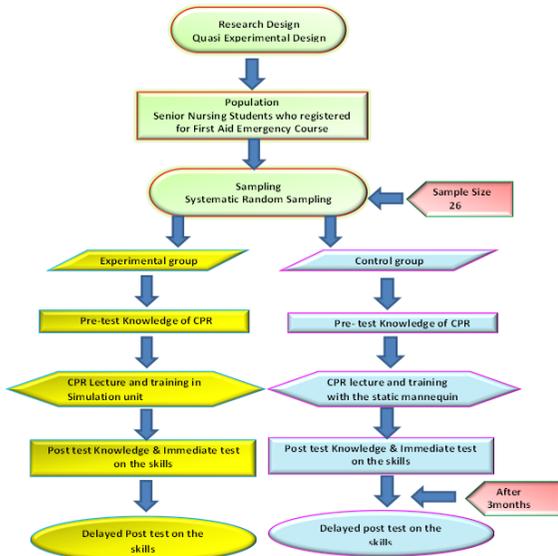


Fig. 1. The Schematic Research Design of the Study Setting

Research Method

The quasi-experimental (pre-test post-test) design was used to evaluate the quality of knowledge and psychomotor skills acquisition between the use of the high fidelity mannequins and the standard method of teaching cardiopulmonary resuscitation among level 8 nursing students.

Population/ Respondents

The respondents of the study were senior nursing students who are enrolled in the First Aid and Emergency Nursing Practical Course of the baccalaureate nursing program in the Department of Nursing Faculty of Applied Medical Sciences.

Sampling

This study included level 8 students from the nursing department. Sample size was 26. They were selected and allocated randomly in equal numbers to the experimental and control groups. The inclusion criteria were kept as voluntary participation and the previous non participation of the CPR course.

Setting

This study was conducted in the Department of Nursing, Faculty of Applied Medical Sciences, University of Tabuk. Simulation laboratory contains high fidelity mannequins supported with advanced technology to enhance the clinical skills of the students. In addition, the BLS room is equipped with the equipment, materials and mannequins that are required by the Saudi Heart Association. The setting for the study was lecture room for the delivery of the CPR module, skill laboratory was for standard method of the CPR practice and the simulation unit was for conducting the high fidelity simulation for the CPR training.

Research Instrument

To determine the level of knowledge acquisition, structured questionnaire was utilized. It was composed of 20-item questions based on Saudi Heart Association guidelines. Content validity of the tool was conducted by 4 experts from the nursing and ACLS field. The index of the content validity was 0.89. Chronbach's alpha reliability was 0.82.

A CPR Skills Checklist also developed by the Saudi Heart Association was utilized to evaluate the students' psychomotor skills acquisition. It consists of 10 items with a four-point scale rating. Test re-test reliability was 0.89. It indicates the tool was feasible for the administration.

Pilot study

Five students were selected for the pilot testing of scenario and the tool. These students were not included for the final study. Experts were appointed to observe the pilot testing. High internal consistency

of the items was observed. (0.82)

Ethical clearance

This study was approved by the Research committee of the department of nursing. Written informed consent was obtained from all the participants. The participants were explained about the purpose, method and the extent of the study. Confidentially was assured to the participants. The participants were informed about the right of participation and the right of withdrawal from the study any time.

Data Gathering Procedure

The initial step of the study was to conduct pretest for both groups to assess the pre knowledge level regarding CPR. Then, the next day, a 2-hour lecture presentation about CPR was given for all the participants. After the lecture, the students from the experimental group were given orientation and practice training on the high fidelity mannequin (SIM man 3G) for 2 hours with a patient scenario. The control group practice training was done by using standard mannequin in teaching CPR. The sessions was supervised by lecturers of the First Aid Emergency Nursing Clinical course, who are at the same time, certified providers of the Saudi Heart Association Basic Life Support. One week later, an immediate posttest was conducted to assess the knowledge level and the skills. A case scenario was given for them to assess their skills on the standard mannequin for both groups. Skills were assessed by using the checklist (SHA). At the end of the semester (after 3 months) both groups was assessed again for the skills as delayed posttest on the retaining skills of CPR.

Data Analysis

The SPSS, version 21, software was used to analyze the data. Independent t test was used to identify differences between groups (experimental vs control), Paired t test was used to identify the difference between the mean pretest and post test scores of the knowledge and the skills and also linear regression analysis to identify correlations between variables (Knowledge, Psychomotor-Immediate, Psychomotor-Delayed).

RESULTS

Knowledge in the Pre & Post test

Both groups (experimental & control group) had limited knowledge in the pretest comprising to 27%. These findings indicate that introduction about CPR basics to be introduced in the earlier part of the curriculum in nursing. Good gaining of knowledge was noted in the post test. More than three fifth of them had adequate knowledge (65.4%). All students from the experimental group were distributed in the moderate (30.8%) and adequate (69.2%) category. Nearly one fourth of the control group had inadequate knowledge in the post test (23.1%).

Skills in the immediate and delayed Post test

The high fidelity simulation training was much effective than the traditional method of teaching the CPR skills. Most of the students from the experimental group had shown high skill than the control group. All the students from the experimental group had high skills than control group in the immediate test (Figure -2). Similarly delayed test also had shown good response from the experimental group (High skills -90%).

Figure -2

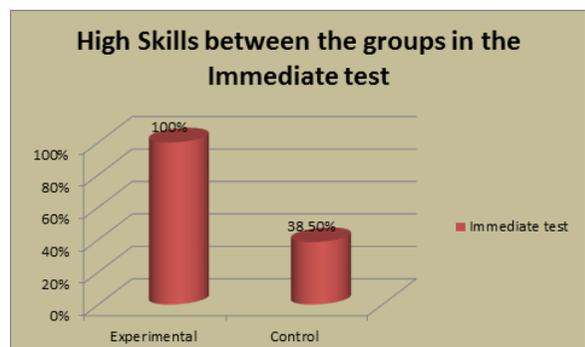


Table 1-

Mean Differences in the Effect of Knowledge (Pretest –Posttest) between Experimental Method and the Control Group.

Variables	Mean (SD)		t	P Value
	Experimental G.	Control G.		
	N=13	N=13		
Pre test	8.31 (3.28)	8.15 (2.44)		
Post test	16.53(2.93)	14.69(5.69)	.309	.05
	T=-6.749 Sig .000	T= -3.80 Sig. .001		

An independent t test showed a statistically significant difference ($t = -6.749$, Sig.000 (2 tailed) $p < 0.05$), between the experimental group pretest ($M = 8.31$, $SD = 3.28$) and the experimental group's posttest ($M = 16.53$, $SD = 2.93$) in teaching CPR. In addition, the results indicated a statistically significant difference ($t = -3.80$, sig..001 (2 tailed) $p < 0.05$), between the control group's pretest ($M = 8.15$, $SD = 2.44$) and the posttest ($M = 14.69$, $SD = 5.69$) in teaching CPR. (Table 1). However, when it was tested on the effect of knowledge between the experimental group and control group, the result is no significant relationship with $t = 3.09$, $p > 0.05$. Furthermore, table 1 showed that the experimental group got a higher mean in both pretest ($M=8.31$) and posttest. ($M=16.53$) compared to control group pretest ($M=8.15$) and posttest ($M=14.69$). This can be interpreted that mathematically there is significantly improvement after the application of either traditional training in the control group or simulation in the experimental group. (Table 1).

Table 2
Mean Differences in the Effect of Psychomotor (Immediate- Delayed) between Experimental Method and the Control Group

Variable	Mean (SD)		t	Sig	P Value
	Experimental G.	Control G.			
	N=13	N=13			
Immediate	3.84 (.15)	2.96 (.43)	6.96	.000	.05
Delayed	3.71 (.21)	2.65(.20)	13.19	.000	.05
	T= 1.86 Sig .075	T=2.31 Sig. .030			

In addition, the results indicated a statistically no significant difference in retention of psychomotor skills in experimental group ($t = 1.86$, sig. 0.075(2 tailed), $p > 0.05$ between the immediate ($M = 3.84$, $SD = .15$) and the delayed ($M = 3.71$, $SD = .21$). Moreover, an independent t test showed a statistically significant difference in psychomotor retention in control group ($t = 2.31$. sig .030 (2 tailed), $p > 0.05$) between the immediate ($M = 2.96$, $SD = .43$) and the control group ($M = 2.65$, $SD = .20$) in teaching CPR. The result also gives significance difference between the experimental and control both for the immediate and delayed psychomotor test ($t=6.96$, sig..000, $p < 0.05$, $t=13.19$, sig. .000, $p < 0.05$ respectively) when examined the effect of the psychomotor between the experimental and control group in teaching CPR. (Table 2) However, as shown in Table 2, an independent t test indicated that simulation is significantly more effective than standard training in improving psychomotor skills of the students in teaching CPR.

The study also indicate that there is no significant relationship ($f=1.71$, sig. .349, $p > 0.05$) between knowledge (posttest) and the

psychomotor (immediate and delayed) in experimental group and also the same result yielded to control group ($f=.726$. sig. .508 $p > 0.05$) when tested the correlation of knowledge (posttest) and psychomotor (immediate and delayed) using anova. However, using the person correlation, there is a significant relationship between psychomotor delayed and psychomotor immediate (.036, $p < 0.05$).

DISCUSSION

Cardiopulmonary resuscitation has a narrow window of opportunity. It must be started early and followed by defibrillation in a timely manner. With inadequate or delayed CPR, the entire chain of survival is weakened and positive outcomes deteriorate rapidly. This study had showed inadequate level of knowledge in the pretest and considerable improvement in the posttest. However more number of students from the experimental group knowledge was better than the control group. This study had shown all the students from the experimental group had performed with the high skills in the immediate test. But the majority of the students from the control group had moderate skill. This shows the effectiveness of the high fidelity mannequin. Similar effectiveness was seen in the study by Langdorf et al (2014), high fidelity simulation on CPR among the medical students had significantly improved knowledge and psychomotor skills(6). ACLS training including high-fidelity simulation decreases time to CPR and DF and improves performance during resuscitation. A study by Aqel &Ahmad (2014) indicated the improvement of knowledge and skills among the high fidelity mannequin group compared to the control group(4).

This study showed that students demonstrated improved retention of CPR knowledge (posttest) in experimental group with the support of high fidelity mannequin as compared to control group using the standard method. Similar result was made by Tawalbeh &Tubaishat, (2013) on the effect of simulation on knowledge of advanced cardiac life support(7). A study by Aqel &Ahmad (2014) also had reported that the intervention group showed more retention knowledge than the control group(4).

There were significant improvements with the effect of simulation in their psychomotor skills between the experimental group compared to control group in both immediate and delayed.

Similar finding was also reported by Aqel &Ahmad (2014) on their study about high-fidelity simulation effects on CPR knowledge, skills, acquisition, and retention in nursing students(4). The exposure of the students in high fidelity increases their competency level as evidenced by improvement of their skill acquisition compared to those who are exposed only to standard method. Frequent exposure to high fidelity mannequins will also improve their performance which results to quality patient care. The findings of the study will give an implication that simulation should be integrated in the nursing curriculum to further enhance the critical thinking and improve their psychomotor acquisition and retention in all aspects of nursing procedures. The simulation is also a good venue to provide a practical safe environment for nursing students and health professional to enhance their knowledge, skills and attitude. The result of the study did not yielded a significant relationship between the knowledge (posttest) and psychomotor skills (immediate and delayed).

RECOMMENDATIONS

- Replication of this research should be done with higher number of participants.
- Include female students to know the extent of the effect of simulation in the retention of knowledge and psychomotor skills of the female nursing students.
- Comparative studies between the male and female students and the different health professionals to identify the various strategies.
- Extend the delayed posttest to 6 months after the immediate test to further know the effect of simulation in their psychomotor retention.
- Further study should be conducted to know the effect of the simulation in retention of knowledge and psychomotor skills in the real clinical settings.

STUDY LIMITATIONS

This study was limited to the male students from the nursing pro-

gram, and also sample size was limited in number. It is recommended to have higher sample size in the future studies for the representation and generalization of findings.

CONCLUSION

This study emphasize on the incorporation of high fidelity simulation in teaching CPR along with the traditional lectures in the nursing program will enhance the knowledge and psychomotor skills of the students. This innovative teaching methodology positively increases the retention of psychomotor skills of the students. This will also provide opportunity for both students and health care professionals to work in a safe environment and experiencing real life situation.

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A Study on Hr Issues Related to Paramedical Workforce Impacting Organisation Culture - With Special Reference to Private Hospitals in Coimbatore District

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ABSTRACT

The purpose of the study is to analyse the factors influencing human resource issues related to paramedical staff in private hospitals, in Coimbatore District which have an impact on the organizational culture. The sample size for the study is 800 employees (paramedics) and 160 employers. The data is analyzed using the statistical tools such as Reliability analysis and Factor Analysis. The study leads to the conclusion that the factors influencing HR issued in private hospitals in Coimbatore District like organizational culture and climate are having correlation with each other. A more professional HRM will be able to significantly contribute to the positive organizational climate which forms the basis for a positive organizational culture. The administrators of the private hospitals may look at the grey areas and weak links pointed out in this study to rectify and provide remedy for the issues faced by paramedical employees in these key areas. The factors discussed in the study though not exhaustive, give an idea as to which specific areas are to be given emphasis to find solutions to the HR issues impacting the organizational culture. The researcher hopes this small effort may pave the way for a better insight into this most intriguing and interesting concept, "HR Issues of Paramedical Employees which impact the organization culture".

KEYWORDS : HR issues, Paramedical workforce, organization culture, Health sector, Private hospitals

INTRODUCTION

Human Resource Management (HRM) is the strategic and coherent approach to the management of an organization's most valued assets – the people working there who individually and collectively contribute to the achievement of the objectives of the business. In simple sense, Human Resource Management (HRM) means employing people, developing their resources, utilizing, maintaining and compensating their services in tune with the job and organizational requirement. The rate of change facing organizations has never been greater and organizations must absorb and manage change at a much faster rate than in the past. In order to implement a successful business strategy to face this challenge, organizations, large or small, must ensure that they have the right people capable of delivering the strategy.

The market place for the talented and skilled people is competitive and expensive. Taking in new staff can be disruptive to existing employees. Also, it takes time to develop cultural awareness, product / process / organizational knowledge and experience for the new staff members.

As organizations vary in size, aims, functions, complexity, construction, the physical nature of their product and appeal as employers, so do the contributions of human resource management. But, in most the ultimate aim of the function is to: "ensure that at all times the business is correctly staffed by the right number of people with the skills relevant to the business needs"; that is, right neither overstated nor understaffed in total or in respect of any one discipline or work grade¹.

According to Edwin B. Flippo the human resource management function is concerned with the procurement, development, compensation, integration and maintenance of the human resource of an organization for the purpose of contributing towards the accomplishment the major goals or objectives of that management. Therefore, human resource management is the planning, organizing, directing and controlling of the performance of those operative functions.

ORGANISATION CULTURE AND CLIMATE

Organizational culture is defined by Agarwal² as the sum of an organization's symbol, event traditions, standardized verbal and nonverbal behavior patterns, folk tales, rules and rituals that give the organization its character or personality. Organizational cul-

tures are central aspects of organizations and serve important communication functions for the people who create and participate in them. These functions include providing employees with a sense of individual and collective identity, contributing to the establishment of structure and control within the organization, aiding the socialization of employees through learning about the customs and traditions of the organization and fostering cohesiveness among employees.

Organizational culture includes norms and expectations regarding how people behave and how things are done in an organization. Constructive cultures encourage interactions with people and approaches to tasks that will enable staff to meet higher -order satisfaction needs. Defensive cultures encourage or implicitly require interaction with people in ways that will not threaten personal security.

Typical climates correspond to human feelings or moods like excitement, depression, anger, fear, optimism or anxiety. Like human mood, an organization's climate can be caused by internal and external factors. If the CEO or other prominent leaders are in a certain mood, they can infect the entire organization. Leaders whose moods are highly variable could lead teams with wildly fluctuating climates. Just as most people won't be in the same mood all the time, we cannot expect an organization's climate to be unchanging. Shifting emotions is a good thing as it makes the organization seem more human. It would feel like being part of a machine if the climate of your workplace never altered. An emotionally variable climate is, like a similarly expressive person, more open, transparent and understandable.

Just as top executives can influence climate, they can also see the tone for the culture. If the CEO is an entrepreneur, the culture will be one that makes fast decisions, takes risks and likes to innovate. Apple Computers would be a good example of an entrepreneurial culture. Insurance companies and banks tend to have a very different culture dominated by avoidance of risk. Such processing cultures need elaborate rules to ensure consistency and efficiency. An engineering culture like aircraft manufacturers or phone companies, value, technical competence and high quality. Then there are marketing cultures that are very much sales oriented. They tend to be populated by dynamic, lively, outgoing people. Scientific cultures are common in medical or drug manufacturing companies where there is an insistence on pure research to back up new proposals. Cultures can vary a great deal

within a particular industry. Organizations might have a culture of blame, fun, hard work, equality, career development, environmental consciousness or any other personality trait.

Major culture change initiatives focus on making the company more customer focused, innovative or cost conscious. It can be a matter of loosening up or tightening up, often accompanied by moving back and forth between centralization and decentralization.

REVIEW OF LITERATURE

In today's competitive business environment, company workforce is in a continual state of flux- skill sets and job requirement as well as the regulatory environment changes at such a rapid pace that the staff needs of tomorrow are very different to those of today. In the past decades, the HR manager has evolved significantly. The previous functional approach has been substituted for a strategic one (Wakely S, 2003). Human resource management is mainly focused on leadership (getting ready for tomorrow) agenda and closely integrated with the business (Mooney, 2012). HR manager now typically having a much deeper understanding of key organizational challenges, play a proactive and more strategic role and no more consigned to a reactive and administrative role. This is more desirable than what is perceived to be personnel's traditional administrative role. Ulrich even goes so far as to suggest that personnel department should be abolished if they fail to become more strategic (Ulrich D, 1995). Now what is the strategic role of HRM in an organization? Within the literature on strategic HRM, HR functions that play a strategic as opposed to a "tactics" or "administrative" role tend to be distinguished by focus on the long term, linking business and HR strategic objectives and forward planning (Tyson S, 1995). The presence of the HR director on the board is also regarded as significant. For an HR function to be involved in strategic business decisions, it needs to be at the center of power and influence within an organization (Mangi R.A, 2012). David Ulrich has distinguished between strategic and non strategic role. He describes four corresponding roles for HR to play within a business: a) as a strategic partner working to align HR and business strategy, b) as an administrative expert working to improve organizational processes and deliver basic HR services, c) as an employee champion, listening and responding to employees' needs, and d) as a change agent managing change processes to increase the effectiveness of the organization. One of the unique things about Ulrich's approach is that it includes all of the ways that HR can deliver value to an organization, rather than shifting focus from one area to another. The role of Human Resource Management in the healthcare sector and challenges it faces has always been an important area of research both in developed and developing countries. The objective of this study is to evaluate the role of the HR department in the private healthcare sector in the province of Khyber Pakhtunkhwa (KPK), Pakistan and to analyze the challenges/factors affecting the role of HR department. Being the largest private sector hospital in KPK the researchers have selected RMI as a case for this study. Data was collected through interviews from different levels of employees in RMI. Constant comparative method was used for analyzing the data. Results are present that HR department plays the role of an administrative expert in RMI. The major internal factors include workload, top management interference, management style and organizational culture which negatively effect motivation, performance and morale of the employees. While small labour market, undue interference of government and other higher authorities and trade unions are the external factors that affect the role of the HR department in RMI. All these external factors create difficulties for HR department to attract and retain the desired workforce (Rosman Md. Y., 2013)

A brief scanning of the research and various studies undertaken earlier brings out the areas in which there are research gaps and thus establishes the justification and purpose of this study.

Objectives of the Study

To study and analyse the factors influencing HR issues particularly the organizational culture and climate in private hospitals in Coimbatore district.

HYPOTHESIS OF THE STUDY

All the variables related factors influencing HR issues in private hospitals like organizational culture and climate are uncorrelated.

METHODOLOGY & RESEARCH DESIGN

Methodology is the key aspect which governs the outcomes of the study. It encompasses and directs the researcher to conduct the study in a systematic process which ensures and facilitates the accuracy of the outcomes. In order to arrive at conclusions with regard to the topic of study, it will be necessary to adopt a suitable mode of study.

SOURCE OF DATA

The primary objective of the study is to analyse the factors to influencing HR issues in private hospitals like organizational culture and climate. For this purpose, the study had to depend on the primary data for its analysis. However, to substantiate the views in the course of the analysis and to provide the review, the secondary data were also collected and used. These data and information were collected from different sources like newspapers, magazines, journals, books, websites, pamphlets, etc., for which the researcher has approached various institutions and the interview schedule prepared in such a way that they are very simple and understandable; this was to enable the respondents to express their views freely and frankly.

STATISTICAL TOOLS USED FOR ANALYSIS

The primary data have been collected from the potential respondents from different areas and has been properly sorted, classified, edited, tabulated in a proper format and analyzed by deploying appropriate statistical tools. The researcher has used excel spreadsheet for recording and calculating about eight hundred samples. The statistical tests are conducted at 5 per cent level of significance. Statistical tools like Reliability Analysis and Factor analysis are used.

Population and Sampling Design

Out of the 237 hospitals data source given by District Statistical officer, Coimbatore the researcher took 160 hospitals. The respondents of this study were employers and paramedics in private hospitals at the time of research. The sampling method used in the study was non-probability proportionate quota sampling.

The researcher decided to use the duly filled in questionnaires received from the private hospital paramedics proportionate to their total number. For the purpose of analysis the researcher used the responses received from 800 employees (Paramedics) and 160 employers.

Ten percentage of the employees (paramedics) were proportionately taken from each hospital as the respondents of this study.

I. RELIABILITY ANALYSIS

The reliability of scales used in this study were calculated by Cronbach's coefficient alpha. Cronbach's alpha reliability coefficient normally ranges between 0 and 1. However, there is actually no lower limit to the coefficient. The closer the Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. The coefficient alpha values exceeded the minimum standard of 0.70. It has provided good estimates of internal consistency reliability.

- The formula is as follows: $\alpha = \frac{kr}{1 + (k-1)r}$
- K is the number of items in the scale.
- R is the average correlation pairs of items.
- As the number of items in the scale (k) increase, the value of alpha becomes larger.
- If the inter-correlation between items is large, the corresponding alpha will also be larger.

**TABLE ---1
RELIABILITY OF SCALES AND ITEM-CONSTRUCT LOADINGS-
FACTORS INFLUENCING HR ISSUES IN PRIVATE HOSPITALS -
ORGANIZATION CULTURE AND CLIMATE**

S.NO.	ITEMS	SCALE MEAN IF ITEM DELETED	CRONBACH'S ALPHA IF ITEM DELETED
1	Policies, procedures, rules and regulations are made transparent	29.13	.839
2	Collaborative management is followed at all the levels of the hospital	29.117	.839
3	Management has the trust of its employees	29.031	.846
4	Autonomy within work limits is provided to all the employees in this hospital	28.523	.861
5	Proactive management was maintained in all the departments	28.825	.842
6	Employees in different departments confront with the complexities and problems in an effective manner	28.962	.834
7	Equality in treatment is provided to all the employees in the hospital	29.061	.840
8	Conducive relationship is maintained	29.069	.846
9	Communication network is well organized till the bottom level employee	29.033	.848
MEAN			32.59
VARIANCE			40.58
STD. DEVIATION			6.37
RELIABILITY CRONBACH'S ALPHA			0.859
NO. OF ITEMS			9

It reveals that all the fourteen measurement scale items are reliable as the Cronbach alpha coefficient of 0.859. It is greater than the threshold level of 0.70. It has provided good estimates of internal consistency reliability and also coefficient alpha values ranged from 0.834 to 0.861 for all the constructs. It is indicated that the scales used in this study were reliable. It clearly indicates that above scale items are consistent with each other and they are reliable measures of factors influencing HR issues in private hospitals - organizational culture and climate.

II. DIMENSIONALITY OF THE MULTI-SCALE ITEMS (FACTOR ANALYSIS)

Factor Analysis is a set of techniques which by analyzing correlations between variables reduces their numbers into fewer factors which explain much of the original data, more economically. Even though a subjective interpretation can result from a factor analysis output, the procedure often provides an insight into relevant psychographic variables, and results in economic use of data collection efforts. The subjective element of factor analysis is reduced by splitting the sample randomly into two and extracting factors separately from both parts. If similar factors result, the analysis is assumed as reliable or stable¹.

TABLE -2 KMO AND BARTLETT'S TEST FOR FACTORS INFLUENCING HR ISSUES IN PRIVATE HOSPITALS - ORGANIZATION CULTURE AND CLIMATE

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.867
Bartlett's Test of Sphericity: Approx. Chi-Square	1343.202
Sig	0.00

From the above table, two tests, namely, Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity have been applied to test whether the relationship among the variables has been significant or not. The Kaiser-Meyer-Olkin Measure of sampling adequacy shows the value of test statistics as 0.933, which means the factor analysis of the selected variable is found to be appropriate or good to the data. Bartlett's test of sphericity is used to test whether the data are statistically significant or not with the value of test statistics and the associated significance level. It shows that there exists a high relationship among variables.

TABLE -3. EIGEN VALUES AND PROPORTION OF TOTAL VARIANCE OF EACH UNDERLYING FACTORS INFLUENCING HR ISSUES IN PRIVATE HOSPITALS - ORGANIZATION CULTURE AND CLIMATE

component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.277	47.527	47.527	4.277	47.527	47.527	2.805	31.171	31.171
2	1.164	12.930	60.456	1.164	12.930	60.456	2.636	29.286	60.456
3	.851	9.460	69.916						
4	.639	7.103	77.019						
5	.478	5.310	82.329						
6	.465	5.170	87.499						
7	.391	4.344	91.844						
8	.379	4.210	96.053						
9	.355	3.947	100.000						

Extraction Method: Principal Component Analysis

The results of the factor analysis presented in the table – 2 regarding factors influencing HR issues in private hospitals - organizational culture and climate, have revealed that there are nine factors that had Eigen value exceeding "one". Among those four factors, the first factor accounted for 47.53 percent of the variance and the second 60.46 percent, The factors solution and they all together represent 66.96

percent of the total variance in the scale items measuring the factors influencing HR issues in private hospitals - organizational culture and climate. Hence, from the above results, it is certain that are factors influencing HR issues in private hospitals - organizational culture and climate.

TABLE ---4
COMMUNALITIES FOR FACTORS RELATED TO FACTORS INFLUENCING HR ISSUES IN PRIVATE HOSPITALS - ORGANIZATION CULTURE AND CLIMATE

S.NO.	ITEMS	Initial	Extraction(h ²)
x1	Policies, procedures, rules and regulations are made transparent	1.000	.549
x2	Collaborative management is followed at all the levels of the hospital	1.000	.588
x3	Management has the trust of its employees	1.000	.506
x4	Autonomy within work limits is provided to all the employees in this hospital	1.000	.662
x5	Proactive management was maintained in all the departments	1.000	.617
x6	Employees in different departments confront with the complexities and problems in an effective manner	1.000	.604
x7	Equality in treatment is provided to all the employees in the hospital	1.000	.638
x8	Conducive relationship is maintained	1.000	.645
x9	Communication network is well organized till the bottom level employee	1.000	.633

The above table (Communalities) represents the application of the Factor Extraction Process, it was performed by Principal Component Analysis to identify the number of factors to be extracted from the data and by specifying the most commonly used Varimax rotation method. In the principal component analysis, total variance in the data is considered. The proportion of the variance is explained by the thirty three factors in each variable. The proportion of variance is explained by the common factors called communalities of the variance. Principal Component Analysis works on the initial assumption that all the variance is common. Therefore, before extraction the communalities are all 1.000. Then the most common approach for determining the number of factors to retain i.e., examining Eigen values was done.

