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# A Study on the level of Multiple Intelligence Levels among College Students in Coimbatore City

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**ABSTRACT-** *Multiple Intelligence is an important factor that students should possess and is also looked upon by recruiters since these are likely to have an influence on their job performance. Hence a study was conducted to investigate the level of multiple intelligence among college students in Coimbatore city. The study included 280 college students and data was collected using a questionnaire which included questions pertaining to the demographic profile of students and the seven intelligences. The study used percentage analysis and cross tabulation to map the demographic profile of the respondents, descriptive statistics to find the level of Multiple Intelligence, t-test and Anova to find out whether significant difference existed in the levels of multiple intelligence across students of varied demographic profile. Results revealed that approximately 55% of the students possess the seven intelligences. There is significant difference in the interpersonal and interpersonal skills across education Assessment of the intelligence levels would help students' focus and develop their intelligence levels though training and practice during their education period in colleges.*

**KEYWORDS:** Multiple Intelligence, Interpersonal Intelligence

## INTRODUCTION

Introduced in 1983, Gardner's Multiple Intelligence (MI) theory provided a new way of looking at intelligence. This theory defines intelligence as "the capacity to solve problems or to fashion products that are valued in one or more cultural settings" (Oliver, 1997). Intelligence can denote a species-specific characteristic; homo-sapiens are that species that can exercise seven intelligences. Intelligence can also denote an individual difference. While all humans possess the right intelligences, each person has his own particular blend or amalgam of the intelligences. All brain-unimpaired people possess all the intelligences, which they blend in various ways in the course of creating something that is meaningful or performing a meaningful role or task. Intelligence has traditionally been defined in terms of intelligence quotient (IQ),

which measures a narrow range of verbal/linguistic and logical/mathematical abilities (Christison, 1996). Gardner (1993) argues that humans possess a number of distinct intelligences that manifest themselves in different skills and abilities. All human beings apply these intelligences to solve problems, invent processes, and create things. Intelligence, according to multiple intelligences theory, is being able to apply one or more of the intelligences in ways that are valued by a community or culture. Howard Gardner advocates that there are at least seven intelligences that need to be considered (Nelson, 1998):

1. Linguistic (syntax, phonology, semantics, pragmatics): the potential to use language, as used in reading, writing, telling stories, memorizing dates, and thinking in words.
2. Logical (Mathematical number, categorization, relations): the potential for understanding cause and effect and for manipulating numbers, quantities, and operations, as used in math, reasoning, logic, problem solving, and recognizing patterns Multiple Intelligences and Learning Styles
3. Spatial (accurate mental visualization, mental transformation of images): the potential for representing the spatial world internally in one's mind as used in reading maps and charts, drawing, solving mazes and puzzles, imagining and visualizing
4. Kinaesthetic (control of one's own body, control in handling objects): the potential for using one's whole body or parts of the body, as used in athletics, dancing, acting, crafting, and using tools
5. Musical (pitch, rhythm, timbre): the potential for thinking in music; for hearing, recognizing, and remembering patterns, as used in singing, identifying sounds, and in remembering melodies and rhythms
6. Interpersonal (awareness of others' feelings, emotions, goals, motivations): the potential for working with others, as used in understanding people, leading and organizing others, communicating, resolving conflicts, and selling
7. Intrapersonal (awareness of one's own feelings, emotions, goals, motivations): the potential for understanding ourselves, as used in understanding self, recognizing one's own strengths and weaknesses, and setting personal goals

Every individual possesses a combination of these intelligences at varied levels. It is essential to assess these intelligences especially at the student level to enable them gain insight into their level of intelligence across the seven categories and accordingly make a choice of their career so that they excel in their career. Further it is essential for the institutions to assess these intelligences among students to enable them provide training to hone these intelligences thus paving way for the holistic development of the students and helping them to lead a better life. Hence we aspired and conducted the study to assess the MI level among college students in Coimbatore city

## **REVIEW OF LITERATURE**

Studies have been conducted to assess the MI levels of students at various capabilities right from school level to post graduate level. Studies reveal that students have capabilities of doing two things at a time which is directly related to their intelligence levels. According to Berman (1998), on the basis of the theory of multiple intelligences, children can draw a picture while listening to a description, act out a nursery rhyme, follow instructions or make a shape or simple model while they listen to a description of it (Brewster, Ellis and Girard, 2003). This drawing and learning by the ear and eye and is good for those with bodily-kinaesthetic intelligence.

In case of school children, while everyone might possess seven intelligences, they are not equally developed in any one individual. Some teachers feel that they need to create activities that draw on all seven, not only to facilitate language acquisition amongst diverse students, but also to help them realise their full potential in all the seven intelligences. One way of doing so is to think about the activities that are frequently used in the classroom and to categorise them according to intelligence type (Larsen-Freeman, 2000).

There are research studies that explain the advantages of using project-based learning in educational settings (Fried-Booth, 1997; Williams, 1998; Korkmaz and Kaptan, 2000; Korkmaz, 2002; Balki-Girgin, 2003; Yurtluk, 2003; Basbay, 2006; Gultekin, 2005). However, only a few of them have focused on project-based learning in English teaching (Cirak, 2006; Kemaloglu, 2006).

Study by Anubha Singh, Mihir Dash and Vivek Anand, (2011) found that postgraduate management students in general are more oriented towards the use of linguistic, logical/mathematical, interpersonal and intrapersonal intelligences. This would correspond to the kind of course structure and the emphasis on teaching both quantitative and non-quantitative subjects

Hoffman and Frost, (2006) examined how the theory of MI as espoused by Gardner may be used to enhance the productivity of teams and results indicated that multiple intelligences framework is a useful approach to predict transformational leadership. Study by Weller, (1999) established that businesses can use multiple intelligences theory to structure workshops and training sessions for employees, which would enhance teamwork, develop human potential, and foster creativity.

## **OBJECTIVE OF THE STUDY**

The objectives of the study were

1. To measure the MI Level of students
2. To examine the students' MI Level across gender, education and location of residence, age and religion.

## METHODOLOGY

The study was descriptive in nature and adopted survey strategy. A questionnaire was used to seek responses from the college students in Coimbatore City, India. The variables included in the study tend to assess the MI of students. The study used the seven intelligences of MI put-forth by Gardner (1993), which Nelson (1998) considered to be the most comprehensive ones. MI was measured using a four-point Likert's scale, ranging from 4 mostly agree to 1 mostly disagree. Questions to profile the demographic characteristics of the students included gender, age, educational level (UG or PG degree), location of residence and number of siblings. The study used primary and secondary data. Primary data was collected using a questionnaire and secondary data was collected from journals and websites.

Using a preliminary draft questionnaire, a pilot study was conducted with 73 respondents from seven different colleges in Coimbatore City and these responses were excluded from the final study. Reliability of the variables were ensured by examining the Cronbach's alpha ( $\alpha$ ) coefficient with an alpha value of  $>0.7$  considered to be acceptable (Nunnally, 1978).

The population for the study covers the college students in India. The present research felt the population too exhaustive and hence as a representation of the college students in India the study identified its sampling frame as those colleges in Coimbatore city, since Coimbatore is one of the education hubs in India. Consequently, the study included respondents from Engineering and Arts and Science colleges in Coimbatore city. There are about 55 Engineering colleges and 70 Arts and Science colleges in Coimbatore city. The study adopted two stage sampling technique. In stage 1, the Engineering and Arts and Science Colleges were arranged in alphabetical order and every fifth college 10-15 respondents were selected at random. Data was collected during the months of September and October 2013 and about 12 questionnaires were rejected due to insufficient data. The numbers of respondents included in this study were:

College	Engineering	Arts and Science
Number of respondents	122	158

The study used percentage analysis and cross tabulation to map the demographic profile of the respondents, descriptive statistics to find the level of MI; t-test and Anova to find whether the perception of students varied across gender, education and location of residence and chi-square test to find the influence of education and no. of siblings on interpersonal and intrapersonal skills.

## DEMOGRAPHIC PROFILE OF THE RESPONDENTS:

The sample consisted of 139 (49.6%) male respondents and 141 (50.3%) female respondents. Students of both the genders were considered almost equally for the study. The study considered students between age groups 18 years to 25 years. Distribution of male and female is high in the age group of 21 years, male (58) and female (66). Among these age groups, the respondents were 44.3% from age group 21 years which is the highest followed by age group of 22 years with 28.6%. Students are equally distributed among other age groups. The study comprised 52.1% students pursuing UG degree and 47.9% pursuing PG degree and respondents were from rural (43.9%) and urban areas (56.1%).

### Gender-wise distribution of respondents across educational level

		Education		Total
		UG	PG	
Gender	Male	74	65	139
	Female	72	69	141
Total		146	134	280

The study comprised 74 male students and 72 female students pursuing UG courses and 65 male and 69 female students pursuing PG courses. Female students have opted more for PG courses compared to Male, since men are mostly career-oriented than women.

### Education-wise distribution of respondents across area of residence

		Area of Residence		Total
		Rural	Urban	
Education	UG	51	95	146
	PG	72	62	134
Total		123	157	280

51 UG students and 72 PG students are from rural area and 95 UG students and 62 PG students are from urban area, which is a good indication that students from rural area prefer to pursue higher studies than confining to UG degree.

## ANALYSIS AND DISCUSSION

t-test were performed to find the difference in perception across gender, education and location of residence and age.

### MI scores across male and female students

**Table 1: MI scores across male and female students**

Gender	MI	N	Mean	Std. Deviation
Male	Linguistic	139	3.0360	.66387
Female		141	3.0567	.68424
Male	Musical	139	2.9281	.64426
Female		141	3.1560	.72981
Male	Spatial	139	2.9568	.61232
Female		141	3.0213	.65974
Male	Logical	139	2.9928	.61968
Female		141	3.0000	.68661
Male	Bodily	139	3.0360	.61867
Female		141	2.9787	.71182
Male	Interpersonal	139	3.0432	.61232
Female		141	3.2270	.74036
Male	Intrapersonal	139	3.0863	.63110
Female		141	3.1702	.68616

From table 1 it is inferred that the mean value of musical intelligence among male students is 2.9281 and female is 3.1560; Interpersonal intelligence in male is 3.0432 and female is 3.2270; mean value of Intrapersonal intelligence in male is 3.0863 and female is 3.1702. Though there existed a difference in the intelligence scores among students of varied gender, yet whether the difference is significant could be confirmed through Independent sample t-test (table 1). When the significance level under Levene's test for Equality of Variance was  $< .05$ , the t value under "equal variances assumed" value from Sig (2-tailed) was considered. On the other hand when the significance level under Levene's test for Equality of Variance was  $> .05$ , the t value under "equal variances not assumed" value from Sig (2-tailed) was considered to find whether significant difference in the perception of students existed for MI. t-test revealed that there existed significant difference for (Table 1) musical intelligence ( $p=0.006$ ), interpersonal intelligence ( $p=0.024$ ) and intrapersonal intelligence ( $p=0.288$ ) among male and female students. Here, the scores for female students are higher than male students.

## MI scores across UG and PG students

**Table 2: MI scores across UG and PG students**

Education	MI	N	Mean	Std. Deviation
UG	Linguistic	146	3.0822	.67983
PG		134	3.0075	.66600
UG	Musical	146	3.0342	.70871
PG		134	3.0522	.68625
UG	Spatial	146	2.9384	.58983
PG		134	3.0448	.68128
UG	Logical	146	3.0137	.61968
PG		134	2.9776	.68788
UG	Bodily	146	2.9932	.72869
PG		134	3.0224	.59404
UG	Interpersonal	146	3.1781	.73047
PG		134	3.0896	.63082
UG	Intrapersonal	146	3.2603	.58786
PG		134	2.9851	.70428

From table 2 it is inferred that the mean value of Interpersonal intelligence among UG students is 3.1781 and PG students is 3.0896. t-test revealed that there existed significant difference (Table 2) in interpersonal intelligence levels among UG and PG students ( $p=0.281$ ).

## MI scores across area of location (Urban/Rural)

**Table 3: MI scores across rural and urban students**

Area	MI	N	Mean	Std. Deviation
Rural	Linguistic	123	2.9593	.65785
Urban		157	3.1146	.67907
Rural	Musical	123	3.0244	.72951
Urban		157	3.0573	.67218
Rural	Spatial	123	3.0407	.64526
Urban		157	2.9490	.62835
Rural	Logical	123	3.1057	.61154
Urban		157	2.9108	.67345
Rural	Bodily	123	3.0325	.57167
Urban		157	2.9873	.73369
Rural	Interpersonal	123	3.0081	.67138
Urban		157	3.2357	.68069
Rural	Intrapersonal	123	3.1951	.64856
Urban		157	3.0764	.66546

From table 3 it is inferred that the mean value of Interpersonal intelligence levels among students from rural area is 3.0081 while that from urban location is 3.2357. t-test revealed that there existed significant difference (Table 3) in interpersonal intelligence levels ( $p=0.006$ ) across students from urban and rural areas. Results reveal that urban students possess higher interpersonal skill level as compared to students from rural background, whereas, students from rural area possess more intrapersonal skills than students from urban background.

### MI scores across Age

**Table 4: MI scores across students of varied age groups**

Intelligence		Sum of Squares	df	Mean Square	F	Sig.
Linguistic	Between Groups	5.211	7	.744	1.671	.116
	Within Groups	121.186	272			
	Total	126.396	279	.446		
Musical	Between Groups	5.830	7	.833	1.747	.098
	Within Groups	129.656	272			
	Total	135.486	279	.477		
Spatial	Between Groups	5.429	7	.776	1.962	.060
	Within Groups	107.539	272			
	Total	112.968	279	.395		
Logical	Between Groups	2.587	7	.370	.864	.536
	Within Groups	116.409	272			
	Total	118.996	279	.428		
Bodily	Between Groups	7.013	7	1.002	2.330	.025
	Within Groups	116.972	272			
	Total	123.986	279	.430		
Interpersonal	Between Groups	8.974	7	1.282	2.861	.007
	Within Groups	121.869	272			
	Total	130.843	279	.448		
Intrapersonal	Between Groups	2.082	7	.297	.678	.690
	Within Groups	119.289	272			
	Total	121.371	279	.439		

The intelligence level among students of varied age groups revealed that significant difference existed for bodily intelligence ( $p= 0.025$ ) and interpersonal intelligence ( $p=0.007$ ).

## CONCLUSION

People are different and they have different combinations of intelligences. All of the intelligences are important. Gardner (1993) stated, "If we can mobilize the full range of human intelligences and ally them to an ethical sense, we can help to increase the likelihood of our survival on this planet, and perhaps even contribute to our thriving". Our paper supports this fact by revealing that approximately 55% of the students possess the seven intelligences. Among this, women are found to have higher level of intelligence compared to men. Also students from rural area have higher intrapersonal intelligence levels implying their focus on self compared to urban students who have more interpersonal intelligence levels implying the impact of the cultural heritage and their preference for engaging in collective work, professionalism and exposure they have gained. There is significant difference in the interpersonal and intrapersonal skills across UG and PG students. An interesting feature is that the UG students are found to be more interpersonal and intrapersonal than PG students around Coimbatore city. This study provides insight into the varied levels of intelligence possessed by students of varied demographic profile. Such studies would help students to gain insight into their level of intelligence thus enabling them to focus on areas for improvement so that it helps them enhance their competencies, make choice of their job based on their intelligence levels so that they excel in their career. Educational institutions could focus on enhancing the intelligence levels of students through self introspection and training programmes which could help them make better career choices and also pave the way for the holistic development of the students. In today's business world, it is the turn of the younger generation to do wonders. This trend should increase in shaping the nation in the forthcoming years and also to lead the way in realizing Dr APJ Abdul Kalam's vision of India 2020.

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# Analysis of On Balance Volume in MCX Energy

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**ABSTRACT** - *The purpose of this study is to find out the effectiveness of technical tools in predicting the index price movement. The research is based on secondary data collected from MCX websites. The Technical indicators taken for the study are On Balance Volume (OBV). From the study it is found that to analyze the price movements of commodities the data were analyzed with the help of On Balance Volume, E Garch and Compound Annual Growth Rate which gives valid results about the commodity prices in the MCX. Trend analysis is also used to spot out the percentage change in the market price of the commodities (crude oil and natural gas) during the period of the study.*

**KEYWORDS:** Technical Analysis, Simple Moving Average, On Balance Volume, Annual Growth Rate, Price Movements

## INTRODUCTION

The economic development of a nation is reflected by the progress of the various economic units, broadly classified into corporate sector, government and household sector. While performing their activities, these units will be placed in surplus/deficit/balanced budgetary situations. Financial system comprises of a set of sub-systems namely financial institutions, financial markets, financial instruments and financial services which help in the formation of capital. Thus a financial system provides a mechanism by which savings are transformed into investments and it can be said that financial system plays a significant role in the economic growth of a country by mobilizing surplus funds and utilizing them effectively for productive purpose.