TABLE 5
ROTATED COMPONENT MATRIX FOR FACTORS INFLUENCING HR ISSUES IN PRIVATE HOSPITALS - ORGANIZATION CULTURE AND CLIMATE

Variable code	Component	
	I	II
X ₈	.790	.142
X ₉	.788	.108
X ₇	.756	.258
X ₁	.608	.423
X ₄	-.087	.809
X ₅	.288	.731
X ₂	.382	.665
X ₃	.337	.626
X ₆	.518	.579

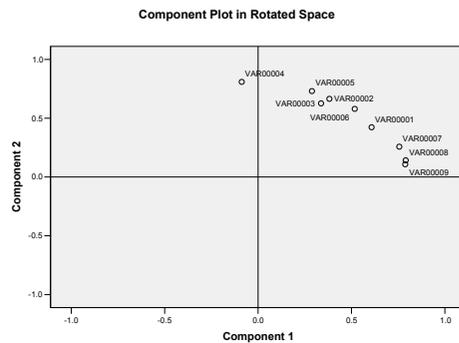
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 9 iterations.

Table 5 represents the Rotated Component Matrix, which is an important output of principal component analysis. The coefficients are the factor loadings which represent the correlation between the factors and the thirty three variables (X₁ to X₉). From the above factor matrix it is found that coefficients for factor-I have high absolute correlations with variable X₈ (Conducive relationship is maintained), X₉ (Communication network is well organized till the bottom level employee), X₇ (Equality in treatment is provided to all the employees in the hospital) and X₁ (Policies, procedures, rules and regulations are made transparent), that is, 0.790, 0.788, 0.756 and 0.608 respectively. Similarly factor-II has high absolute correlation with variable X₄ (Autonomy within work limits is provided to all the employees in this hospital), X₅ (Proactive management was maintained in all the departments), X₂ (Collaborative management is followed at all the levels of hospital), X₃ (Management has trust on its employees) and X₆ (Employees in different departments confront with the complexities and problems in an effective manner) that is, 0.809, 0.731, 0.665, 0.626 and 0.579 respectively.

TABLE 6
Component Transformation Matrix

Component	1	2
1	.726	.688
2	-.688	.726

The above table reveals the factor correlation matrix. If the factors are uncorrelated among themselves, then in the factor correlation matrix, the diagonal elements will be 1's and off diagonal elements will be 0's. Since matrix was rotated with Varimax, barring some variables all other variables are found to have, even if not zero correlations but fairly low correlation.



Thus the thirty three variables in the data were reduced to two Component factors and each factor identified with the corresponding variables as follows:

TABLE 7
THE FACTORS INFLUENCING HR ISSUES IN PRIVATE HOSPITALS - ORGANIZATION CULTURE AND CLIMATE

Variable	Description	Variance Explained (%)	Factor
X ₈	Conducive relationship is maintained	62.41%	Factor I
X ₉	Communication network is well organized till the bottom level employee	62.09%	
X ₇	Equality in treatment is provided to all the employees in hospital	57.15%	
X ₁	Policies, procedures, rules and regulations are made transparent	36.97%	
X ₄	Autonomy within work limits is provided to all the employees in this hospital	65.45%	Factor II
X ₅	Proactive management was maintained in all the departments	53.44%	
X ₂	Collaborative management is followed at all the levels of hospital	44.22%	
X ₃	Management has trust on its employees	39.19%	
X ₆	Employees in different departments confront with the complexities and problems in an effective manner	33.52%	

INFERENCE

The study introspects the factors influencing Human resource issues in the focused key area of measures for Paramedical employees in private Hospitals in Coimbatore District from employee's and employer's view point.

The foregoing study and analysis indicate the rejection of null hypothesis.

Thus all the variables like Conducive relationship is maintained, Communication network is well organized till the bottom level employee, Equality in treatment is provided to all the employees in hospital, Policies, procedures, rules and regulations are made transparent, Autonomy within work limits is provided to all the employees in this hospital, Proactive management was maintained in all the departments, Collaborative management is followed at all the levels of hospital, Management has trust on its employees, Employees in different departments confront with the complexities and problems in an effective manner are having positive correlation.

RECOMMENDATION

Thus a more professional HRM will be able to significantly contribute to the positive organizational climate which forms the basis for a positive organizational culture.

CONCLUSION

With the increase in the population of India and the shrinking health-care budget of Government of India, private initiatives in the health-care sector have become necessary. Hence, it has become the era of private medical hospitals. The quality of staff (both medical and para-medical) determine the reputation of the hospitals. Globalization has increased competitiveness, technological development, and migration of health professionals. Hence retention of skilled employees is a big challenge for the HR professionals. Coimbatore stands second to Chennai in Tamilnadu for highly affordable and quality healthcare deliveries of international standards. The recommendations of this study, if implemented, will bring about a positive change in the attitude of both the management and employees leading to a healthy work culture in the private hospitals. This is likely to translate into better quality healthcare. It may be recalled: "Health is Wealth....!!".

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A Study on Critical Success Factors for Crm Implementations in Commercial Banks at Coimbatore City

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ABSTRACT

The exploratory study on CRM implementations in commercial banks at Coimbatore city using structured questionnaire identifies the critical success factors that contribute to effective CRM implementation in banks. The results shows that Top management support as the most relevant CSF for successful CRM implementation in banks. Further, the research initiative offers useful information for banks while planning and implementing CRM projects.

KEYWORDS : CRM, Critical Success Factors, CRM Implementation.

Introduction

The banking practices across the world have undergone dramatic transformation since mid-nineties. The internet technologies and the strategic capabilities of advanced information systems used in banks have increased the momentum. Majority of the banks in India have implemented advanced information systems in place including the CRM systems. However, the major challenge lies in the successful implementation of the same. This study focuses on the critical success factors that determine the effectiveness of CRM implementations in the commercial banks, especially the one's operating at Coimbatore city.

Literature Review

The technology adoptions in the banking sector in India are much more than any other industry. Extending from the traditional branch banking relationship marketing to the sophisticated digital relationship models, the use of customer relationship management had huge relevance. Swift (2000)¹ conducted a study and explained that the private sector banks and foreign banks in India are more successful in implementing CRM practices while compared to other types of banks. The CRM concepts evolved from business process such as relationship marketing with increased emphasis on improving customer retention though the effective management of customer relationship (Light, 2001)² has high relevance in the financial services industry, especially in banking.

Strauss et al., (2003)³ explains CRM as a holistic process of acquiring, retaining and growing customers, which has huge effect for organisations into banking business. Further, Rosenberg (2004)⁴ is of the opinion that CRM focuses on the strategic use of information, processes technology and people to manage the customers' relationship with organisations across the whole customer life cycle. Further, Rosenberg (2004)⁵ is of the opinion that CRM focuses on the strategic use of information, processes technology and people to manage the customers' relationship with organisations across the whole customer life cycle. There are many studies (Lindgreen and Antioco (2005)⁶, Ngai, (2005)⁷) in the literature that explains CRM as a comprehensive strategy which creates superior value for both organization and the customer. However, Kennedy et al., (2006)⁸ has a different perception and explains the concept of CRM limiting to the technological issues. Broady-Preton et al., (2006)⁹ discusses CRM as the strategic prospective in creating value for the customers.

However, there is a gap in the existing literature on the critical success factors that impact on the successful implementation of CRM practices, especially in the Indian banking context. This study focuses on identifying and presenting the CSF's for effective CRM implementations in the commercial banks with special reference to banks operating in Coimbatore city.

Objectives

- To understand the critical success factors [CSF] for CRM implementations in commercial banks at Coimbatore city.
- To check whether there exists significant difference in the per-

ception of public and private sector commercial banks towards CSF in CRM implementation.

Sample Design

This exploratory research initiative on Customer Relationship Management implementation in the Indian commercial banks (public and private sector) operating at Coimbatore city was carried out by using purposive sampling techniques. A structured questionnaire was used to collect required data from the identified 535 respondents employing purposive sampling technique. The response rate for the study was almost 66 percent age. Further analysis was carried out using SPSS Ver. 20.00 and statistical tools like t-test, analysis of variance, exploratory factor analysis and confirmatory factor analysis were used.

Analysis

The CRM systems, practices and its implementation effectiveness in the Indian commercial banks differ from one another. The success of CRM implementations in banks depend on many factors like top management commitment, strategic and procedural practices adopted by the bank, the feedback mechanisms and technological tools used in CRM projects. The study identifies and derived eighteen factors (Table 1) that bear upon the success of CRM implementations from concepts drawn from the earlier research initiatives.

TABLE 1
Factors for effective CRM implementations in banks

Sl. No.	CS Variables	Mean Score in		t-statistics
		PRSBs	PUSBs	
1.	Top management support	3.8085	3.2569	2.7317*
2.	Clear goals and objectives	3.9194	3.0816	2.8109*
3.	Business process recognizing	3.8917	3.2067	2.4568*
4.	Project management	3.8034	3.1245	0.2447*
5.	Information technology	3.8641	3.2337	2.2605*
6.	Data, information and knowledge management	3.6861	3.5646	0.2417
7.	Feedback system	3.8185	3.1772	2.0291*
8.	Users perception	3.9241	3.2565	2.3344*
9.	Resources	2.1455	2.5142	-0.9145
10.	Project team competence	3.6557	3.0165	2.2048*
11.	Inter departmental co-operation	3.5668	3.4841	0.1817
12.	Management by objectives	3.7271	3.0269	2.2089*
13.	Vendors	3.6617	2.9691	2.8184*
14.	Culture and social factors	3.5902	2.8177	2.7331*
15.	Training	3.2391	3.3097	-0.2144
16.	IS department	3.8664	3.1224	2.5086*
17.	Inter departmental communications	3.6412	2.8042	2.9091*
18.	Customers feed back	3.8149	3.6569	0.8146

Source: Collected and Computed *Significant at five per cent level.

Graphical representation of the Factors for effective CRM implementations in banks is shown in Figure 1

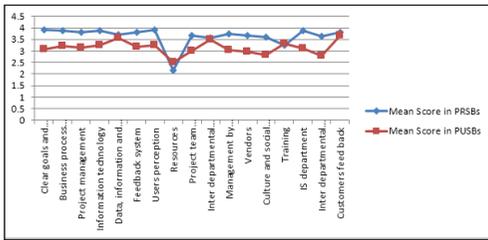


Figure 1 Factors for effective CRM implementations in banks

TABLE 2 Critical Success Factors (ICSFs) in CRM implementations at Banks

Sl. No.	ICSFs	Number of Variables in	Eigne Value	Reliability Coefficient	Per cent of Variation Explained	Cumulative Per cent of Variation Explained
1.	Management support	5	3.9179	0.7344	23.11	23.11
2.	Management principles	5	3.4302	0.7969	20.33	43.44
3.	Feedback system	4	2.4549	0.8042	18.17	61.61
4.	CRM tools	4	2.0317	0.7196	14.22	75.83
KMO measure of sampling Adequacy: 0.7817				Bartlett's test of sphericity Chi-Square value: 89.94*		

Source: Collected and Computed *Significant at five per cent level.

The Table 2 reveals that the four critical factors namely management support, management principles, feedback and tools explain the critical success factors for CRM implementations to the extent of 75.83 per cent. The most important CSF is management support as its Eigen value and the per cent of variation explained by it is 3.9179 and 23.11 per cent respectively. The second and third CSF's are management principles and feedback system and its Eigen values are 3.4302 and 2.4549 respectively. The next major CSF identified by the EFA is the CRM tools with Eigen value 2.0317. The Kaiser-Meyer-Olkin Measure of sampling adequacy shows the value of test statistics as 0.7817, which means the factor analysis of the selected variable is found to be appropriate or good to the data. Bartlett's test of sphericity is used to test whether the data are statistically significant or not with the value of test statistics and the associated significance level. It shows that there exists a high relationship among variables.

Further, the study tried to understand whether there exists significant difference between the perception of the public and private sector banks towards CSF on CRM implementations. The mean scores of all four CSFs in the private sector banks and public sector banks were computed separately to identify the level of importance of the CSFs among the two groups of banks.

The results of the 't' test is explained in Table 3

TABLE 3 Perception of commercial banks towards CSFs on CRM implementation

Sl. No.	ICSFs	Mean Score in		t-statistics
		PRSBs	PUSBs	
1.	Management support	3.3915	3.0643	0.8549
2.	Management principles	3.7625	3.1339	2.3308*
3.	Feedback system	3.7477	3.1751	2.4412*
4.	CRM Tools	3.8216	3.1479	2.5034*

Source: Collected and Computed *Significant at five per cent level

The figure 2 explains the pictorial representation of the Critical Success Factors (ICSFs) in CRM implementations.

The Table 1 also explains that there exists significant difference among the public and private sector commercial banks towards their perception regarding factors affecting CRM implementations.

Further, efforts were made to understand the critical success factors for CRM implementations in the commercial banks using Exploratory Factor Analysis (EFA). The scores of all 18 variables (Table 1) have been included for the analysis. Initially, the test of validity and reliability of data for factor analysis have been examined with the help of the KMO measure of sampling adequacy and the Bartlett's test of sphericity. Both the tests satisfy the validity of data for analysis. The EFA has been executed to narrate the critical variables into factors. The result of the EFA is explained in Table 2 represented below.

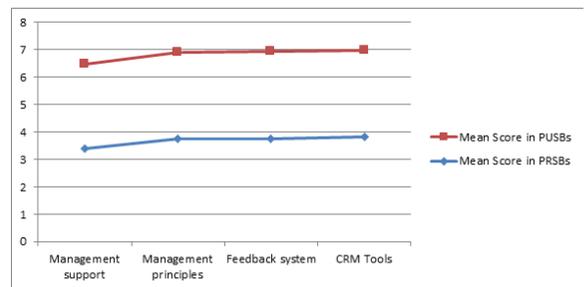


Figure 2 - Critical Success Factors (ICSFs) for CRM implementations.

Thus it is evident from the above table that there exists significant difference between the commercial public and private sector banks towards their perception on CRM implementation CSF's.

Findings

The study shows that there exists significant difference in perception of the public and private sector commercial banks towards the factors affecting CRM implementations.

The results of the analysis shows that "Top management support" as the major critical success factor that contribute to effective CRM implementation.

Suggestions

It is revealed from the study that management support and commitment as the most important factor that determine the successful implementation of CRM in the commercial banks.

Therefore, adequate orientation has to be given to the top executives in banks regarding the importance and impact of CRM in the banking context. Such efforts shall ensure effectiveness in the CRM implementations by invoking responsibilities from top to bottom level executive of banks.

Further, it is also seen that the CRM related management principles which are evolved and developed in the banks also determine the success CRM implementations in the commercial banks.

Therefore, the top management has to take earnest efforts in design-

ing the CRM policies and procedures as the same has critical relevance in the success of CRM implementations.

The banks shall also encourage in getting the right feedback from the employees so that these feedbacks can be effectively utilized for improving the effectiveness of the CRM systems.

Appropriate marketing about the CRM benefits has to be explained to the employees of the banks as such efforts encourage them to make use of the CRM systems while delivering responsibilities.

Limitations and Scope for further Research

The present study was carried out in Coimbatore city. Therefore, it would be better if future researchers also include other locations while conducting the research. Such efforts shall help in generalizing the results of the study. Further, future researchers shall also include other organisational variables that affect CRM implementations.

Conclusion

The study on critical success factors for CRM implementations in commercial banks at Coimbatore city was aimed to identify and understand the most important factors that decide the successful implementation of CRM practices in the commercial banks at Coimbatore city. The study used structured questionnaire in collecting useful data from the employees of the commercial banks at Coimbatore city. The analysis reveals that top management support, management principles practices in the bank, feedback systems and the CRM tools used in a bank are the most critical factors among the identified eighteen factors that determine the success of CRM implementations.

Abbreviations Table

S.no	Abbreviation	Full form
1	CRM	Customer Relation Management
2	CSF	Critical Success Factor
3	PRSBs	Private Sector Banks
4	PSUBs	Public Sector Banks
5	EFA	Exploratory Factor Analysis
6	KMO	Kaiser-Meyer-Olkin
7	CSFs	Critical Success Factors

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Use and Impact of Big Data in Cloud Computing

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ABSTRACT

Big data is an all-encompassing term for any collection of data sets which are large and complex it contain structured and unstructured both type of data. As big data comes from everywhere, sensors used to gather climate information, digital pictures and videos etc. We all know that big data is a new term used to identify the datasets that due to their large size and complexity, we cannot manage them with our current methodologies. Cloud computing offers the promise of big data implementation to small and medium sized businesses. Big Data processing is performed through a programming paradigm known as MapReduce. Typically, implementation of the MapReduce paradigm requires networked attached storage and parallel processing. The computing needs of MapReduce programming are often beyond what small and medium sized business are able to commit.

Cloud computing is on-demand network access to computing resources, provided by an outside entity. Common deployment models for cloud computing include platform as a service (PaaS), software as a service (SaaS), infrastructure as a service (IaaS). The three types of cloud computing are the public cloud, the private cloud, and the hybrid cloud. A public cloud is the pay-as-you-go services. A private cloud is internal data center of a business not available to the general public but based on cloud structure. The hybrid cloud is a combination of the public cloud and private cloud.

Three major reasons for small to medium sized businesses to use cloud computing for big data technology implementation are hardware cost reduction, processing cost reduction, and ability to test the value of big data. The major concerns regarding cloud computing are security and loss of control.

KEYWORDS : Big data, cloud computing, private cloud, public cloud, hybrid cloud

INTRODUCTION:

Enormous amounts of data are collected every year from various sensors, devices in different formats, from independent or connected applications. Let us consider the Internet data. The web pages indexed by Google were around one million in 1998, but quickly reached 1 billion in 2000 and have already exceeded 1 trillion in 2008. This rapid expansion is accelerated by the dramatic increase in acceptance of social networking applications, such as Facebook, Twitter, etc., that allow users to create contents freely and amplify the already huge Web volume. As in today world mobile phones becoming the sensory gateway to get real time data on people from different aspects, the vast amount of data that mobile carries can potentially improve our daily life has significantly outpaced our past CDR (call data record)-based processing for billing purposes only. It can be foreseen that by having internet applications it will raise the scale of data to an unprecedented level. People and devices from home, to cars, to buses, railway station and airports are all loosely connected. The trillions of such connected components will generate a huge data and valuable information must be discovered from the data which help us to improve the quality of life and make our world a better place. Scalability is at the core of the expected new technologies to meet the challenges coming along with big data. The simultaneously emerging and fast maturing cloud computing technology delivers the most promising platforms to realize the needed Scalability with demonstrated elasticity and parallelism capacities. Numerous notable attempts have been initiated to exploit massive parallel processing architectures (Berkovich, S., Liao, D. (2012)). Google's novel programming model, Map Reduce (Beyer, M.A., Laney, D. (2012)), and its distributed file system, GFS (Google File System) (Beyer, M.A., Laney, D. (2012)), represent the early groundbreaking efforts made in this line.

Background Information

CLOUD COMPUTING:

Cloud computing can be defined as a new style of computing in which dynamically scalable and often virtualized resources over internet. As computing services initially offered by commercial providers, such as Amazon, Google, and Microsoft (Rajkumar Buyya, 2011). The

key concept of cloud computing is to deliver computing resources through a global network when and where the customer requests. With the cloud computing technology, users use a variety of devices, including laptops, smartphones, PCs.

As cloud based apps can be up and running in days or weeks, and they cost very less. With this app, user just open a browser, log in, customize the app and start using it.

Categories/ Classification of cloud computing services

From a service point of view, cloud computing includes 3 models: software, platform, and infrastructure

- **Software as a service (SaaS):** It includes a complete software offering on the cloud. As this application are hosted by a cloud service provider and made available to customer over a network, typically the internet.
- **Infrastructure as a service (IaaS):** As this service offering hardware related services using the principles of cloud computing the equipment used to support operations, including storage, hardware, servers, and networking components.
- **Platform as a service (PaaS):** With PaaS, developers can build Web applications without installing any tools on their computer, and then deploy those applications without any specialized administrative skills.

Benefits of Cloud Computing:

- **Shared Infrastructure:** - As shared infrastructure uses a virtualized software model, enabling the sharing of physical services, networking and storage capabilities. The cloud infrastructure, regardless of deployment model, seeks to make the most of the available infrastructure across a number of users.
- **Economical:** - Cloud computing is an approach to IT, in which a low initial investment is required to get going.
- **Network Access:** - Network access needs to be accessed across the internet from a broad range of devices such as PCs, laptops, and mobile devices. Deployments of services in the cloud include

everything from using business applications to the latest application on the smart phones.

- **Increased Effectiveness:** - Cloud computing frees the user from the finer detail of IT system configuration and maintenance, enabling them to spend more time on mission-critical tasks and less time on IT operation and maintenance.
- **Energy Efficient:** - Because resources are pooled, each user community does not need to have its own dedicated IT infrastructure.

Models of Cloud Computing

To deploy cloud computing, the US National Institute of Standards and Technology (NIST) listed 4 models:-

(1) Public cloud: In public cloud the computing infrastructure is hosted by the cloud vendor at the vendor premises. The customer has no visibility and control over where the computing infrastructure is hosted.

(2) Private cloud: A cloud infrastructure is operated solely for a single organization. In other words, the proprietary network or the data center supplies hosted services to a certain group of people.

(3) Community cloud: The cloud infrastructure is shared by several organizations with common concerns (e.g., mission, security requirements, and policy). For example, the Google Gov Cloud provides the Los Angeles City Council with a segregated data environment to store its applications and data that are accessible only to the city's agencies.

(4) Hybrid cloud: The cloud infrastructure comprises 2 or more clouds (private, public, or community). In this infrastructure, an organization provides and manages some resources within its own data center and has others provided externally.

CLOUD COMPUTING FOR BIG DATA IN A SMALL TO MEDIUM SIZED BUSINESS

Cloud computing provides an environment for small to medium sized businesses to implement big data technology. Benefits that businesses can realize from big data include performance improvement, decision making support, and innovation in business models, products, and services (Manyika et al., 2011). Three major reasons for small to medium sized businesses to use cloud computing for big data technology implementation are the ability to reduce hardware costs, reduce processing costs, and to test the value of big data before committing significant company resources. The major concerns regarding cloud computing are security and loss of control (Géczy, Izumi, & Hasida, 2012).

Platform as a Service is a cloud computing model that provides hardware cost savings. Hardware cost savings are accrued using PaaS through standardization and high utilization of the cloud-based

platform across a number of applications (Oracle, 2012). Businesses can also realize hardware cost savings from the SaaS model since the business incurs no additional hardware costs for implementation; the only costs are for bandwidth based on the time and number of users (Cole, 2012). Hardware as a Service is not currently used as often as other models, but businesses can derive hardware cost savings through the model since HaaS allows customers to license the hardware directly from the service provider (Rouse, 2007).

In-house processing of big data typically requires use of the MapReduce programming paradigm (Eaton et al., 2012). The parallel processing needs of MapReduce entails a huge commitment of processing power. Use of cloud computing for big data implementation lowers the in-house processing power commitment by shifting the data processing to the cloud.

The use of big data could provide sufficient benefit to a small to medium sized company to the extent that the business would be willing to commit resources to implement big data technology in-house. However, the level of benefit is difficult to determine without some experience. Cloud computing implementation of big data processing could provide the business with justification to adopt the technology in-house. If the benefit accrued from big data use on the cloud is significant, the business has established a reason to adopt the technology in house. Otherwise, the business can continue cloud computing use of big data or rely on its current data processing environment.

The advantages of cloud computing are tempered by two major concerns – security and loss of control (Géczy, Izumi, & Hasida, 2012). While the public cloud provides the greatest costs savings, it also incurs the greatest security risk and loss of control, since all of the company's big data is transferred to the cloud service provider (Géczy, Izumi, & Hasida, 2012). If the data being processed is considered mission critical to the company, the more expensive private cloud, implemented in-house, would provide a more secure environment with the company keeping the mission critical data in-house.

The Future State

Cloud computing enables small to medium sized business to implement big data technology with a reduced commitment of company resources. The processing capabilities of the big data model could provide new insights to the business pertaining to performance improvement, decision making support, and innovation in business models, products, and services. Benefits of implementing big data technology through cloud computing are cost savings in hardware and processing, as well as the ability to experiment with big data technology before making a substantial commitment of company resources. Several models of cloud computing services are available to the businesses to consider, with each model having trade-offs between the benefit of cost savings and the concerns data security and loss of control.

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Effect of Foot Reflexology on Labour Pain During the First Stage of Labour

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ABSTRACT

Pregnancy is a crucial period and childbirth represents the most painful event in most women's lifetime. Foot Reflexology is an ancient non-invasive technique, used widely as one of the non-pharmacological methods for pain relief. Aim: To assess the effect of foot reflexology on pain among parturient mother during first stage of labour. Methodology:

Quasi experimental research design with non equivalent control group before after design was used, 30 in experimental and 30 in control group respectively. The tools used for data collection were socio demographic proforma, clinical data sheet, numerical pain rating scale and observation checklist. Thirty subjects in the experimental group received foot reflexology at 1-3 cm cervical dilatation and 5-7 cm cervical dilatation for 30 minutes and thirty subjects in the control group received routine care. Pretest was conducted before intervention and post test was conducted 30 minutes after the intervention at 1-3 cm and 5-7 cm cervical dilatation for both groups. Results: The result shows that the severity of labour pain in the experimental group was lower than the control group ($p < 0.01$). Conclusion: The findings showed that foot reflexology was found to be effective in reducing labor pain.

KEYWORDS : Effect, labour pain , foot reflexology, first stage of labour

1. Introduction

Child birth is one of the exciting and often most joyful experiences in a woman's life. It is the fulfillment of their dreams. At this time, the mothers need lot of support for the realization and acceptance of child birth as a normal physiological phenomenon¹.

A woman's reaction to labour pain may be influenced by the circumstances of her labour, including the environment and the support she receives. Support from the midwife may include helping the woman in her wish to avoid pharmacological pain relief or helping her to choose pharmacological or non-pharmacological methods of pain relief. In order to achieve this goal midwives should keep up to date with non-pharmacological methods of pain relief².

Foot Reflexology is an ancient non-invasive technique in which massage and pressure is given to specific points on the feet known as reflex points, so as to relieve pain, thus helping in relaxation⁴. Reflexology encourage the production of endorphins and encephalin, which brings on a sense of euphoria and help with pain relief³.

Even though there has been enormous growth in complementary alternative medicine research in the past decade, few well-designed studies on the use of CAM in pregnancy or childbirth have been conducted.

2. Review of Literature

Hamidzadeh A(2012) conducted a randomized clinical trial among 100 parturient mothers at Fatemiyeh Hospital, Iran to evaluate the effects of foot reflexology on labor pain in the first stage of labor, on labor duration, and on patient satisfaction. There were significant differences between the groups in subjective labor pain scores immediately and 20, 60, and 120 minutes after intervention ($P \leq .001$)⁴.

3. Research question

A study on effect of foot reflexology on pain among parturient mother during the first stage of labour in a selected hospital at Thiruvananthapuram.

4.1. Objectives

1. To assess the effect of foot reflexology on pain among parturient mother during first stage of labour.
2. To determine the association between pain perceived by the parturient mother and parity.

4.2. Hypotheses

H₁. There is a significant difference in the level of pain perceived by

the parturient mother after foot reflexology.

H₂. There is a significant association in the level of pain perceived by the parturient mother and parity.

5. Research methodology

Research approach - Quantitative research

Research design - Quasi experimental design (Non equivalent control group before after design)

Independent variable - foot reflexology

Dependent variable - Level of pain

5.1. The setting of the study

- Labour room of Sree Gokulam Medical College Hospital and Research Foundation .

5.2. Population

- All parturient mothers in first stage of labour.

5.3. Sample size

- A total of sixty subjects were selected for the study, thirty each in experimental and control group

5.4. Sampling technique

- Convenient sampling

Inclusion Criteria

- Parturient mother who have completed 37 week of gestation.
- Parturient mother with singleton pregnancy.
- Parturient mother with normal fetal presentation.
- Parturient mother with a cervical dilatation >1cm and duration of uterine contractions 30-40 seconds.

Exclusion criteria

- Parturient mother with pregnancy associated complications
- Parturient mother who use any form of analgesics
- Parturient mother with any foot deformities.

5.5 Data collection Tools/Technique

- Socio demographic proforma
- Clinical data sheet.
- Numerical pain rating scale
- Observation check list

5.6.Data collection procedure

Sixty parturient mothers who met the inclusion criteria were selected by convenient sampling.30 subject were included in the experimental group and 30 in control group. Informed consent was obtained prior to the pilot study. Confidentiality was assured to all subjects.

The subject's socio demographic data were collected through structured interview schedule and assessed the pain level of parturient mothers using numerical pain rating scale and observation checklist before starting the intervention. After the pretest two sessions of reflexology was given to the experimental group at 1-3 cm and 5-7 cm cervical dilatation for 30 minutes each respectively. Post test was assessed after 30 minute of each session using numerical pain rating scale and observation checklist.

In the control group routine care was given to the parturient mother and pretest was assessed at 1-3 cm cervical dilatation Post test was assessed after 1 hour at 1-3 cm cervical dilatation and 5-7 cm cervical dilatation.

5.7.Plan for data analysis

The data collected were analysed using both descriptive and inferential statistics.Effect of foot reflexology was analysed using independent t test and Analysis of co-variance (ANCOVA) Association between parity and labour pain perception was analysed by using chi-square test.

6.Findings

6.1.Description of subject characteristics

46.7 % of subjects in the control group and half of the subjects in the experimental group belonged to the age group of >27 years. 40 % and 43.3 % of subjects in the control and experimental group completed higher secondary education respectively. 36.7 % in the control group and more than half of the subjects (53.3 %) in the experimental group were housewives. More than half of the subjects in the control group (53.3 %) and experimental group (66.7%) belonged to Hindu religion. More than half of the subjects (53.3%) in the experimental group had a monthly income of 5001-10000.In the control group 33.3 % of subjects had a monthly income between5001-10,000 and another 33.3 % subjects had a monthly income above 15,000. Majority of the subjects in the experimental group(83.3%) and control group(86.7%) had satisfactory marital relationship. Half of the subjects in the control group and majority of the subjects (70 %) in the experimental group had a planned pregnancy .More than half of the subjects in the control group (56.7%) and experimental group (53.3%) had received antenatal health education / counseling.

6.2 Effect of foot reflexology on level of pain among parturient mother

Table :1

	group	mean	SD	N	T
Pre test	Control	6.2	1.6	30	0.92
	Experimental	6.6	1.5	30	
I post test	Control	8.4	1.1	30	6.96**
	Experimental	6.5	1.0	30	
II post test	Control	9.7	0.4	30	11.67**
	Experimental	8.1	0.6	30	

Table 1: shows that both group had similar pain perception at pre test level. During I & II post test the mean pain score of experimental group was significantly less than that of the control group.

The current findings support the study findings of another study (Dolathian M) on the effect of reflexology on pain intensity and duration of labor. Findings shows that Pain intensity at all the three stages of cervical dilatation was significantly lower in the reflexology group⁵.

6.3. Section IV: Association between parity and labour pain perceptions before foot reflexology

Parity	Mild / Moderate Pain		severe		df	X ²	p
	f	%	f	%			
Primipara	8	27.6	20	64.5	1	8.21**	0.004
Multipara	21	72.4	11	35.5			

Table 2: shows that there was significant ($\chi^2 = 8.21^{**}$, $p < 0.05$) association between parity and pain perception. So it can be concluded that primipara had more severe pain perception than multipara.

The study findings were consistent with a study of Gaston JF et al was conducted to describe the dimensions of pain during the progression of labor in primiparas and multiparas.The result shows that primiparas reported more intense sensory pain in Stages I and III and more intense affective pain in all three stages of labor than the multiparas even though they consumed significantly more pain medications than the multiparas⁶.

7.Conclusion

The study proved that foot reflexology is effective in reducing labour pain. It also proved that parity is having a significant effect on labour pain. Properly using of this technique, reflexology can reduce the labor pain and consequently prevent from using pharmacological methods such as palliative medicines which unconsciously can impose certain side effects to the individual. Furthermore, the results of this study should be considered in fields such as increase midwives skills in labor pain relief and wider application of midwifery staff and also educational and care planning in promoting women's health and application of the new techniques in complementary medicine.

8.1.Nursing implications

The findings of the study have the following implication in nursing practice

Implications for Nursing Practice

- Foot reflexology help in reducing the need and frequency of administration of analgesics.
- Foot Reflexology help to conserve the energy of the mother during first stage, which helps to put her own effort during second stage
- Foot reflexology should be made as an integral part of pain relief in the management of labour pain

Implications for Nursing Education

Nurse educators should encourage nursing students to utilize as measure for the labour pain reduction

Implications for Nursing Research

- The study will be a valuable reference material for future researcher
- The findings of the study would help to expand the scientific body of professional knowledge upon which further researchers can be conducted

8.2.Limitation

- It needs much explanation to get consent from the mothers and her relatives
- The data was collected using convenient sampling method
- Study was limited to study on first stage of labour
- Blinding technique would have been followed to avoid investigators bias

8.3. Recommendations

- Similar study can replicate on a large scale
- Similar study can be conducted in other way like increasing frequency and duration of foot reflexology.

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Monthlies Variations in Phytoplankton Density in Alwara Lake of District- Kaushambi (U.P.)

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ABSTRACT

Alwara Lake is located in Kaushambi district of Uttar Pradesh. This lake is one of the perennial wetland (water logged area), biota of which is influenced by several physico-chemical parameters. The said lake has a vast dynamic landscape which is created by annual flooding of adjacent river Yamuna. In this water ecosystem, phytoplankton is major producers which fix energy and transfers to the land. Present investigation is an attempt to assess some phytoplankton families and monthlies variations in their density. Present study will not only attract the biologists for further study but also help to frame appropriate strategy for the development of Wetland (Alwara Lake).

KEYWORDS : Wetland, Phytoplanktons, Chlorophyceae, Physico-chemical parameters, Alwara Lake.

INTRODUCTION

The lake under investigation is situated in the Yamuna basin of district Kaushambi, Uttar Pradesh which is a part of Gangetic Plain of India (northern region). The lake is a marshy riparian type wetland, covering an area of several hectares and locally called as Alwara taal.

Physiographically it is situated under the sub tropical region of north- Indian of Indo – Gangetic plain near to Yamuna basin. The annual floods of adjacent river Yamuna bring about the vast openness of agricultural land in winter and summer season around the lake. It also turned out into an open land form and many irregular shapes of marshy wetland under non-flooding periods

In this water ecosystem, phytoplanktons are the major producers which fix energy and transfers to the land. For example, vast openness around the lake provides habitat for threatened birds (now vulnerable) Sarus Crane (Prakash *et al.*, 2014) and phytoplanktons directly provide fabricating material for the nest of this bird and indirectly provides food for it as well as other water birds. Present investigation is therefore an attempt to assess some phytoplankton families and monthlies variations in their density.

STUDY AREA

The Alwara lake is located in Kaushambi district of Uttar Pradesh. The lake is 75 km far from Allahabad, 25 km from Manjhanpur (headquarter of district Kaushambi) and 290 km from Lucknow by road. Its nearest railway station is Bharwari at a distance of 35 km and nearest airport Bamrauli (Allahabad) is at a distance of 70 km. It is situated between the latitude 25°24'05.84"S – 25°25'10.63"N and longitude 81°11'39.49"E-81°12'57.95"W with altitude MSL – 81.08 meter.

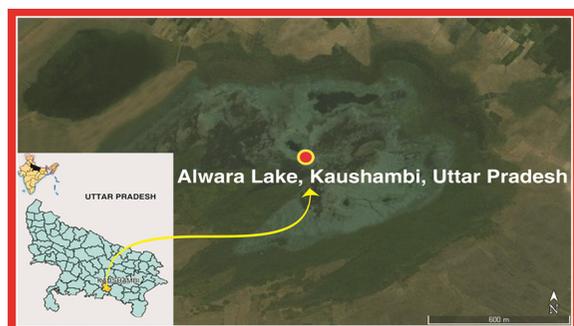


Fig. 1. Alwara lake in Kaushambi district (U.P.)



Fig. 2. A view of Alwara lake

Material and methods

Water samples were collected weekly *i.e.* four times in a month from selected areas in all the 12 months over the year 2014. The collection time was late morning. The lake water was collected in a flask and brought to laboratory for further examination. Physico-chemical analysis was carried out in accordance with Standard Methods for Examination of Water and Waste Water described by American Public Health Association (APHA, 1998). The samples for dissolved oxygen and Biological Oxygen Demand used to fix at the collection sites. The temperature was measured with the Glass - mercury centigrade thermometer at the collection site. Transparency was measured with the Secchi disc at the site. The other parameters were analyzed in the laboratory.

The assessment of phytoplankton population was done by preparing 10 ml concentration in 4% formalin after filtering 100 liter of sample water through number 20 bolting net. Microscopic counting was done by Sedgwick Rafter Cell slide by using of binocular stage microscope. The phytoplankton population was calculated as unitsL⁻¹ with the help of following formula :

Total plankton count per liter = $A * (1/L) * (n/v)$ where,

A = number of organisms per drop L = volume of original sample (l)
n = total volume of concentrated sample (ml)
v = volume of one drop (ml)

Identification of phytoplankton was done according to Desikachary (1959), Ramnathan (1964), Sarode and Kamat (1984). Four groups of phytoplanktons studied are: Chlorophyceae, Bacillariophyceae, Cyanophyceae and Euglinophyceae.

Table. Monthlies variation (Mean±SE) of phytoplanktons (unitsL⁻¹) of Alwara Lake during 2014.

Month	Phytoplanktons (unitsL ⁻¹)				Total(Mean±SE)
	Bacillariophyceae	Chlorophyceae	Cyanophyceae	Euglinophyceae	
Jan	548.5±14.29	695.0±07.46	230.0±17.62	39.2±2.68	1512.7 (378.2±149.0)
Feb	438.6±16.71	554.0±07.46	225.6±17.65	42.5±2.49	1260.7 (315.2±113.5)
Mar	421.3±20.04	552.0±24.69	195.0±10.34	48.2±3.29	1196.5 (299.1±109.1)
Apr	392.5±23.31	514.0±23.22	180.2±13.37	28.0±2.59	1114.7 (278.1±108.3)
May	316.5±16.25	205.5±27.17	129.0±12.35	18.5±1.70	0669.5 (167.4±62.8)
Jun	307.2±08.05	195.8±20.17	110.6±19.19	15.4±1.87	0629.0 (157.3±62.1)
Jul	128.6±15.86	158.0±09.41	125.0±16.67	18.6±2.29	0430.2 (107.6±030.6)
Aug	135.0±10.26	105.0±18.97	102.8±09.80	12.6±1.94	0418.9 (088.9±026.5)
Sep	198.5±07.23	180.0±21.22	139.4±18.71	29.1±2.44	0483.5 (136.8±038.0)
Oct	318.4±11.60	250.0±16.91	182.6±08.14	32.5±3.06	0783.5 (195.9±061.1)
Nov	390.8±18.48	439.0±18.91	200.0±13.13	38.7±3.67	0968.5 (247.2±087.8)
Dec	403.4±17.85	548.0±23.26	222.0±12.50	36.7±2.50	1212.1 (303.1±111.1)
Average	325.1±36.46	366.4±58.32	170.1±13.48	30.0±3.35	0891.7±106.96
%	36.46	41.09	19.09	03.36	100.00

RESULT AND DISCUSSION

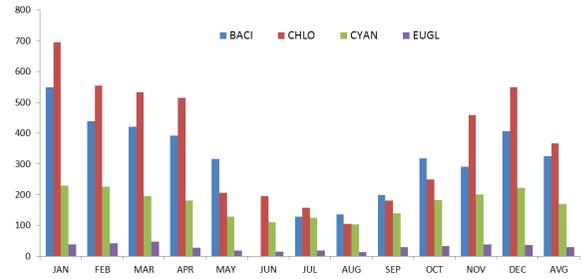
Total four groups of phytoplanktons are worked out from all the sampling sites with their similar distribution (Table). The overall population density of phytoplankton, 1512.7 (378.2±149.0) - 0418.9 (088.9±026.5) was observed during the study period. The maximum density (unitsL⁻¹) was recorded in winter season (Jan., Feb., Nov. and Dec.) as: 1243.5±107.6 (1512.7-988.5); moderate in summer season (Mar. - Jun.) as: 902.4±147.4 (1196.5-629.0) and minimum in rainy season (Jul. - Oct.) as: 529.0±86.0 (783.5-418.9). The density of Chlorophyceae 366.4±58.32 (105.0-695.0) dominated over Bacillariophyceae 325.1±36.46 (128.6-548.5) followed by Cyanophyceae 170.1±13.48 (102.8-230.0) and Euglinophyceae 30.0±3.35 (12.6-48.2) and given in Table.

The table represented explains that Chlorophyceae was the dominant in density among all the observed phytoplankton. The dominance of Chlorophyceae in the similar physiographic region has also been reported by various workers (Khan and Siddiqui, 1976, Lakshminarayana 1965, Nayak 1993, Kumar and Watal 2006, Hossain *et al.*, 2013).

Kumar and Watal (2006) reported higher turnover of lake energy in the month of January- June (mid winter- summer) and less in July to September (rainy) for both phytoplankton and aquatic plants. In our present study, almost similar result is also obtained. The findings of Chaudhary and Pillai (2009), Ghosh *et al.*, (2012), Narasimha and Benarjee (2013) told maximum phytoplankton abundance and density in summer season.

The phytoplanktons density depends more to physical factors

than chemical factors of water which influence its seasonal-ity and distribution pattern in the water body in this physiographical environment. That is why certain phytoplanktons and their density are regulated by seasonal fluctuations of water temperature and apparently disappear in severe condition due to the fact that certain species either become too scarce or occur as spore, resting eggs etc which are not easily detectable (Munawar 1970, Majagi 2013).



Monthlies variation in phytoplankton (unitsL⁻¹) of Alwara Lake during the year, 2014

CONCLUSION

In the present investigation, marked monthlies variations of planktons are reported. Sometimes it becomes more abundant and sometimes scarce. Certain planktonic population apparently disappears at specified period and reappears during other months. Such temporary disappearances are due to the fact that species concerned either become scarce or occur as spores or resting eggs etc. which are not easily detectable. Similar trend was reported by Imam and Khan (2014). The dominance of Chlorophyceae members was evident. The reason behind this dominance is that chlorophyceae members can adapt any type of water environment due to their photosynthetic pigments.

At the same time, authors also found marked variations in some vulnerable species such as sarus crane and some endangered species such as lotus. The lotus or Indian lotus or sacred lotus is not only a symbol of Indian cultural heritage, deeply associated with Hindu mythology, art and culture but also accorded the status of the National Flower of India. The plants of this species help to improve the economic condition of poor rural people and protect water sites as well. It is one of the most attractive aquatic plant species in India showing huge phenotypic diversity with a large number of variants. It is now a need to conserve the lotus and its sustainable use will make this marvellous and heavenly species alive.

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A Study On Customer's Opinion About Digitalisation of Insurance Sector (E-Insurance)"

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ABSTRACT

towards digital insurance.

While other industries within the financial sector have strongly embraced the Internet to obtain sustainable competitive advantage, the insurance industry has been slow to fully adopt e-commerce. This paper examines the impact as well as the importance of e-insurance on customers mind. It has presented the views and demand amongst the customers

KEYWORDS : E-insurance, IT, Internet, Digitalisation, customer's opinion.

Introduction:

The Insurance industry is a significant player in the global economy. In 2007, 19 insurance companies ranked among *Fortune* magazine's 500 largest corporations. It is a key influencer and employs millions of people and touches many more as policyholders. As it has considerable exposure to social, political, and economic dynamics that will shape the next 10 years to 15 years. Competition is emerging from new players with new business models. Across the globe, insurance sector is exploring new ways to convert their business into digital model. So far the changes have not been too disruptive for insurance companies. Besides gradually reducing paper-based interactions, the primary focus has been on enhancing the product suite with value-added services and achieving integrated channel experience. Recent developments in information technology (IT) and web-enabled systems have made it easier for insurers to run global operations in a way that would not have been possible even two years ago. Insurers are already reaping advantages from IT improvements in internal efficiencies in areas as diverse as underwriting, claims, policy administration, financial reporting and human resources. But efficiencies go beyond these internal ones. In the coming years, the internet will have at least two major effects on the insurance industry: cost efficiencies and broader distribution. These efficiencies will come as insurers experience a greater availability of data from the internet and the transfer of business processes from manual insurance to e-insurance systems.

Objectives of the Study:-

1. To understand the importance of e-insurance.
2. To study the demand for digital insurance amongst customers.
3. To analyse the impact of digital insurance on consumers.

Review of literature:-

Supriya G., Sangita P., Madhuri G. (March 2014), "Impacts of ICT Application on the Insurance Sector (E-Insurance)", they have analysed that to step in the world of e-insurance, as the first step, it is necessary to know the positive benefits of ICT application on insurer and its customers and the probable barriers they may face to have complete electronic interaction based on ICTs. Also comparative study of benefits to consumers from commerce (manual insurance) and e-commerce (e-insurance) will help to improve the shortcomings.

Dr.S.Hariharaputhiran (March2012,) "Challenges and Opportunities of E-Commerce" revealed the opportunities and weakness of e-commerce. He has suggested that in order to increase consumer adoption of e-services, the sources of consumer confusion, apprehension and risk need to be identified, understood and alleviated. E-commerce provides tremendous opportunities in different areas but it requires careful application for consumer protection issues. Lastly, the paper was concluded with, while many companies, organizations, and communities in India are beginning to take advantage of the potential of e-commerce, critical challenges remain to be overcome before e-commerce would become an asset for common people.

What is E-insurance?

- E-insurance can be broadly defined as the application of Internet and related information technologies (IT) to the production and distribution of insurance services. In a narrower sense, it can be defined as the provision of an insurance cover whereby an insurance policy is solicited, offered, negotiated and contracted online.
- E-Insurance through Insurance Repository is a facility to help policy holders buy and keep insurance policies in electronic form, rather than as a paper document. Some of the benefits are: Safety (you don't have to preserve the physical document for life), Convenience (you can transact online), Single Point of Service (for all your insurance policies) and Single KYC.
- An Insurance Repository is a facility to help policy holders buy and keep insurance policies in electronic form, rather than as a paper document. Insurance Repositories, like Share Depositories or Mutual Fund Transfer Agencies, will hold electronic records of insurance policies issued to individuals and such policies are called "electronic policies" or "e Policies".

IRDA guidelines for e-insurance policies:

The IRDA has stated that the main aim to initiate the insurance repository is to help the policyholders revise, modify, or change their plans in a correct and quick manner. According to the guidelines, the providers of e-insurance policies will need to avail the services of authentic repositories and the e-policies will also be regarded as legitimate contracts.

For an insurance repository to be regarded as certified, it should have a minimum net worth of INR 25crores sans any investment from outside India. Also no single insurance company should own more than 10 percent of its stakes or enjoy a managerial position in an insurance repository. The IRDA has also made it mandatory for the insurance repositories to take steps that will make sure that all crucial information will be adequately safeguarded and there will be effective systems that will prevent any misappropriation of deals and records. The guidelines also state that insurers can make deals with more than one insurance repository to make sure that e-insurance policies are properly maintained.

Digitalisation in Insurance Sector and its importance:

Modern Technological innovations have set a global platform for everything to be easily understood and acquired. Gone are the days when knowledge had to be experienced and then passed on to others through word of mouth. Modern times demand easy and quick access to information. Internet plays a major role in providing such expertise to people. A click can reach out to million books of knowledge and information. Internet not only provides a knowledge domain to people but also acts as a huge cost effective marketing platform for marketers.

An ancient Indian proverb states that “We can’t change the direction of the wind, but we can adjust the sails”. As such, the Indian insurance sector has been doing just that: innovating and changing to remain both competitive and compliant. The growth of the insurance sector in India has been phenomenal. It has undergone a massive change over the last few years. It has reached to its all time high because of internet collaborations. India is going digital in a massive way. Recently Prime Minister Narendra Modi launched the ‘Digital India’ campaign. Insurance industry in India will not be an exception.

The Information Age, The Digital Age, The Computer Age, The Technology Age whichever name we use. Digitisation is increasingly integrating aspects of our everyday lives with a connected world, and the insurance sector also stands to reap the benefits. E-insurance is a new revolutionized concept which is used by [insurance providers](#) to reach out to target audience. Since most of the potential customers are tech savvy and use modern technology to underline most of their prioritized purchases.

Articles, blogs, social media marketing, websites, comparing sites etc, all these collectively add to the domain of E-Insurance. Rather than waiting for your insurance agent to come over and taking you through the terms of the policy, a browsing hour will let you go through all the terms of the policy along with the platforms to [compare best plan](#) as per your need and preferences. Insurance giants provide an online platform for their customers to [buy insurance](#) in less than 5 minutes. It’s for all of us to be a part of Modern times, it’s time to be a part of digital generation.

When it comes to the Internet, Google is one of the most convincing forces. Recently, this search engine giant conducted a study to analyse consumer trends over online platforms and found that since 2008, a number of people have been searching for life and health insurance policy comparison and related information online. This trend has grown by 450 per cent. The general insurance industry rather witnessed a cumulative growth rate of 600 per cent in the past five years. These numbers reflect the magnitude of digital insurance in India and act as a testimony to the success of online channels.

Research Methodology:

Sample size:-Sample size for this study was 50 policy holders of Mumbai city.

Data collection Methods:- Data was collected from both primary and secondary sources:-

Primary data is collected through questionnaire method:- Detailed questionnaire was prepared for the policyholders who have availed their policy either through manual insurance or through online.

Secondary data is collected through following sources:-

1. Use of Internet - Internet was extensively used to seek data from the websites of various Insurance Companies.
2. Published/ Unpublished Data - Journals regarding Insurance, e-insurance.

Data Analysis and Interpretation:-

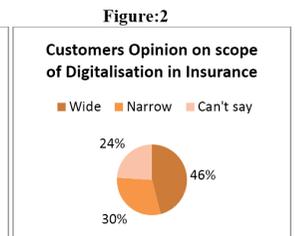
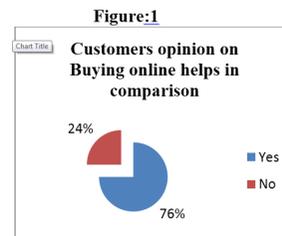
Customer’s opinion on buying online helps in comparison:- 76% of the respondent said that various IRDA websites helps in comparison of policies and 24% said that they never buy policies online because of lack of trust and dependency on agents.

(Graphical presentation is shown in figure 1)

Total Customers	50	100%
YES	38	76%
NO	12	24%

Customer’s opinion on scope of Digital insurance:- Out of total respondents 46% said that it has a wide scope in future as there is increase in use of technology like computers & mobile phones. 30% said narrow because they don’t trust the authentication of information provided online and 24% were unable to give any opinion. (Graphical presentation is shown in figure 2)

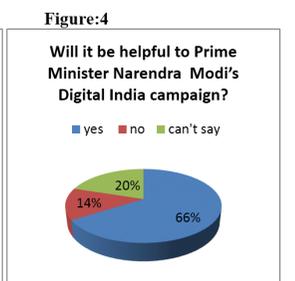
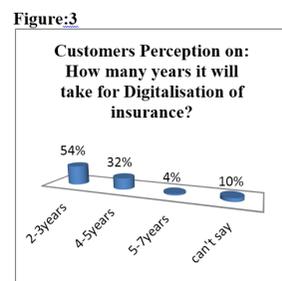
Total Customers	50	100%
Wide	23	46%
Narrow	15	30%
Can’t Say	12	24%



Majority of the respondents i.e. 54% said that it will take around 2-3years for complete digitalisation of insurance sector and hence it will be helpful to achieve our Prime Minister Narendra Modi’s Digital India Campaign said by 66% of the respondents. (Graphical presentation is shown in figure 3 & 4)

Total Customers	50	100%
2-3Years	27	54%
4-5Years	16	32%
5-7Years	2	4%
Can't Say	5	10%

Total Customers	50	100%
Yes	33	66%
No	7	14%
Can't Say	10	20%



Findings:

The study showed that the customers who are well educated as well as tech savvy do comparison of various policies available online. There are few websites which are approved by IRDA for doing comparison of policies before buying (like policyX.com). This helps to increase the customer’s satisfaction level and thereby the scope of e-insurance becomes wide. It has also showed that 76% of customers prefer comparison of plans online before buying any policy. More than 60% were strongly agree with the Prime Minister Narendra Modi’s Digital India Campaign as 50% of the respondents perception is that it will take 2-3years for complete digitalisation of insurance sector.

Conclusion:-

As per analysis, it is said that in the 2-3 years, three out of every four insurance purchase decisions will be influenced by digital channels of sales and marketing. That’s a surprising number. It simply demonstrates the power of digital media and its growing role in the insurance sector in India. More and more people are coming under the scope of e-insurance and this trend will continue moving upwards. With the government of India itself supporting digitisation, the level of trust will go up. So, there is no looking back for a sunshine industry like insurance, which is already experiencing an unusual growth.

Scope for Future Research:-

Further, the researcher can compare the customer’s opinion about digitalisation of insurance sector of different age groups, qualification and income level of population.