The financial system is characterized by the presence of integrated, organized and regulated financial markets, and institutions that meet the short term and long term financial needs of both the household and corporate sector. Both financial markets and financial institutions play an important role in the financial system by rendering various financial services to the community. They operate in close combination with each other. A Financial System is a composition of various institutions, markets, regulations and laws, practices, money manager, analysts, transactions and claims and liabilities.

## COMMODITY MARKET

Commodity markets are markets where raw or primary products are exchanged. These raw commodities are traded on regulated commodities exchanges, in which they are bought and sold in standardized contracts. Commodity market is an important constituent of the financial markets of any country.

### MULTI COMMODITY EXCHANGE OF INDIA LIMITED (MCX)

Multi Commodity Exchange of India Limited (MCX) is an independent and de- mutualised exchange with permanent reorganization from Government of India, having Head Quarters in Mumbai. Key share holders of MCX are Financial Technologies (India) Limited, State Bank of India, Union Bank of India, Corporation Bank of India, Bank of India and Canara Bank. MCX facilitates online trading, clearing and settlement operations for commodity futures market across the country.

MCX started off trade in November 2003 and has built strategic alliance with Bombay Bullion Association, Bombay Metal Exchange, Solvent Extractors Association of India, Pulses Importers Association and Shetkari Sanghatana. MCX deals with about 100 commodities.

### COMMODITIES TRADED AT MCX

Bullion	Gold, Gold Gunia, Gold mini, Gold petal, Platinum, Silver, Silver mini, Silver Micro
Oil and seeds	Crude palm oil, Kapasia khalli, Refined soya oil, soya bean
Spices	Pepper, Red Chilli, Jeera, Turmeric
Metal	Copper, Nickel, Lead, Zinc, Aluminum
Fiber	Kapas, Cotton long staple, Cotton medium staple, Cotton short staple
Cereals	Barley, wheat, maize
Energy	Crude oil, Natural gas, Brent crude oil, Furnace oil
Plantation	Rubber
Weather	Carbon(CER), Carbon(CFI)
Pulses	Chana, Urad, Yellow peas, Tur, Masur
Others	Menthe oil, Almond, Potato, Guar seed

### REVIEW OF LITERATURE

**Frankel and Froot 1990** – “**Technical Indicators**” Practitioners’ reliance on technical analysis is well documented and noted that market professionals tend to include technical analysis in forecasting the market. There is also a shift away from the fundamentals to technical analysis in the 1980s, according to a survey done by Euro

money (see Frankel and Froot, 1990a). On a market level, the prevalence of technical analysis is demonstrated by the fact that most real time financial information services, like Reuters and Telerate, provide detailed, comprehensive and up-to-date technical analysis information.

**Ramey and Ramey (1995)**-“**Managing Commodity Price Volatility**” probed & had a conclusion on energy price volatility that oil prices are highly volatile compared with all products manufactured in the United States. Yet relative to other commodities, oil prices have in fact been less volatile than most other commodity prices up to 1986. A link between high price volatility and lower growth rates is also found in the cross-country study. It looks at a panel of 92 countries and establishes a robust negative relationship between government spending, price volatility, and average growth rates during the period 1960-1985.

**Thomas A. Bierovic (2006)** –“**On Balance True Range**” On-Balance True Range (OBTR) is the attempt to improve on the old On-Balance Volume study (OBV). The OBV line confirms the current trend by making new highs or new lows along with prices, or it warns of a possible trend reversal by diverging from price action. OBV is a reasonably good trend-following indicator. On-Balance True Range is an improvement to On-Balance Volume because we do not have to rely on tick volume or wait until tomorrow to obtain actual volume figures and because OBTR more accurately reflects a market’s real activity when there is a gap.

**Xun Luo (2007)** – “**Study of Fundamental Analysis for Crude Oil Futures Prices**” investigated the analysis of fundamental drivers for the prices of crude oil futures. The report first presents a summarization of the crude oil basics, including types, futures trading and modelling approaches. Four quantitative models that use fundamental as parameters for crude oil price forecasting are subsequently evaluated. This project tries to use fundamental analysis approaches for in-depth study of crude oil futures price. Although quantitative models have been very successful in the financial derivatives market, fundamental analysis is still an indispensable element for energy derivatives, which crude oil futures is one its kind. The result is also partially reflected in the quantified influential power of futures price in determination of future spot prices.

**Venkataraman (2008)** suggests that Price movements do not depend wholly on Technical Analysis. Fundamental factors also affect the commodity market price. So, each and every investor should think about their selling and buying the product before the investment. Day to day price changes in Government policies also affect the market prices. Political stability, war, depression / boom of the economic condition will affect the market. In India, commodity market growth has been increasing day by day. Awareness has spread throughout the country now. Ignorance of the commodity market has been slightly removed by the government policies.

**Keppo. I (2009) – “Influence of rising commodity prices on energy policy”** It states that although the commodity production costs usually have a fairly large energy component, the high increases in commodity prices, and raw material costs of power plant investments, cannot explain the recently experienced hikes in power plant investment costs; a doubling of the costs of the main raw material flows could explain an investment cost increase of some 5-10%, depending on the power plant type. This would seem to indicate that other contributing factors, such as bottlenecks in the production of power plant components, may play an important role in the recent investment cost increase.

## **OBJECTIVES OF THE STUDY**

1. To study the MCX Energy trend by using On Balance Volume.
2. To Study the price volatility by using E GARCH.
3. To calculate the annual growth rate of the two commodities.

## **RESEARCH DESIGN**

The research design is the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. It is a blue print that is followed in completing a study.

## **ANALYTICAL RESEARCH:**

Research Design was based on analytical research, on the other hand, the researcher had to use facts or information already available, and analyze these to make a critical evaluation of the material

## **SOURCES OF DATA**

Secondary data has been collected for this research. The past 5 years of energies (Natural gas and crude oil) future data can be collected from January 1, 2008 to December 31, 2012. The data has been collected from MCX (Multiple commodity Exchange) website and other related website.

## **PERIOD OF STUDY**

The study had been carried out for a period of five years of daily data of commodities (crude oil and natural gas) future prices from MCX ((Multi Commodity Exchange) the total number of sample was 1559 observation taken from January 1, 2008 to December 3, 2012

## **TOOLS FOR ANALYSIS**

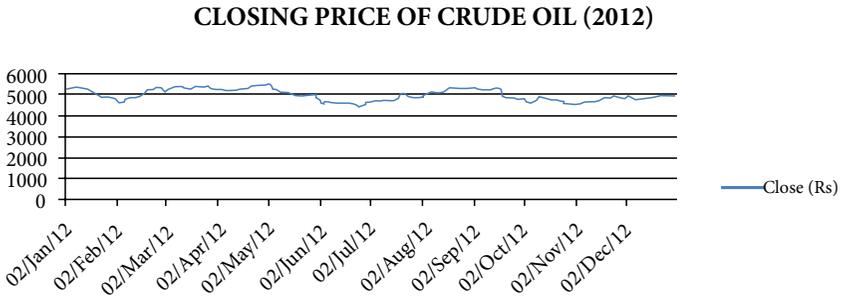
1. ON BALANCE VOLUME INDICATOR
2. COMPOUND ANNUAL GROWTH RATE ANALYSIS
3. E GARCH

## ANALYSIS AND INTERPRETATION

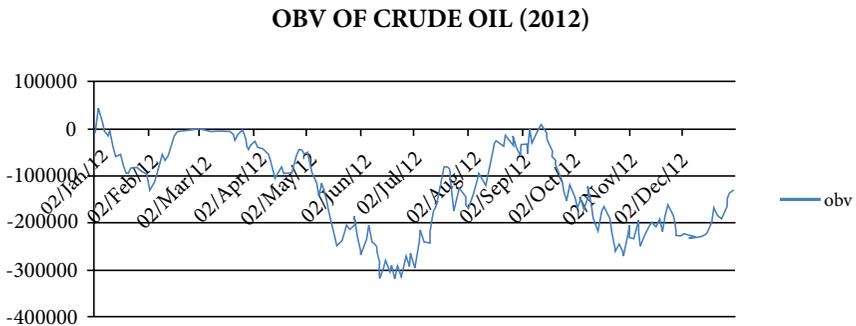
### 1.1 On Balance Volume of Crude Oil in The Year 2012

The daily prices of crude oil futures had been taken from MCX India for calculating the On Balance Volume (OBV) for the period January 1, 2012 to December 31, 2012. The conclusion is as shown in the figures given below

**Figure 1.1.1**



**Figure 1.1.2**



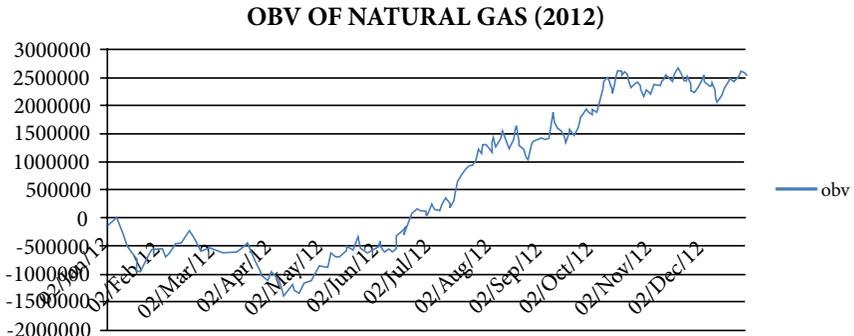
### INTERPRETATION:

The figure 1.1.1 & 1.1.2 shows that by comparing the closing price and On Balance Volume in the period of 2012. Rising price of crude oil and a falling OBV in 2012 reflects the negative volume and there is no positive volume pressure

### 1.2 On Balance Volume of Natural Gas in the Year 2012

The daily prices of Natural gas futures had been taken from MCX India for calculating the On Balance Volume (OBV) for January 1, 2012 to December 31, 2012 the data is as shown in the figures given below

**Figure 1.2.1**



**INTERPRETATION:**

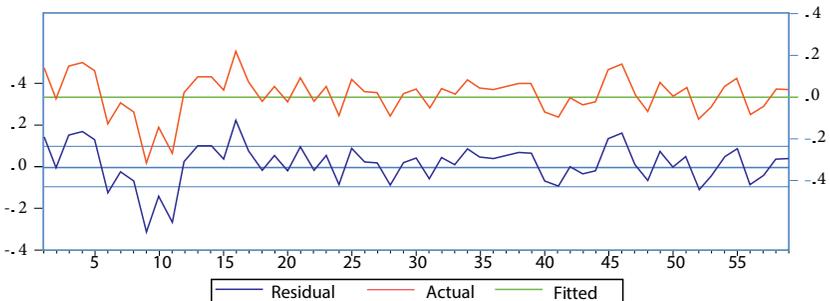
The figure 1.2.1 & 1.2.2 shows that by comparing the closing price and On Balance Volume in the period of 2008. A fall in the price of natural gas and a rising OBV in the month of November and December 2012 reflects positive volume pressure that can lead to higher prices and a falling OBV in January to May 2012 reflects negative volume pressure that can foreshadow lower prices.

**2.1 E Garch Analysis of Crude Oil**

$$\text{LOG}(\text{GARCH}) = C(1) + C(2)*\text{ABS}(\text{RESID}(-1)/\text{@SQRT}(\text{GARCH}(-1))) + C(3) * \text{RESID}(-1)/\text{@SQRT}(\text{GARCH}(-1)) + C(4)*\text{LOG}(\text{GARCH}(-1))$$

Variable	Coefficient	Std. Error	z-Statistic	Prob.
	Variance Equation			
C(1)	-0.470788	0.455225	-1.034189	0.3010
C(2)	0.211741	0.283702	0.746350	0.4555
C(3)	-0.060968	0.151323	-0.402903	0.6870
C(4)	0.942084	0.066039	14.26559	0.0000

**Figure 2.1.1**



## INTERPRETATION:

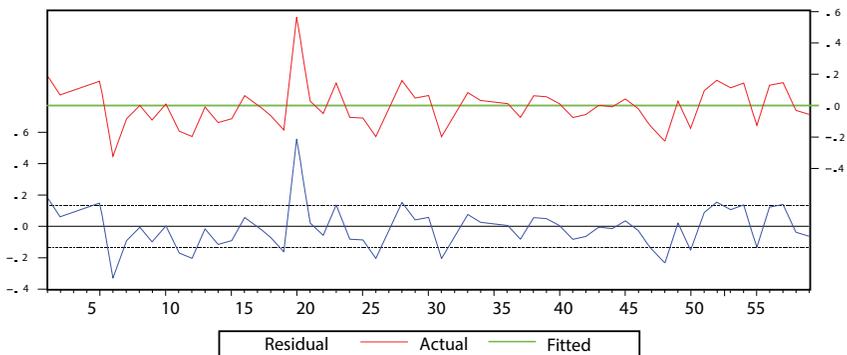
The results of E-GARCH (1, 1) effect for crude oil returns are given in the above table. According to the table, The Co-efficient of parameters are C (1)-0.470788, C (2) 0.211741, C (3) -0.060968 and C (4) 0.942084. The sum LOG (GARCH) equation was close to one. This reveals crude oil experienced normal volatility. It's risky for the investors during the study period from January 2008 to December 2012.

## 2.2 E Garch Analysis of Natural Gas

$$\text{LOG(GARCH)} = C(1) + C(2)*\text{ABS}(\text{RESID}(-1)/\text{@SQRT}(\text{GARCH}(-1))) + C(3) \\ * \text{RESID}(-1)/\text{@SQRT}(\text{GARCH}(-1)) + C(4)*\text{LOG}(\text{GARCH}(-1))$$

Variable	Coefficient	Std. Error	z-Statistic	Prob.
	Variance Equation			
C(1)	-3.269548	1.835365	-1.781416	0.0748
C(2)	0.953298	0.349797	2.725294	0.0064
C(3)	-0.225652	0.168399	-1.339986	0.1802
C(4)	0.395303	0.413395	0.956235	0.3390

Figure 2.2.1



## INTERPRETATION:

The results of E-Garch (1, 1) effect for natural gas returns are given in the above table. According to the table, the Co-efficient of parameters are C(1)-0.470788, C(2) -0.470788, C(3)-0.060968 and C(4) 0.942084. The sum LOG (GARCH) equation was close to one. This reveals natural gas experienced less volatility. It was risky for the investors during the study period from January 2008 to December 2012

### 3.1 Compound Annual Growth Rate of Crude Oil

$$\begin{aligned}\text{CAGR} &= [\text{Ending value}/\text{Beginning value}]^{1/5-1} \\ &= [3772.0/5015.0]^{1/5-1} \\ &= [3772.0/5015.0]^{0.5-1} \\ &= 0.7521436^{0.5-1} \\ &= 0.0586 \times 100 \\ &= 5.97\%\end{aligned}$$

Compound Annual Growth Rate: 5.97%

#### INTERPRETATION:

Over the course of 5 periods Crude oil grew from \$3,752.00 to \$5,015.00, its compound annual growth rate, or its overall return of crude oil is 5.97%.

However, although investment started at \$3,752.00 and ended with \$5,015.00, its growth in any one year may have been quite a bit lower or even positive (if the investment gained money over that time). Consequently, the CAGR figure may give the impression that the investment has produced a stable return (or, in this case, a decline) throughout its life, even if the investment was extremely volatile, fluctuating a great deal from year to year.

### 3.2 Compound Annual Growth Rate of Crude Oil

$$\begin{aligned}\text{CAGR} &= [\text{Ending value}/\text{Beginning value}]^{1/5-1} \\ &= [184.9/293.5]^{1/5-1} \\ &= [184.9/293.5]^{0.5-1} \\ &= 0.629983^{0.5-1} \\ &= -8.83\%\end{aligned}$$

#### INTERPRETATION:

Over the course of 5 periods Crude oil grew from \$184.90 to \$293.50, its compound annual growth rate, or its overall return of crude oil is 8.83%

However, although investment started with \$184.90.00 and ended with \$293.50, its growth in any one year may have been quite a bit lower or even positive (if the investment gained money over that time). Consequently, the CAGR figure may give the impression that the investment has produced a stable return (or, in this case, a decline) throughout its life, even if the investment was extremely volatile, fluctuating a great deal from year to year.