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सतत एवं व्यापक मूल्यांकन के क्रियान्वयन में आने वाली समस्याओं का समीक्षात्मक अध्ययन : शिक्षकों के विशेष सन्दर्भ में

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ABSTRACT

विद्यार्थियों के व्यक्तित्व के बौद्धिक, भावनात्मक, शारीरिक, मानसिक एवं क्रियात्मक पक्षों के विकास का सीधा सम्बन्ध शिक्षा से है। इस बहुआयामी विकास की प्रगति की जाँच हेतु सतत आकलन का व्यापकता के साथ मूल्यांकन किया जाना आवश्यक है। राष्ट्रीय पाठ्यचर्या की रूपरेखा 2005 द्वारा निःशुल्क और अनिवार्य बाल शिक्षा का अधिकार एवं 2009 द्वारा सतत एवं व्यापक मूल्यांकन प्रक्रिया हेतु स्पष्ट नियम एवं मार्गदर्शक सिद्धान्त उपलब्ध हैं। इसी आधार पर सतत एवं व्यापक मूल्यांकन प्रणाली को राष्ट्रीय स्तर पर लागू किया गया। केन्द्रीय माध्यमिक शिक्षा बोर्ड दिल्ली के अन्तर्गत संचालित सभी विद्यालयों व राज्य स्तरीय बोर्ड ने भी इस नवीन मूल्यांकन पद्धति को अपनाया है।

नीति निर्धारकों का मानना था कि मूल्यांकन की इस पद्धति से जहाँ बालकों में विभिन्न विषयों की आधारभूत अवधारणाओं के प्रति समझ विकसित होगी वहीं शिक्षकों द्वारा भी अपना अवलोकन कर शिक्षण विधियों व विद्याओं में सुधार के प्रयास किये जाएँगे। इस प्रक्रिया की सफलता का सम्पूर्ण दायित्व शिक्षक वर्ग पर है। डॉ ए.पी.जे. कलाम का कहना है "शिक्षा का मतलब महज पढ़ना-पढ़ाना ही नहीं है। शिक्षक बच्चों के सम्पूर्ण जीवन को प्रभावित कर सकते हैं और उसे सँवार सकते हैं।" लेकिन इस प्रणाली के प्रभावी क्रियान्वयन को लेकर हमारे अध्यापकों में भी एक विशेष प्रकार का डर व्याप्त है। कारण, मूल्यांकन प्रणाली के अनुसार विद्यालयों में न तो सुविधा है, न वातावरण है और न ही शिक्षक व छात्र इस प्रणाली को लेकर अपने आपको समायोजित कर पा रहे हैं। प्रस्तुत शोध पत्र इसी दिशा में एक समाधान ढूँढने का प्रयास है।

KEYWORDS :

गुरुब्रह्मा, गुरुर्विष्णु, गुरु देवो महेश्वरः।
गुरु साक्षात् परब्रह्म, तस्मै श्री गुरवे नमः॥

भारतीय संस्कृति में अनादिकाल से प्राप्त यह महिमामय पद व सम्मान गुरु को ऐसे ही प्राप्त नहीं हुआ है। यह महत्व उसे प्राप्त हुआ है – अपने ज्ञान, साधना, कठिन परिश्रम, तप, त्याग व योग्यता से। बालकों को जीवन जीने की कला सिखाना तथा उसे समाज व राष्ट्र का एक आदर्श नागरिक बनाने का दायित्व प्रारम्भ से ही गुरुओं व शिक्षकों का ही रहा है। अपने अद्भुत कौशल से बालकों की विभिन्न प्रकार की प्रतिभाओं का पहचानकर उनके लिये जीवनपर्यन्त प्रेरणा स्रोत बनकर मार्ग प्रशस्त किया है।

इसी परम्परा का निर्वाह वर्तमान में भी शिक्षकों द्वारा किया जा रहा है। वर्तमान समय में शिक्षा का प्रसार-प्रसार का दायित्व राज्य व केन्द्र सरकारों का है। सरकारों द्वारा चलाई जा रही योजनाओं का क्रियान्वयन शिक्षकों के भरोसे ही किया जा रहा है। शिक्षा को गुणवत्ता को बढ़ाने के लिये सतत एवं व्यापक मूल्यांकन (सी.सी.ई.) प्रणाली को लागू करते समय ही इसकी सफलता के लिये शिक्षकों की केन्द्रीय भूमिका को स्वीकार कर लिया गया था। यही कारण है कि सतत एवं व्यापक मूल्यांकन में विद्यालय के शिक्षकों के अनुभव ही कार्य कर रहे थे, क्योंकि शिक्षक ही वह समुदाय है जो बालकों के साथ प्रत्यक्ष रूप से जुड़ा है और जिसका प्रत्येक कार्य बालक तथा सम्पूर्ण शिक्षा प्रणाली को प्रभावित करने वाला होता है।

सतत और व्यापक मूल्यांकन का अर्थ :-
सतत और व्यापक मूल्यांकन सीखने का ही एक हिस्सा है। यह अधिगम को प्रभावी बनाता है। इसके द्वारा यह माना जाता है कि बच्चों ने क्या सीखा है, बजाय इसके कि वे क्या नहीं जानते हैं? सामान्यतया परीक्षा तनाव एवं भय को जन्म देती है जबकि मूल्यांकन शिक्षण अधिगम प्रक्रिया का ही एक हिस्सा है जो सतत एवं सहज रूप से होता रहता है।

सतत एवं व्यापक मूल्यांकन का अर्थ विद्यार्थी के स्कूल आधारित मूल्यांकन व्यवस्था से है, जो उसके सीखने के सभी पक्षों पर ध्यान देती है। सतत एवं व्यापक मूल्यांकन सीखने-सिखाने की विद्या का ही अग्नि हिस्सा है। यह कोई अलग अवधारणा नहीं है। यह उन विद्यार्थियों के लिये उपयोगी होगी जो पढ़ाई में बहुत अच्छे नहीं हैं, लेकिन दूसरी गतिविधियों में औसत या उससे भी आगे हैं। इससे वे अपने रुचि के क्षेत्र का चयन कर उसका चुनाव कर सकेंगे। क्योंकि इस प्रणाली में विद्यार्थियों के शैक्षिक और सहशैक्षिक गतिविधियों का मूल्यांकन किया जाता है।

सतत एवं व्यापक मूल्यांकन के उद्देश्य :-

- (1) विद्यार्थियों में बोर्ड परीक्षा का तनाव कम करना।
- (2) देश के सभी बच्चों के लिये मूल्यांकन का एक समान व व्यापक तरीका लागू करना।
- (3) सी.सी.ई. के दो व्यापक उद्देश्य – 1. सततता, 2. व्यापकता पर जोर देना।
- (4) विद्यार्थियों के व्यक्तित्व के तीनों पक्षों – ज्ञानात्मक, भावात्मक, कौशलात्मक

विकास पर बल देना।

अध्ययन की आवश्यकता एवं महत्व :-

शिक्षा के क्षेत्र में मूल्यांकन का विशेष महत्व है। मूल्यांकन शिक्षण-प्रक्रिया का एक प्रमुख अंग है। इसका उद्देश्य केवल विद्यार्थियों की शैक्षिक उपलब्धि के बारे में जानकारी प्राप्त करना ही नहीं, अपितु इसके अनुरूप शिक्षण प्रक्रिया में सुधार लाना भी है। इसलिए छात्र-छात्राओं के समय एवं अनवरत मूल्यांकन के लिये समय-समय पर प्रयास होते रहे हैं। केन्द्रीय माध्यमिक शिक्षा बोर्ड द्वारा मूल्यांकन की प्रक्रिया को वस्तुनिष्ठ, वैध, वैज्ञानिक, व्यापक उद्देश्यनिष्ठ बनाने हेतु किये गये प्रयासों में, सतत और व्यापक मूल्यांकन एक अच्छी पहल है।

सतत और व्यापक मूल्यांकन इस उद्देश्य से लागू किया गया था कि विद्यार्थियों का सिर्फ वर्ष में दो या तीन बार मूल्यांकन न करके मूल्यांकन की प्रक्रिया को सतत बनाया जाये, जिससे विद्यार्थियों का सर्वांगीण विकास हो सके।

वर्तमान में यदि सतत एवं व्यापक मूल्यांकन को यदि समीक्षात्मक दृष्टि से देखा जाये कि किस स्तर तक मूल्यांकन पद्धति अपने उद्देश्यों को पूरा कर पाई है, तो परिणाम संतोषजनक प्रतीत नहीं होते हैं। ऐसा प्रतीत होता है कि सतत एवं व्यापक मूल्यांकन प्रणाली उद्देश्यों को प्राप्त करने में सफल नहीं हो पाई है। क्योंकि चारों ओर इस पद्धति को लेकर संशय एवं असंतोष दृष्टिगोचर होता है। शिक्षा ही परिवर्तन है और परिवर्तन ही शिक्षा है, तो इसे सकारात्मक रूप में लिया जा सकता है। लेकिन विभिन्न समाचार पत्रों, पत्रिकाओं में प्रकाशित लेखों तथा केन्द्रीय माध्यमिक शिक्षा बोर्ड के स्कूलों में कार्यरत शिक्षकों तथा उनसे की गई बातचीतों के आधार पर यह सामने आया है कि इसके सफल क्रियान्वयन में बहुत-सी समस्याएँ आ रही हैं।

अध्ययन की प्रासंगिकता :-

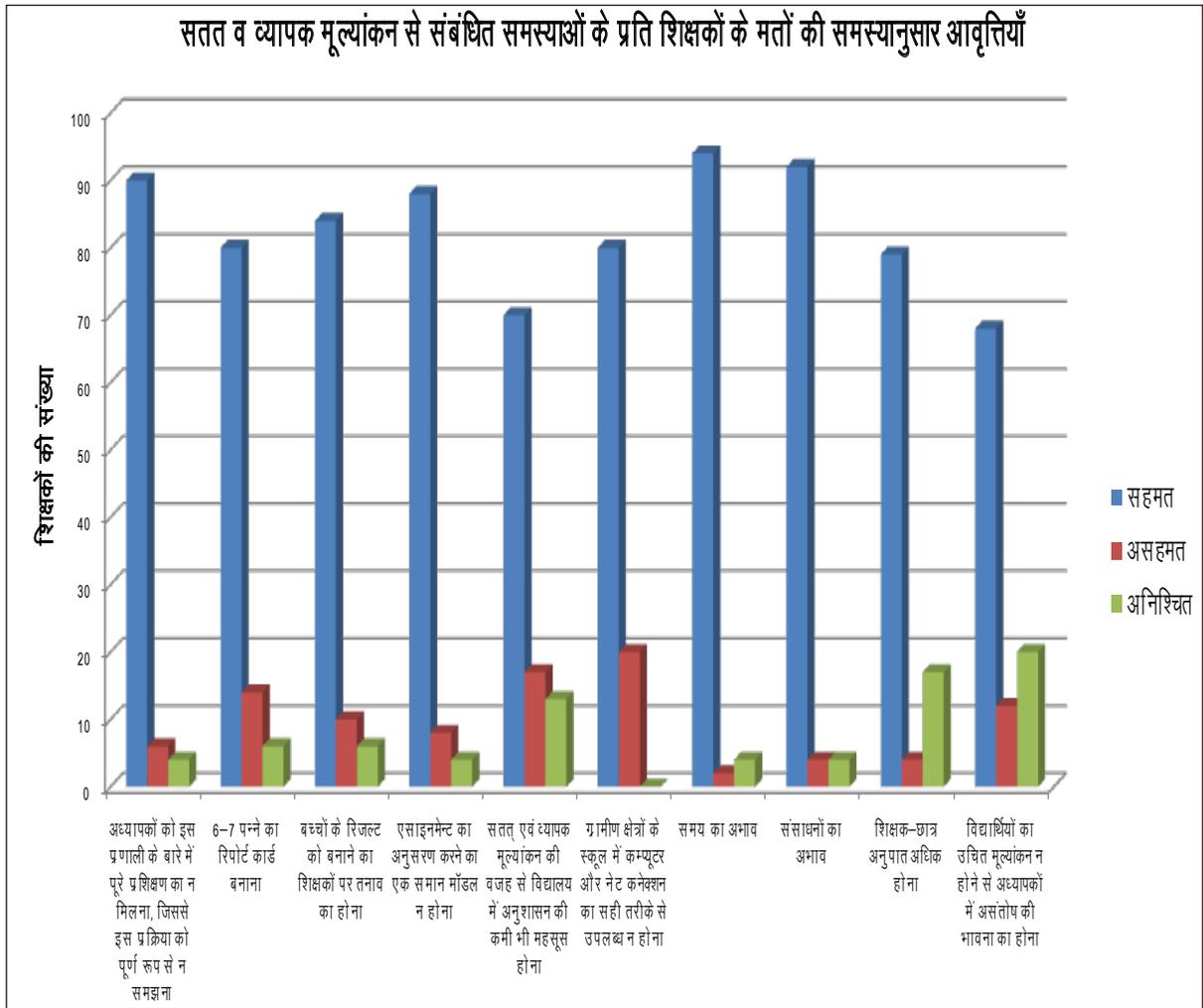
शोधार्थी ने इसी उद्देश्य को ध्यान में रखकर एक सर्वेक्षण किया जिसका उद्देश्य सतत एवं व्यापक मूल्यांकन के क्रियान्वयन में आने वाली समस्याओं का अध्ययन करना था। चूँकि शिक्षक अधिगम प्रक्रिया का अभिन्न अंग होते हैं, अतः न्यायदर्श के रूप में विभिन्न केन्द्रीय माध्यमिक शिक्षा बोर्ड द्वारा संचालित विद्यालयों के 100 शिक्षकों को लिया गया।

समस्याओं का संकलन :-

प्रस्तुत अध्ययन के लिए अध्यापकों के सतत एवं व्यापक मूल्यांकन में आने वाली समस्याओं का संकलन शोधार्थी ने समाचार पत्रों में प्रकाशित लेखों, छात्र व उनके अभिभावकों के अनुभव, शिक्षकों के अनुभव एवं शोधार्थी के स्वयं के अनुभव के आधार पर किया है। शोधार्थी ने केन्द्रीय माध्यमिक शिक्षा बोर्ड द्वारा मान्यता प्राप्त विद्यालयों में कार्यरत 100 शिक्षकों से सतत एवं व्यापक मूल्यांकन प्रणाली के प्रभावी क्रियान्वयन में आने वाली समस्याओं का उल्लेख सादे कागज पर करने को कहा, तत्पश्चात् अतिरिक्त समस्याओं का मिलान किया गया। अन्ततः 10 समस्याएँ शोधार्थी के द्वारा महत्वपूर्ण पाई गईं। इन समस्याओं को एक मापनी के रूप में तीन बिन्दु पैमाने सहमत, असहमत, अनिश्चित पर छपवाया गया तथा अध्यापकों के मतों को प्राप्त किया गया, जिनका विवरण संलग्न है।

समस्याओं का विश्लेषण :-

अध्यापकों को अपने शिक्षण काल में आने वाली समस्याओं का विश्लेषण शिक्षकों के मतों के आधार पर किया गया है, जिसमें प्रत्येक समस्या पर अध्यापकों के मतों की आवृत्तियाँ एवं प्रतिशत संख्या ज्ञात की गई है, जिसका विवरण निम्नांकित ग्राफ एवं तालिका में दिया गया है।



सतत व व्यापक मूल्यांकन से सम्बन्धित समस्याओं के प्रति अध्यापकों के मतों की समस्यानुसार आवृत्तियाँ एवं प्रतिशत दर्शाने हेतु तालिका

क्रम	अध्यापकों की समस्याएँ	सहमत		असहमत		अनिश्चित	
		आवृत्ति	प्रतिशत	आवृत्ति	प्रतिशत	आवृत्ति	प्रतिशत
1	अध्यापकों को इस प्रणाली के बारे में पूरे प्रशिक्षण का न मिलना, जिससे इस प्रक्रिया को पूर्ण रूप से न समझना	90	90	6	6	4	4
2	6-7 पन्ने का रिपोर्ट कार्ड बनाना	80	80	14	14	6	6
3	बच्चों के रिजल्ट को बनाने का शिक्षकों पर तनाव का होना	84	84	10	10	6	6
4	एसाइनमेंट का अनुसरण करने का एक समान मॉडल न होना	88	88	8	8	4	4
5	सतत एवं व्यापक मूल्यांकन की वजह से विद्यालय में अनुशासन की कमी भी महसूस होना	70	70	17	17	13	13
6	ग्रामीण क्षेत्रों के स्कूल में कम्प्यूटर और नेट कनेक्शन का सही तरीके से उपलब्ध न होना	80	80	20	20	0	0
7	समय का अभाव	94	94	2	2	4	4
8	संसाधनों का अभाव	92	92	4	4	4	4
9	शिक्षक-छात्र अनुपात अधिक होना	79	79	4	4	17	17

10	विद्यार्थियों का उचित मूल्यांकन न होने से अध्यापकों में असंतोष की भावना का होना	68	68	12	12	20	20
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विवेचना :-

प्रमुख समस्याओं की विवेचना निम्न प्रकार है -

- (1) अध्यापकों को इस प्रणाली के बारे में पूरे प्रशिक्षण का न मिलना, जिससे इस प्रक्रिया को पूर्ण रूप से न समझना :- इस समस्या पर 90 प्रतिशत अध्यापक अपनी सहमति व्यक्त करते हैं। जबकि 6 प्रतिशत अध्यापक अपनी असहमति व्यक्त करते हैं। अर्थात् 90 प्रतिशत अध्यापक इस समस्या को कठिन मानते हैं। अतः स्पष्ट है कि सतत एवं व्यापक मूल्यांकन के होने वाले प्रशिक्षण को सही तरीके से किया जाये।
- (2) 6-7 पन्ने का रिपोर्ट कार्ड बनाना :- इस समस्या पर 80 प्रतिशत अध्यापक अपनी सहमति व्यक्त करते हैं। जबकि 14 प्रतिशत अध्यापक अपनी असहमति व्यक्त करते हैं। अतः स्पष्ट है कि अध्यापकों की उक्त समस्या गम्भीर है।
- (3) बच्चों के रिजल्ट को बनाने का शिक्षकों पर तनाव का होना :- इस समस्या पर 84 प्रतिशत अध्यापक अपनी सहमति व्यक्त करते हैं। जबकि 10 प्रतिशत अध्यापक अपनी असहमति व्यक्त करते हैं। अतः स्पष्ट है कि अध्यापकों बच्चों के रिजल्ट को बनाने का तनाव महसूस करते हैं।
- (4) एसाइनमेंट का अनुसरण करने का एक समान मॉडल न होना :- इस समस्या पर 88 प्रतिशत अध्यापक अपनी सहमति व्यक्त करते हैं। जबकि 8 प्रतिशत अध्यापक अपनी असहमति व्यक्त करते हैं। अतः स्पष्ट है कि उक्त समस्या को अधिकांश अध्यापक कठिन मानते हैं। एसाइनमेंट का अनुसरण करने का एक समान मॉडल होना चाहिये।
- (5) सतत एवं व्यापक मूल्यांकन की वजह से विद्यालय में अनुशासन की कमी महसूस होना :- इस समस्या पर 70 प्रतिशत अध्यापक अपनी सहमति व्यक्त करते हैं, जबकि 17 प्रतिशत अध्यापक अपनी असहमति व्यक्त करते हैं। अर्थात् अध्यापक इस समस्या को कठिन मानते हैं। सतत एवं

व्यापक मूल्यांकन में सालभर परीक्षाओं की अधिकता रहने के कारण विद्यालय में अनुशासन में कमी महसूस हो रही है।

- (6) ग्रामीण क्षेत्रों के स्कूल में कम्प्यूटर और नेट कनेक्शन का सही तरीके से उपलब्ध न होना :- इस समस्या पर 80 प्रतिशत अध्यापक अपनी सहमति व्यक्त करते हैं जबकि 20 प्रतिशत अध्यापक अपनी असहमति व्यक्त करते हैं। अतः स्पष्ट है कि ग्रामीण क्षेत्रों के स्कूलों में कम्प्यूटर और नेट कनेक्शन सही तरीके से उपलब्ध नहीं होता है। जिससे सी. सी.ई. में मिलने वाले प्रोजेक्ट वर्क को सही तरीके से समझ नहीं पाते।
- (7) समय का अभाव :- इस समस्या पर अधिकांश 94 प्रतिशत अध्यापक अपनी सहमति व्यक्त करते हैं, जबकि 2 प्रतिशत अध्यापक अपनी असहमति व्यक्त करते हैं। अतः स्पष्ट है कि सतत् एवं व्यापक मूल्यांकन प्रणाली से बच्चों को पढ़ाने में अध्यापक को समय ज्यादा लगता है।
- (8) संसाधनों का अभाव :- इस समस्या पर अधिकांश 92 प्रतिशत अध्यापक अपनी सहमति व्यक्त करते हैं। जबकि 4 प्रतिशत अध्यापक अपनी असहमति व्यक्त करते हैं। अतः स्पष्ट है कि सतत् एवं व्यापक मूल्यांकन प्रणाली के प्रभावी क्रियान्वयन के लिए विद्यालय में संसाधनों की ज्यादा से ज्यादा उपलब्धता होनी चाहिये।

प्रभावी क्रियान्वयन में बाधक तत्व :-

विभिन्न स्रोतों से प्राप्त समस्याओं पर अध्यापकों के मत लेने व उनका विवेचन करने पर निम्न बाधक तत्व प्रकाश में आए :-

- (1) मूल्यांकन की प्रक्रिया में संलग्न अध्यापकों को प्रणाली के बारे में पर्याप्त एवं सम्यक ज्ञान का अभाव होना।
- (2) अध्यापकों को एसाइनमेंट का अनुसरण करने का एक-समान मॉडल न होना।
- (3) समय का ज्यादा लगना व मूलभूत सुविधाओं का अभाव होना।
- (4) अध्यापक व बच्चों का कक्षा में अनुप्रात ज्यादा होना।
- (5) सतत् एवं व्यापक मूल्यांकन का स्कूल अनुशासन पर प्रभाव पड़ना।
- (6) सतत् एवं व्यापक मूल्यांकन प्रणाली का परीक्षा परिणामों पर प्रभाव पड़ना।
- (7) सतत् एवं व्यापक मूल्यांकन प्रणाली का कक्षा शिक्षण पर प्रभाव पड़ना।
- (8) सतत् एवं व्यापक मूल्यांकन प्रणाली का शिक्षकों की अभिवृत्ति पर प्रभाव पड़ना।

प्रभावी क्रियान्वयन हेतु सुझाव :-

- (1) सतत् एवं व्यापक मूल्यांकन प्रणाली के प्रभावी क्रियान्वयन के लिये अध्यापकों को इस प्रणाली के बारे में पूरा प्रशिक्षण मिलना चाहिये। जिससे वह इस प्रणाली को ठीक प्रकार समझ सकें और इस प्रणाली को प्रभावी बनाने में सहयोग कर सकें।
- (2) सतत् एवं व्यापक मूल्यांकन प्रणाली के प्रभावी क्रियान्वयन के लिये स्कूलों में शिक्षक-छात्र अनुपात कम रखना चाहिये। जिससे शिक्षक प्रत्येक छात्र पर व्यक्तिगत ध्यान दे सकें।
- (3) सतत् एवं व्यापक मूल्यांकन प्रणाली के प्रभावी क्रियान्वयन के लिये सभी स्कूलों में संसाधनों को मजबूत करना चाहिये ताकि प्रोजेक्ट कार्य के प्रति शिक्षक विद्यार्थी के वास्तविक रुझान को ज्ञात कर उसके व्यक्तित्व के विकास में सहयोग प्रदान कर सकें।
- (4) सतत् एवं व्यापक मूल्यांकन प्रणाली के प्रभावी क्रियान्वयन के लिये समय-समय पर कार्यशालाओं व सेमिनार का आयोजन किया जाना चाहिये, जिससे शिक्षक इस प्रणाली के नवाचारों से अवगत हो सकें।
- (5) सतत् एवं व्यापक मूल्यांकन प्रणाली में ग्रेडिंग सिस्टम से हो रहे मूल्यांकन के लिये अध्यापकों में असन्तोष के लिये उपाय सोचा जाना चाहिये। इसमें ग्रेड प्रदान करने का आधार बहुत ही सुपरिभाषित होना चाहिये ताकि शिक्षकों का व्यक्तिगत रुझान प्रभावी ना हो सके एवं शिक्षक छात्र का उचित मूल्यांकन कर सकें।

निष्कर्ष :-

प्रस्तुत अध्ययन के परिणामों के आधार पर यह निष्कर्ष निकलता है कि अध्यापकों को सतत् एवं व्यापक मूल्यांकन प्रणाली से सम्बन्धित बहुत-सी समस्याओं का सामना करना पड़ रहा है। इसमें अधिकांश समस्याएँ ऐसी हैं, जिन पर अध्यापक अपनी सहमति व्यक्त करते हैं। ये समस्याएँ अध्यापक के कार्य में बाधा उत्पन्न करती हैं। सतत् एवं व्यापक मूल्यांकन की सफलता की जिम्मेदारी शिक्षक के कंधों पर ही है। अतः इन समस्याओं का समाधान करके ही हम सतत् एवं व्यापक मूल्यांकन प्रणाली का प्रभावी क्रियान्वयन कर अच्छे शिक्षक तैयार कर सकते हैं, जिससे वे सतत् एवं व्यापक मूल्यांकन के प्रभावी क्रियान्वयन में अपना पूर्ण योगदान दे सकें।

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Assessing Effect of Transformational Change on Employees' Perception: A Case Study of Conversion of Dvb Into Tpdld

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ABSTRACT

Purpose: The present study is undertaken with a view to identify the factors responsible for shaping positive attitude of employees towards a high order change i.e., Organisational Transformation (OT) of Delhi Vidyut Board (DVB) into Tata Power Delhi Distribution Limited (TPDDL) on Public-Private-Partnership (PPP) basis. The study further explore the relationship between the extent of employees' favourable attitude towards OT with Parameters of Job Dissatisfier; Parameters of Job Satisfier; Productivity Parameters as well as Company's overall performance to justify the instrumentality of these factors on employees attitude in presence of Organisational Transformation.

Findings: Significant and Positive relationship exists among the employees' favourable attitude towards OT and different factors that were introduced at the time of organisational transformation. This in turn led to enhancement in productivity as well as overall performance of the organisation.

Research Limitations: This study is based on employees' perception towards change therefore all flaws relevant to attitudinal survey would be applicable to this study as well.

KEYWORDS : Organisational Change, Organisational Transformation, Employees' Attitude, Perception, Tata Power Delhi Distribution Limited.

INTRODUCTION

Organisational Change is the key to unlock innovative ideas, establishing new rules, eliminating boundaries, exploring opportunities, providing better services, reducing losses and generating consumer satisfaction. Incorporating organizational change effectively requires a positive bent of mind of all the participants to change. In other words success of any change initiative depends on the change agents that communicate and lead the vision of change as well as most importantly on employees' attitude towards change that makes it a real success. Moreover it is crucial to explore the factors which are directly and indirectly responsible for eliciting positive response of employees and thereby winning over resistance to change.

Therefore, a study is conducted on Tata Power Delhi Distribution Limited (TPDDL) which has been transformed from a fully owned public entity viz., Delhi Vidyut Board on Public-Private-Partnership (PPP) basis on July 2002. According to Gerrard (2001) "Public-private partnerships (PPPs) combine the deployment of private sector capital and, sometimes, public sector capital to improve public services or the management of public sector assets. By focusing on public service outputs, they offer a more sophisticated and cost-effective approach to the management of risk than is generally achieved by traditional input-based by the public sector procurement". "TPDDL has started its operations on July 1, 2002 after the unbundling of erstwhile Delhi Vidyut Board (DVB) into TPDDL under privatisation arrangement for distribution of electricity to North and North-West Delhi" (Tata Power Delhi Distribution Ltd., 2015a). Several research studies have already been effectuated on TPDDL uncovering the reasons that were responsible for initiation of such a high magnitude change i.e., Transformational Change which advocates that change was necessary and became inevitable and thereby established it as a successful model of transformational change.

But till now no research has been undertaken to uncover the essential factors responsible for shaping positive attitude of employees towards second order change i.e., Transformational change. At this juncture it is essential to define Transformational Change, according to Burke and Litwin (1992) "It occurs as a response to the external environment and directly affects organisational mission and strategy, the organisation's leadership and culture. In turn, the transactional factors are affected – structure, systems, management practices, and climate. These transformational and transactional factors together affect motivation, which, in turn, affects performance" (p.523).

RESEARCH OBJECTIVE

The empirical evidence on organisational change is lacking and there-

fore an in depth analysis of the case of a utility company in India has been studied to understand the dynamics of managing a massive change i.e., transformation of a public utility company DVB into TPDDL on PPP basis. The change has been managed in such a systematic and harmonious manner that it has taken the organisation to an entirely new phase of success as compared to the erstwhile DVB which has lend itself into a complete troubled situation.

Thus the proposed study is undertaken to realize the following objectives.

- To explore the relationship between employees' favour for OT and parameters of Job Dissatisfier or Hygiene Factors
- To explore the relationship between employees' favour for OT and parameters of Job Satisfier or Motivating Factors
- To explore the relationship between employees' favour for OT and productivity.
- To explore the relationship between employees' favour for OT and Organisation's overall performance.

RESEARCH METHODOLOGY

It is a primary research study conducted on TPDDL and the sample size consists of 210 employees of TPDDL. Simple random sampling technique is employed to collect data with the help of structured questionnaire based on five point Likert scale consisting of 49 variables. Here the result of 5 questions consisting of 29 variables is shown. The data so generated is tabulated, computed and analysed by application of Mean, Standard deviation, Karl Pearson coefficient of correlation and Coefficient of determination etc. Software such as MS Excel and SPSS is used. Since the study justified favourable impact of organisational transformation on employees it became essential to explore relationship between the extent of employees' favour towards various factors responsible for shaping positive attitude of employees towards OT.