#### FINDINGS

1. Rising the price of crude oil and a falling OBV in 2012 reflects the negative volume and there is no positive volume pressure
2. A rising OBV in the month of November and December 2012 reflects positive volume pressure that can lead to higher prices and a falling OBV between January to May 2012 reflects negative volume pressure that can foreshadow lower price.

3. The Result of E Garch of crude oil, the Co-efficient of parameters are C(1)- 0.470788, C(2) 0.211741, C(3) -0.060968 and C(4) 0.942084. The sum LOG (GARCH) equation was close to one. This reveals crude oil experienced high volatility. It was risky for the investors during the study period January 2008 to December 2012.
4. The Result of E-Garch (1, 1) effect for crude oil returns are given in the above table. According to the table, the Co - efficient of parameters are C (1) - 0.470788, C (2) - 0.470788, C (3) - 0.060968and C (4) 0.942084. The sum LOG (GARCH) equation was close to one. This reveals natural gas experienced less volatility. It was of low risk to the investors during the study period January 2008 to December 2012
5. The compound annual growth rate for natural gas has decreased to -8.83 during 5 yrs. And for crude oil the compound annual growth has increased to 5.97.

## CONCLUSION

On Balance Volume (OBV) is a simple indicator that uses volume and price to measure buying pressure and selling pressure. Buying pressure is evident when positive volume exceeds negative volume and the OBV line rises. Selling pressure is present when negative volume exceeds positive volume and the OBV line falls. Chartists can use OBV to confirm the underlying trend or look for divergences that may foreshadow a price change. As with all indicators, it is important to use OBV in conjunction with other aspects of technical analysis. It is not a stand alone indicator. OBV can be combined with basic pattern analysis or to confirm signals from momentum oscillators. But Technical Analysis does not give absolute predictions about the future. Instead it can be used as an anticipatory tool.

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# Contextualizing Workplace Stress: The Experience of Private Bank Employees in Coimbatore – Empirical Study

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**ABSTRACT-** *Stress is inevitable in our society. Researchers on stress make it clear that, to enter in to the complex area of stress, especially in to the area of occupational stress, is very difficult. Stress is an unavoidable consequence of modern living. During the past decade, the banking sector had under gone rapid and striking changes like policy changes due to globalization and liberalization, increased competition due to the entrance of more private (corporate) sector banks, downsizing, introduction of new technologies, etc. Due to these changes, the employees in the banking sector are experiencing high level of stress. In light of the above, the present study attempts to throw light on the various problems of occupational stress among banking professionals specifically the HDFC bank employees. For meeting the objective Occupational Stress Index (OSI) constructed by Srivastava and Singh was used in the study. The questionnaire is categorised into 10 sub scales namely Role Overload, Role Ambiguity, Role Conflict, Unreasonable Group and Political Pressure, Responsibility for Persons, Under Participation, Powerlessness, Poor Peer Relations, Low Status and Strenuous Working Conditions.*

*The subjects were 103 professionals occupying various positions in HDFC Bank. The study was largely concentrated to four branches of Coimbatore. The result obtained was analyzed using descriptive statistics and inferential statistics.*

*In this juncture, the present study is undertaken to address specific problems of Private banks' employees related to occupational stress. This throw light into various problems related to occupational stress among bank employees. The study will be helpful to draw up further policy on the related fields and act as a secondary data for further research.*

**KEYWORDS:** Workplace stress, Occupational stress

## INTRODUCTION

During the past decade, the banking sector has under gone rapid and striking changes like policy changes due to globalization and liberalization, increased competition due to the entrance of more private (corporate) sector banks, downsizing, introduction of new technologies, etc. Due to these changes, the employees in the banking sector are experiencing high levels of stress. This research investigates the relationship between occupational stress and individual characteristics of the employees of private banks. It also shows the effect of various factors on occupational stress. This study also helps us to identify which factor causes more of stress in work place. Nowadays it has become

more important for a bank employee to manage stress and this helps to identify and reduce most stress causing factor.

Considering role stress as a debilitating syndrome, this study has been undertaken with an aim to systematically investigate the factors causing role stress amongst bank professionals. Banks are among the top ten high stress related workplaces in India. Elucidating the causes of role stress is important not only for its potential implications for stress management at banks but also for enhancing and understanding of strategic human resource management. With this aim, the study makes an effort to identify the sources of role stress experienced by the employees of commercial banking sector.

## **NEED FOR THE STUDY**

Modern living has brought with it, not only innumerable means of comfort, but also a plethora of demands that tax human body and mind. Now-a-days everyone talks about stress. Not only just high pressure executives are its key victims but it also includes laborers, slum dwellers, working women, businessmen, professionals and even children. Stress is an inevitable and unavoidable component of life due to increasing complexities and competitiveness in living standards. The speed at which change is taking place in the world today is certainly overwhelming and breathe taking. In the fast changing world of today, no individual is free from stress and no profession is stress free. Everyone experiences stress, whether it is within the family, business, organization, study, work, or any other social or economical activity. Thus in modern time, stress in general and job stress in particular has become a part of life and has received considerable attention in recent years. Stress has become the core concern in the life of everyone, but everybody wants stress-free life. Stress is a subject which is hard to avoid. Stress is a part of day-to-day living. Every individual is subjected to stress either knowingly or unknowingly. Stress, long considered alien to Indian lifestyle, is now a major health problem / hazard. The present study was designed to analyze the factors influencing stress among the selected branch employees of private banks in Coimbatore.

## **INDUSTRY PROFILE**

In the early 1990s, the then Narasimha Rao government embarked on a policy of liberalization, licensing a small number of private banks. These came to be known as New Generation tech-savvy banks, and included Global Trust Bank (the first of such new generation banks to be setup), which later amalgamated with Oriental Bank of Commerce, Axis Bank (earlier as UTI Bank), ICICI Bank and HDFC Bank. This move, along with the rapid growth in the economy of India, revitalized the banking sector in India, which has seen rapid growth with strong contribution from all the three sectors of banks, namely, government banks, private banks and foreign banks. The next stage for the Indian banking has been set up with the proposed relaxation in the norms for Foreign Direct Investment, where all Foreign Investors in banks may be given voting rights which could exceed the present cap of 10%, at present it has

gone up to 74% with some restrictions. The IT revolution had a great impact in the Indian banking system. The use of computers had led to introduction of online banking in India. The use of the modern innovation and computerization of the banking sector of India has increased many folds after the economic liberalization of 1991 as the country's banking sector has been exposed to the world's market. The Indian banks were finding it difficult to compete with the international banks in terms of the customer service without the use of information technology and computers.

In 1988, the RBI set up a committee on Computerization in Banks (1988) headed by Dr. C.R.Rangarajan which emphasized that settlement operation must be computerized in the clearing houses of RBI in Bhubaneswar, Guwahati, Jaipur, Patna and Thiruvananthapuram. It further stated that there should be National Clearing of inter-city cheques at Kolkata, Mumbai, Delhi, Chennai and MICR should be made operational. It also focused on computerization of branches and increasing connectivity among branches through computers. It also suggested modalities for implementing on-line banking. The committee submitted its reports in 1989 and computerisation began from 1993 with the settlement between IBA and bank employees' association. In 1994, a Committee on Technology Issues relating to Payments System, Cheque Clearing and Securities Settlement in the Banking Industry (1994) was set up with chairman Shri.W.S.Saraf, Executive Director, Reserve Bank of India. It emphasized on Electronic Funds Transfer (EFT) system, with the BANKNET communications network as its carrier. It also said that MICR clearing should be set up in all branches of all banks with more than 100 branches. Committee for proposing Legislation On Electronic Funds Transfer and other Electronic Payments (1995) emphasized on EFT system. Electronic banking refers to DOING BANKING by using technologies like computers, internet and networking, MICR, EFT so as to increase efficiency, quick service, productivity and transparency in the transaction.

## **TYPES OF BANKS**

Banks' activities can be divided into retail banking, dealing directly with individuals and small businesses; business banking, providing services to mid-market business; corporate banking, directed at large business entities; private banking, providing wealth management services to high net worth individuals and families; and investment banking, relating to activities on the financial markets. Most banks are profit-making, private enterprises. However, some are owned by government, or are non-profit organizations.

### **Types of Retail Banks:**

Commercial bank, Community banks, Credit unions, Postal savings banks, Private banks, Offshore banks, Savings bank, Building societies and lend banks, Ethical banks and A Direct - or Internet-Only bank.

### **Types of Investment Banks:**

Investment banks “underwrite” and Merchant banks.

**Banking and Insurance:** Universal banks

**Other Types of Banks:** Central banks and Islamic banks.

## **OBJECTIVES OF THE STUDY**

1. To assess the occupational stress levels among different categories of employees working in Private Banks.
2. To find out major stress causing factors and analyze stress level in private banks employees in relation to individual differences.
3. To identify the degree of relationship among the stress causing factors and also with demographic characteristics.
4. To offer valuable suggestion on how to cope with stress by the private banks employees.

## **SCOPE OF THE STUDY**

1. Stress can be brought about by pressures at home and at work. Employers cannot usually protect workers from stress arising outside of work, but they can protect them from stress that arises through work.
2. Stress at work can be a real problem to the organization as well as for its workers. Good management and good work organization are the best forms of stress prevention. This study is helpful in assessing the extent of stress experienced by the employees.
3. To understand Stress-management strategies and seek to extend the wellbeing of the supervisor relationship with their subordinates.

## **RESEARCH METHODOLOGY**

### **Research Design**

A research design is a plan that specifies the objectives of the study, method to be adopted in the data collection, tools in data analysis and hypothesis to be framed. The research design helps in providing direction to the computation and interpretation process to arrive at solutions and recommendations.

### **Primary Data**

Primary data are the first hand information collected by the researcher for the immediate data collection. For the present study, structured questionnaire was used to elicit responses from the respondents because of the simplicity and reliability.

### **Secondary Data**

The secondary data was collected from various journals, magazines, articles, various sites and private banks records.

## **Sampling Size and Technique Population**

The population of this study is the total employees in all the private bank in Coimbatore. It is a finite population (large size).

## **Sampling technique**

The sampling technique used in this study is simple random sampling method. This method is also called as the method of chance selection. Each and every item of population has an equal chance to be included in the sample.

## **Size of the sample**

It refers to the number of items to be selected from the universe to constitute as a sample. The sample size of the study is 103. Data was collected from different branches of private banks.

## **DATA COLLECTION TOOL**

### **Questionnaire**

A structured questionnaire was used. The questionnaire contained close-end questions with 5-points scale rating technique (Likert's scale). The questionnaire consists of 40 questions with 10 dimensions.

### **Statistical Tools Used**

Statistics is a tool, not an aim. The value of statistics lies with organizing and simplifying data, to permit some objective estimate showing that an analysis is under control or that a change has occurred.

### **Analysis of Variance**

In statistics, analysis of variance (ANOVA) is a collection of statistical models, and their associated procedures, in which the observed variance in a particular variable is partitioned into components attribute to different sources of variation.

### **Correlation**

In statistics, correlation indicates the strength and direction of a linear relationship between two random variables. Correlation is computed into what is known as the correlation coefficient, which ranges between -1 and +1. Positive correlation is indicated by +1 and negative correlation is indicated by -1.

### **Chi-Square**

Chi-square analysis in statistics is to test the goodness of fit to verify the distribution of observed data with assumed theoretical distribution.

### **Descriptive statistics**

Descriptive statistics are distinguished from inferential statistics, in that descriptive statistics aim to summarize a data set, rather than use the data to learn about the population that the data are thought to represent.

## Factor Analysis

Factor analysis is a statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved, uncorrelated variables called factors.

## Independent sample t-test

The Independent Sample t-test compares the mean scores of two groups on a given variable.

## Limitations of the Study

The research is limited only to selected branches of Private Bank employees and the study was restricted to Coimbatore district.

## DATA ANALYSIS AND RESULTS (FINDINGS)

**Table 1: Correlation among the stress causing factors**

	RO	RA	RC	UG&PP	RP	UP	PL	PPR	LS	SWC
RO	1									
RA	.054	1								
RC	.284*	.372**	1							
UG&PP	.189	.411**	.068	1						
RP	.365**	.273**	.046	.151	1					
UP	-.319**	.308**	.020	.045	-.621**	1				
PL	-.272**	.291**	.158	.028	-.563**	.694**	1			
PPR	-.176	.130	.299**	.062	-.322**	.335**	.256**	1		
LS	-.167	.264**	.219*	-.025	-.392**	.374*	.473**	.314**	1	
SWC	.150	.432**	.195*	.395**	-.009	-.017	.004	.221*	-.027	1

1. \*\* Correlation is significant at the 0.01 level (2-tailed).
2. \* Correlation is significant at the 0.05 level (2-tailed).

## RESULT:

- It is observed that Role Overload arises because of more responsibility given to the employees and also if the person is under participating he will not experience Role Overload.
- Role Ambiguity/confusion arises because of strenuous working condition and if the employees are more responsible then Role Ambiguity is not possible.
- Role Conflict arises because of poor peer relations.
- Unreasonable Group and political pressure arises because of strenuous working condition and if the person comes under low status then he does not experience Unreasonable Group and Political Pressure.
- If the employee is given more responsibility then definitely he will not be Under Participative.

- Under Participation arises because of Powerlessness of the employees it does not happen because of strenuous working condition.
- The employee is powerless if he falls under the category of Low Status and Poor Peer Relations arises because of Low Status.
- Low status of the employee does not depend upon the strenuous working condition.

**Table 2: Correlation between the stress causing factors and demographic characteristics**

		Annual income	Working hours	Experience	Department	Marital status	No of children	Family size	Qualification	
RO										
RA		-.253**		-.292**		195*			-.235*	
RC		.294**		-.202*					-.196*	
UG&PP	.313**	-.313**	-0.151	-.323**	.207*	-0.072	-0.121	-0.065	-0.187	0.029
RP			.301**					.247*	.301**	
UP		-.372**	-.388**	-.252*			.263**		-.442**	
PL		-.372**								
PPR										
LS									-.280**	
SWC				-.327**						1

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

## RESULT:

- With respect to age of the employees Role Overload occurs and age does not relate to Unreasonable Group & Political Pressure.
- Stress due to Role Conflict occurs due to difference in income level and income does not depend on Under Participation and Powerlessness.
- Working hours of employees is affected greatly by responsibility for persons and it does not suit for Under Participation.
- Experience happens due to more responsibility given to the employees and does not relate to Strenuous Working Condition.
- Department of the workers is related to the Unreasonable Group & Political Pressure and does not depend on Low Status.
- Marital status of the employees depend on Role Ambiguity to a great extend.
- If number of children increases Under Participation occurs.
- If family size and educational qualification of the employees increases responsibility also increases.

- Gender difference is mostly related to powerlessness and there is an occurrence of role conflict between the genders.

## CHI-SQUARE TEST

**Chi-square 1: To find the association between Role Overload and responsibility for persons**

Ho: There is no association between role overload and responsibility for person.

Ha: There is an association between role overload and responsibility for persons.

**Table 3: Chi-square 1: To find the association between Role Overload and responsibility for persons**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-square	5.056a	1	.025		
Continuity Correction <sup>b</sup>	4.203	1	.040		
Likelihood Ratio	5.095	1	.024		
Fisher's Exact Test				.030	.020
Linear-by-Linear Association	5.007	<sup>1</sup>	.025		
N of Valid Cases <sup>b</sup>	103				

## RESULT:

Since there is an association between role overload and responsibility for persons, if the employees are given more responsibility then obviously they tend to have more work load which causes stress to the employees.

**Chi-square 2: To find the association between family size and stress level of the employees.**

Ho: There is no association between family size and stress level.

Ha: There is an association between family size and stress level.

**Table 4: Chi-square 2: To find the association between family size and stress level of the employees.**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	.091a	4	.024
Likelihood Ratio	1.029	4	.005
Linear-by-Linear Association	.251	1	.017
N of Valid Cases <sup>b</sup>	103		

## RESULT:

Since there is an association between the family size and stress level of the employees, if the family size increases, the stress level of the employees also increases.

### **t-test: To analyze the stress level of employees based on the marital status**

Ho: There is no significant difference between the factors causing stress with respect to marital status of the employees.

Ha: There is significant difference between the factors causing stress with respect to marital status of the employees.