ANALYSIS OF RESULTS

RELATIONSHIP BETWEEN EMPLOYEES' FAVOUR FOR OT AND PARAMETERS OF JOB DISSATISFIER OR HYGIENE FACTORS

The following parameters of Job dissatisfier or hygiene factor or parameters of Job dissatisfier were taken into consideration:

- Company policy and administration
- Supervision
- Inter-personal relation with supervisor
- Inter-personal relation with peers

- Inter – personal relation with subordinates
- Salary
- Job security
- Personal life
- Working conditions
- Status
- Physical environment

To investigate the probable relationship between employees favour for OT and Parameters of job dissatisfier in presence of the organisational transformation, Karl Pearson Coefficient of Correlation (r) is computed and it is found significant at 1% level of significance as shown in table no. 1.

Relationship	Karl Pearson Coefficient of Correlation (r)	Coefficient of Determination (r ²)
Employees favour for OT and Parameters of job dissatisfier	0.494	0.244

Table no. 1: Relationship between employees’ favour for OT and Parameters of Job dissatisfier or Hygiene factors in presence of OT

It could be deduced from table no. 1 that significant and positive correlation (r) exists between employees’ favour for OT and parameters of job dissatisfier or hygiene factors. To put differently, decrease in job dissatisfaction i.e., presence of hygiene factors leads to increase in employees favour for OT and vice-versa. Moreover, it is established by coefficient of determination (r²) that 24.4% of variation in employees favour for OT factors is explained by parameters of job dissatisfier or vice-versa.

RELATIONSHIP BETWEEN EMPLOYEES’ FAVOUR FOR OT AND PARAMETERS OF JOB SATISFIER OR MOTIVATING FACTORS IN PRESENCE OF THE OT

The following parameters of Job satisfier or Motivating factors were taken into consideration:

- Your Achievement
- Your Advancement
- Your possibility of growth
- Your recognition
- Your work
- Your responsibility
- Your personal growth

In order to examine relationship between employees’ favour for OT and parameters of job satisfier or motivating factors in presence of organisational transformation, Karl Pearson Coefficient of Correlation (r) is computed and found significant at 1% level as shown in Table no. 2.

Relationship	Karl Pearson Coefficient of Correlation (r)	Coefficient of Determination (r ²)
Employees favour for OT and Parameters of Job Satisfier	0.461	0.212

Table no. 2: Relationship between employees’ favour for OT and parameters of job satisfier or Motivating Factors in presence of OT

It is evident from table no. 2 that significant and positive correlation exists between employees’ favour for OT and parameters of job satisfier or motivating factors. Thus, it is conveyed that employees favour for OT is also influenced by parameters of job satisfier or the intrinsic factors responsible for job satisfaction in the light of Organisational Transformation. Simultaneously, coefficient of determination (r²) verifies that 21.2% of variation in employees favour for OT is explained by parameters of job satisfier or motivating factors and vice-versa.

RELATIONSHIP BETWEEN EMPLOYEES’ FAVOUR FOR OT AND PRODUCTIVITY IN PRESENCE OF THE OT

The following parameters of Productivity were taken into consideration viz.,

- Efficiency level
- Reduction in transmission and distribution losses
- Reduction in wastage/spillage
- Quality improvement
- Customer satisfaction
- Job satisfaction
- Reduction in absenteeism
- Reduction in power interruption
- Reduction in employee turnover

The extent of relationship between employees’ favour for OT and productivity is determined through Karl Pearson Coefficient of Correlation (r) as shown in table no. 12.

Relationship	Karl Pearson Coefficient of Correlation (r)	Coefficient of Determination (r ²)
Employees favour for OT and Productivity	0.545	0.297

Table no. 3: Relationship between Employees’ favour for OT and Productivity in presence of the OT

It is evident from table no. 3 that significant correlation (r) exists between employees favour for OT and productivity exist at 1% level of significance. This implies employees who favoured OT are also in favour of enhancement in productivity in presence of the OT. Concurrently, it is emphasized by coefficient of determination (r²) that 29.7% of variation in employees favour for OT is explained by productivity and vice-versa.

RELATIONSHIP BETWEEN EMPLOYEES’ FAVOUR FOR OT AND COMPANYS OVERALL PERFORMANCE IN PRESENCE OF THE OT

Karl Pearson Coefficient of Correlation (r) is applied to determine the relationship between employees’ favour for OT and company’s overall performance as shown in table no. 4.

Relationship	Karl Pearson Coefficient of Correlation (r)	Coefficient of Determination (r ²)
Employees favour for OT and Company’s overall Performance	0.508	0.258

Table no. 4: Relationship between Employees’ favour for OT and Company’s Overall Performance in presence of OT

Table no. 4 represents existence of significant correlation (r) between employees’ favour for OT and company’s overall performance at 1% level. In other words, company’s performance and employees’ favour for OT are positively correlated in a sense that employees who have favoured OT more have also rated company’s performance better. Also, coefficient of determination (r²) signifies that 25.8% of variation in employees favour for OT is explained by company’s overall performance or vice-versa.

CONCLUSION

The present study highlights the important factors i.e., parameters of job dissatisfier or hygiene factors and parameters of job satisfier or motivating factors which not only exert greater influence on winning over resistance to change but are also instrumental in generating positive attitude towards change. In addition to this, the employees’ favourable attitude leads to enhancement in productivity of the organisation in terms of “increased consumer satisfaction that has reached from none to 84% in 2015, reduction in average technical and commercial losses from 53.1% in July 2002 to 9.87% in March 2015. (TPDDL, 2015), consumer satisfaction as bill complaint resolution time has went down from 45 days in 2002to 4 days in 2015” (Tata Power Delhi Distribution Ltd., 2015b). Hence, TPDDL could be considered as a successful role model in managing human resource successfully by utilising their talent and potential to the best their abilities which created a win-win situation for all i.e., the management, the employees as well as the consumers.

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A Model of Pharmaceutical Customer Complaints and Redressal System

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ABSTRACT

Complaint handling is a Good Manufacturing Practices (GMP) requirement because all complaints is potentially about defective products that must be paid attention for complete evaluation and action to prevent recurrence. For pharmaceutical and drugs regulatory compliance, manufacturers must demonstrate strict adherence to current Good Manufacturing Practices (cGMP) with respect to their processes, controls and product manufacturing. Additionally they must also ensure that compliance is met within their supply-chain and during product distribution operation. In order to manage the complaint handling effectively, latest automated software are used having features of integrated tracking, responding and reporting.

KEYWORDS : Customer Complaint Handling, cGMP, Pharmaceutical, Good Manufacturing Practices, Good Distribution Practices

INTRODUCTION

A complaint is notification that a product in commercial distribution may be in violation of the laws and regulations administered by drugs regulatory authorities or is not as per quality standards perceived by consumers. Complaint is described product as a statement that something is wrong or not good enough. This may trigger stringent actions like:

- Loss of goodwill
- Loss of business orders
- Regulatory actions (eg. Warning letters, import alert etc.)
- Field alert reporting
- Forced Recalls

Numerous regulatory observations and letters are issued by USFDA against inadequate redressal actions by pharmaceutical manufacturers. The most frequent cause of these observations is that systems do not exist for receiving, logging in, reviewing, or evaluating complaints, or that the current procedures do not include provisions for adequate closures of the complaints.

Relevant references for handling customer complaint handling include following:

- USFDA - 21 CFR 211.198
- USFDA - 21 CFR 11 (For automated systems)
- ICH Q10, 3.2.2
- EU 8.2

In the year 2014, European Commission has published the final Chapter 8 of the EU Guidelines for GMP (Complaints, Quality Defects and Product Recalls), which is a comprehensive document, in addition to the other regulatory guidance papers.

GLOBAL SCENARIO OF PHARMA BUSINESS:

Over the past decade, a few whistleblower cases have spotlighted the illicit marketing practices of pharmaceutical companies in the US but relatively few similar cases have been brought in Europe. The reason for this discrepancy is unclear but probably the wider use of self-regulation in Europe deters illicit conduct.

The UK government through has decided Competition Commission against varying or removing undertakings which restrict the way in which Investment Management System (IMS) Health Incorporated sells its specialized pharmaceutical data services.

As per figure culled from IMS Health, India has slipped from the 8th rank as forecast in 2016 to the 11th position in 2017. The downgrade suggests that the market may not be growing at the pace projected earlier, and has lost value due to various reasons probability due to loss of confidence due to customer and regulatory complaints.

COMMON TYPES CUSTOMER COMPLAINTS IN PHARMA INDUSTRY

Customer's complaints are received by authorized person of quality unit of drug manufacturing organization. Such complaints may be generated due to inadequate practices adopted by Packaging, Manufacturing, Supply Chain, Transportation, Warehousing or Pharmacovigilance. Most common complaints logged by customers of pharmaceutical manufacturers are listed as under:

Causing Department	Nature of Complaints
Packaging	Seal Integrity of packs Smudged or illegible printed information thereby creating confusion about: Batch Number Price Manufacturing date and Expiry date
Manufacturing	Foreign materials, particles Appearance nonconformance Discoloration of product Assay of drug product is out of specification Impurity of product is more than specification
Pharmacovigilance	Lack of effect Adverse drug reaction Contraindications
Transportation, Logistics, & Warehousing	Temperature excursions Product Mix ups

Table-1 - Common complaints logged by customers

MANAGING CUSTOMER COMPLAINTS

The management includes overall handling and redressal of customer complaints. The Quality Assurance (QA) determines if investigation of the customer complaint is required and how the complaint will be investigated. The QA determines that which department would be made part in complaint investigation. Typically complaint handling involves following departments as per requirement:

- Quality Control (QC)
- Production (Manufacturing & Packaging)
- Supply Chain Management (SCM)
- Marketing (or Business Development)
- Research and Development (Formulation development)
- Regulatory Affairs (RA)



Figure 1: Cross Functional Team (CFT) for Complaint Handling

A well-documented standard operating procedure (SOP) enables handling of complaint and streamlines the lifecycle from event receiving, through investigation, root cause analysis, corrective & preventive action and reporting to regulatory agencies. Adherence of an effective complaint handling system is more than just a requirement, it is a good practice that can help assure a manufacturer's product to continue to meet quality attributes after it leaves premises.

As per GMP there must be a defined system for collection of complaint-related information. If an effective automated or otherwise, fully integrated quality management process and reporting system is not in place, challenges arise that put a serious strain on a company's quality management efforts. These challenges can lead to very serious consequences to entire business.

Key parts of a complaint handling program must be formulated by including following aspects in the form of Standard Operating Procedure (SOP) to:

- Describe the mode of receipt of complaint
- Define the complaint login system
- Acknowledge of complaint
- Assigning of responsibilities of team for complaint handling
- Request for complaint sample or photograph
- Review of batch documents
- Comparison with retention samples
- Review of stability samples
- Investigation approach and tools
- Establishing root cause
- Formulating corrective action and preventive action (CAPA)
- Response to complainant
- Set the time lines for implementing CAPA
- Periodic trend analysis of complaints
- Management review of complaints

Figure 2: Mechanism of Complaint Handling



Complaints should be categorized (typically in terms of critical, major or minor) so as they may be tracked and trended. Categories may also include defect type, system impacted, product, dose, etc. Trend reports should be evaluated for management review on a regular basis to identify major flaws and assure management that controls are in pace to prevent potential complaints.

Investigation and Root Cause Analysis:

Investigation should also include possible impact to other batches, the complaint history for the particular batch, and a review of the manufacturing and laboratory records for possible deviations that could have led to customer complaint.

Product complaint investigations should be completed within a standard timeline from the time the company received the complaint. The complaints those involving third-party manufacturers, may require longer timelines. If the investigation cannot be completed on time, an interim report approved by the Quality department should be issued to complainant.

Following tools are often used for investigation of customer complaints:

Review of Check-sheets:

Comprehensive standard checklists are used to investigate, what could have gone wrong that caused customer complaints. Use of batch documents, analytical data and retention (control) samples are reviewed as a part of investigation.

Brain Storming:

The probable causes are generated with people from relevant functions and personnel to reach out maximum possible reasons of complaint.

Process Mapping:

Process flow diagrams and mapping data are critically reviewed to evaluate the potential mistakes.

Ishikawa (Fish Bone) Diagram:

Reasons and complaints have relationship of cause effect. The probable causes explored from– Man, Machine, Material, Methods, Miscellaneous issues.

Why-Why analysis:

This is based on a basic philosophy that digging into the issue by asking the reasons five times 'Why' shall help to reach the root cause of the complaint.

Pareto Charting:

Amongst the data base of complaints corrective action against the most frequent problem (most recurring complaint) should be prioritized. This is also known as 80:20 rule, which indicates that- if 20 percent of major problems are solved, there shall be improvement of 80 percent in reducing the complaints.

The most critical outcome of the investigation can lead a decision of recall of concerned batch from market. If the complaint is observed to be fatal for consumers or has evidence of regulatory violations or has high risk to patient's health, there may be immediate recall under public notification. Hence, the pharmaceutical industry can assess and manage risk using recognized risk management tools and/or internal standard operating procedures (SOP). US Food Drug Administration (USFDA) has provided a non-exhaustive list of some of these tools:

- Basic risk management facilitation methods (flowcharts, check sheets, etc.)
- Failure Mode Effects Analysis (FMEA)
- Failure Mode, Effects, and Criticality Analysis (FMECA)
- Fault Tree Analysis (FTA)
- Hazard Analysis and Critical Control Points (HACCP) Hazard Operability Analysis (HAZOP)
- Preliminary Hazard Analysis (PHA)
- Risk ranking and filtering
- Supporting statistical tools

Quality Risk Management comprises of following basis processes:

- Risk Identification
- Risk Evaluation and
- Risk Mitigation

COMPLAINT LOG-IN FACILITY:

The pharmaceutical complaint and grievance redressal mechanism largely depends upon approach of the reinforcement agency and government regulations. However, in order to enhance customer satisfaction, the manufacturing organization shall ensure that:

Each product label is accompanied with toll free number and e-mail for lodging customer grievances.

The pharmacy and medical product sales outlets are encouraged to display customer complain log-book or customer complaint boxes.

The pharmaceutical companies shall make customer relationship management (CRM) and computer terminals for logging customer complaints shall be made available at sales outlets.

AUTOMATED COMPLAINT MANAGEMENT SOFTWARE

Complaints are logged from any source like customer relationship manager (CRM) software module, phone, email, letter, website, etc. Now a days customer complaint software are used to log, respond, investigate and analyze complaints with the notion of maintaining and improving a manufacturer's quality of service process. The prerequisite of automated software is the compliance with 21 CFR Part 11, by ensuring that an organization identifies, accesses, and evaluates laws, regulations, and drugs regulatory requirements.

A few prominent automated software system for complaint handling are listed below:

- Sparta System/ Trackwise
- AssurX Complaint Management software
- EtQ has developed an FDA Compliance Software
- i-Sight Quality and Corrective Action software
- NOVATEK software
- MasterControl Customer Complaints™
- QuTrack QMS - Market Complaints

The automated systems come with fully compliant audit trail and electronic signature functionality secured built-in. Using automatic task assignment as per job role, escalation and notifications to keep the process efficiently moving. . The automated analysis systems include statistical evaluation tool, identification of outliers, and identify trends that indicate a need for process change or improvement.

CONCLUSIONS:

All complaints reflect customer's anguish about quality of pharmaceutical product. Complaint can be either confirmed or invalidated through a comprehensive investigations of complaint intake with help of batch record, analytical data, and stability records and retention sample. The successful initiation and timely closure of a complaint and mitigation for prevention is the goal of a good complaint handling management. The assessment of the risk posed by the quality defect must be critically evaluated before closure of the customer complaint case. Deployment of automated complaint tracking software are recommended ultimate interest of customers and drug manufacturers.

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Management of E-Waste in Smart City, Udaipur

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ABSTRACT

E-Waste comprises of wastes generated from used electronics devices and house hold appliances which are not fit for their original intended use and are destined for recovery, recycling or disposal. Such wastes encompasses wide range of electrical and electronics devices such as computers ,hardware, hand held cellular phones, personal stereos, including large household appliances such as refrigerators, air-conditioners etc.

In the present paper we revise the guidelines apply to all those who handle e- waste which includes the generators, collectors, transporters, dismantlers, recyclers and stakeholders of e-wastes irrespective of their scale of operation. It also shows Legislations/Framework governing e-waste, its finding and application with special ref to proposed smart city Udaipur.

We also tried to develop new set of guidelines with special ref. to proposed smart city such as Udaipur. If we effectively implement it we will get our green smart city.

KEYWORDS :

1. Introduction

Globalization and information technology are being widely recognized as main drivers of the human civilization in the later part of twentieth century and the 21st century. The Information Technology (IT) has been the power house of the global economy particularly since early 1990s. Software and hardware part of IT has touched most of the parts of social, technical, economic and natural environment. Exponentially increasing production of computer hardware has posed major challenges of proper disposal of the waste (e-waste) produced by this industry. Current study focuses on the effect of usage, dumping and recycling of the electronic waste on the natural environment and how effectively it can be manage for proposed smart city such as Udaipur.

2. Hazardous impact of chemicals caused by computers

Electronic Waste (e-waste) is the term used to describe old, end-of-life electronic appliances such as computers, laptops, TVs, DVD players, mobile phones, mp3 players etc. which have been disposed of by their original users. The reality of computer life cycle reveals a hazardous life cycle. The dark side of high technological development of electronic industry, especially computer technology, is revealed in the form of polluted drinking water, waste discharges that cause harm to fish, birth defects, high rate of miscarriage and cancer among cluster workers. Large amounts of dangerous chemicals are present in computer and other electronic goods. The toxicity is due to lead, mercury, cadmium, hexavalent chromium (Chromium), brominated flame retardants, plastic, PVC etc. A typical computer monitor may contain more than 6 percent lead by weight. Each computer display contains an average of 4-8 pound of lead (MCC: 1996). Monitor glass contains about 20 percent lead by weight. When these components are illegally disposed and crushed in landfills, the lead is released into the environment, posing a hazardous legacy for current and future generations.

3. India's informal E-waste recycling sectors

India is the second most populous country in the world, with over 1 billion people, and one of the major e-waste producing and importing countries. Moreover, India is one of the fastest Growing economies of the world. There are no public waste service systems for municipal waste. The formal recycling sector is still small; currently there are 16 units licensed by the Central Pollution Control Board (CPCB), and most of them do only partial processing and recycling. However, while the waste sector overall is highly informal, it is also highly organized. The informal e-waste sector is well networked but unregulated. The financial flow in the sector is highly organized and the huge network of collectors, traders and recyclers make financial gain through re-use, Refurbishment and recycling. Over 95% of the e-waste is treated and processed in the majority of urban slums of

the country, where untrained workers carry out the dangerous procedures without personal protective equipment, which are detrimental not only to their health but also to the environment. Recycling and treatment facilities require a high initial investment, particularly those fitted with technologically advanced equipments and processes.

4. Introducing Green Electronics

The most urgent challenge domestic manufacturer's face is to use "greener" design. The Legislative process embodies two considerations: one is to encourage the recycling and reuse of resources, and second the other is environmental protection, a clear principle is that sending e-waste to landfills or incinerators will be strictly prohibited.

5. E-waste Treatment Technologies

Environmentally sound E-waste treatment technology was identified at three levels. The first level includes decontamination, dismantling and segregation. The second level included shredding and four special treatment processes like electromagnetic separation, eddy current separation, CRT breaking and treatment and density separation using water. The third level treatment included recovery of metals and disposal of hazardous E-waste fractions including plastics with flame retardants, CFCs, capacitors, Mercury, lead and other items.

6. Establishment Of Integrated E-Waste Recycling & Treatment Facility

Establishment of E-waste Recycling & Treatment Facility shall be in line with the existing Guidelines/best practices /requirement in India for establishment and operating "Recycling and Treatment and Disposal Facilities" for hazardous wastes. Such facilities shall cover collection, storage, dismantling & segregation, recycling, and treatment & disposal of e-wastes.

7. Extended Producer Responsibility (EPR)

Before they can sell new equipment, the producers must take back old equipment for proper disposal. The cost of such "end-of- life" processing must be a part of the sale price, not listed as a separate fee. This gives manufacturers an economic incentive to devise the most efficient methods of coping with the problems of old equipment. Implementation of such measures would require the employment of large number of people, and could potentially mean the expansion of a new economic sector in developing countries. The new re-use technologies could provide a source of new jobs in developing countries, and call on Civil Society to help by lobbying at the national level and in international forums for recognition of the e-waste problem and potential solutions. Unless the Indian Government comes up with legislation compelling vendors to initiate a take back and recycle mechanism, the Indian IT dream could well end up in an ecological nightmare. IT advancement would, then, mean environmental disaster.

8. Various legislations cover different aspects of e-waste

The hazardous waste (management and handling) rules, 1998 as amended in 2008 for Toxic content – registration mandatory for recyclers Municipal Solid Waste Management & Handling Rules for non-Toxic content Basel convention for regulating transboundary movement Foreign Trade policy restricts import of second-hand computers and does not permit import of e-waste

9. 'Guidelines' by Central Pollution Control Board (2008)

The guidelines notified in April 2008 - basic guidance document identifying and recognizing fundamental principles:

Producer Responsibility

RoHS (Restriction on Hazardous Substances)

Best practices

Insight into technologies for various levels of recycling

The guidelines explicitly mention the need for a separate legislation for implementing 'Producer Responsibility'

10. Need for a separate/dedicated legislation for Smart City

e-waste is 'distinct' as it is an end-of-consumption waste while hazardous waste results from a distinct industrial process specially in smart city as Udaipur

Environment Protection Act provides for separate regulations for waste in context of Smart city with 'distinct' characteristics - Biomedical Wastes (M&H) Rules- 1998 , lead acid batteries, the Batteries (M&H) Rules- 2001 etc.

The e-waste value chain is rather complex as it involves multiple players - producers, distributors, retailers, end consumers, collection system, recyclers while hazardous waste chain involves only the 'occupier/ generator' and the 'operator' hence responsibilities must be defined for all the players

Recovery of non-ferrous metals and reprocessing of used oil are the only two major activities in hazardous waste recycling while e-waste recycling involves refurbishment for reuse, dismantling and precious metal recovery which is a complex process

11. Proposed e-Waste Rules: Title: E-waste (Management & Handling) Rules to be published under the Environment Protection Act

OBJECTIVE :To put in place an effective mechanism to regulate the generation, collection, storage, transportation, import, export, environmentally sound recycling, treatment and disposal of e-waste. This includes refurbishment, collection system and producer responsibility thereby reducing the wastes destined for final disposal.

ESSENCE: the producer of electrical and electronic equipments is responsible for the entire life cycle of its own branded product and in particular the environmentally sound end-of-life management and facilitating collection and take back.

12. Salient points of proposed e-waste Rules:

Responsibility of each element in the e-waste Value Chain:

- a. Producers – Extended/Individual Producer Responsibility
- b. Dealers
- c. Collection agencies/ collection Centres
- d. Dismantler
- e. Recycler
- f. Consumer and bulk consumers

Procedure for Authorization of producers, collection agencies, dismantlers, recyclers and enforcement agencies

Procedure for registration/renewal of registration of recyclers

Regulations for import of e-waste

Liability of producers, collection agencies, transporter, dismantlers and recyclers

Information & Tracking

Elimination of hazardous substances used in e-equipments

Setting up of Designated Authority to ensure transparency, audit and inspect facilities, examine authorization/ registration etc.

13. Implication and Suggestions

Smart city concept of central govt. Looks very fabulous but implementation in India is not as easy special in small city like Udaipur. But if in phased manner if we can implement some rules regulation and if we will strict enough to apply it we will achieve our goal. Reusing and recycling the raw materials from end-of- life electronics conserve s natural resources and avoids solid waste, air and water pollution, as well as greenhouse gas emissions. By donating your used electronics, you allow schools, non-profit organizations, and lower- income families to use equipment that they otherwise could not afford. We need to improve the environmental performance of all economic operators involved in the lifecycle of the electrical and electronic equipment (EEE).

Some environmental issues are of global proportions, and the "wait and see" philosophy is simply too dangerous because the impending environmental disaster could be beyond our means to repair. Problem cannot be solved by only purchasing a few sets of fancy recycling machines from developed countries. Lacking in advanced technology yet rich in labour, India should develop a path for e-waste recycling that is suitable to its current situation. There is an immediate need for collaboration between industry, government, environmental groups, and citizens to solve the problems of e-waste, e-scrap, e-surplus, e-junk, and e-discards

Synthesis Epr Study and Biological Evaluation of Four Co-Ordinate Complex and Heterocyclic Base Adducts of Cu (II) Derived From N(4) Thiosemicarbazone

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ABSTRACT

3,5 dichloro 2-Hydroxy acetophenone N(4) thiosemicarbazone was synthesized by refluxing 3,5 dichloro 2-Hydroxy acetophenone and N (4) methyl thiosemicarbazone in the mole ratio 1:1 and characterized by $^{13}\text{C-NMR}$, $^1\text{H NMR}$ as well as IR, electronic spectra and mass spectra. Cu (II) complex and adducts have been synthesized by refluxing the Cu (II) chloride with 3,5-dichloro 2-hydroxy acetophenone N(4) methyl thiosemicarbazone and in presence of heterocyclic bases like pyridine (py), 2-chloropyridine, 3-chloropyridine and 4-chloropyridine. The synthesized complex and adducts were characterized by elemental analysis, IR, electronic spectroscopy, EI-MS as well as TGA, magnetic and conductivity measurement. Square planner geometry for the four coordinate complexes has been predicted from magnetic and spectral data. The thiosemicarbazone and its copper (II) complexes have been found antibacterial and show growth inhibitory activity against *Staphylococcus aureus*, *Bacillus subtilis* (Gram+ve), *Escherichia Coli*, *Pseudomonas aeruginosa* (Gram-ve) bacterial species.

KEYWORDS : Thiosemicarbazone, N(4) methyl thiosemicarbazone, EPR, antimicrobial activity.

Introduction

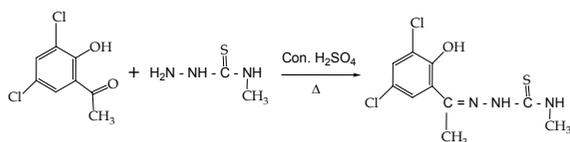
Biological activity of thiosemicarbazone is related to the substituent at N⁴ position. The stereochemistry adopted by thiosemicarbazone while interaction with transition metal ions depend on denticity and charge on ligand. Transition metal complexes with thiosemicarbazones exhibit potential biological activity. Metal complexes of thiosemicarbazones have pharmacological and therapeutic effects. Studies on thiosemicarbazones showed that the thiosemicarbazones have antibacterial and antioxidant properties. Transition metal complexes are found to have more activity than uncombined thiosemicarbazones. Scientific research copper(II) complexes possesses activities such as antiulcer [1], antiamebic [2], antidiabetic [3] anticonvulsant [4], anti-inflammatory [5-7], antimicrobial [8] and antitumor [9].

Copper (II) complex of sulfacetamide, (N-[4-(amino-phenyl)sulfonyl]acetamide), has been used in treatment of ophthalmic and dermatologic infections [10, 11]. Further studies of the copper(II) complexes of sulfacetamide and sulfanilamide [10] and sulfoxazole [12] have showed good results. Sulfonamide copper(II) complexes showed antimicrobial activity against Gram(+) *Staphylococcus aureus*, *Bacillus subtilis* and Gram(-) *Escherichia coli*, *Pseudomonas aeruginosa* [13] a slightly higher activity was observed in Gram(-) bacteria [14]. The copper(II) complexes of benzimidazoles showed strong activity against fungi [15]. The complexes of thiabendazole with Cu (II) were found active [16]. Moreover, was also found for a copper(II) complex of p-amino acetophenone benzoylhydrazone was found active against *Aspergillus sp.* and *Penicillium* antifungal species. [17].

In this research article We have reported the synthesis, spectral characterisation and biological studies of four coordinate complexes of copper (II) with 3,5-dichloro 2-hydroxy acetophenone N(4) methyl thiosemicarbazone.