**Table : t-test: To analyze the stress level of employees based on the marital status**

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	Sig. (2- tailed)	Mean Difference
RO	.006	.939	.038	101	.969	.00383
RA	3.340	.071	-1.999	101	.048	-.19617
RC	.032	.859	.089	101	.929	.00881
UG&PP	5.343	.023	-2.126	101	.036	-.20575
RP	.516	.474	.728	101	.468	.07280
UP	2.665	.106	-1.111	101	.269	-.10958
PL	1.197	.276	-.607	101	.545	-.06054
PPR	2.248	.137	-.842	101	.402	-.08238
LS	.179	.673	-.211	101	.833	-.02107
SWC	6.852	.010	-1.528	101	.130	-.14943

## RESULTS:

There is difference between marital status towards Unreasonable Group & Political Pressure and Strenuous Working Condition i.e. both married and unmarried employees suffer different level of stress for Unreasonable Group & Political Pressure and Strenuous Working Condition. And also there is no difference between married and unmarried employees towards other factors i.e. they suffer from the same level of stress with other factors.

### **ANOVA: To analyze the significant difference of stress in different categories of employees.**

Ho: There is no significant difference between the factors causing stress with respect to different category of employees.

Ha: There is significant difference between the factors causing stress with respect to different category of employees.

**Table 6: ANOVA: To analyze the significant difference of stress in different categories of employees.**

		Sum of Squares	Mean Square		Sig.
RO	Between Groups	.712	.356	1.438	.242
	Within Groups	24.744	.247		
	Total	25.456			
RA	Between Groups	2.790	1.395	6.107	.003
	Within Groups	22.841	.228		
	Total	25.631			
RC	Between Groups	1.085	.542	2.249	.111
	Within Groups	24.119	.241		
	Total	25.204			
UG&PP	Between Groups	4.508	2.254	10.972	.000
	Within Groups	20.541	.205		
	Total	25.049			
RP	Between Groups	2.398	1.199	5.139	.008
	Within Groups	23.330	.233		
	Total	25.728			
UP	Between Groups	2.613	1.306	5.783	.004
	Within Groups	22.591	.226		
	Total	25.204			
PL	Between Groups	3.664	1.832	8.369	.000
	Within Groups	21.889	.219		
	Total	25.553			
PPR	Between Groups	4.016	2.008	9.717	.000
	Within Groups	20.664	.207		
	Total	24.680			
LS	Between Groups	2.786	1.393	6.119	.003
	Within Groups	22.767	.228		
	Total	25.553			
SWC	Between Groups	2.185	1.093	4.779	.010
	Within Groups	22.863	.229		
	Total	25.049			

**RESULT:**

There is no difference between different categories employees with respect to Role Conflict and Role Overload. All other factors show significant difference with respect to different level of employees. Top level managers, Middle level managers and Operational level workers experience same level of stress based on Role Conflict and Role Overload. But all other stress causing factors produce some kind of difference with respect to different categories of employees.

**2. ANOVA: To analyze the significant difference of stress in different working hours of the employees.**

Ho: There is no significant difference between the factors causing stress with respect to different working hours of the employees.

Ha: There is a significant difference between the factors causing stress with respect to different working hours of the employees.

**Table 7: ANOVA: To analyze the significant difference of stress in different working hours of the employees.**

		Sum of Squares	Mean Square		Sig.
Role Overload	Between Groups	.030	.015	.060	.942
	Within Groups	25.426	.254		
	Total	25.456			
Role Ambiguity	Between Groups	1.820	.910	3.822	.025
	Within Groups	23.811	.238		
	Total	25.631			
Role Conflict	Between Groups	.290	.145	.582	.561
	Within Groups	24.914	.249		
	Total	25.204			
Unreasonable Group & Political Pressure	Between Groups	.772	.386	1.591	.209
	Within Groups	24.276	.243		
	Total	25.049			
Responsibility For Persons	Between Groups	2.403	1.202	5.152	.007
	Within Groups	23.325	.233		
	Total	25.728			

Under Participa- tion	Between Groups	4.094	2.047	9.698	.000
	Within Groups	21.109	.211		
	Total	25.204			
Powerlessness	Between Groups	3.451	1.726	7.808	.001
	Within Groups	22.102	.221		
	Total	25.553			
Poor Peer Rela- tions	Between Groups	.102	.051	.209	.812
	Within Groups	24.577	.246		
	Total	24.680			
Low Status	Between Groups	.579	.290	1.160	.318
	Within Groups	24.974	.250		
	Total	25.553			
Strenuous Work- ingCondition	Between Groups	2.177	1.088	4.759	.011
	Within Groups	22.872	.229		
	Total	25.049			

## RESULT:

There is no difference between working hours of the employees and their stress level with respect to Role Overload, Role Conflict, Unreasonable Group & Political Pressure, Low Status and Poor Peer Relations. All other factors show a significant difference in their stress level with respect to different working hours of the employees. Based on different working hours of employees each group of employees experience have different level of stress.

**Factor Analysis:** To find out major stress causing factors among bank employees from 10 variables.

**Table 8: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. Approx. Chi-Square		
	df	.718
	Sig	301.623
		45
Bartlett's Test of Sphericity		.000

**Table 9 : Total Variance Explained**

Comp	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings					
	% of Variance	Cumulative %	% of Variance	Cumulative %	% of Variance	Cumulative %			
1	3.171	31.706	31.706	3.171	31.706	31.706	3.098	30.985	30.985
2	2.090	20.900	52.606	2.090	20.900	52.606	1.753	17.534	48.519
3	1.064	10.643	63.249	1.064	10.643	63.249	1.473	14.730	63.249
4	.835	8.354	71.603						
5	.677	6.767	78.371						
6	.608	6.079	84.450						
7	.552	5.521	89.971						
8	.445	4.451	94.422						
9	.308	3.083	97.505						
10	.249	2.495	100.000						

**Extraction Method: Principal Component Analysis**

**Table 10: Rotated component matrix for 10 scales**

	Component		
	1	2	3
Role Overload	-.509	.529	.036
Role Ambiguity	.392	.645	.276
Role Conflict	.043	.793	.089
Unreasonable Group Political Pressure	-.099	.454	.626
Responsibility For Persons	-.812	.117	-.026
Under Participation	.828	.005	.077
Powerlessness	.811	.165	-.023
Poor Peer Relations	.477	-.169	.509
Low Status	.663	.369	-.115
Strenuous Working Condition	-.059	.131	.847

**Extraction Method: Principal Component Analysis.**

**Rotation Method: Varimax with Kaiser Normalization**

**Table 11: Table showing reduced factors**

S.NO	Role Stressors	Organizational Climate Stressors	Interpersonal Development Stressors
1.	Role Overload	Under participation	Unreasonable Group & Political Pressure
2.	Role Ambiguity	Powerlessness	Poor Peer Relations
3.	Role Conflict	Low Status	Strenuous Working Condition

## **RESULT:**

The three major stressors that are identified after factor analysis are as follows

1. Role Stressors
2. Organizational Climate Stressors
3. Interpersonal Development Stressors

## **SUGGESTIONS**

1. Organize a Stress Management Program that focuses on different leave categories of employee's at all hierarchical level.
2. Take adequate steps to redesign jobs, which are taxing to employees' abilities and capacities.
3. Adequate Role Clarification should be made whenever necessary to eliminate Role Ambiguity.
4. Introduce more job oriented training programs, which improve employees' skill and their confidence to work effectively.
5. Encourage open channel of communication to deal with work related stress.
6. Undertake stress audit at all levels in the organization to identify stress areas for improving conditions of job and alleviating job stress.
7. Introduce 'Pranayamam' (Brain Stilling and control of Vital Force) as a holistic managerial practice.
8. Provide counseling on work related and personnel problems and support from a team of welfare health and counseling staff.
9. Attractive system of reward and recognition of good work may reduced the occupational stress.

## **ENDNOTE**

The problem of stress is inevitable and unavoidable in the banking sector. This particular research was intended to study the impact of occupational stress on Private Bank employees only. A majority of the employees face severe stress-related ailments and a lot of psychological problems. Hence, the management must take several initiatives in helping their employees to overcome its disastrous effect. Since stress in banking sector is mostly due to excess of work pressure and work life imbalance the organization should support and encourage to take-up roles that help them to balance work and family.

The productivity of the work force is the most decisive factor as far as the success of an organization is concerned. The productivity in turn is dependent on the psychosocial well being of the employees. In an age of highly dynamic and competitive world, man is exposed to all kinds of stressors that can affect him in all realms of life. The growing importance of interventional strategies is felt more at organizational level.

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# Developing Competency Matrix for Medical Records Department Staffs at Aravind Eye Hospital, Madurai

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**ABSTRACT-** *Many contemporary organizations are placing greater emphasis on their performance management systems as a means of generating higher levels of job performance. In this research the job performance of Medical Records Department (MRD) staffs at Aravind Eye Hospital, Madurai is revealed through developing competency matrix. The Skill, Knowledge, Attitude (SKA) component for each individual is identified based on their proficiency level. By developing this competency matrix the present SKA component of individuals' in MRD are identified and it helps in directing towards future needs. The research design adopted for this study is descriptive research and this study includes the entire population in MRD. The source of data is primary and secondary; the primary data is collected through questionnaire. This competency matrix helps to know whether they have reached the competency level to perform their work or whether they require any training to reach that competency level. Thus this research study is concluded by finding out the competency required for the job and in identifying the competency level of individuals in MRD. It provides an opportunity for self development of MRD staffs and it provides a basis of recruitment and selection of persons from external or internal candidates by identifying the best qualified persons for a particular job position.*

**KEYWORDS:** Competency Matrix; Competency; Competency level; Medical Records

## INTRODUCTION

Competencies are set of behaviors, which encompass skills, knowledge, abilities and attributes. Competencies need to be assessed at the organization and individual level. Individual competencies together reinforce organizational competencies. However, there always exists a possibility of major incongruence between individual competencies and organizational competencies. It is future-oriented and it helps to describe an ideal workforce. A competency model when developed and documented helps in managerial decision –making, as it is well aligned with vision, mission, objectives, goals and strategies of an organization. The American Heritage Dictionary of English Language (2000) provides a general description of competency as “the state or quality of being properly or well qualified” [1]. It also helps employees of an organization to understand

the functional requirements and self-initiate the enrichment of their skill, knowledge, abilities, attributes. The most general and detailed definition was proposed by Parry. Parry's definition has been accepted by numerous scholars (Lucia & Lepsinger, 1999): A competency is a cluster of related knowledge, skills, and attitudes that affects a major part of one's job (a role or responsibility), that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved via training and development (as cited by Lucia & Lepsinger, 1999) [2]

In this paper an attempt has been made to find out the competency required for the job and in identifying the competency level of individuals in MRD. This paper involves primary objective as to develop competency matrix for Medical Records Department staffs at Aravind Eye Hospital, Madurai. The secondary objectives are (i) To identify the process carried out in Medical Records Department. (ii) To review current work performance. (iii) To offer suggestions for future improvement. This helps in identifying the Skill, Knowledge, Attitude (SKA) component of each individual based on their proficiency level. By developing this competency matrix the present SKA component of individuals in MRD are identified and it helps in directing towards future needs. David Martone (2003) defined a competency-based performance management system as a documented and well-structured model that considers the skills and behaviors' for successful performance in the present and also the future job role[3]. This competency matrix helps to know whether they have reached the competency level to perform their work or they require any training to reach that competency level. It provides an opportunity for self development of MRD staffs and it provides a basis for recruitment and selection of persons from external or internal candidates by identifying the best qualified persons for a particular job position.

## **COMPETENCY MATRIX**

A competency matrix is an ideal tool to combine an individual view with the organizational view. This competency matrix is located in the platform's "study" section of the platform, the main starting point for learners. As a first step they rate their current competencies. In the second step they rate the importance of these competencies for their work. This helps to combine the self-perception with the other's view. Based on this rating, the system recommends which competencies should be improved. The recommendation is based on the assumption that a learner should initially improve competencies which are most important to his job. Burgoyue (1993) employed a functional perspective to define a competency as how the goals of organizations were best achieved by improving member's performance [4].

## **MRD IN ARAVIND EYE HOSPITAL, MADURAI**

Aravind Eye Care Hospital is an ophthalmological hospital with several locations in India. It was founded by Dr. Govindappa Venkataswamy in 1976. Since then it has

grown into a network of eye hospitals that have seen a total of nearly 32 million patients in 36 years and performed nearly 4 million eye surgeries, majority of them being very cheap or free.

Medical Records management has become an integral activity of the hospital management. The department provides multiple benefits not only to the patients but also to running a hospital efficiently. In Aravind Eye Hospital, Madurai the Medical Records Department is completely computerized and maintains health information system to provide updated statistics. The department benefits the patient by being responsible for the completeness, accuracy, and availability of the medical records at all times. The medical records are used by the postgraduate students and other doctors for learning and for other research purposes. The Medical Records Department forms the integral part of the patient care which comprises of Enquiry counter, New counter, Revisit counter, File retrieval counter, Clinical Management System, Cash counter, Admission and Discharge counter.

## **MATERIALS AND METHODS**

The purpose of the present study is to develop competency matrix for MRD staffs, to achieve this the entire Medical Records Department staff's are taken as sample. The Medical Records Department consists of 41 staffs. A research design is a detailed blue print used to guide a research study towards its objective. The research design adopted for this study is Descriptive research. Descriptive method was adopted because it deals with description of the state of affairs as it exists at present. The entire population of 41 staffs in the Medical Records Department of Aravind Eye Hospital was taken for the study. Hence this type of research is called census study. The source of data used for research is primary and secondary data. The primary data is collected through well structured questionnaire. The questionnaire contains close ended questions which incorporate three point Likert scaling. The secondary data was obtained from secondary sources such as organization websites, magazines and previous studies done in related field.

## **ANALYSIS AND INTERPRETATION**

In this chapter, emphasis is on the presentation of the data in tables and figures and then the interpretation of primary data collected through structured questionnaire. One of the simplest and most revealing devices for organizing and summarizing data and presenting them in a meaningful style is the statistical table. The purpose of a table is to simplify the presentation and to facilitate comparisons. As a further enrichment, the data can be presented in the form of charts because they are more appealing.

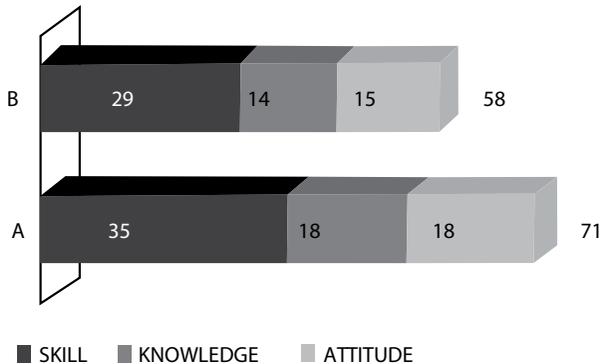
The data is analyzed and interpreted using

1. Presentation of Tables
2. Presentation of Charts

**TABLE: 1 Shows the Competency Matrix of MRD Staffs in Enquiry Department**

NAME	SKILL	KNOWLEDGE	ATTITUDE	SKA COMPONENT
	HIGH : 36 LOW : 12	HIGH : 18 LOW : 6	HIGH : 18 LOW : 6	HIGH : 72 LOW : 24
A	35	18	18	71
B	29	14	15	58

**CHART: 1 Showing CM of MRD Staffs in Enquiry Department  
CM - Enquiry Department**



**Source: Primary Data**

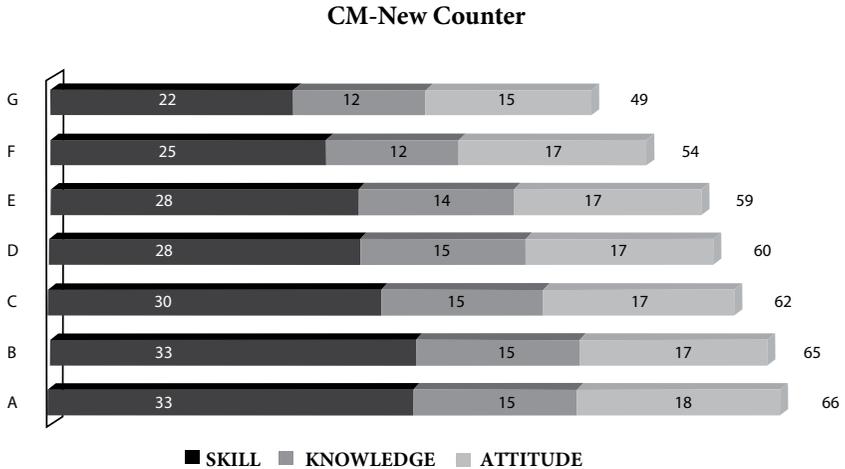
**Inference:**

From the above table, it is inferred that, A's SKA component is 71 as she demonstrates very strong capabilities in most behavioral indicators of all competencies in the enquiry department and B's SKA component is 58 as she demonstrates only average capabilities in most competencies in the Enquiry department.

**TABLE: 2 Shows The Competency Matrix of MRD Staffs in New Counter**

NAME	SKILL	KNOWLEDGE	ATTITUDE	SKA COMPONENT
	HIGH : 33 LOW : 11	HIGH : 15 LOW : 5	HIGH : 18 LOW : 6	HIGH : 66 LOW : 22
A	33	15	18	66
B	33	15	17	65
C	30	15	17	62
D	28	15	17	60
E	28	14	17	59
F	25	12	17	54
G	22	12	15	49

**CHART: 2 Showing CM of MRD Staffs in New Counter**



**Source: Primary Data**

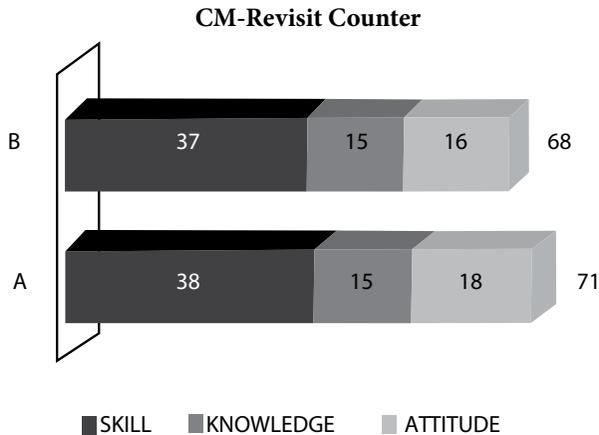
**Inference:**

From the above table, it is inferred that, in New counter 4 persons are having 66, 65, 62 and 60 as SKA component, as they demonstrate very strong capabilities in most behavioral indicators of all competencies and remaining 3 persons are having 59, 54, 49 as SKA component, as they demonstrate average capabilities in most competencies in a consistent manner.

**TABLE: 3 Shows the Competency Matrix of MRD Staffs in Revisit Counter**

NAME	SKILL	KNOWLEDGE	ATTITUDE	SKA COMPONENT
	HIGH : 39 LOW : 13	HIGH : 15 LOW : 5	HIGH : 18 LOW : 6	HIGH : 72 LOW : 24
A	38	14	18	71
B	37	15	16	68

**CHART: 3 Showing CM of MRD Staffs in Revisit Counter**



**Source: Primary Data**

**Inference:**

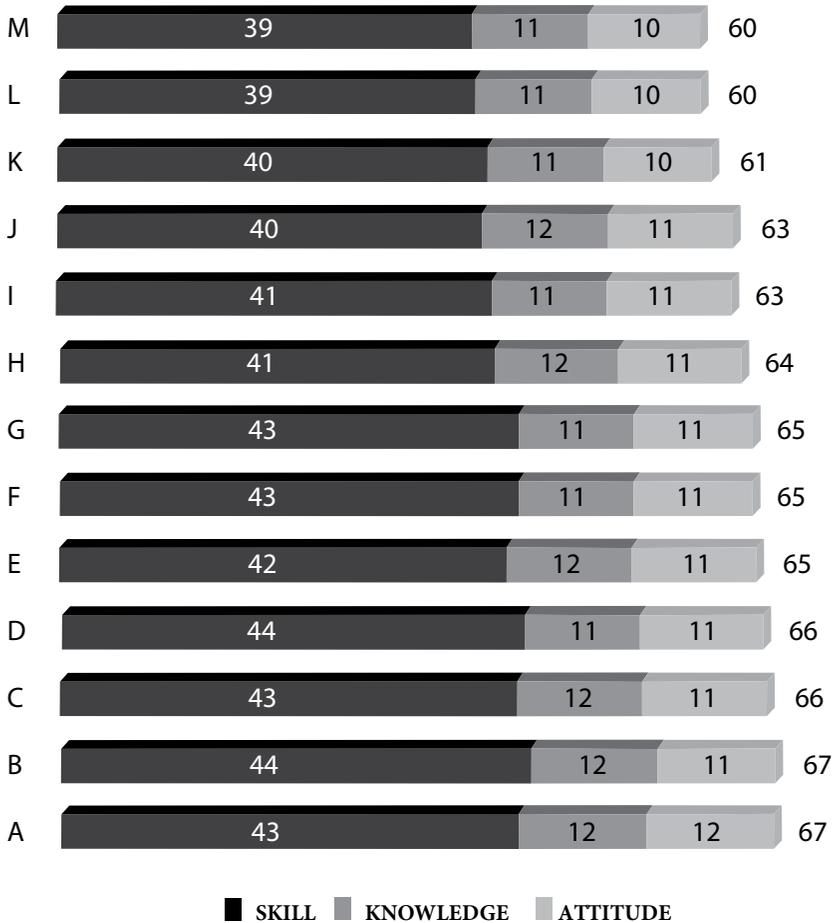
From the above table, it is inferred that, in Revisit counter A and B are having 71 and 68 as SKA component respectively, as they demonstrate very strong capabilities in most behavioral indicators of all competencies.

**TABLE: 4 Shows the Competency Matrix of MRD Staffs in File Retrieval Counter**

NAME	SKILL	KNOWLEDGE	ATTITUDE	SKA COMPONENT
	HIGH : 45 LOW : 15	HIGH : 12 LOW : 4	HIGH : 12 LOW : 4	HIGH : 69 LOW : 23
A	43	12	12	67
B	44	12	11	67
C	43	12	11	66
D	44	11	11	66
E	42	12	11	65
F	43	11	11	65
G	43	11	11	65
H	41	12	11	64
I	41	11	11	63
J	40	12	11	63
K	40	11	10	61
L	39	11	10	60
M	39	11	10	60

**CHART: 4 Showing CM of MRD Staffs in File Retrieval Counter**

**CM-File Retrieval Counter**



**Source: Primary Data**

**Inference:**

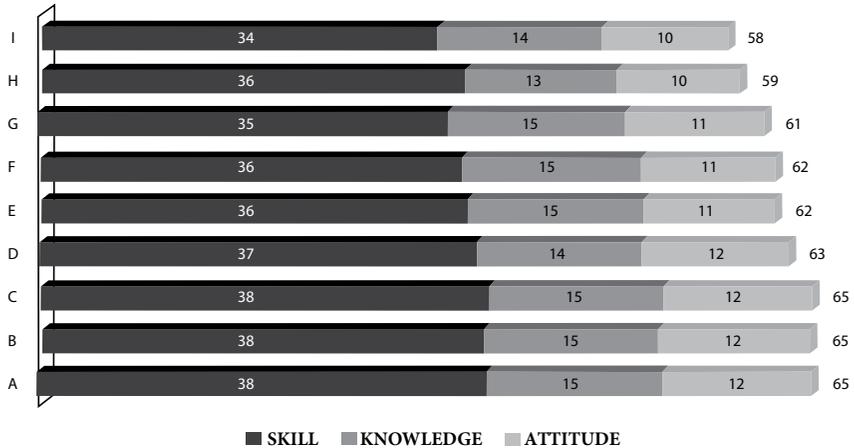
From the above table, it is inferred that, in File Retrieval counter 13 persons are having a score of 67, 67, 66, 66, 65, 65, 65, 65, 64, 63, 63, 61, 60 and 60 as SKA component, as they demonstrate very strong capabilities in most behavioral indicators of all competencies.

**Table: 5 Shows the Competency Matrix of MRD Staffs  
in Clinical Management System**

NAME	SKILL	KNOWLEDGE	ATTITUDE	SKA COMPONENT
	HIGH : 39 LOW : 13	HIGH : 15 LOW : 5	HIGH : 12 LOW : 4	HIGH : 66 LOW : 22
A	38	15	12	65
B	38	15	12	65
C	38	15	12	65
D	37	14	12	63
E	36	15	11	62
F	36	15	11	62
G	35	15	11	61
H	36	13	10	59
I	34	14	10	58

**CHART: 5 Showing CM of MRD Staffs in Clinical Management System**

**CM-Clinical Management System**



**Source: Primary Data**

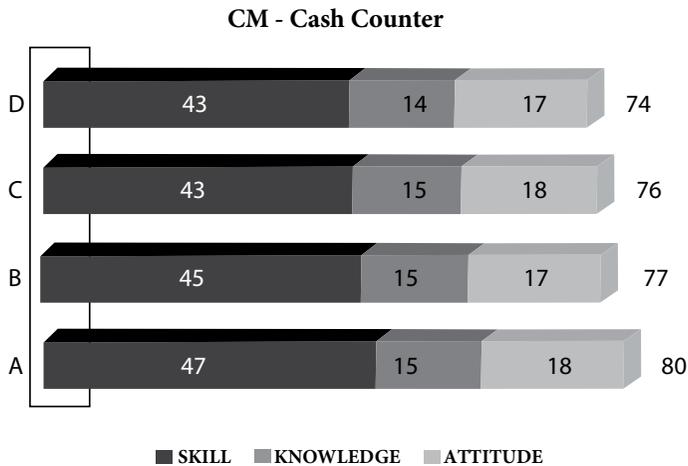
**Inference:**

From the above table, it is inferred that, in Clinical Management System 7 Persons are having a score of 65, 65, 65, 63, 62, 62 and 61 as SKA component, as they demonstrate very strong capabilities in most behavioral indicators of all competencies and remaining 2 persons have a score of 59, 58 as SKA component, as they demonstrate average capabilities in most competencies in a consistent manner.

**Table: 6 Shows the Competency Matrix of MRD Staffs in Cash Counter**

NAME	SKILL	KNOWLEDGE	ATTITUDE	SKA COMPONENT
	HIGH : 48 LOW : 16	HIGH : 15 LOW : 5	HIGH : 18 LOW : 6	HIGH : 81 LOW : 27
A	47	15	18	80
B	45	15	17	77
C	43	15	18	76
D	43	14	17	74

**CHART: 6 Showing CM of MRD Staffs in Cash Counter**



**Source: Primary Data**

**Inference:**

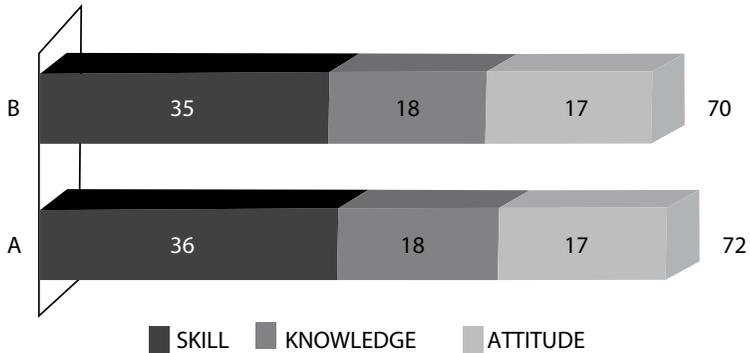
From the above table, it is inferred that, in cash counter 4 persons have a score of 80, 77, 76 and 74 as SKA component, as they demonstrate very strong capabilities in most behavioral indicators of all competencies.

**TABLE: 7 Shows the Competency Matrix of MRD Staffs in Admission**

NAME	SKILL	KNOWLEDGE	ATTITUDE	SKA COMPONENT
	HIGH : 36 LOW : 12	HIGH : 18 LOW : 6	HIGH : 18 LOW : 6	HIGH : 72 LOW : 24
A	36	18	18	72
B	35	18	17	70

**CHART: 7 Showing CM of MRD Staffs in Admission Counter**

**CM - Admission Counter**



**Source: Primary Data**

**Inference:**

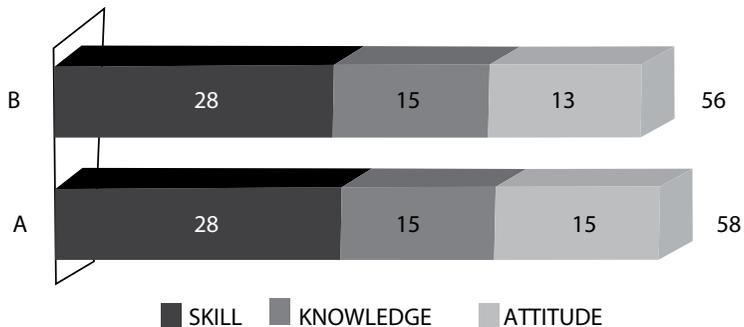
From the above table, it is inferred that, in cash counter 4 persons have a score of 80, 77, 76 and 74 as SKA component, as they demonstrate very strong capabilities in most behavioral indicators of all competencies.

**Table: 8 Shows the Competency Matrix of MRD Staffs in Discharge**

NAME	SKILL	KNOWLEDGE	ATTITUDE	SKA COMPONENT
	HIGH : 30 LOW : 10	HIGH : 15 LOW : 5	HIGH : 15 LOW : 5	HIGH : 60 LOW : 20
A	28	15	15	58
B	28	15	13	56

**CHART: 8 Showing CM of MRD Staffs in Discharge Counter**

**CM - Discharge Counter**



**Source: Primary Data**

**Inference:**

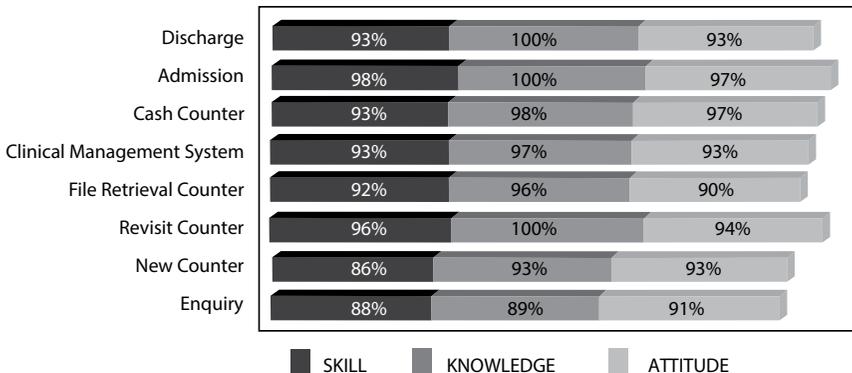
From the above table, it is inferred that, in Discharge counter 2 persons have 58 and 56 as SKA component, as they demonstrate very strong capabilities in most behavioral indicators of all competencies.

**TABLE: 9 Shows the Competency Matrix of Medical Records**

DEPARTMENT	SKILL	KNOWLEDGE	ATTITUDE	SKA COMPONENT
Enquiry	88%	89%	91%	8
New Counter	86%	93%	93%	6
Revisit Counter	96%	100%	94%	2
File Retrieval Counter	92%	96%	90%	7
Clinical Management System	93%	97%	93%	5
Cash Counter	93%	98%	97%	3.5
Admission	98%	100%	97%	1
Discharge	93%	100%	93%	3.5

**CHART: 9 Showing CM of Medical Records Department**

**CM - Medical Records Department**



## **Source: Primary Data**

### **Inference:**

From the above table, it is inferred that, in MRD, the Admission counter ranks first in determining the position of SKA component, as this counter demonstrates very strong capabilities in most behavioral indicators of all competencies and Enquiry counter ranks least in determining the position of SKA component, as this counter does not demonstrate expected behavior across most competencies.

## **DISCUSSION**

In every counter the person who scores a high SKA component has demonstrated very strong capabilities in most behavioral indicators of all competencies. In the Enquiry department "A" (K.M.Manimegalai) in Enquiry counter has SKA component as 71. She has scored a high SKA component because she is known to attend and guide a patient in a polite manner which is very necessary for this counter. She is good in communication. She is good in collecting the details from the patient at the same time she is good in answering the patient queries.

In the New counter "A" (Lakshmi Gandhi) scored SKA component as 66 due to the working environment and motivation given by the head of the counter over there in new counter. She is good in entering the patient details in the system and she is good in checking for any corrections, omissions and other details to be added in the registration form. "A" is very fast in issuing the ID card to the patients and good in collecting the fee from the patient by issuing the printed slip.

In the Revisit counter "A" (V.P.Megala) scored SKA component as 71 due to her clear communication. She is very fast in typing and in issuing the duplicate card to the patient if need arises. She is very clear in providing services based on the patient. These are the reason why she scored high SKA component.

In the File Retrieval counter "A" and "B" have the same SKA component 67 due to the working environment and they have good skills in retrieving the medical records by MR number by keeping the tracer card in a place from where the record is taken and at the same time they are good in filing medical records in relevant racks in an ascending order according to MRD number. They are very knowledgeable in checking for deficiencies in outpatient and inpatient records and for any incompleteness in report. They are good in coding the completed records in the system. This helped them to score a high SKA component.