Experimental**Synthesis of ligand:**

A 0.01 mole solution of 4-methyl-3-thiosemicarbazide in 20 ml ethanol was treated with 0.01 mole ethanolic solution of 3,5 dichloro 2-hydroxy acetophenone and refluxed for 3 hours. The reaction mixture was cooled and faint yellow compound separated out. The solution was filtered, washed well with ethanol and then diethyl ether. The compound was recrystallized from ethanol and dried over P_2O_5 in vacuo (Scheme I).

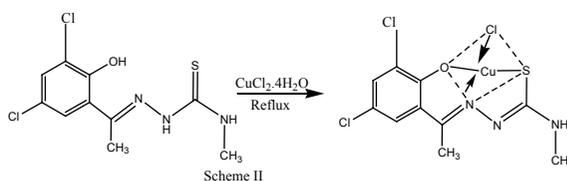


SCHEME - I

Synthesis of complex:

This complex was synthesized by refluxing an ethanolic solution of li-

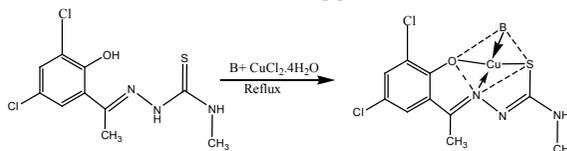
gand (0.01 mole) with ethanolic solution of $\text{CuCl}_2 \cdot 4\text{H}_2\text{O}$ (0.01 mole) for 3 hours. The brown complex formed was filtered, washed with hot water, cold ethanol and finally with ether and dried over P_2O_5 in vacuo (Scheme II).



Scheme II

Synthesis of adducts

The adducts were synthesized by refluxing an ethanolic solution of ligand (0.01 mole) with ethanolic solution containing heterocyclic base (~10 ml pyridine, 2-chloro pyridine, 3-chloro pyridine, 4-chloro pyridine) in slight excess over the metal: ligand ratio 1:1 for 7 hours. The brown compound formed was filtered, washed with hot water, cold ethanol and finally with ether and dried over P_2O_5 in vacuo (Scheme III).



Scheme III

(B = pyridine, 2-chloro pyridine, 3-chloro pyridine, 4-chloro pyridine)

Materials and methods

The starting materials and solvents (A.R. grade) were commercially available and used without further purification. Elemental analysis was recorded on a Perkin elmer elemental analyzer. The infrared spectra of the solid samples were recorded in Jasco spectrometer in the range of $4000\text{-}200\text{ cm}^{-1}$. Electronic spectra were recorded using Jasco UV-visible double beam spectrophotometer using DMF solvent in the range of 200-800 nm. The molar conductivity measurements of the metal complexes were carried out in $\sim 10^{-3}\text{ M}$ DMF solutions using digital conductivity meter. Magnetic measurements were carried out by Faraday method. NMR spectra were recorded in the mixture of CDCl_3 and DMSO-d_6 (1:1 v/v) with a Bruker AC-300F 300MHz spectrometer. Metal in the complex and adducts was estimated by E.D.T.A using murexide as an indicator. Chloride in the complex was determined by Mohr's method.

Physical measurements-

Table 1

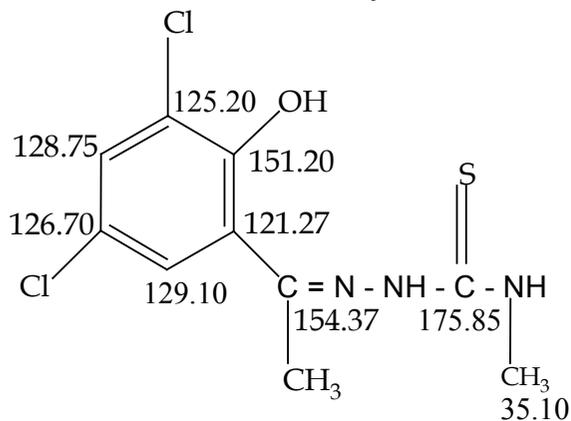
Compounds	Colour	Empirical Formula	Molar conductance Ohm ⁻¹ cm ² mole ⁻¹	Magnetic Moment B.M.
L	FaintYellow	C ₁₀ H ₁₁ N ₃ OCl ₂	-	-
Cu-L.Cl	Brown	C ₁₀ H ₉ N ₃ OCl ₃ Cu	50.7	1.80
Cu-L.Py	Brown	C ₁₅ H ₁₄ N ₄ OCl ₂ Cu	80.6	1.83
Cu-L.2-Cl py	Brown	C ₁₅ H ₁₃ N ₄ OCl ₃ Cu	70.4	1.85
Cu-L. 3-Cl py	Brown	C ₁₅ H ₁₃ N ₄ OCl ₃ Cu	60.6	1.87
Cu.L.4-Cl py	Brown	C ₁₅ H ₁₃ N ₄ OCl ₃ Cu	50.5	1.89

¹H-NMR

Signals at 11.6, 3.30 ppm are assigned to -OH, -CH₃ protons respectively.

¹H-NMR signals at 12.00 and 2.4 ppm are assigned to -OH and -CH₃ protons respectively. The signals at 2.30, 3.01 correspond to ⁴NH and H⁺N-CH₃ respectively. Signal at 10.5 ppm corresponds to ²NH. Aromatic protons show multiplets at 7.0, 7.20, 7.35, ppm.

¹³C-NMR (DMSO-D₆): δppm 125.20 (C = C-Cl), 128.75 (C = C), 127.79 (C = C - Cl), 126.70 (C = C), 129.10 (C = C), 151.20 (C = C - OH), 154.37(C = N), 175.85 (C = S), 35.10 (NH - CH₃).



(Calcd) found ESI-MS m/z, ion M⁺: C₁₀H₁₁N₃OCl₂ (292.17) 292.89, C₁₀H₉N₃OCl₃Cu (389.14) 389.92, C₁₅H₁₄N₄OCl₂Cu (432.79) 432.09, C₁₅H₁₃N₄OCl₃Cu (467.23) 467.89, C₁₅H₁₃N₄OCl₃Cu (467.23) 467.82, C₁₅H₁₃N₄OCl₃Cu (467.23) 467.78.

Table.2 Analytical data

Compounds	Elemental Analysis Found (Calculated) %				
	Metal%	%C	%H	%N	%S
L	-	41.74 (41.11)	3.13 (3.79)	14.88 (14.38)	10.21 (10.97)
Cu-L.Cl	16.63 (16.33)	30.11 (30.86)	2.74 (2.33)	10.13 (10.80)	8.73 (8.24)
Cu-L.Py	14.23 (14.68)	41.21 (41.63)	3.91 (3.26)	12.37 (12.95)	7.71 (7.41)
Cu-L.2-Cl py	13.20 (13.60)	38.11 (38.56)	2.22 (2.80)	11.18 (11.99)	6.23 (6.86)
Cu-L. 3-Cl py	13.22 (13.60)	38.02 (38.56)	2.12 (2.80)	11.22 (11.99)	6.12 (6.86)
Cu.L.4-Cl py	13.92 (13.60)	38.10 (38.56)	2.02 (2.80)	11.23 (11.99)	6.26 (6.86)

Table 3 .Electronic spectral data (cm⁻¹)

Compound	Mode	d-d	L→M	n→π*	π→π*
L	DMF	-	-	25971	40860
Cu-L.Cl	DMF	17800	25600,28300	30064	42843
Cu-L.Py	DMF	17094	25741,28741	31256	42444
Cu-L.2-Cl py	DMF	17692	25974,28550	30560	43486
Cu-L. 3-Cl py	DMF	17500	25841,28562	30781	42553
Cu.L.4-Cl py	DMF	17194	25907,28360	33313	42478

Infrared Spectroscopic data (cm⁻¹)

1.L: ν (-OH) 3200; ν (C = N) 1642; ν (-C - S) 790 (s), 1365 (m); ν (N - N) 1060; ν (²N-H) 3250; ν (C - O) 1295.

2. [Cu-L.Cl]: ν (C = N) 1605; ν (C = N-N=C) 1570, ν (C-S) 702, 1298, ν (N-N) 1110, ν (M - N) 440, ν (M-O) 520, ν (M-S) 320, ν (C - O) 1210.

3. [Cu-L.Py]: ν (C = N) 1608; ν (C = N-N=C) 1582, ν (C-S) 706, 1308; ν (N-N) 1113, ν (M - N) Base 270, ν (M - N) 455, ν (M - O) 525, ν (M-S) 320, ν (C - O) 1215, Band due to HB 1475.

4.[Cu-L.2-Cl py]: ν (C = N) 1610; ν (C = N-N=C) 1580, ν (C-S) 708, 1311, ν (N-N) 1115, ν (M - N) Base 275, ν (M - N) 458, ν (M - O) 530, ν (M-S) 325, ν (C - O) 1220, Band due to HB 1478.

5.[Cu-L. 3-Cl py]: ν (C = N) 1615; ν (C = N-N=C) 1585, ν (C-S) 710, 1315, ν (N-N) 1120, ν (M - N) Base 280, ν (M - N) 462, ν (M - O) 534, ν (M-S) 328, ν (C - O) 1225, Band due to HB 1482.

6. [Cu.L.4-Cl py]: ν (C = N) 1620; ν (C = N-N=C) 1590, ν (C-S) 718, 1325, ν (N-N) 1125, ν (M - N) Base 280, ν (M - N) 468, ν (M - O) 540, ν (M-S) 335, ν (C - O) 1230, Bands due to HB 1488.

Electron Paramagnetic Resonance Spectral data :

EPR spectrum of complexes was carried out in DMF at 77 K. The values of g₁, g₂, g₃, A₁₁, A₂, R, f, G, a², b², K, K₀ are listed in Table No.4

Table.4

Complex	g ₁	g ₂	g ₃	G	A ₁₁	A ₂	R	f	a ²	b ²	K	K ₀
Cu-L.Cl	2.15	2.16	2.16	1.45	184	51	0.54	118	0.513	0.720	0.371	0.366
Cu-L.Py	2.18	2.14	2.16	1.62	180	50	0.55	120	0.525	0.725	0.374	0.378
Cu-L.2-Cl py	2.20	2.12	2.16	1.71	182	53	0.53	122	0.520	0.728	0.370	0.370
Cu-L.3-Cl py	2.19	2.13	2.16	1.55	179	55	0.56	125	0.522	0.729	0.372	0.372
Cu.L.4-Cl py	2.17	2.13	2.15	1.60	178	54	0.58	120	0.520	0.724	0.378	0.375

Thermogravimetric analysis:

The TGA curves of complexes were recorded between the temperatures 30 °C to 800 °C

Table.5

Complex	First step	Mass loss %	Second step	Mass loss %	Residue	Temperature	% (Cal) found
Cu-L.Cl	200	2.25	300.15	55.30	CuO	780	20.72(20.44)
Cu-L.Py	200	2.75	380.82	57.80	CuO	780	18.09(18.38)
Cu-L.2-Cl py	211	2.35	319.58	55.60	CuO	778	17.72(17.02)
Cu-L.3-Cl py	210	4.50	300.35	59.60	CuO	778	17.54(17.02)
Cu.L.4-Cl py	214	5.25	318.62	55.72	CuO	780	17.68(17.02)

Antimicrobial activity (Agar plate diffusion method)

Table.6 ⁵ Activity index of L , Cu(II) complexes,metal salt and standered

Compound % Activity Index	Staphylococcus aureus		Bacillus subtilis		Escherichia Coli		Pseudomonas aeruginosa	
	Gram positive				Gram negative			
	800 µg/ ml	1000 µg/ ml	800 µg/ ml	1000 µg/ ml	800 µg/ ml	1000 µg/ ml	800 µg/ ml	1000 µg/ ml
L	17.80	19.18	17.30	21.30	17.60	21.72	18.35	22.00
Cu-L.Cl	27.00	30.22	28.30	32.16	26.20	32.20	25.30	31.00
Cu-L.Py	32.05	34.40	32.16	34.70	30.21	34.17	31.35	33.10
Cu-L.2-Cl py	33.08	35.68	33.51	36.65	30.95	35.90	31.10	34.12
Cu-L.3-Cl py	33.15	35.32	33.10	36.40	30.60	35.90	31.45	34.35
Cu.L.4-Cl py	33.40	35.44	33.38	36.42	30.15	35.63	32.44	34.00
CuCl ₂ .4H ₂ O	39.35	40.92	38.35	41.52	38.69	42.20	39.26	42.66
Standard	100	100	100	100	100	100	100	100

(Std-Amphilicine)

% activity index was calculated by the formula

$$\% \text{ Activity Index} = \frac{\text{Zone of inhibition of test compound}}{\text{Zone of inhibition of standard (diameter)}} \times 100$$

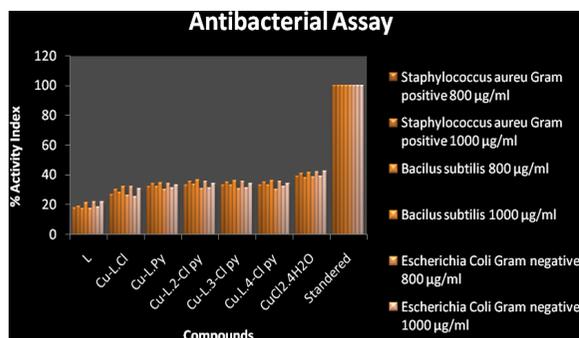


Fig.1 % Activity Index Bar Graph

Results and discussion

Elemental analysis data are consistent with 1:1 ratio of metal ion, thiosemicarbazone for complex and 1:1:1 ratio for metal thiosemicarbazone and heterocyclic base for all adducts. The complex and all adducts are soluble in DMF in which conductivity measurements were made (27°C), showing all complexes to be non electrolyte [18].

The magnetic susceptibility of complex and adducts carried out at room temperature (27°C) fall in the range of 1.80-1.90 B.M (Table 1). These are very close to the spin-only value of 1.73 B.M. for d⁹.

UV-visible spectrum of thiosemicarbazone showed absorption bands n-π* at 25971 cm⁻¹ and π-π* at 40,860 cm⁻¹ (Table 2). These are shifted to higher side on complexation. The L→M charge transfer bands are observed in the range 25,000-26,000 cm⁻¹ and 28,000-29,000 cm⁻¹. The higher energy band is due to S-Cu (II) transitions [19]. The band 22000-29000 cm⁻¹ is due to phenoxy O-Cu (II) transitions [20]. The d-d bands of Cu (II) complexes are observed in the range 17,000-18,000 cm⁻¹. This shows square planer structure [21,22].

The IR spectra of L showed ν(OH) vibrations at 3200 cm⁻¹ which disappeared in the spectra of complexes. It is confirmed by decrease in ν(CO) and an appearance of a band in the range 520-540 cm⁻¹ due to a ν(Cu-O) stretch in the spectra of complexes [23,24,25]. It indicates coordination through phenolic oxygen. ν(C=N) at 1642 cm⁻¹ in the uncomplexed thiosemicarbazone is shifted to the lower energy side in the spectra of complexes [26] due to the conjugation of the p-orbital on the double bond with the d-orbital on the metal ion with the reduction of force constant. The presence of new band in the range 440-470 cm⁻¹ is consistent coordination of azomethine nitrogen [27,

28]. The increase in ν (N-N) in the spectra of complexes is due to enhanced double bond character through chelation, thus offsetting the loss of electron density via donation to the metal ion, and it confirms azomethine coordination. The spectral band ν (N-H) of thiosemicarbazones disappeared in the complexes indicating the deprotonation of the N-H proton. The coordination through thiolate sulfur is indicated by a decrease in ν(C-S). The new band in the range 320-335 cm⁻¹ is due to (Cu-S) vibration confirms the sulfur bonding [29-31]. IR spectra of the complexes 4, 5, 6, 9 and 10 exhibit bands characteristic of coordinated heterocyclic bases [32].

The TGA curves of the copper (II) complex and adducts were carried out within a temperature range from room temperature up to 800°C. The decomposition of complexes proceeded in several steps. Hydrations of water molecules were lost in between 30-100°C. No change was seen up to ~ 200°C. The break in the curves observed due to evaporation of molecules of organic ligand. The complete ligand was removed from the coordination sphere at ~ 600°C. Finally CuO was formed above 600°C. The decomposition was complete at ~ 780°C.

It has been found that Cu (II) complexes were stable up to 200°C. The second step temperatures are in the range of 300-400°C. The solid residue was CuO [33].

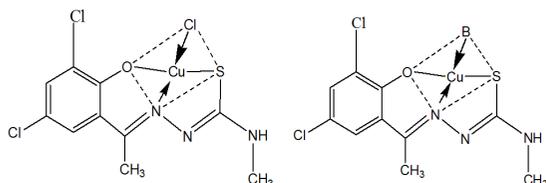
The complexes prepared with different metals decompose in two steps. It is evaluated that the coordination of metal ion to ligand in the complexes is responsible for the thermal stabilities of metal complexes [34].

EPR spectra of complexes showed well resolved four copper hyperfine lines, characteristic of monomeric Cu (II) complexes and nine superhyperfine lines due to azomethine nitrogen and nitrogen atom of the coordinated heterocyclic base in frozen DMF. Since superhyperfine coupling by nitrogen of the heterocyclic base is observed, the coordinated heterocyclic base is found to be coplanar with the ONS bichelate rings [35]. Hence a square planar structure can be assigned for CuL₂ (B = py, 2-chloro pyridine, 3-chloro pyridine, 4-chloro pyridine). The variations in g values indicate that the geometry of the compound is affected by the nature of the coordinating gegenions. The geometric parameter G is calculated by the relation $G = (g_{11-2}/g_{\perp-2})$ is a measure of the exchange interaction between copper centers in the polycrystalline compound. If $G > 4$, the exchange interactions is negligible and if it is less than 4 exchange interaction is indicated in the complex. All complexes have values $g_{11} > g_{\perp} > 2$ and G values falling within this range 1 to 3 are consistent with a $dx^2 - y^2$ ground state corresponding to square planer or square pyramidal geometry. For all complexes the lowest g value is 2.12 indicating a rhombic square coplanar geometry. The rhombic spectral values R is calculated by the relation $R = g_2 - g_1/g_3 - g_2$. If $R > 1$, a predominant $dx^2 - y^2$ ground state is present and when $R = 1$ then the ground state is an approximately equal mixture of dz^2 and $dx^2 - y^2$, the structure is intermediate between square planar and trigonal bipyramidal geometries. For all complexes $R < 1$ suggests a distorted square planar geometry with a $dx^2 - y^2$ ground state. The empirical factor $f = g_{11}/A_{11}$ (cm) is an index of tetragonal distortion. The value may vary from 118 to 125 for square planer complexes. The orbital reduction factor K_{11} was calculated by the relation $K = \alpha^2 \beta^2$. For all compounds $K \gg 0.370 \sim 0.378$. The contribution of s electrons to the hyperfine interaction can be estimated by the value of Fermi contact hyperfine interaction term (K_0). K_0 is a dimensionless quantity and is generally found to have a value of 0.3. The values calculated for all complexes are in the range of 0.366 to 0.378. The bonding parameters α^2 , β^2 are regarded as measures of the covalency of the in plane σ bonds, in plane p bonds α^2 , β^2 values are much less than 1.0 which is expected for 100 % ionic character of the bonds, and become smaller with increasing covalent bonding. The evaluated values of α^2 , β^2 of the complexes are consistent with both strong in plane σ and in-plane p bonding. For all complexes, the g_{\perp} values are nearly same indicating that the bonding is dominated by the thiosemicarbazone moiety rather than the heterocyclic bases. The g_{11} values are less than 2.3, is an indication of significant covalent bonding in the complexes [36, 37].

The bacterial assay was carried out by the agar plate diffusion method. The activity was determined by measuring the diameter of the inhibition zone (in mm). Activity was measured in two different concentrations (800µg/ml, 1000µg/ml). The adducts showed good activ-

ity against bacterial species than free ligand. The results of % activity index are given in Table 6. In these six compounds tested, adducts were found to be more active against four bacterial cultures. The thiosemicarbazone was found less active than its complex and adducts. The increase coordination number increases on complexation, this increases microbial activity. Thus it is evaluated that the coordination of metal ion to ligand enhances biological activity. More activity was observed at 1000 µg/ml concentration. The minimum inhibitory concentration is 800 µg/ml. Below this no activity was observed. Gram positive species showed better activity than gram negative species. It has been observed that the % activity index for free metal ion is higher than metal in binded form.

Expected structures



(B = pyridine, 2-chloro pyridine, 3-chloro pyridine, 4-chloro pyridine)

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Novel Approach for Unitary Embedding for Data Hiding in Video

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ABSTRACT

To enhance the security of messages sent more the world wide web steganography is used. In this research we propose a novel data hiding approach for high resolution video. In this work to provide appropriate protection on data all through transmission. Intended for the accuracy of the accurate message yield that mine from source we can utilize a tools for evaluation investigation can be completed. Its major benefit is that it is a method and its concern on video eminence or coding effectiveness is nearly insignificant. Our proposed technique particularly configurable, consequently it might consequence in high data competence. At last, effortlessly extended, consequential in enhanced robustness, recovered data security and elevated embedding capacity.

KEYWORDS : steganography, Steganalysis, RSA, LSB.

1. Introduction

Information hiding approaches that are exploiting nowadays comprise steganography, watermarking, and cryptography. Every part has a dissimilar aim after hiding data. Cryptography is the knowledge of hiding message satisfied by encrypting or encoding the message bits in such a approach with the purpose of the message is inarticulate except the explanation near decrypt it is recognized. In cryptography, it is comprehensible that a message is organism transmit the purpose of encryption is formulate the unauthorized decryption of the message acquire

Difficult amounts of video processing resources and time. Watermarking of digital data is afraid through defensive the digital data itself for possession rationale copy control or further content protection Rationale. In watermarking, a progression of bits is inserting contained by the data. Though it might be identified that a watermark has been interleave for copy protection function, the aim of watermarking is to create removal of the put in watermark bits impracticable without additional information such as a key. Steganography is a kind of concealed message everywhere a secret message be hidden in a liberation service or cover message the intend of steganography is to establish message bits so as to the exceedingly continuation of the message is not measurable by a viewer. Data hiding can as well be functional former to compression. For example [1] initiate a technique that is healthy to important JPEG compression. It is moreover probable to hide data in the wavelet field as report in [2]. In such a technique, considerable wavelet coefficients are recognized and use for embed a message payload. Finally, hiding of data preserve moreover is practical in the compacted domain. For example, the work in [3] planned hiding messages in the compacted H.264/AVC I-frames with no the preamble of drift deformation.

Steganalysis, on the additional hand, is the process of detecting the presence of hidden messages in video. Steganalysis be able to be practical to digital images and to digital video as report in [4] and [5], correspondingly. Obtainable work on video-based steganography take such study into description and try to preserve the statistics of delivery service previous to and subsequent to message hiding. For example, the effort in planned a sub histogram preserving advance for quantization accent with matrix encoding. Our proposed technique particularly configurable, consequently it might consequence in high data competence. at last, effortlessly extended, consequential in enhanced robustness, recovered data security and elevated embedding capacity .in the first section we represent introduction of data hiding scheme, second section represents related works ,third section proposed novel approach for data hiding.

2. Related work

The greater part of today's steganographic system uses a variety of multimedia substance such as image, audio, video etc as cover media since people often transmit digital pictures in excess of email and other Internet communication

Tintu.E.R in at al[1] in this study show to accomplish best ever compression and decompression method in video steganography by means of Arnold Transformation and Diamond investigate based Motion Estimation. The major organization of the paper includes the subsequent (i) propose a novel Compressed Video Secure Steganography (CVSS) algorithm. (ii) Owing to amplified entropy, image might also be additional to the video using steganography (iii) Arnold transformation is second-hand for scramble the image (iv) Inter pixel value coding is unspecified for earlier coding.

Amit r. Dengre in at al[2] they have proposed a condensed distortion algorithm for LSB video steganography. The answer thought of the algorithm is watermark bit embed that cause minimal embedding deformation of the host audio. Listen tests show that explain algorithm succeed in rising the depth of the embed layer from 4th to 6th LSB layer without moving the perceptual transparency of the watermarked audio signal. The development in robustness in company of preservative noise is obvious, as the proposed algorithm get considerably lower bit error rates than the normal algorithm. The steganalysis of the planned algorithm is additional difficult as well, since there is an important cryptography provided data security.

Xiaoni Li1 in at al[3] map of this work is list below: in the subsequent segment, the basic framework of H.264 encoder will be introduce and the inter coding and the CAVLC will be introduce mostly. data hiding apply inter coding in arrange to get better video quality will be introduce. Data hiding apply the CAVLC in order to control bit rate will be introduced. The beyond two embedding algorithms will be included which.

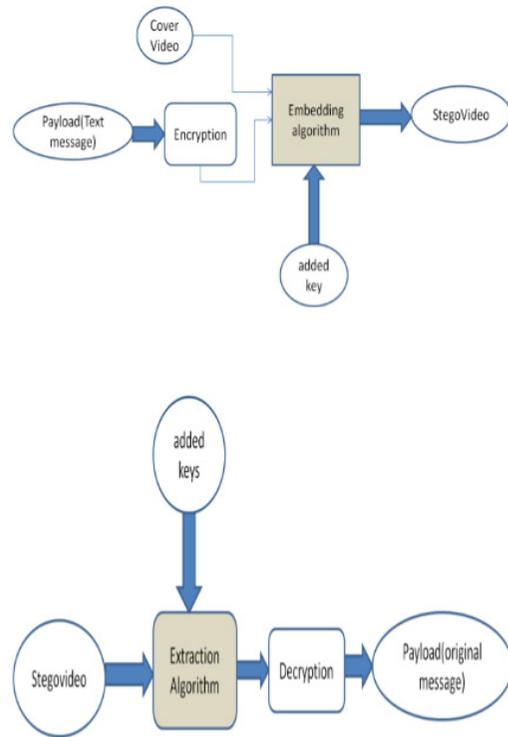
Deepika R.Chaudhar in at al[4] This Paper target the primary the video is alienated into blocks and next the communication is came in to existence consequently the message is programmed in the least significant part of the block and is specified as 16*16, 16*8, 8*8, 8*16 correspondingly. Therefore here in this situation the data hiding is not a chief task and also the data decoding is as well not a most important job but the major thing we are supposed to deliberate is on the simplicity level or the mean square error (MSE) that is noise and as well the loss of the data and both approach less than the artifact. Now and again we might too call as a quantization errors consequently quantization is nothing but the setting the predefined values or may also

be distinct as the rounding off creation it to the adjacent value in that order.