In the Clinical Management System "A","B" and "C have the same SKA component 65 because they are skilled in entering the In-time and Out-time of the patient without making any mistakes. They are good in entering the diagnosis and investigation of the patient. They have excellent skill to check Doctor Wise performance. They have good knowledge to answer the patient queries in a polite manner. These are the reason why they scored high SKA component.

In the Cash counter “A” (A.J.Revathy) scored SKA component 80 because she is good in recalling the different types of investigation and she is very fast in collecting the amount from the patient based on the investigation. She is good in providing the services based on the type of patient and she is knowledgeable about cancelling the wrong form. This made her to score a high SKA component in Cash counter.

In the Admission counter “A” (Velagani) scored SKA component 72 as she works effectively in both morning and night shift. She has good skill in knowing the patient’s preference about the type of lens and room. She is fast in collecting the fee from the patient for surgery by issuing the printed receipt for the payment of surgery fees by the patients. She is good in providing the services based on the type of patient. She is good in maintaining the in-patient records and she has good knowledge for coding the medical records. These are the reason why they have scored a high SKA component.

In the Discharge counter “A” (M.P.Rajeswari) scored SKA component 58 as she works effectively in both morning and night shift. She is good in preparing the final receipt according to the number of days stay and for the surgery performed. She is good in explaining about the follow- up date to the patient for their revisit to the hospital for check up. This made her to score a high SKA component in the discharge counter.

## **LIMITATIONS OF THE PRESENT STUDY**

This study involves certain limitation such as

1. Due to time constraints the competency matrix was developed only for MRD
2. This study will not be applicable to any other branches of Aravind Eye Hospital.

## **CONCLUSION**

The competency matrix is done to identify the individual skill, knowledge and attitude of the MRD staffs, at present towards their work. It helps in improving their SKA components to match with the future requirements of the organization and it provides an opportunity for self development of an MRD staff. It provides a basis for recruitment and selection of persons from external or internal candidates by identifying the best qualified person for a particular job or position.

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# Mapping Business Excellence - Marketing Strategies

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**ABSTRACT-** *To remain competitive, organizations must efficiently and effectively map their Business Excellence. Business Excellence is the use of quality management principles and tools systematically in business management, with the goal of improving performance, based on the principles of customer focus by marketing. A perfect business model should follow the basics of profit maximization and globalization as their main objective. This article brings to light the role of marketing in mapping the business excellence and profit maximization.*

**KEYWORDS:** Profit Maximization, Business Excellence, Customer Focus by Marketing.

## KNOWLEDGE SURVEY

Marketing is the science and art of exploring, creating, and delivering value to satisfy the needs of a target market at a profit. Marketing identifies unfulfilled needs and desires. It defines measures and quantifies the size of the identified market and the profit potential. It pinpoints which segments' the company is capable of serving best and it designs and promotes the appropriate products and services.

Marketing is often performed by a department within the organization. This is both good and bad. It's good because it unites a group of trained people who focus on the marketing task. It's bad because marketing activities should not be carried out in a single department but they should be manifest in all the activities of the organization.

**Important concepts of marketing:** segmentation, targeting, positioning, needs, wants, demand, offerings, brands, value and satisfaction, exchange, transactions, relationships and networks, marketing channels, supply chain, competition, the marketing environment, and marketing programs. These terms make up the working vocabulary of the marketing professional.

**Marketing's key processes are:** (1) opportunity identification, (2) new product development, (3) customer attraction, (4) customer retention and loyalty building, and (5) order fulfilment. A company that handles all of these processes well will normally enjoy success. But when a company fails at any one of these processes, it will not survive.

## **THE IMPORTANCE OF MARKETING**

For a company or institution to grow, it must build strong customer relationships. That's where an effective integrated marketing plan comes in. With a comprehensive, integrated marketing plan, one can effectively communicate mission, values and messages in ways that speak to the target audience.

### **Benefits of an effective integrated marketing plan include:**

1. A stronger, more consistent university image
2. Increased support from funding publics such as the legislature
3. Greater loyalty among stakeholders
4. A general public that is more aware of UCR's local and global impact
5. The ability to attract and retain the best employees, students and faculty
6. The ability to establish partnerships within the community
7. The ability to show supporters that our brand equity is a valuable commodity
8. Greater employee satisfaction including an increased sense of pride and loyalty

## **MARKETING STRATEGIES**

A marketing strategy is something that every single business; no matter how big or small, needs to have in place. Many business owners are hesitant to set up an actual marketing strategy because they simply don't know how to do it. This approach means simply trying something new every week or month, whether it's tweeting one week or running an ad in the paper the next week. Business owners who use marketing in this way are simply using different forms of marketing that one turns out to be profitable.

For a truly effective marketing strategy, one must study and evaluate one's business and its target audience, then create a plan of action and follow through with it. The first part is to evaluate the actual business. This means looking at the business from a customer's or end users point of view and finding what they truly get out of the company. And many business owners are surprised to find that it's not what they actually thought. An insurance company for instance, may sell policies but it's actually the customer's safety and security that they buy, not that piece of paper. Find out what the Unique Selling Proposition (USP) and make this the objective of every aspect of the marketing techniques.

The next part of creating a great marketing strategy is finding out what the company offers that no other company does. While one would definitely want to advertise the fact that they sell a certain product or service, there are probably many other companies that offer the same for customers to choose from. So to set themselves apart, one must also advertise the thing that makes the company special – the magic that no other company has. So whether they offer the lowest prices, the best customer service, or promotions whenever customers shop at the store, this must not only be included in the marketing strategy, but it must be a part of every aspect of marketing one does.

## **HISTORY OF MARKETING**

Marketing started with the first human beings. Using the first Bible story as an example (but this was not the beginning of human beings), we see Eve convincing Adam to eat the forbidden apple. But Eve was not the first marketer. It was the snake that convinced her to market to Adam.

Economists, in their passion for pure theory, had neglected the institutions that help an economy function. Demand and supply curves only showed where price may settle but do not explain the chain of prices all the way from the manufacturer through the wholesalers through the retailers. So, early marketers filled in the intellectual gaps left by economists. Nevertheless, economics is the mother science of marketing.

Marketing is more of a craft and profession than an art form. The American Marketing Association and the British Chartered Institute of Marketing are independently working on professional credentials for professional marketing. They believe that tests can be constructed that can distinguish between qualified marketers and phony marketers. At the same time, many people will originate with brilliant marketing ideas who are not trained marketers. Ingvar Kamprad was not a marketer and yet his IKEA Company is phenomenally successful in bringing good quality, low-cost furniture to the masses. Creativity is a big part of marketing success and is not limited to marketers.

But science is also important to marketing. Marketers produce interesting findings through marketing research, market modelling, and predictive analytics. Marketers are using marketing models to make decisions and guide their investments. They are developing marketing metrics to indicate the impact of their activities on sales and profits.

## **MISSION OF MARKETING**

At least three different answers have been given to this question. The earliest answer was that the mission of marketing is to sell any and all of the company's products to anyone and everyone. A second, more sophisticated answer is that the mission of marketing is to create products that satisfy the unmet needs of target markets. A third, more philosophical answer, is that the mission of marketing is to raise the material standard of living throughout the world and the quality of life.

Marketing's role is to sense the unfulfilled needs of people and create new and attractive solutions. The modern kitchen and its equipment provide a fine example of liberating women from tedious housework so that they have time to develop their higher capacities.

## **THE BEST MARKETING STRATEGIES IN THE WORLD:**

The following case described in this section will provide the details about the qualitative data, providing a foundation for the general marketing phenomenon and strategies adopted in general all over the world.

## **CASE 1:**

### **Introduction:**

Branding is a “name, term, sign, symbol or design, or a combination of all these that identifies the goods and services of one seller or group of sellers and to differentiate them from those of competitors.” Branding does not only allow their target market to choose the company over the competitor’s, but it helps in getting their prospects to see one as the only company that provides a solution to the consumer’s problems. It provides a company with a recognizable and trustworthy badge of originality, an intangible guarantee, i.e. a promise of performance that the product will meet with desired consumers’ expectations. Apple’s Branding Strategy Apple Inc. uses the Apple brand to compete across several highly competitive markets, including the personal computer industry with its Macintosh line of computers/laptops and related software, the consumer electronics industry with products such as the iPod, digital music distribution through iTunes Music Store, the smart phone market with the Apple iPhone, magazine, book, games and applications publishing via the AppStore for iPhone and the iPad tablet computing device, and movie and TV content distribution with Apple TV. The company is also establishing a very strong market presence relative to the rival (Google) in the advertising market, via its business Apps and iAd network. Steve Jobs, the co-Founder of Apple, described the company as being a “mobile devices company”, largest in the world as their revenues are bigger than Nokia, Samsung, or Sony’s mobile devices business. **Brand Awareness** is when the consumers are familiar about the life or availability of the product. It is the degree to which consumers’ associate one brand with a specific product/ service.

**Brand Recognition-** is when the consumers have good awareness which may include knowledge of brand, when they are asked questions related to a specific brand and they are able to differentiate a brand on the basis of having noticed or heard about earlier.

**Brand Recall-** It allows a customer to recover a brand from his memory when given the product class/category, needs satisfied by that category or buying scenario as a signal, i.e. if they are able to recall the brand from their memory. E.g. Showing a logo of Apple’s brand, and asking which brand does this logo belongs to. Apple’s brand personality as stated by “what is branding and how important is it to one’s marketing strategy?”, a good branding helps to deliver the brand and helps a company to achieve these objectives. It confirms the companies credibility message clearly, it strengthens the user, motivates the buyer, target prospects emotional loyalty. Apple has a branding strategy that focuses on the emotions. Apple brand’s personality is about lifestyle, imagination, liberty regained, innovation, passion, hopes, dreams and aspirations, and power-to-the-people through technology. The Apple brand personality is also about simplicity, making life easier for people as they have people-driven product design, and is a humanistic company with a heartfelt connection with its customers. Apple’s Brand equity is the premium value that the company realizes from a product with a recognizable name as compared to its

generic equivalent firm. Companies can create brand equity for their products by making them memorable, easily recognizable and superior in quality and reliability. Also, mass marketing campaigns may help to create brand equity. Brand equity is said to be positive if the consumers are willing to pay more for a branded product than for a generic one. Brand awareness plays a key role in building brand equity. Create reliable brand image, slogans and taglines, helps to strengthen brand awareness which therefore improves brand equity. Since Apple has strong brand awareness, it has high sales and high market share, and the consumers are well acquainted and familiar with the brand and its products. They are also willing to pay premium price for their products, relative to the competitor's brand due to Apple's positive brand equity. Apple is not just intimate with their consumers but there is a real sense of community among users of its main product lines. Therefore, this also helps to create consumer's brand loyalty.

## **KEY TECHNIQUES FOR A SUCCESSFUL COMPANY:**

### **Digital Marketing**

Digital marketing, or direct digital marketing, is a type of marketing in which a business uses purely electronic means to advertise their products and services. This type of marketing can be implemented through television, the internet (newsletters, or other emails), and even electronic billboards. Not only does this save a company in mailing costs, it also ensures that more people will be exposed to their products. Digital marketing has erupted from television commercials to the internet, then from the internet to phones and other portable digital devices such as the iPad, Kindle, etc.

### **Internet Marketing**

Like its relative digital marketing, Internet marketing uses electronic means to advertise to the public. The difference between the two is strictly Internet driven. Internet marketing employs email, banner ads, those annoying pop ups, etc. The internet is an ever-growing market of seemingly limitless advertising space, and it continues to grow with evolving subsections of marketing such as affiliate marketing.

### **Affiliate Marketing**

Affiliate marketing is a type of marketing in which online advertisers and merchants share revenue with online salespeople or website owners through a compensation model that is based on certain performance measures such as Pay per Click (PPC), sales, registrations, or a model that combines any or all of these forms.

### **Multi-Level Marketing**

Multi-level marketing, or MLM, is a type of marketing in which consumer products are generally sold by individuals either in consumer's homes or in a designated area of meeting. For instance, Avon, Tupperware, and Mary Kay are all forms of legitimate multi-level marketing. Multi-level marketers set their own hours and can earn money based on sales.

## **Global Marketing**

Global marketing is a form of marketing in which various international business allies form relationships and develop networks on a global scale. They work closely with one another's home countries, their government officials, and the industry competitors in order to gain and develop a target market. In this type of advanced market, stakeholder benefits outweigh that of the company's personal organizational objectives. In this case, stakeholders would be employees, the society in which a business is entering, the companies' respective governments, etc.

### **Study On Marketing Strategy With Special Reference To 'C-Bazaar':**

C-bazaar, also known as Chennaibazaar.com, started operations in 1998 as an online gifting solution and later forayed into apparel. Initially they owned only a single website for both domestic and international customers, at that time the number of visits was only below 1000. The brand gained popularity with time and diversified its product range from wedding sarees, salwar kameez, and ghagra choli to ethnic wear for men and children, as well as fashion accessories. The products were delivered to more than 50 countries. In May 2012, Inventus Capital Partners and Ojas Venture Partners invested \$3.5 million in C-bazaar. At present, the online shopping portal houses, one of the largest ranges of Indian traditional wear, with more than 15,000 items. On an average, over 100 designs are added every day. In 2013, C-bazaar introduced Bollywood-inspired collections, and became the official online shopping partner of movies such as Aiyya, Son of Sardaar, Matru Ki Bijlee Ka Mandola and Saheb Biwi Aur Gangster Returns. It also offers a collection inspired by Bengali films.

### **C Bazaar offers the following types of products:**

- Sarees
- Salwar kameez
- Lehenga Choli
- Sherwani
- Handbags
- Jewellery
- Footwear
- Children's clothing

### **Traffic Report:**

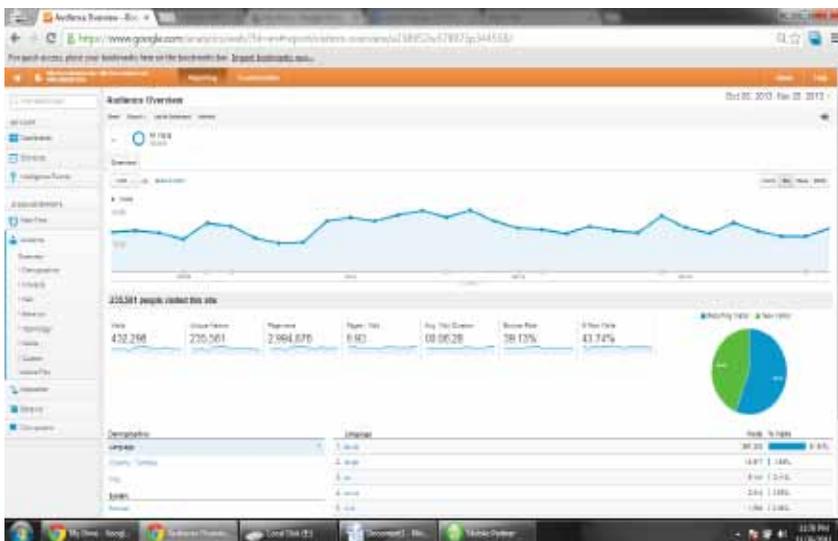
The below report shows the traffic for the month of October 26,2013 to November 25,2013 of 'C-bazaar' where it shows the number of users from world level who visited that particular web site. According to this traffic report overall total visit to this site is 4, 32,296 among them 2.35,561 were unique, total amount of viewers who just view the page are almost 29, 94,876. Average visit duration of the particular individual is 6 minute and 28 seconds, and the bounce rate is 39.13%. Bounce rate is nothing but if the individual or the viewer feels that your content is not sufficient and he want more results and thus move to another web site for same information is called bounce rate.



### Report of Indian users:

The report below shows the number of people who use 'C-bazaar' only in INDIA. Where it gives a clear report like the total number of visit made is 2, 18,923 which includes the visit by Google or organic method is 1,03,829 , by direct it is 46,855 , referral from Google is 4,532 , by facebook is 2,861 etc... New visit to the site is shown as 65.90% ie. 144,266 new visits.

Among the total visits, the successful conversions are 336 visits. Revenue that was made from them is 12, 11,475. Hence the ecommerce conversion rate is 0.15 % . This shows that online marketing is one of the emerging successful marketing strategies. More over this is not an electronic good which can be seen as images and can be purchased. These are goods where the quality and also the size matters for the users. People are starting to procure these types of products online itself. This shows the emerging concept of On-line marketing.



## **Concept of their On- line Marketing:**

According to them more people choose Google as it is the best, and more over Google is the king of all search engines. So, all marketers go for it. Google follows two techniques in their search engine

Google Analytics - To view or to measure the traffic.

Web Master Tool – For detecting any further search engine issues with the site.

In online marketing there are 4 main concepts

1. Search Engine.
2. Social Media.
3. Re- Marketing.
4. Affiliate Marketing.

### **1. By Search Engine Marketing:**

1.1 Organic method.

1.2 Paid method.

#### ***1.1 Organic method:***

It is nothing but natural result gets displayed while searching. Here the main problem is most people will go for the maximum of first five results that is displayed by Google, there the competition arises. Google will rank the sites according to their content. Google will not accept the contents which are copied from other sites, if so then Google will rank them last. The contents should be informative and should be more related to the topic which the user wants. Google will also rank the site low if the user opens the web site and within a minute he closes the site and again if he searches for new results, that shows the site is not informative.

#### ***1.2 Paid Method:***

Paid method is another method of marketing where we pay to promote our ads in other web site. They can pay per click or pay per a conversion that depends on the contract. C-Bazaar will have a link with other well established website so that they can promote their products.

### **2. Social Media**

Social media marketing is marketing their product in the social media websites like Facebook, Twitter, Orkut etc. Where they will display their products on the side of their websites in the social media and hence they will promote by social media.

### **3. Re-Marketing**

Re-marketing is a very good technique where they select the users who are interested in a particular product but they will not purchase, in that case they will use the browser cache and they will promote the images of the product which the user has seen in C-Bazaar in

the websites which they are currently using, which will impress the user so he will get eager to buy that particular product. This is another good method to market the product and to make conversions.

#### 4. Affiliate Marketing:

Affiliate marketing is the type of marketing in which a product of a company is marketed with the help of other well established networking websites to which they are affiliated. This can be paid or non- paid based on the contract which is made between the two. These affiliate marketers include facebook , yahoo , Google.

Objectives	Situation Analysis	Strategies to achieve goals	KPI
Improve the conversion rate from 1.01% to 1.5%	<ul style="list-style-type: none"> <li>• 18.2% of 'drop off' from the total visit to the home page.</li> <li>• Load time is high</li> <li>• Page size is high: 4.3 MB</li> <li>• Checkout page with lot of distractions and complications</li> </ul>	<ul style="list-style-type: none"> <li>• Image compress for reducing the page and decrease the load time</li> <li>• Add shopping cart login via Google+ and Facebook.</li> <li>• Remove all the unwanted buttons and top menu navigation from checkout page</li> </ul>	Lower Bounce rate on potential pages Lower Shopping cart Abandoners Site Speed improves which benefits SEO and User Experience
Mobile Compatibility	<ul style="list-style-type: none"> <li>• Site isn't mobile friendly.</li> <li>• Around 31% of Tyent's visitors are from mobile devices.</li> </ul>	RWD – Responsive web design are a perfect solution for making site mobile friendly.	Lowers the overall bounce rate to a great extent. Increases conversions.
Social Responsibilities of Tyent	Migrating from Active / Direct Marketing techniques to >> Passive / Indirect marketing strategy	Initiating social responsible campaign base on themes like Save Water, Save Earth from Tyent, Safe water for future generation (Facebook and twitter pages) Indirect marketing and Brand Recognition Plan activities to target and engage people for Tyents Water conservation program. Build social communities and make active participation of common people in the discussions.	Brand Value and Trust Improves. A Strong platform on Social Media

Acquiring more reviews		Invite satisfied customers by Email/ call to write reviews. Collect voice reviews (Phone/ Skype) and transcribe to text. Small gift vouchers or compliments for the persons who purchased and reviewed us.	Positive Feedbacks / Reviews on G+ pages will build higher Online-Reputation
Remarketing		Targeting Shopping Cart Abandoners and New Visitors	Improves Conversion Rate.

## CONCLUSION

From the analysis that we have made with C-bazaar and the various data collected, we have come to a conclusion that online marketing is developing rapidly and is the most effective means of marketing which leads to Business Excellence. Business Excellence cannot be achieved without effective marketing strategies.

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# Comparative Analysis of Performance Management System in Higher Education Institutions

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**ABSTRACT-** *In the challenging Higher Education Institution Sector, every institution focuses on building highly competitive students. To mould the students in pace with the requirements of the industry, the role of faculty is predominant. The Higher Education Institutions needs to attract and retain faculty who are qualified and willing to take on new task and responsibility. Faculty members' can be reviewed through effective performance management system practised in the institutions. A survey on 662 faculty members representing 10% of the population was done with Stratified Sampling Method with a response rate of 77.8% and with Cronbach Alpha of 0.9. It is found that the faculty members of Higher Education Institutions are convinced with the current Performance Management Systems practised in their institutions and they need to focus on developing professional performance management systems in order to motivate the faculty members, develop their skills and performance there by leading to improve the institution as a whole.*

**KEYWORDS:** Performance Management System, Higher Education Institutions

## INTRODUCTION

Higher Education Institutions face challenges emphasizing the need of high levels of individual performance. Performance Management Systems is viewed as a tool to ensure optimum individual performance. The history of Performance Management in Higher Education has been one of acceptance and not always been of immediate success (Plessis, 2011). Fletcher (1993) defined Performance Management System (PMS) as it being “associated with an approach to creating a shared vision of the purpose and aims of the organization, helping each employee understand and recognize their part in contributing to them, and in so doing, manage and enhance the performance of both individuals and the organization.”

## LITERATURE REVIEW

Armstrong (2006) explains that the aim of a Performance Management System is to create a high performance culture in which all members, managers or employee, takes responsibility for continuous improvement of business processes and also of their own skills Performance management not only enhances the individual performance, but also improves the organisational performance (Williams, 2002); Hale & Whitlam, (2000). Rao (2008) had identified that the implementation process of Performance Management, must be complied to minimise staff resistance. According to their re-

search, there needs to be evidence of the employee's interest in the performance practice. Successful communication about the practice is needed to result in mutual agreement and involvement between manager and employee. They further stress the importance of the creation of shared values, the nature and scope of policies and practices. As performance management is seen as an instrument to change the culture of the organisation, the role that organisational culture plays with employees, should not be ignored or underestimated. Performance management is thus about establishing a culture in which individuals and groups take responsibility for the continuous improvement of the performance of the business by improving their skills, changing their behaviour and performance (Armstrong, 2009); (Denisi, 2006). Performance management should not be perceived as something done to the employee, but rather something done in partnership with employees.

Performance management system's focal point must be on performance tracking and improvement rather than assessment of performance. It means institute should examine the individual performance and organize interim meeting with individual to guide and mentor them. In addition to that special training should be arranged in areas in which institute or faculty wants to improve. Faculty performance depends on the various factors in the job content, management perception and attaining objectives. This can be categorized like personal benefits, job security, additional responsibility, training and development, teaching aid and facilities and work freedom. Personal benefits enlists the elements associated in the enrichment of faculty's own affairs like remuneration, casual and other leave, on-duty provision, permission to attend university valuation and attending programmes, giving incentive for paper publication, granting of permission of further study, funds for membership and rewards for producing cent percent results (Barani & Rajesh, 2012).

## **OBJECTIVE**

To compare the factors of Performance Management Systems practised in Arts and Science and Engineering & Technology institutions.

## **METHODOLOGY**

Data was collected from 662 faculty members working in educational institutions affiliated to Bharathiar University and Anna University in Coimbatore. The sample was extracted randomly from 10% of the population. The sampling method used for the study is Stratified Random Sampling. Data was collected through a validated instrument. The instrument was distributed to 850 faculty members working in HEI in Coimbatore out of which 700 were received and only 662 useable responses were taken indicating a response rate of 77.8%.

The statistical tools used for the study are standard deviation and mean score. The five point Likert Scale such as Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, Strongly Disagree was used.

Reliability was tested on the data collected using Cronbach Alpha test and the overall reliability for Performance Management System was found to be 0.988

## RESULTS AND DISCUSSIONS

The faculty members had been questioned on the Performance Management Systems (PMS) practised in their institutions. PMS are either traditional or modern in nature. Traditional systems focus on having standard questions which are practised for quite a long time and Modern PMS focus on evaluating personnel on all criteria by the members in all levels in the institution. The frequency of appraising the faculty members was also included to understand the focus of the management of higher education institutions in the current scenario. PMS also need to be modified as and when required based on the changing patterns in the educational industry. The perception of the faculty members on the PMS practised in the institutions where they work currently was discussed in Table 1. Table 1 illustrates that out of the 662 respondents who were surveyed, 608 faculty members belonged to the institutions where they have PMS and 54 belonged to the institutions which do not practise PMS. 56% of the institutions had Modern PMS. 67% of the institutions have the practise of appraising the faculty members once in a year and 65% of the institutions modify the PMS periodically. Out of the 608 members who belonged to the institutions which had PMS, 45% of them were satisfied with the PMS implemented in the institutions.

**Table 1 - PMS in HEI**

S. No	Variable	Classification	Frequency	Percentage
1.	PMS in Institutions	Yes	608	91.8
		No	54	8.2
		<b>Total</b>	<b>662</b>	<b>100</b>
2.	Kind of PMS	Traditional	240	36.3
		Professional	368	55.6
		<b>Total</b>	<b>662</b>	<b>100</b>
3.	Frequency of Appraisal	Once in 6 months	120	18.1
		Once in a year	440	66.5
		Once in 2 years	32	4.8
		Once in 3 years	16	2.4
		<b>Total</b>	<b>608</b>	<b>91.8</b>
4.	PMS modified periodically	Yes	432	65.3
		No	176	26.6
		<b>Total</b>	<b>608</b>	<b>91.8</b>
5.	PMS implementation in the Institutions	Highly Satisfied	70	10.6
		Satisfied	296	44.7
		Neither Satisfied nor dissatisfied	162	24.5
		Dissatisfied	57	8.6
		Highly Dissatisfied	23	3.5
		<b>Total</b>	<b>608</b>	<b>91.8</b>

### **Performance Management System factors**

The items in PMS construct in the study are framed to measure the perceptions of the faculty members about the performance management system practised in their organisation. It is adapted from (Greenberg, 1993) four-factor model of organizational justice. The four factors include systemic, configural, informational and interpersonal aspects of justice. Systemic (structural-procedural) and configural (structural - distributive) justice perceptions include structural dimensions of performance appraisal practices. Informational and interpersonal include the social aspects of performance appraisal.

### **Comparison of Performance Management System among faculty members working in Arts & Science and Engineering Technology Institutions**

A comparison study was done to identify the difference of Performance Management System among faculty members working in Arts & Science and Engineering Technology Institutions. All the factors of Performance Management System with its 11 dimensions such as Seeking performance expectations, Rater Confidence, Seeking Appeals, Accuracy of Rating, Concern over ratings, Respect in Appraisal, Sensitivity in Appraisal, Clarifying expectations and standards, providing feedback, explaining rating decisions and Outcomes of performance appraisal were compared with various demographic factors such as type of institution, nature of institution, age, marital status, educational qualification, income and current position. The statistical tool namely Anova was applied to determine whether there was any significant difference among the two groups viz. faculty members working in Arts and Science institutions affiliated to the Bharathiar University and members of faculty working in Engineering & Technology institutions affiliated to Anna University. The factors which have the significant values for their respective frequency which were less than 0.05 were said to be significantly different between the two groups. The details of comparison of Performance Management System factors between the faculty members working in Arts & Science and Engineering Technology Institutions are mentioned in Table 2.

**Table 2 - ANOVA of Performance Management System between the Groups  
Arts & Science and Engineering & Technology Institutions**

No	Variables	Type of institution		Nature of institution		Gender		Age		Marital Status		Educational Qualification		Income		Current Position	
		F	Sig	F	Sig	F	Sig	F	Sig	F	Sig	F	Sig	F	Sig	F	Sig
I	<b>Setting Performance Expectation</b>																
1	Performance expectations	2.934	0.087	0.028	0.867	0.198	0.657	1.420	0.060	1.936	0.200	1.264	0.300	1.156	0.300	0.927	0.400
2	Measuring expectations	1.494	0.222	0.008	0.930	2.319	0.128	1.310	0.110	1.851	0.200	0.567	0.600	0.994	0.400	0.598	0.700
3	Performance planning session	0.247	0.619	0.310	0.578	3.680	0.056	1.340	0.100	3.278	0.100	0.366	0.800	0.971	0.400	1.543	0.200
4	Performance appraisal process	1.539	0.215	0.001	0.975	0.253	0.615	1.330	0.100	0.002	1.000	0.620	0.600	1.441	0.200	1.461	0.200
5	Standards unchanged	1.065	0.303	0.341	0.560	0.877	0.349	1.210	0.190	0.746	0.400	0.606	0.600	1.074	0.400	0.868	0.500
II	<b>Rater Confidence</b>																
6	Evaluation by HOD	4.956	0.026	1.059	0.304	0.093	0.761	1.210	0.190	0.162	0.700	1.140	0.300	1.523	0.200	0.380	0.800
7	Appraiser awareness	5.228	0.023	0.200	0.655	0.001	0.975	1.120	0.290	0.938	0.300	1.847	0.100	1.084	0.400	0.173	1.000
8	Appraiser evaluation	4.124	0.043	1.432	0.232	0.253	0.615	1.360	0.080	1.527	0.200	0.906	0.400	1.090	0.400	0.451	0.800
9	Appraiser familiarity	9.623	0.002	0.001	0.977	0.621	0.431	1.560	0.020	1.537	0.200	0.789	0.500	1.117	0.400	1.029	0.400
10	Peer evaluation	3.425	0.065	0.436	0.509	0.032	0.858	1.540	0.030	0.008	0.900	0.912	0.400	1.007	0.400	0.986	0.400
III	<b>Seeking Appeals</b>																
11	Challenge appraisal	1.001	0.317	0.095	0.758	0.673	0.412	1.310	0.110	0.325	0.600	0.049	1.000	0.624	0.700	2.058	0.100
12	Communicating disagreement	2.694	0.101	0.158	0.691	1.509	0.220	1.820	0.000	0.584	0.400	1.189	0.300	2.359	0.000	0.822	0.500
13	Appeal a rating	0.206	0.650	0.191	0.662	1.117	0.291	1.570	0.020	0.417	0.500	0.610	0.600	1.632	0.100	1.893	0.100
14	Change unfair rating	0.024	0.878	1.513	0.219	1.240	0.266	1.610	0.020	0.987	0.300	0.682	0.600	0.837	0.500	1.713	0.100
15	Corrective process	0.009	0.925	0.030	0.862	4.437	0.036	1.520	0.030	0.421	0.500	0.808	0.500	2.111	0.100	1.639	0.200
IV	<b>Accuracy of Rating</b>																
16	Effectiveness of rating	2.382	0.123	0.547	0.460	0.013	0.908	1.130	0.280	0.003	1.000	0.530	0.700	0.810	0.500	0.885	0.500
17	Reflecting ratings	0.042	0.838	1.029	0.311	0.081	0.776	1.030	0.420	0.319	0.600	1.293	0.300	1.052	0.400	0.137	1.000
18	Non-academic activities considered	0.088	0.767	0.059	0.808	0.016	0.898	1.200	0.200	0.002	1.000	1.128	0.300	1.244	0.300	1.133	0.300
19	Effort reflected	1.162	0.282	0.089	0.766	0.451	0.502	1.510	0.030	0.442	0.500	1.622	0.200	1.221	0.300	0.865	0.500
20	Roles considered	0.855	0.355	0.005	0.941	0.022	0.881	1.320	0.110	0.744	0.400	2.017	0.100	1.006	0.400	0.248	0.900

From Table 2 it was found that there is no significant difference between the Arts and Science and Engineering and Technology Institutions with regard to the demographic factor current position. The faculty members perceive a common scenario in their current position irrespective of Arts and Engineering and Technology institutions.