3. Proposed Methodology

The most important high resolution video file is nonentity but a succession of high resolution video call frames. Firstly we will approximate to stream the video and accumulate every the frames in bitmap format. With as well gather the subsequent information preliminary frame. It designate the frame beginning which the algorithm start message embed. preliminary comprehensive block It designate the comprehensive block contained by the selected frame beginning which the algorithm establish message embed. Quantity of comprehensive blocks: It specify how numerous comprehensive blocks inside a frame are disappearing to be use for data hiding. These comprehensive blocks might be uninterrupted frame according to a predefined pattern. It sounds as if, the further the comprehensive blocks we proposed approach for superior the embed competence. Furthermore, if the size of the message is unchanging, this quantity will be preset, as well. Or else it is able to be enthusiastically altered. Frame stage: It designate the quantity of the lay to rest frames, which are required to pass, earlier than the algorithm replicate the embedding. Though, if the frame stage is too diminutive and the algorithm replicates the message extremely often, that strength has a collision against the coding competence of the

encoder [3] [5]. Rumor has it that, if the video succession is huge sufficient, the frame stage can be therefore great. The encoder read these parameters beginning a file. The similar file is understood by the software that takes out the message, so as together of the two codes to be corresponding. Following stream the video file into frames. In our proposed approach to use the conservative LSB (Least Significant Bit) substitute method. LSB substitute method has been widespread to a number of bit planes as fine. Of late [5] has preserve that LSB alternate between other than one least significant bit plane is fewer obvious than single bit plane LSB substitute. Therefore the utilize of numerous bit planes for embedding has been expectant. Except the through use of 3 or additional bit plane lead to calculation of significant quantity of noise in the wrap video. In this work we used high resolution video and receiving a RGB permutation of every pixel as in Figure 1 therefore if we believe one LSB we have a alternative of 3 bits for every pixel. That determination conquers the clam of [4]. With provide a higher security of the Data Hiding technique. In this work video steganography is achieve by means of RSA algorithm, frame discovery algorithm and LSB algorithm. Frame detection is the preliminary step in thing recognition. This frame detection method is used to recognize the frame in the wrap video by with prewitt and crafty frame detection method. Then the undisclosed message is been encrypted by with RSA algorithm and surrounded the secret message with resources of the LSB algorithm and then concert is intended by with PSNR. Though RSA algorithm is the most excellent encrypted method since if the attacker find the video and decode the video, the attacker be able to simply find the cipher text not the inventive secret message. Consequently the RSA algorithm gives additional secrecy and solitude. The PSNR value use to characterize recreate video presentation ratio for prewitt and crafty frame detection method. The clever frame detection algorithm perform enhanced than prewitt frame detection algorithm and devoid of edge detection method. Because crafty algorithm is malleable to a variety of environment. Its parameter permit it to be customized to gratitude of frames of opposed distinctiveness depending on the exacting necessities of a specified works.



Message The message is the necessary prerequisite in the anticipated system. The message is the greater part significant component in the message while put out the secret information added than the e-mail or www message. However in steganography, it is valid or the secret information which is sends from sender to earpiece. This undisclosed message includes text. Inventive medium the unique video is the video which is use for hiding in sequence. In this unique text is in a video. Subsequent to decide the video, it contain to be splitted and want a frame which will be utilize as the wrap page for embed the undisclosed information. Encrypted message in organize to make available added security, the secret data is be encrypted by with RSA algorithm. Embed subsequent to prefer the frame and message, the subsequently step is embedding. Meant for the embedding, primary ends are recognized by with the edge exposure method, and by with the LSB technique the data are embedded. Though embedding the data, edges which are recognized by edge discovery technique is not use for embedding merely the enduring pixel are worn for embed the data. We mark the hidden data whereas embed the data, the hidden data are noticeable, so to facilitate it will be use for the receiver to decipher the message. Subsequent to scratch the hidden, it is propelling to the earpiece. Subsequent to the distribution the message, moreover the attacker or genuine receiver gets the video. The receiver subsequent to find the video, the stage the get video to find the secret information. The receiver the stage the video and decode the encrypted hidden message. The encrypted message decrypted by with the RSA algorithm. The message which is found following decrypting procedure is call extract message.

Firstly a video is selected and split into frames. For every one frame, the restriction might be dissimilar for remarkable text content and undisclosed message M. In this steganographic method RSA and LSB and a frame detection method are use for embedding and take out hidden data in the wrap text. In data embed, primary frame is selected and mine the frame information beginning the wrap text base on frame discovery method such as Prewitt and crafty frame detector. The subsequently stride is to decide a secret message and encrypting the secret message by means of RSA algorithm and after that implant the encrypted message bit stream in the wrap image. Base on the periphery information, it afterward does a few preprocessing and identifies the pixel and hides the data by means of Least Significant Bit supplement scheme. This scheme modify the low regulate bit of every pixel to equivalent the message to hide. Lastly, it finds the stego video for secret message is finding. Then the routine ratio for crafty

frame detection is intended and evaluate by means of PSNR values. Primary, a secret message is chosen for distribution to the receiver. The secret message is the genuine or the classified in sequence which is to be send from sender to receiver RSA is a de facto typical and can be use for key swap and encryption. For encrypting the secret message, primary customer of RSA creates and publishes the creation of two prime numbers, but the two prime numbers have to be reserved secret. The public key can be use by someone to encrypt a message This RSA Algorithm contain three steps. (i) Key generation (ii) Encryption and (iii) Decryption. Primary every letter of the alphabet is connected through a unique number. This will agree to exchange secret message into a series of numbers which then achieve operations on.

4. Conclusion

We proposed novel technique for data hiding in video used steganography that is RSA and LSB based Algorithms by think about video bit streams. The beginning of this technique is by means of the grouping of text message in video. With this scheme, the data must be transfer in a further secured manner. In regulate to hiding the secret information in the video, single container construct use of further technique of steganography, which is less protected. By improving this scheme, we able to acquire the video files not including any noise interruption. A novel secure and preserving the file-size compacted domain steganography is planned in this work. Embed the secret data and detection and hidden secret data are together done completely in the compacted domain to get together the real time condition. Altering the spatial pixel values cause the contradiction that can be expected in the condensed domain and the payload is chosen by allowing for the inconsistency of every cover frame so that the correlation value of the incessant frames is not changed.

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Knowledge, Attitude and Practice of House Keeping Staff Regarding Biomedical Waste Management

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ABSTRACT

Medical care is vital for our life and health, but the waste generated from medical activities represents a real problem of living nature and human world. In order to make its disposal and treatment successful, it is vital that the various healthcare professionals working at the hospitals have correct knowledge, attitudes and practices regarding biomedical waste management (1). Objective: The present study was aimed to assess the knowledge, attitude and practice of housekeeping staff regarding biomedical waste management. Methodology: The research design adopted for the present study was Descriptive research Design. The study was conducted among sixty six subjects of selected hospital. Informed consent was obtained from study participants and the data were collected by self report method using socio personal proforma , semi structured questionnaire. Result: The findings shows more than half of the subject had good knowledge ,positive attitude, healthy practices towards biomedical waste management and significant correlation was found between knowledge, attitude and practices. Summary: On the whole, the knowledge, attitudes and practices among the participants was fair.

KEYWORDS : Knowledge, Attitude, Practice , biomedical waste management

Introduction

The waste produced in the course of healthcare activities carries a higher potential for infection and injury than any other type of waste⁽¹⁾. Inadequate and inappropriate knowledge of handling of healthcare waste may have serious health consequences and a significant impact on the environment as well. It is estimated that annually about 0.33 million tonnes of hospital waste is generated in India and, the waste generation rate ranges from 0.5 to 2.0 kg per bed per day. Wherever, generated, a safe and reliable method for handling of biomedical waste is essential. Effective management of biomedical waste is not only a legal necessity but also a social

responsibility⁽²⁾. Although, there is an increased global awareness among health professionals about the hazards and also appropriate management techniques but the level of awareness in India is found to be unsatisfactory⁽²⁾. Adequate knowledge about the health hazard of hospital waste, proper technique and methods of handling the waste, and practice of safety measures can go a long way in protecting the community from various adverse effects of the hazardous waste⁽³⁾.

Statement of the problem

A descriptive study on Knowledge, Attitude and Practice of house-keeping staff in a selected hospital at Trivandrum

Objectives

1. To assess the knowledge of housekeeping staff regarding biomedical waste management
2. To assess the attitude of housekeeping staff regarding biomedical waste management.
3. To assess the practice of housekeeping staff regarding biomedical waste management
4. To determine the correlation between knowledge and practice of housekeeping staff regarding biomedical waste management
5. To determine the correlation between attitude and practice of housekeeping staff regarding biomedical waste management

Materials and methods

In this study researcher adopted a Quantitative research approach using descriptive design. The setting of the study was Sree Gokulam Medical College and Research Foundation. The population of the study was all housekeeping staff working in Sree Gokulam medical college and research foundation who satisfied the inclusion criteria. Sample size of 66 were selected using convenient sampling.

Tools & Technique

Socio personal proforma , Semi structured knowledge questionnaire , Likert scale & Semi

structured practice questionnaire

Technique - Self reporting

Data collection procedure

Formal permission was obtained from institutional ethical committee of the selected hospital. Data were collected over a period of 3 days from 8-6-20015 to 10-6-2015. The samples were selected based on sampling criteria and informed consent was obtained from study participants individually after explaining the objectives and purpose of the study. After obtaining permission from subjects socio personal proforma, structured knowledge ,practice questionnaire and likert scale were administered and data were collected. The questionnaire were collected back by the investigator after being filled within 15 minutes.

Results

Majority of the subjects majority of the subjects (60.6 %) were in the age group of 31 -40 years. Majority (87.9%) of them were Hindus and about 36.4% of subjects were with less than one year experience .90.9% of the subject had attended training programme.

More than half of the subjects (54.5%) were found to have good knowledge and 45.5% of them have average knowledge regarding biomedical waste management. About 89.4% of them have positive attitude and 10.1% of them have negative attitude towards biomedical waste management. About 65.5% of housekeeping staff were following healthy practice and remaining 34.8% were following unhealthy practices.

There was a significant association between knowledge and practices & attitude and practices with the correlation coefficient of 0.266 at 0.05 levels and 0.415 at 0.01 levels respectively. The study revealed that those who had good knowledge and attitude also have good level of practices, thus are able to manage the waste in proper manner.

Discussion

In the present study, 54.5% of housekeeping staff were reported to have good knowledge and 45.5% have average knowledge regarding biomedical waste management. This finding is par with details from a study conducted by Saini S (2005) which showed that 78% of having

very good knowledge and 22% having average knowledge regarding biomedical waste management(4).

In the present study 89.4% of housekeeping staff were reported to have positive attitude and 67% of them were practicing healthy practices of Biomedical waste management. The findings are consistent with the findings reported by Pallavi V(2012) which stated that 81% of the healthcare professionals had positive attitude and 70% of them followed healthy waste disposal⁽⁵⁾

Conclusion

This study revealed that though overall knowledge of study participants was good but still they need of need good quality training to improve their current knowledge about BMW. For this there is a need for intensive training programme at regular time intervals to repeatedly train and retrain all the staff, which may include question raising and problem solving approach. There should be time to time informative session about newer way of scientific, safe and cost effective management of the waste and to sensitize them to the needs of BMW management in the hospital.

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कबीर के काव्य में जन-चेतना और स्त्री दृष्टिकोण

पुष्पराम

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KEYWORDS :

कबीरदास जी भक्तिकालीन हिन्दी साहित्य की निर्गुण संत काव्यधारा के सर्वश्रेष्ठ कवि थे। कबीर एक महान कवि, महात्मा तथा सच्चे समाज सुधारक थे। इन्होंने अपने काव्य में जनभाषा को अपनाया है जिसमें अवधी, ब्रज, खड़ी बोली पूर्वी हिन्दी, अरबी, फारसी, राजस्थानी तथा पंजाबी भाषा के शब्दों का भी मिश्रण किया गया है। कबीर की भाषा को सधुक्कड़ी तथा पंचमेल खिचड़ी भी कहा जाता है। इन्होंने अपनी वाणी को साखी, दौहा, चौपाईं छैली में प्रस्तुत किया है। कविता करना उनका मकसद नहीं था फिर भी वे एक उच्च कोटि के कवि थे इस बात को सभी लोग स्वीकार करते हैं। इन्होंने अपने जीवन में जो अनुभव किया उसे बिना किसी लाग-लपेट के सहज षब्दावली में अभिव्यक्त कर दिया। कबीर पंथियों में कबीर के जन्म के संदर्भ में यह छंद प्रसिद्ध है –

चौदह सौ पचपन साल गये, चंद्रवार एक ठाठ गए।
जेठ सुदी बरसायत को, पूरनमासी तिथि प्रगत गए।।
घन गरजे दामिनि दमके, बूँदे बरसे झर लाग गए।
लहर तालाब में कमल खिले, तहँ कबीर भानु प्रगत गए।।

कबीरदास जी का जन्म संवत् 1455 में काषी में हुआ और मृत्यु संवत् 1575 में बनारस के समीप मगहर नामक स्थान पर हुई। कबीर के बारे में यह लोकमत है कि ये गृहस्थ थे। उनकी पत्नी का नाम लोई था तथा एक पुत्र कमाल और एक पुत्री कमाली थी। अधिकांश विद्वान कबीर को रामानन्द का पियर मानते हैं। कबीर अंध-विश्वास का खंडन करने वाले और मानव धर्म के सच्चे पारखी तथा प्रबल क्रांतिकारी थे। कबीर के समय राजनीतिक, सामाजिक और धार्मिक परिस्थितियों में स्थिरता का अभाव था। ऐसे समय कबीर विष्व-धर्म की स्थापना करना चाहते थे। वे जन्मजात विद्रोही थे और उनके अन्दर अदम्य साहस एवं अखण्ड आत्मविश्वास था। वे प्रखर प्रतिभा तथा विलक्षण अथक सपत्त व्यक्तित्व के धनी थे। उन्हें यह विश्वास था कि उन्होंने वास्तविक सत्य का ज्ञान प्राप्त कर लिया है। इसलिए वे उस सत्य के विपरीत आचरण करने वाले को फटकार कर सच्चाई के मार्ग पर लाना चाहते थे। वे सिकंदर लोदी के सामने झुकें नहीं, हिन्दू और मुस्लिमों के प्रबल शोष ने उन्हें तनिक भी विचलित नहीं किया वे योगियों के प्रभाव से आहत नहीं हुए और न ही सूफी उन्हें अपने सम्प्रदाय में शामिल कर सके। इन्होंने कदाचार का डटकर विरोध किया वे जीवन-पर्यन्त अपनी अटपटी वाणी के द्वारा उत्तरी भारत का नेतृत्व करते रहे। सुकरात के समान वे सामाजिक व्यवस्था और धार्मिक व्यवस्था पर तीव्र आघात करते थे सुकरात के समान ष्पासक वर्ग ने कबीर को भी विश का प्याला दिया परन्तु वे पीकर पचा गए। कबीर का व्यक्तित्व अद्भूत है। निरक्षर होने के बावजूद कबीर बड़े-बड़े दार्शनिक विद्वानों के कथन को कागज की लेखी कहकर टुकरा देते थे। तार्किकता के क्षेत्र में अत्यंत पुरस्क, हृदयहीन, तीक्ष्ण प्रतीत होने वाले कबीर भक्ति की भाव धारा में बहते समय सबसे आगे दिखाई देते हैं। निरक्षरता को कबीर ने स्वयं स्वीकार किया है—

efl dlekn Nwls ufgd dye xg: ksuglglfll

यह बिना किसी विवाद के सत्य है कि इन्होंने स्वतः किसी ग्रंथ को लिपिबद्ध नहीं किया। कबीर के नाम की लगभग 63 रचनाएँ बतायी जाती हैं फिर भी साहित्य के महत्व की दृष्टि से प्रसिद्ध है—आदिग्रंथ में संकलित पद, बीजक, रमैनी, साखी तथा सबद। बीजक कबीर का सर्वाधिक महत्वपूर्ण ग्रंथ है। और इसके बारे में कहा जाता है कि कबीर ने स्वयं अपने दो पेश्यों जगजीवनदास तथा भगवान दास को यह ग्रंथ प्रदान किया। रमैनी बीजक का महत्वपूर्ण अंश है। जिसकी रचना दोहो और चौपाईयों के क्रम में हुई है। इनके द्वारा गाए पदों तथा भजनों के संग्रह को सबद कहा गया है। कबीर मूलतः भक्त हैं, समाज सुधारक हैं, साधक हैं, मानवतावादी संत हैं, उसके बाद कवि हैं। कबीर की प्रमुख विशेषता यह है कि इनके जैसा अप्रिय सत्य कहने का साहस किसी दूसरे कवि में खोजने पर भी नहीं मिलता। समस्त संत कवियों में कबीर सबसे अधिक प्रतिभाशाली हैं। उनमें काव्यानुभूति इतनी सबल और उत्कृष्ट है कि काव्यशस्त्र से सर्वथा अनजान

रहते हुए भी वे महाकवि कहलाने के अधिकारी हैं। कवि को जीवन के कठोर सत्य का पूर्ण ज्ञान था क्योंकि उनके काव्य का आधार सहानुभूति और कठोर यथार्थ है। इन्होंने इस संदर्भ में स्पष्ट कहा है –

ešdgrk gšvhl[ku dh nšllh
rwdgrk dlxn dh yšllh

कबीर ने निर्गुण निराकार परमात्मा के लिए अनेक नामों का प्रयोग किया है। एक और तो वे उसे अल्ला, करीम, खुदा, रहीम कहते हैं तथा दूसरी और उसे केषव, माधव, जगदीश, हरि, गोविन्द, राम आदि नामों से सम्बोधित करते हैं। कबीर के लिए सभी नामों का महत्व एक ही है। अतः वे नाम के विवाद में नहीं फंसना चाहते। वे इतना अव्यक्त कहते हैं कि मेरे राम दषस्थ पुत्र राम नहीं हैं –
दषस्थ सुत तिहँ लोक बखाना, राम नाम का मरम है आना।

कबीर निर्गुण निराकार ईश्वर में विश्वास रखते थे। कबीर के अनुसार ब्रह्म अनन्त, अगम तथा अगोचर है। निर्गुण ईश्वर सृष्टि के कण-कण में समाया हुआ है। निर्गुण ब्रह्म का निवास न देवालया में होता है न पूजा पाठ में न बाह्याडम्बरो में बल्कि प्रत्येक मनुष्य के हृदय में वह निवास करता है परन्तु माया के चक्कर में फंसकर हम उस ईश्वर को बाहर खोजते फिरते हैं—

करतूरी कुँडल बसे, मृग दूँडे वन माहिं।
ऐसे घट में पीव है, दुनियाँ जाने नाहिं।।

कबीरदास जी एक अन्य दोहे में स्पष्ट करते हैं जिस प्रकार तिलो में तेल है और चकमक पत्थर के अन्दर आग है उसी प्रकार मनुष्य के हृदय में ईश्वर का वास है।

ज्यों तिल माही तेल, ज्यों चकमक मे आगि।
तेरा साईं तुज्ज में, जागि सके तो जागि।।

कबीरदास जी ने अपनी वाणी और सिद्धान्तों में गुरु को परमात्मा से अधिक महत्व प्रदान किया। क्योंकि गुरु ही पियर को परमात्मा से मिलने का मार्ग दिखाता है। कबीर के समकालीन कवियों सूरदास, तुलसीदास आदि ने भी इस मान्यता को स्वीकारा है। कबीर के मतानुसार गुरु के बिना सभी साधनाएँ अधूरी हैं। कबीर के समक्ष गुरु और गोविन्द दोनों खड़े हैं। अतः कवि निर्णय करता है कि पहले गुरु के ही चरण – स्पर्श करने चाहिए। क्योंकि ईश्वर को प्राप्त करने का रास्ता वही दिखाता है –

गुरु गोविन्द दोऊ खडे, काकै लांगू पाय।
बलिहारी गुरु आपने, जिन गोविन्द दियो मिलाय।।
अथवा
सतगुरु की महिमा अनंत, अनंत किया उपगार।
लोचन अनंत उघारिया, अनंत दिखावन हार।।

कबीर का युग सामाजिक अव्यवस्था का युग कहा जा सकता है। उस समय समाज में जाति – पाति, धर्म, धन, ऊँच – नीच, वर्ण – व्यवस्था आदि का बोलबाला था। कबीर मनुष्य को ईश्वर की संतान मानते थे। इसलिए वे ऊँच – नीच, अभिजात्य – निम्न के भेद को बनावटी तथा व्यर्थ मानते हैं। कबीर स्वयं निम्न जाति से थे। अतः यह मनोवैज्ञानिक कारण भी कबीर के लिए वर्ण – व्यवस्था का विरोध करने में सहायक सिद्ध हुआ। वे

जाति व्यवस्था को व्यर्थ सिद्ध करते हुए कहा करते थे –
जाति – पाति पूछे नहीं कोय।
हरि को भजै सो हरि का होय।।

कबीरदास जी ने मानव को ईश्वर की संतान माना है। उनकी नजर में सभी मनुष्य समान हैं। कोई छोटा – बड़ा नहीं है। एक स्थान पर वे कहते हैं –

एक बूँद एकै मल मूत्र, एक चॉम एक गूदा।
एक जोति थै सब उतपनॉ, कौन बाहन कौन सूदा।।

कबीरदास जी भक्तिकालीन हिन्दी साहित्य के महान रहस्यवादी कवि थे। कबीर ने अपने रहस्यवाद में उस स्थिति का वर्णन किया है जब विरहिणी आत्मा असीम परमात्मा से एकाकार करना चाहती है। उन्होंने आत्मा रूपी प्रेमिका को परमात्मा रूपी प्रिय के लिए विरह से बेचैन दिखाया है। कबीर के अनुसार साधना के क्षेत्र में जो ईश्वर है, साहित्य के क्षेत्र में वहीं रहस्यवाद है। एक स्थान पर विरहिणी आत्मा कहती है –

आय सकॉं नहिं तुज्ज पैं, सकॉं न तुज्ज बुलाय।
जियरा यॉं ही लेहुगे, विरह तपाय तपाय।।

कबीर के रहस्यवाद पर शंकर के अद्वैतवाद का प्रभाव स्पष्ट नजर आता है। कई स्थलों पर वे प्रतीकात्मक शब्दावली का प्रयोग करने लगते हैं। उनका रहस्यवाद श्रुद्ध भावात्मक स्तर को छूता है –

जल में कुम्भ कुम्भ में जल, भीतर बाहर पानी।
फूटा कुम्भ जल जलहि समाना, यह तत्व कहै ग्यानी।।

कबीर ने अपनी वाणी में नाम – स्मरण पर विशेष बल दिया है। उनका मत था कि हम नाम – स्मरण के बिना ईश्वर को प्राप्त नहीं कर सकते हैं। जब तक मनुष्य के शरीर रूपी दीपक में प्राण रूपी तेल है तब तक मनुष्य को निडर होकर राम के नाम का जाप करना चाहिए जब हमारे शरीर से आयु रूपी तेल घट जाएगा। तब यह बत्ती भी बुझ जाएगी।

कबीर निर्भय राम जपु, जब लागि दीवा बाति।
तेल घटै बाति बुझै, तब सोवोगे दिन – राति।।

कबीरदास जी ने नारी को माया के रूप में स्वीकार किया है। वे नारी को जहर की पुडिया, काँटो की झाड़ी और नागिन कहकर पुकारते हैं। उनका मत है कि नारी के कारण ही मनुष्य भक्ति, मुक्ति तथा ज्ञान को नहीं पा सकता है। नारी मनुष्य के सर्वनाश का कारण बनती है कबीर ने नारी के सहवास को विश – तुल्य माना है उनका विष्वास है कि नारी की छाया पड़ने से सॉप भी अन्धा हो जाता है।

नारी की झाई परत, अंधा होत भुजंग।
कबिरा तिनकी कौन गति, जो नित नारी – संग।।

यह दौहा कबीर ने उन नारियों के लिए कहा है जो दूसरे पुरुषों पर ज़ोरे डालती हैं। कबीर द्वारा नारी की निन्दा करने पर कुछ आलोचकों ने उनका विरोध भी किया परन्तु कबीर नारी की निन्दा करते हैं तो वे पतिव्रता नारी की प्रशंसा भी करते हैं। वे पतिव्रता नारी के ऊपर करोड़ों रूपों को न्यौछावर करने की बात कहते हैं –

पतिव्रता मैली भली, काली कुचित कुरूप।
पतिव्रता के रूप पर, वारों कोटिक रूप।।

कबीर का व्यक्तित्व क्रान्तिकारी चेतना से युक्त था उन्होंने अपने समय में निर्भीकतापूर्वक समाज सुधार किए हैं वो अद्वितीय हैं। आज के युग में तथा कथित समाज सुधारक भी ऐसा साहस नहीं दिखा सकते जो कबीर ने धार्मिक उन्माद से ग्रस्त तत्कालीन युग में दिखाया था। एक सच्चे युग पुरुष की भाँति उन्होंने अन्धविश्वासों, रूढ़ियों, अनीति, अत्याचारों एवं दोशों पर प्रबल प्रहार करते हुए समाज को सही दिशा – निर्देश देने का प्रयास किया। कबीर उदार संतोशी, निर्भीक, अहिंसा और प्रेम के समर्थक तथा बाह्य आडम्बरो के घोर विरोधी थे। कबीर मस्तमौला के साथ फक्कड़ आदत से अक्खड़, भक्त के समान निरीह वेशधारी के आगे प्रचण्ड, दिल के साफ, दिमाग और कर्म से वंदनीय थे। कबीर ने जहाँ पंडितों, पीरों फकीरों को उनके पाखण्डों के लिए फटकार लगाई वहीं उन्होंने एक सामान्य धर्म की स्थापना भी की जिसके दरवाजे सभी के लिए खुले थे। इस अर्थ में भक्ति काव्य के अन्दर वे एक विद्रोही कवि थे। इसमें सन्देह नहीं है। कबीर की भाषा विविध भाषाओं से गृहीत ब्रजभाषा है। इसका कारण है कि वे एक स्थान से दूसरे स्थान की यात्रा से प्राप्त विभिन्न भाषाओं का व्यवहार स्वाभाविक भी था और आवश्यक भी। उनकी कविता में पारसीयता की खोज करना व्यर्थ है। भाषा में तो वह और भी कठिन है। सच कहा जाए तो आज तक हिन्दी में ऐसा जबरदस्त व्यंग्य और विद्रोही कवि पैदा ही नहीं हुआ है। कबीर की भाषा साफ चोट करने वाली है वह बिना कुछ कहे भी सब कुछ कह देने वाली पैली तथा अत्यन्त सादी परन्तु अत्यन्त तेज व असाधारण है। आचार्य हजारी प्रसाद द्विवेदी ने कबीर की भाषा पर कहा है – भाषा पर कबीर का जबरदस्त अधिकार था वे वाणी के डिकटेटर थे। जिस बात को उन्होंने जिस रूप में प्रकट करना चाहा है, उसे उसी रूप में भाषा से कहलवा लिया है। बन गया तो सीधे-2 नही तो दरेश देकर भाषा कबीर के सामने लाचार सी नजर आती हैं। वे भारतीय समाज और हिन्दी साहित्य की अप्रतिम अनूठी निधि हैं।

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Role of Social Media on Generating Market Perception Among The Customer

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ABSTRACT

The emerging practice of social media movement significantly changed the ways in which companies interact with their customers. For instance buying advice, product information, pricing and technical usage about the product is increasing organism dispersed from customers to customers. Social media has given brands the great gift of giving consumers a platform to space their concerns, laud their praise, and voice their desires. Consumer community has never been more robust or active than it is right now; consumers are saying what they need in a forum for brands to perceive thud and observe it. The present study aims to analyses the ways in which, social media networks creating market perception among the customers. It also discusses the buying behavior of customer thorough social media network and revise the existing relevant social media devices in the market etc.

KEYWORDS : Social media, Market perception, Buying behavior and Product sequence.

INTRODUCTION

Social media has become a platform that is easily accessible to anyone with internet access. Increased communication for organizations fosters brand awareness and often, improved customer service. Besides, social media serves as a relatively inexpensive platform for organizations to implement marketing campaigns.

Social media marketing involves the use of social networks, consumer's online brand related activities and electronic word of mouth to successfully advertise online. Social networks such as Facebook and Twitter provide advertisers with information about the likes and dislikes of their consumers. This technique is crucial, as it provides the businesses with a "target audience". With social networks, information relevant to the user's likes is available to businesses; who then advertise accordingly.

Social media monitoring tools also can pick up both quantitative and qualitative responses to advertising campaigns for promotions, illuminate opportunities to improve one's brand, uncover significant unmet customer needs, and identify people who may be highly predisposed to a brand or product. Furthermore, we believe there will be significant and disruptive innovations in the area of highly relevant, targeted marketing that becomes part of the perceived high relevance of the experience itself. Companies that embrace such innovations will be positioned to have a much greater influence on consumers' choices and, consequently, realize significant increases in revenue and profitability and sustained competitive advantage.

Social media has given brands the great gift of giving consumers a platform to air their concerns, laud their praise, and voice their desires. Consumer community has never been more robust or active than it is right now; consumers are saying what they need in a forum for brands to hear it—and see it. But it is all wasted on an organization if solid holistic social listening procedures aren't in place from the beginning.

REVIEW OF LITERATURE

Raji Srinivasan (2014) in her article entitled "Online Social Media and Networks: Impact on Marketing Practice" Online social media and networks have a growing role in marketing, which has important implications for how consumers, channels, and companies perform. In social media settings, consumers provide online feedback about products, and this feedback is visible to other agents, including other consumers, channel partners, competitors, and investors. Moreover, there is inherent variety in the way the feedback is received and processed (e.g., ratings, reviews) and the forums in which it is provided. The myriad characteristics of online social media environments have effects on outcomes of interest to marketers and implications for managerial practice.

Paquette and Holly (2013), "Social Media as a Marketing Tool: A Literature Review" conducted further research using the TAM to discern that enjoyment is the major factor that influences consumers to

use social networks as a platform for assisting in their buying decisions. They found that the fun provided by Facebook, as well as the opportunity it provides users to ask for suggestions in an easy and entertaining way, motivates individuals to pay more attention to the products promoted on Facebook.

Taylor, Strutton, and Thompson (2012), in their study found however, that social media users' message sharing behaviors are also attributed to the need for self-enhancement. When consumers perceive an online advertisement to be consistent with their identity, they are more likely to share the message with others because it is representative of who they are and what they like.

Shankar et al. (2011) in his study, research has determined that retailers can increase awareness of their brand by being creative when engaging customers on social media sites. "As more shoppers are using social media (e.g., Twitter, Facebook, MySpace, and LinkedIn) and rely on them for marketing shopping decisions, promotion through these media has become important".

GROWTH OF SOCIAL MEDIA DEVICES

The growth of social media devices is having a significant impact on both how consumers interact with companies and the level of control such companies have over the sales, marketing and service of their products. In the pre-Internet days, consumers interested in purchasing a product either asked their friends or a retailer for advice. They had to go to the retailer's store to buy the item and call the manufacturer's call center for support. The introduction of the Internet gave consumers more options. They could access further information on products—as well as limited support information—via the retailer's or manufacturer's websites. For most products, though, consumers still had to go to a physical store to purchase items and call the manufacturer for support.

Social media is that dominating force in the modern world that can change minds, catch more business, increase sales or build and shape a brand or business. This is because of the impact social media has on all of us these days. Over the years, social media sites have also proven to be effective platforms for marketing.

POPULAR SOCIAL MEDIA NETWORKS:

Facebook: This is the biggest social networking site with the largest number of users. There are more than 1 million small or medium sized businesses advertising here and it is estimated that larger companies are spending as much as \$100 million on Facebook advertising per year.

Twitter: Twitter is loved for spreading the word via tweets. This site has revolutionized social media. Approximately 81 percent of Twitter's advertising revenue comes from mobile and there is a \$200,000 cost estimated for a 24-Hour Promoted Trend on Twitter.

LinkedIn: LinkedIn helps to build professional networks and en-

agement with other users. It is the world's largest professional network being used for this purpose. Today, it has over 332 million users and each second adds two new members, all of which attracts marketers.

Google +: This site has 300 million monthly active users and is used for relationship marketing. It has over a 53 percent positive interaction between Google+ users and brands.

YouTube: YouTube is expected to generate \$5.6 billion in gross revenue in 2016. Currently, there are 6 billion hours of video watched on YouTube per month and 1 billion videos watched over mobile phones per day.

Pinterest: Pinterest marketing is another social media tool helping brands to grow rapidly. There are over 70 million users of Pinterest of which 80 percent are women and 20 percent are men. Over 9 million users have connected their accounts to Facebook.

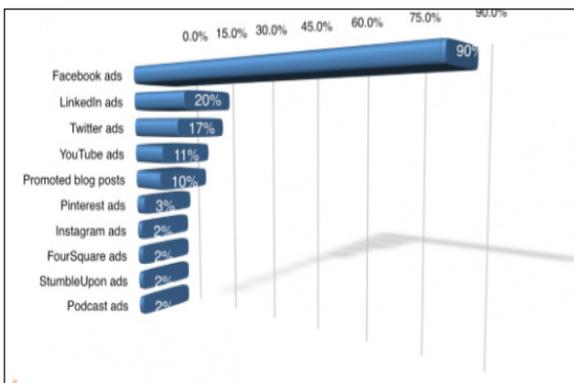
Instagram: Marketers know the usefulness of Instagram marketing and use Instagram to market products and services. It is a wonderful platform to share visual stories. There are more than 300 million monthly active users on Instagram, of which 75 million are daily active users. Instagram is widely being used for business marketing.

Tumblr: This micro blogging platform is used for sharing photos, videos, audio, quotes, text or anything that you'd like to market. It has more than 420 million users and 217 million blogs created, making it a favorite.

Flickr: This image and video hosting social network has over 3.5 million images uploaded daily by users and offers massive online photo storage.

Reddit: This is a social networking site used for entertainment purposes, where registered members share content and direct links. It has 174 million monthly unique visitors.

The most popular form of paid social media advertising amongst respondents is comfortably Facebook followed by LinkedIn and Twitter adverts:



Source: www.greenbook.org/socialmedia/market-research

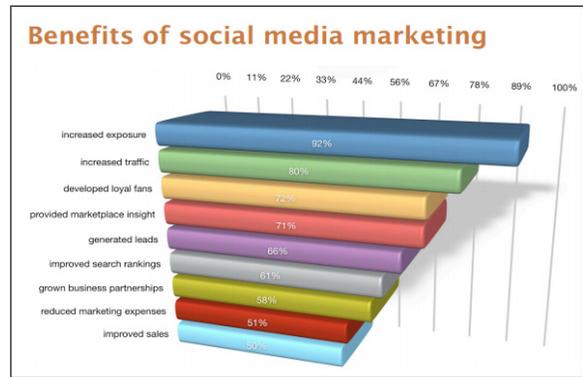
BENEFITS OF SOCIAL MEDIA

In terms of business benefits, the top two benefits are increasing exposure (brand awareness) and driving additional course.

Social media has developed a reputation by some for being a passing marketing interest, and therefore, an unprofitable one. The statistics, however, illustrate a different picture. According to Hubspot, 92% of marketers in 2014 claimed that social media marketing was important for their business, with 80% indicating their efforts increased traffic to their websites. And according to Social Media Examiner, 97% of marketers are currently participating in social media—but 85% of participants aren't sure what social media tools are the best to use.

'92% of marketers has increased their exposure through social media and 80% had positive results in terms trade off.

The graph below shows the range of benefits:



Source: www.greenbook.org/socialmedia/market-research

Improved sales: Over half of the respondents have seen an increase in sales after using social media for at least 3 years, and on the flip side the remainders have not realized growth. Though the report highlights, that this could be due to a lack of measurement and associated tools, for companies understand the true impact of social media on their business.

Increased exposure: Over 95% gained business exposure even with as little as 6 hours a week allocated within a year, to social media.

Growing Partnerships: Partnerships evolved from spending time engaging in social media, for companies who were active for at least a year. 61% of respondents selling to businesses were more likely to acquire partnerships, compared to 54% selling to consumers.

Lead Generation: The more time spent on social media has resulted in lead generation from those being active for more than a year spending in some cases 6 hours a week.

Reduced marketing expenses: 57% of companies with less than 10 employees realized efficiencies in expenditure, whereas 60% of companies with more than 1000 employees disagreed.

Improved search rankings: Companies active for more than a year improved their SEO according to 58% of respondents.

Increased traffic: Companies, who had been using social media for longer with more experience, were gaining increased traffic from their strategies.

Insight into the marketplace: Companies were acquiring useful information which could be due to the range of tools and metrics now easily accessible, about their own activities, competitors and the marketplace in general.

Increased Fan loyalty: Loyalty was more apparent with B2B companies compared to those in B2C, and time invested in social media impacted this.

In the face of sustained misinformation around social media, retailers are still figuring out how to best drive sustainable e-commerce purchases via social media. In 2015, we saw major developments including Pinterest's launch of the "Buy it" button and Instagram's expanded ad program. Twitter, Facebook, and YouTube also made their sites and apps more eCommerce-friendly with the addition of new buy buttons.

While social media may still only drive a small fraction of retail sales, small businesses can't ignore its impact. According to the Internet Retailer's Social Media 500 report, the top 500 retailers earned \$3.3 billion from social shopping in 2014, a 26 percent increase over 2013, well ahead of the average 16 percent growth rate for eCommerce. Analysts predict the jump in 2016 may be even greater. Keep a close eye on these three platforms.

CONCLUSION

Social media networks have become extremely awareness generated among the users and gathered information about the viewers to connecting with them in multidimensional market environment. Social media networking web site Facebook were quietly working on a new advertising system that would let marketers target users with ads based on the massive amounts of information people reveal on the site about themselves. Some customers were reacting negatively because they believed it is an invasion of privacy. On the other hand, some customers have enjoyed this feature because their social network recognizes their interests and sends them particular advertisements pertaining to those interests. Moreover, the social media were created a vast platform to insight the market perception among the customers and provoked their buying behavior.

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Changing trend of PPIUCD acceptance: Hospital based study

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ABSTRACT

Integrating IUCD insertion with delivery services optimizes opportunities for women to obtain an appropriate long term, reversible family planning method. Aim of the study was to evaluate the acceptance of PPIUCD in the community and factors influencing it. It was a prospective, interventional study conducted over a period of one year at Department of Obs & Gynae, MLB Medical College Jhansi, comprised of 513 women in whom acceptance of PPIUCD was noted and evaluation of associated factors was done. All antenatal women between 36-42 weeks of gestation who anticipate delivery and counselled were included. Follow up was at 6 weeks. Out of 513 women counselled for PPIUCD, 306 accepted it. Acceptance was significantly high~ 60%. Multipara had significantly higher acceptance. Most common reason for acceptance was counselling. At 6 weeks 88.33% females were happy with PPIUCD and wanted to continue it. Bleeding p/v was the most common reason for removal. Key words PPIUCD, ACCEPTANCE, COUNSELLING

KEYWORDS :

Introduction

Family planning is important not only for population stabilization, but it has been increasingly realized that family planning is central to improve maternal and newborn survival and health. India accounts for more than 20% of global maternal and child deaths, most of them preventable¹. In spite of availability of wide range of contraceptives, the unmet need for family planning in India is estimated to be 21.3% by DLHS III survey². The common reasons for unmet need are unsatisfactory services, lack of information, and fear about side effects of contraceptive methods. Studies showed that pregnancies taking place within 24 months of previous birth have higher risk of adverse outcome like abortion, premature labour, postpartum haemorrhage, low birth weight babies, fetal loss, and maternal death^{3,4}. The recommended interval before attempting the next pregnancy is at least 24 months in order to reduce the risk of adverse maternal, perinatal and infant outcomes^{4,5}. Postpartum IUDs provide a high level of efficacy in the absence of systemic metabolic effects, and ongoing motivation is not required to ensure efficacy once the device has been placed⁶. The CuT380A is approved to remain in place for 10 years. With perfect use the probability of pregnancy in the first year is 0.6 percent; with typical use, the first-year pregnancy rate is 0.5 to 0.8 percent⁷. Integrating IUCD insertion with delivery services optimizes opportunities for women to obtain an appropriate long term, reversible family planning method before returning home⁸. It is also seen that women are highly motivated and receptive to accept family planning methods during the postpartum period and this is the best time when a woman is in contact with the health care facility. Appropriate times for IUCD insertion in the postpartum periods include the post-placental IUCD insertion, the immediate postpartum IUCD insertion and the transcasaesarean IUCD insertion. In 2008, the Government of India took the initiative to revitalize the PPIUCD services in the country. This initiative was taken to address the high unmet need for postpartum family planning (PPFP) services beyond sterilization, and to help improve pregnancy spacing, which would contribute in improving maternal and child morbidity and mortality status throughout the country⁹. Factors like socioeconomic background, parity, educational status, communication between husband & wives, religious beliefs, son preference, awareness and access to family planning services influences the acceptance of PPIUCD¹⁰. **Material and methods** The present study is a prospective, interventional study to evaluate the

acceptance of PPIUCD and factors influencing it. PPIUCD inserted within ten minutes of placental expulsion up to 48 hours after delivery in women delivered at Department of Obs & Gynae, MLB Medical College Jhansi (UP) between May 2014 to September 2015. All antenatal women between 36 to 42 weeks of gestation who anticipate delivery (vaginal / C-section) and counselled for PPIUCD were included. PPFP Counselling was done as a part of study either during their antenatal visit or while preparing for a scheduled caesarean section or early labour or post partum period (within 48 hrs). If females were willing to use PPIUCD then we used *WHO Medical Eligibility Criteria*¹ for client assessment. Table 1 about medical eligibility criteria was at the end of this article. Follow up schedule was at 6 weeks after PPIUCD insertion. Percentage and chi square test were used for statistical analysis. **Observation** Total 513 women counselled for PPIUCD and 306 women accepted it. Acceptance of PPIUCD was around 60%. After counselling only around 40% of female refused to use it. Table 2 about Acceptance of PPIUCD was at the end of this article. Most females (62.09%) were in age group 18-25 years. Hindu community contributed around 91.5% while Muslim community contributed only around 8.5%. Women accepted PPIUCD were mostly rural (77.12%) and only 22.88% were urban. Around 83% of the total study population which accepted PPIUCD belonged to low socioeconomic status. Around 55% women educated below 5th std, 16% were illiterate and 29% educated above 5th std. Around 51% women counselled prior to LSCS, 43% during early labour and only 6% counselled during their antenatal visits. Around 54% of PPIUCDs were inserted during caesarean section. Post placental insertions were 42.48% and 3.60% PPIUCDs were inserted within 48 hrs after delivery. Acceptance of PPIUCD was around 58% in multiparous women and around 42% in primiparous women. Most common reason behind acceptance of PPIUCD was PPFP counselling (~60%) whether antenatal, during early labour or prior to caesarean section. Second most common reason (22.22%) for acceptance was completed family. 11.11% were motivated by ASHA and 6.54% wanted birth spacing. Table 3 about the common reasons behind acceptance of PPIUCD was at the end of this article. 44.77% (137) women came for follow up at 6 weeks. 55.23% (169) females were lost from study during follow up. 11.67% followed up females wanted removal of PPIUCD at 6 weeks while 88.33% females were happy with PPIUCD and wanted to continue it. Bleeding per vaginam was the most common reason behind the removal of PPI-

UCD accounted for 37.5%. Second most common reason was missing strings in 25% females. Other reasons were infection, expulsion and pelvic pain together accounted for 37.5%.

Discussion

In our study acceptance of PPIUCD was around 60%. In studies done previously the acceptance ranges between 25-40%^{8,11}. In a study in Tanzania with 369 women counselled, a total of 102 (27.6%) were accepted PPIUCD¹². In comparison to those studies the acceptance in our study was significantly high. In our study most females (62.09%) were in age group 18-25 years. Katheith G et al (2013) also found that acceptance of PPIUCD was higher in the age group of 21-25 years (50.88%)⁸. PPIUCD acceptance was significantly higher in Hindu community (91.5%). In Muslim community acceptance was only around 8.5%. This huge difference may be because they are minority population and their different cultural/religious belief. 77.12% rural and 22.88% urban population accepted PPIUCD. These differences are not statistically significant may be because urban population is less than the rural population attending the institute or may be because urban population is economically stronger than rural population and can afford better health care services than govt. medical institutions. Around 83% of women accepted PPIUCD belonged to low socioeconomic status. Reason may be that for these women, this was the best opportunity to receive information about contraception when they were in contact with healthcare providers. In our study acceptance of PPIUCD was higher among women with up to primary education or above (~84%), than those with no formal education (~16%). Similar to a study done in Egypt by Safwat et al where women with no formal education had an acceptance of 9.4% while those with formal education had 19.4%¹¹. Around 51% women counselled prior to LSCS, 43% during early labour and only 6% counselled during their antenatal visits. Glazer, A.B., Wolf, A., & Gorby, N. (2011) also concluded that prenatal visits and postpartum contact with health care providers create an opportunity to discuss family planning and contraception¹³. Around 54% of PPIUCDs were inserted PPIUCD during caesarean section. Post placental insertion was 42.48% and 3.60% PPIUCDs were inserted within 48 hrs after delivery. According to program learning for PPIUCD integration with maternal health services (MCHIP/USAID 2012) three different types of PPIUCDs were inserted in India, post placental 43%, intracasean 36% and immediate 21%. This difference was may be because of small sample size. Acceptance of PPIUCD was around 58% in multiparous women and around 42% in primiparous women. This difference was statistically significant. Most common reason behind acceptance was PPF counselling (~60%). Second most common reason (22.22%) was completed family and others were motivated by ASHA (11.11%), 6.54% wanted birth spacing. Similar findings were reflected in the study done by Safwat et al in Egypt, where 16% of primiparous accepted the use of PPIUCD compared to one third of grand multiparous¹¹. At 6 weeks 55.23% (169) females were lost from study during follow up while only 44.77% (137) women came for follow up. 11.67% followed up females wanted removal of PPIUCD at 6 weeks while 88.33% females were happy with PPIUCD and wanted to continue it. Bleeding per vaginum was the most common reason behind the removal of PPIUCD accounted for 37.5%. Second most common reason was missing strings in 25% females. Other reasons were infection, expulsion and pelvic pain together accounted for 37.5%. Similar results were found in study done by Rukiya Abdulwahab Mwinyi Ali (2012), expulsion rates of the immediate PPIUCD at 4 weeks interval was 6.4%, pelvic infection 3.2% and lost strings were 5.3%¹². Expulsion rate was 10.5% in the study of Katheith G et al (2013)⁸.

Conclusion

In India for last few years acceptance of PPIUCD was significantly increased. Most common reason behind this increased acceptance was PPF counselling.

Abbreviations

PPIUCD-Postpartum intrauterine contraceptive device, PPF- Postpartum family planning, DLHS-District Level Household and Facility Survey, ASHA-Accredited social health activist

Table 1: WHO Medical eligibility criteria for client assessment

Category 1	Condition for which there is no restriction for the use of the contraceptive method. Safely use.
Category 2	Condition where the advantages of using the method generally outweigh the theoretical or proven risks. Generally use.
Category 3	Condition where the theoretical or proven risks usually outweigh the advantages of using the method. Generally do not use.
Category 4	Condition which represents an unacceptable health risk if the contraceptive method is used. Do not use

Table 2: Acceptance of PPIUCD

Total no of females	513	Percentage
Accepted PPIUCD	306	59.64%
Not Accepted PPIUCD	207	40.36%

Table 3: Common reasons behind acceptance of PPIUCD

Reasons	No of females
Counselling	184 (60.13%)
Family completed	68 (22.22%)
Motivated by ASHA	34 (11.11%)
Wanted birth spacing	20 (6.54%)
Total	306

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Comparison of Basic Fitness Status Between The Children Belongs to Hill Area and Coastal Area of West Bengal

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ABSTRACT

The purpose of conducting the present study was to investigate the differences in physical fitness between the children belongs to hill area and costal area of west Bengal. The sample for this study consisted of 54 boys' students from hill are and 60 boys' students from coastal area of west Bengal in India. A total of 114 school boys' were chosen to participate as subjects in the present study. The age group of the subjects was ranged from 12 – 14 years. In the present study standing height, body weight and body mass index (BMI) were used as anthropometric measures. Five components of physical fitness (four performance related and one health-related) were tested. These included 20-meter dash (as a measure of movement speed), standing long jump (as a measure of explosive power), sit and reach (as a measure of lower back/upper thigh flexibility), bent knee sit-ups completed in 60 seconds (as a measure of abdominal strength and endurance) and 600m distance run (as a measure of cardio respiratory-endurance). Mean and standard deviation of each variable were calculated. The means of respective variables between two groups were compared by using t-test. Statistical significance was tested at 0.05 level of confidence. For statistical calculations Excel Spread Sheet of windows version 7 was used. The results of the study showed that the Weight and BMI of the coastal area school students were significantly higher than the hill area school students. It also found that the SLJ (standing long jump), SAR (sit and reach) and Sit-up, 600m run time of the hill area school students were significantly better than the coastal area school students. On the other hand, coastal area school students taking significantly less time to complete the 20m.-dash than the hill area school students. This may happen due to the difference of life style, geographical hindrances in daily living, socioeconomic status and scope of physical activity between the children of two separate geographical areas.

KEYWORDS : Health-related physical fitness, hill area, costal area, BMI, Dash (20-meter run), SLJ (standing long jump), SAR (sit and reach), and Sit-up.

INTRODUCTION

Physical Fitness is a level of health in which you have muscular endurance, muscular strength, flexibility, cardiovascular endurance, and lean body composition. Physical fitness is achieved by the regular movement of muscles through a variety of exercises. Maintaining physical fitness is a life-long process and should always be part of your lifestyle. According to the Nixon, "Physical fitness refers to the organic capacity of the individual to perform the normal task of daily living without undue tiredness or fatigue having reserves of strength and energy available to meet satisfactory and emergency demands suddenly placed upon him." Three concepts comprise physical fitness: I) specific fitness- Which is based on the ability to perform specific aspects of recreation or occupations. II) Basic fitness- A state of health and wellbeing. III) Emergency preparation- The physical capability to avoid, adapt and overcome emergency situations. Physical fitness is commonly defined as the capacity to carry out the day's activities, pursue recreational activities, and have the physical capability to handle emergency situations.

It is frequently assumed that physical activity is an integral part of growing up, but many studies show that children and adolescents are often physically inactive. Recent studies also show evidence of greater inactivity among children in both vigorous and medial activities. It is also a question that cans geographical condition effect performance? To answer the question the present study was planned. Thus, the purpose of this study was to determine the level of basic fitness of the school children of hill and coastal area of west Bengal and to compare the basic fitness between the children belongs to hill area and costal area of west Bengal.

METHODS & MATERIALS

The sample for this study consisted of 54 boys' students from hill are and 60 boys' students from costal area of west Bengal in India. A total of 114 school boys' were chosen to participate as subjects in the present study. The age group of the subjects was ranged from 12 – 14 years. The schools were selected from two geographical areas of West Bengal. For the children belongs to coastal area two schools of east medinipore district were chosen, that was situated in Contai sub-division. For collecting data of the children from hill area one school of Kalimpong sub-division was chosen. All participants were healthy and

participated regularly in physical education class in school. The data were collected from June end to July first. For the present study random group design was adopted.

INSTRUMENTS AND PROCEDURE

Methods for evaluating fitness may vary according to the structure of the study. The AAHPERD (AAHPERD, 1984) test battery designed for the assessment of physical fitness in children was used as guidance in determining our test battery with slight modifications in consolidation with the Eurofit test battery (Adam et al., 1988). Standing height, body weight and body mass index (BMI) were measured as anthropometric variables. Five components of physical fitness were tested (four performance related and one health-related). These included 20-meter dash (as a measure of movement speed), standing long jump (as a measure of explosive power), sit and reach (as a measure of lower back/upper thigh flexibility), bent knee sit-ups completed in 60 seconds (as a measure of abdominal strength and endurance) and distance run (as a measure of cardio respiratory-endurance).

ANTHROPOMETRIC ASSESSMENT

Standing height was measured to the nearest 0.5 cm with the Martin-type anthropometer for the standing posture. Weight was measured to the nearest 0.1 kg using portable digital scales (Tanita BC 554, Body composition monitor). The measurements were made while the children were wearing light clothes and no shoes. BMI was calculated as weight in kilograms divided by the square of height in meters (BMI = kg/m²).

PHYSICAL FITNESS

The 20-meter dash was performed from the standing start position. The test measured the time elapsed to the nearest 0.1 second from the starting signal to crossing the finish line. Three trials were administered alternating with the resting pause. The mean value was calculated and included in the analysis.

The standing long jump (SLJ), as a measurement of explosive power, was measured to the nearest cm as the distance from the standing start to the point of landing heels. Three trials were administered and the mean value was included in the analysis.

The *sit and reach* (SAR) measured the distance of the performed stretch to the nearest cm.

Before the test, the shoes were removed and the subjects were instructed to slowly reach forward with their knees fully extended as far as possible with palms facing downward. This test represents flexibility in the lower back and upper thighs. Three trials were administered and the mean value was taken in the analysis. The maximum number of *sit-ups* achieved in 60 seconds was recorded. The subjects were instructed to keep their arms across the chest while curling up to a sitting position until their elbows touched their thighs. This test gave us insight into abdominal strength and endurance. One trial was given. A *distance run* (600 meters) was measured as the time elapsed to the nearest second from the starting signal to crossing the finish line. This test presents an example of cardiorespiratory endurance. The time necessary to cover the proposed distance was recorded in minutes and seconds. One trial was administered.

DATA ANALYSIS

Mean and standard deviation were the descriptive statistics and the differences between the students Health related physical fitness profiles between Government and Private Schools were determined using t-test. The level of significant difference was set at p<0.05 level of confidence. For statistical calculation Excel Spread Sheet of windows version 7 was used.

RESULTS AND DISCUSSION

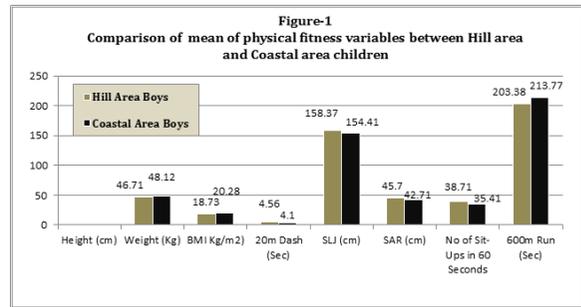
In Table-1 the mean and standard deviation of all the variables (anthropometric and fitness) of both government and Private school students has been presented.

Table 1
Mean SD and t-ratio of different variables for Hill and Coastal Students

Variable	Hill Area Boys Mean ± SD	Coastal Area Boys Mean ± SD	t-ratio
Height (cm)	148.92 ± 6.53	149.55 ± 5.84	1.02
Weight (Kg)	46.71 ± 7.78	48.12 ± 9.10	2.04*
BMI Kg/m ²	18.73 ± 3.13	20.28 ± 3.51	2.12*
20m Dash (Sec)	4.56 ± 0.75	4.10 ± 0.68	6.43 *
SLJ (cm)	158.37 ± 18.60	154.41 ± 19.62	2.08 *
SAR (cm)	45.70 ± 7.09	42.71 ± 8.23	3.89*
Sit-Ups in 60 Seconds	38.71 ± 7.44	35.41 ± 7.87	4.31*
600m Run (Sec)	203.38 ± 58.39	213.77 ± 39.48	2.42*

* SLJ - standing long jump, SAR - sit and reach, Table value of 't' for df (112) at 0.05 level of confidence = 1.98

The results of the study showed that the Weight and BMI of the coastal area school students were significantly higher than the hill area school students. It also found that the SLJ (standing long jump), SAR (sit and reach) and Sit-up, 600m run time of the hill area school students were significantly better than the coastal area school students. On the other hand, coastal area school students taking significantly less time to complete the 20m.-dash than the hill area school students. The mean value of the fitness components of the two groups was presented in figure-1.



The result may be explained by the fact that the difference of socio-economic status and scope of physical activity between the children of two separate geographical location. The difference of life style, food, nature of activity, difference of altitude, nature of sports participation differs from the children in these two geographical areas that may cause significant difference in the fitness status of the children of the two areas.

CONCLUSION

It can be concluded that in basic fitness there are significant difference existed in different variables between the children belongs to hill region and coastal region of West Bengal. From the result of the study following conclusions can be drawn:-

- The Weight and BMI of the coastal area school students were significantly higher than the hill area school students.
- It also found that the SLJ (standing long jump), SAR (sit and reach) and Sit-up, 600m run time of the hill area school students were significantly better than the coastal area school students.
- On the other hand, coastal area school students taking significantly less time to complete the 20m.-dash than the hill area school students.

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