When compared as a whole for the construct Performance Management System, there is significant difference among the two groups for the demographic factors type of institution, nature of institution, gender, age, marital status, educational qualification and income. With regard to type of institution and the dimension "Rater Confidence", the factors "Evaluation by HOD" ( $F = 4.956, p = 0.026$ ), "Appraiser awareness" ( $F=5.228, p=0.023$ ), "Appraiser evaluation" ( $F=4.124, p=0.043$ ) and "Appraiser familiarity" ( $F=4.956, p=0.026$ ) have significant difference. The dimension "Concern over ratings" had the factor ( $F=6.034, p=0.014$ ) with significant difference. The dimension "Respect in Appeal" had the factors "Respect by my appraiser" ( $F = 7.633, p = 0.006$ ), "Considers suggestions" ( $F = 5.587, p = 0.018$ ) and "Superior is courteous" ( $F = 6.247, p = 0.013$ ) with significant difference. The dimension "Sensitivity in appraisal" had significant difference in the factors "No statements to hurt me" ( $F = 5.041, p = 0.025$ ) and "Rights as faculty" ( $F=7.317, p=0.007$ ). The dimension "Clarifying expectations as standards" with its factors "Explains expectations" ( $F=9.393, p=0.002$ ), "Meeting performance expectations" ( $F=5.201, p=0.023$ ) and "Progress towards expected performance" ( $F = 4.914, p = 0.027$ ) had significant difference. The dimensions "Providing feedback" had its factor "Doing job" ( $F = 5.780, p = 0.017$ ), "Explaining rating decisions" with its factors "Clear and real examples" ( $F = 6.687, p = 0.010$ ), "understanding process" ( $F = 7.368, p = 0.007$ ), "Encourages to question" ( $F = 6.735, p = 0.010$ ), "Understanding to improve performance" ( $F=9.413, p=0.002$ ), "Outcomes of performance appraisal" with its factors 'Definite structure" ( $F = 11.183, p = 0.001$ ) and "Practice new skills" ( $F = 7.044, p = 0.008$ ) were significantly different between the two groups.

The demographic factor nature of institution had the factor "Definite structure" corresponding to the dimension "Outcomes of Performance Appraisal" as significantly different. With regard to the demographic factor gender, the dimension "Seeking appeals" was significantly different with its factor "Corrective process" ( $F=4.437, p=0.036$ ).

There were significant differences in the factors of 8 out of the 11 dimensions in Performance Management System with regard to the demographic factor age. The dimension "Rater Confidence" with its factors "Appraiser familiarity" ( $F=1.560, p=0.020$ ) and "Peer evaluation" ( $F=1.540, p=0.030$ ) were significantly different. The dimension "Seeking Appeals" had significant difference between the two groups in the factors like "Communicating disagreement" ( $F=1.820, p=0.000$ ), "Appeal a rating"

( $F=1.570$ ,  $p=0.0260$ ), “Change unfair rating” ( $F=1.610$ ,  $p=0.020$ ), “Corrective process” ( $F=1.520$ ,  $p=0.030$ ). The factor “Effort reflected” ( $F=1.510$ ,  $p=0.030$ ) of the dimension “Accuracy of Rating” was significantly different between the two groups. The dimension “Concern over ratings” had its factors “Appraiser gives rating which upsets me” ( $F=1.600$ ,  $p=0.020$ ), “Performance rating not higher” ( $F=1.530$ ,  $p=0.030$ ), “Same rating” ( $F=1.430$ ,  $p=0.050$ ) and “Superior recognises my contribution” ( $F=1.550$ ,  $p=0.020$ ) which were significantly different. With regard to the dimensions “Providing feedback” the factors “Guidance to improve performance” ( $F=1.810$ ,  $p=0.000$ ), “Performance review” ( $F=1.670$ ,  $p=0.010$ ), “Explaining rating decisions” with its factor “Understanding process” ( $F=1.480$ ,  $p=0.040$ ) and “Outcomes of Performance appraisal” with its factors “Definite structure” ( $F=1.440$ ,  $p=0.050$ ) and “Practise new skills” ( $F=1.470$ ,  $p=0.040$ ) had significant difference between the two groups.

With regard to the demographic factor “marital status” the dimensions “Concern over ratings” with its factor “Quality and quantity of work” ( $F=4.476$ ,  $p=0.000$ ), “Explaining rating decisions” with its factor “Understanding process” ( $F=3.905$ ,  $p=0.000$ ) were significantly different.

The demographic factor “educational qualification” had the dimension “Explaining rating decisions” with its factor “Explains decisions” ( $F=2.885$ ,  $p=0.000$ ) significantly different. With regard to the demographic factor “income” the dimensions “Seeking Appeals” with its factor “Communicating disagreement” ( $F=2.359$ ,  $p=0.000$ ), “Sensitivity in appraisal” with its factor “Privacy not invaded” ( $F=2.844$ ,  $p=0.000$ ), “Clarifying expectations and standards” with its factors “Explains expectations” ( $F=3.970$ ,  $p=0.000$ ), “Progress towards expected performance” ( $F=3.044$ ,  $p=0.000$ ) and “Outcomes of Performance appraisal” with its factor “Definite structure” ( $F=2.303$ ,  $p=0.000$ ) had significant difference between the two groups Arts and Science and Engineering and Technology institutions.

## **CONCLUSION**

The construct PMS includes the right measures, linked to the organization’s strategy. It was found that there was no difference between the two groups with regard to the demographic factor current position. There was significant difference between the dimensions of Performance Management System and the demographic factors like type of institution, nature of institution, age, marital status, educational qualification and income. Hence it could be understood that the PMS varies with regard to the Arts and Science and Engineering and Technology institutions. It was also found that the faculty members of Higher Education Institutions are convinced with the current Performance Management Systems practised in their institutions. As the accrediting bodies like All India Council for Technical Education (AICTE) and National Assessment and Accreditation Council (NAAC) focus on improving the quality of the educational

institutions, the management of these institutions need to focus on healthy practices of setting standards to the faculty members and thereby implement a systemised Performance Management System benefitting the institutions and its faculty members.

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# Subjective Well-Being among B-School Faculty

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**ABSTRACT-** *A person's cognitive and affective evaluation of his or her life is called Subjective Well-Being (Diener, Lucas, & Oishi, 2003). A person who has a high level of satisfaction with his or her life, and who experiences a greater positive affect and little or less negative affect, would be deemed to have a high level of SWB. The present study was aimed at studying the subjective well-being among the B-School faculty and differences in well-being among the respondents of different demographic characteristics. A convenience sample consisting of thirty six faculty members working in various B-Schools participated in the study. Questionnaire method was used for data collection. The collected data was analyzed with Mean, Standard Deviation, ANOVA, correlation and regression tests. A higher level of SWB was observed among the respondents of 40-50 years age group; gender; above 30000 income group; and joint family. There was a significant difference in SWB among the respondents of different age, family type, and income groups. There was a significant correlation between the chronological age of the respondents and their SWB. Regression test revealed that eighteen per cent of the variance in subjective well-being was explained by age.*

**KEYWORDS:** Affect, Nuclear family, Personality, and Subjective well-being.

## INTRODUCTION

Subjective well-being (SWB) is defined as 'a person's cognitive and affective evaluations of his or her life' (Diener, Lucas, & Oishi, 2003). The cognitive element refers to what one thinks about his or her life satisfaction in global terms (life as a whole) and in domain terms (in specific areas of life such as work, relationships, etc.). The affective element refers to emotions, moods and feelings. Affect is considered positive when the emotions, moods, and feelings experienced are pleasant (e.g. joy, elation, affection etc.) Affect is deemed negative when the emotions, moods, and feelings experienced are unpleasant (e.g. guilt, anger, shame etc.). A person who has a high level of satisfaction with their life, and who experiences a greater positive affect and little or less negative affect, would be deemed to have a high level of SWB. When psychologists measure SWB, they are measuring how people think and feel about their lives. Personality appears to be one of the strongest and most consistent predictors of SWB. Explanations and support for

the relationship between personality and SWB comes from a number of research studies and theories.

According to the dynamic equilibrium model (Headey & Wearing, 1989) although an event in one's life can influence an individual's SWB, the individual will eventually adapt to the change experienced and return to his or her biologically determined 'set point' or level of adaptation. According to the 'hedonic treadmill' theory (Brickman and Campbell, 1971) individuals adapt quickly to changes in their lifestyles and return to their baseline levels of happiness, a theory which is consistent to the dynamic equilibrium model. Exceptions to the adaptation rule include death of a loved one such as a spouse or child, where individuals adapt very little to their baseline level of happiness or not at all, and noise, where individuals almost never adapt (Fredrickson and Levenson, 1998).

Although research evidence seems to support the theory of happiness having a genetic component, as well as the concept of adaptation, Diener, Suh, Lucas and Smith (1999) have suggested that these theories, whilst useful, provide an incomplete explanation of why and how individuals adapt. Whilst the power of the personality in influencing SWB is important in terms of predisposing an individual to behave in a certain way, one's own efforts are also of importance. For example, a neurotic individual could learn to be more optimistic by changing their explanatory thinking style. He or she could start doing various positive psychology exercises, such as attending to and recalling more of the pleasant aspects of life. One could also spend more time doing the things that bring happiness.

The personality traits of extroversion and neuroticism have been granted the most theoretical and empirical attention, given that extroversion is strongly correlated with SWB and neuroticism is strongly correlated with negative affect (Costa & McCrae, 1980; Watson & Clark, 1988; Diener & Lucas, 1999). According to Watson and Clark (1988), extroverts have a temperamental predisposition to experience positive affect, whereas neurotics are predisposed to experience negative affect. How one thinks about his or her life also plays a part in determining one's SWB. In addition to extroversion, Diener et al. (1999) also found that optimism (the expectation that more good things will happen in the future than bad), internal locus of control (the belief that one has control over his or her life) and self-esteem were personality traits that correlated significantly with SWB.

## **REVIEW OF LITERATURE**

Diener, Sandvik, Pavot and Fujita (1992) conducted a study which showed that whether extroverts lived alone or with others, whether they had jobs which involved working with other people or not and whether they lived in rural or urban areas, extroverts were happier than introverts. Argyle, (2001) conducted a study and concluded that people who have jobs tend to be happier than those who are unemployed, and what's more, skilled workers seem to be happier than their unskilled counterparts. Many studies have revealed that a rich and fulfilling social life and a network of close social support with

family and friends as being strongly correlated with SWB. Diener & Seligman, (2002) conducted a study of the happiest 10 per cent of college students which showed that those found to engage in large amounts of social activity were the happiest. Consistent with the conclusions from this study was the experiment conducted by Fleeson et al (2002) where both extroverted and introverted college students were asked to record their activities and moods over a period of 3 weeks in a diary. The results showed that both groups were happiest when engaged in 'extroverted' activities. Both these studies support the theory that social participation is a strong predictor of life satisfaction.

Williams and Schneiderman (2002) argue that there is now strong evidence that SWB is predictive of cardiovascular disease in healthy populations. They also concluded that SWB is predictive of cancer incidence and survival, although the evidence is limited. Pressman and Cohen (2005) reviewed evidence suggesting that positive affect is associated with physical health and longevity in normal populations, but concluded that the evidence is mixed for positive affect predicting survival in those with existing disease. Thus, a number of literature reviews and meta-analysis all concluded that SWB predicts health and longevity in healthy populations.

Howell, Kern, and Lyubomirsky (2007) reviewed 139 experimental studies testing the impact of well-being on health-relevant physiological outcomes. Inductions of well-being and ill-being led to positive biological outcomes and negative biological outcomes, respectively. The impact of well-being was much stronger for immune response and pain tolerance, and non-significant for cardiovascular reactivity, although positive emotions produced a significant drop in cortisol. The strongest effect size they reviewed was between transient positive emotions and sIgA antibody production.

Chida and Steptoe (2008) conducted a meta - analysis of the prospective studies examining the association between positive well-being and mortality in both healthy and diseased populations. Positive psychological well-being was related to lower mortality in both healthy and diseased populations, independently of negative effect. Positive moods such as joy, happiness, and energy, as well as characteristics such as life satisfaction, hopefulness, optimism, and sense of humor were associated with reduced risk of mortality in healthy populations, and predicted longevity, controlling for negative states. Positive states were associated with reduced death rates in patients with HIV and renal failure. In the healthy population studies, higher quality studies yielded evidence of greater protective effects. In the disease population studies the protective effects were greater when baseline disease and treatment were controlled.

Segerstrom and Sephton (2010) found among first-year law students that changes in both optimism and positive affect across time were associated with changes in immune responses. The effects of each persisted when controlled for the other, but were reduced to about half of their former strength. This dynamic relation over time suggests that increasing positive affect strengthens immunity, and that the relation between the two is not due simply to inborn temperament or stable differences in life circumstances.

## OBJECTIVE OF THE STUDY

The study was aimed at studying the subjective well-being among the B-School faculty and differences in well-being among the respondents of different demographic characteristics.

## METHODOLOGY

A convenience sample consisting of thirty six faculty members working in various B-Schools participated in the study. Questionnaire method was used for data collection. Subjective well-being Inventory developed by Indian Council of Medical Research was used to assess the level of well-being. This tool has 40 items with 3 point Likert scale. The responses were scored as follows: Very much/ very good/ most of the time =3, To some extent/ quite good / some time =2, and Not so much / not so good / hardly ever = 1. The collected data was analyzed with Mean, Standard Deviation, ANOVA, correlation and regression tests.

## RESULTS AND DISCUSSION

This section presents the analysis of the data collected from the respondents.

**Table 1 - Demographic characteristic of the respondents**

Demographic factors	Classification	Number of Respondents	Percent
Age ( in years)	20-30	10	27.8
	30-40	17	47.2
	40-50	9	25.0
Gender	Male	19	52.8
	Female	17	47.2
Income (in rupees)	Below 20000	17	47.2
	20000-30000	11	30.6
	Above 30000	8	22.2
Family Type	Nuclear	19	52.8
	Joint	17	47.2

Among the 36 respondents, 17 (47.2%) belong to 30- 40 years age group; 19 (52.8.0%) are male; 17 (47.2%) belong to below 20000 income group and 19 (52.8%) belong to nuclear family group.

**Table 2 - Mean Standard Deviation and ANOVA for SWB in different age groups**

Age	Mean	N	Std. Deviation	F-Value	Significance
20-30	89.10	10	4.358	8.477	.001
30-40	88.00	17	4.717		
40-50	96.56	9	6.710		
Total	90.44	36	6.194		

A higher level of SWB (Mean=96.56) was observed among the respondents of 40-50 years age group. There was a significant difference in SWB ( $F=8.477$ ;  $p<.01$ ) among the respondents of different age groups.

**Table 3 - Mean Standard Deviation and ANOVA for SWB in different gender groups**

Gender	Mean	N	Std. Deviation	F-Value	Significance
Female	90.88	17	7.158	.157	.694
Male	90.05	19	5.359		
Total	90.44	36	6.194		

A high level of SWB (Mean=90.88) was seen among the female respondents. There was no significant difference in SWB ( $F=0.157$ ;  $p>.05$ ) among the male and female respondents.

**Table 4 - Mean Standard Deviation and ANOVA for SWB in different family type groups**

Family Type	Mean	N	Std. Deviation	F-Value	Significance
Nuclear	88.16	19	5.025	6.315	.017
Joint	93.00	17	6.510		
Total	90.44	36	6.194		

A high level of SWB (Mean=93.00) was observed among the respondents belonging to joint family type. There was a significant difference in SWB ( $F=6.315$ ;  $p<.05$ ) among the respondents of nuclear and joint family.

**Table 5 - Mean Standard Deviation and ANOVA for SWB in different income groups**

Income	Mean	N	Std. Deviation	F-Value	Significance
Below 20000	85.29	17	2.544	49.455	.000
20000-30000	92.64	11	2.203		
Above 30000	98.38	8	5.125		
Total	90.44	36	6.194		

A high level of SWB (Mean=98.38) was seen among the respondents of above 30000 income group. There was a significant difference in SWB ( $F=49.45$ ;  $p<.01$ ) among the respondents of different income groups.

**Table 6 - Showing the correlation between age and SWB**

		Age	SWB
Age	Pearson Correlation	1	.429**
	Sig. (2-tailed)		.009
	N	36	36
SWB	Pearson Correlation	.429**	1
	Sig. (2-tailed)	.009	
	N	36	36

Correlation test revealed that there was a significant correlation ( $r=.429$ ;  $p<.01$ ) between the chronological age of the respondents and their SWB.

**Table 7 - Regression analysis with SWB as the dependent variable**  
**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.429a	.184	.160	5.678

a. Predictors: (Constant), age

#### ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	246.921	1	246.921	7.660	.009a
	Residual	1095.968	34	32.234		
	Total	1342.889	35			

a. Predictors: (Constant), age

b. Dependent Variable: SWB

#### Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	83.329	2.739		30.419	.000
	age	3.608	1.303	.429	2.768	.009

a. Dependent Variable: SWB

Regression analysis was done to investigate the relationship between age and SWB. F-Test was statistically significant ( $F=7.660$ ;  $p<.001$ ), which means that the model was statistically significant. The R-Squared is .184 which means that approximately 18% of the variance in subjective well-being was explained by the predictor variable, that is, age.

## CONCLUSION

The present study was aimed at studying the Subjective Well-Being among the B-School faculty and differences in well-being among the respondents of different demographic characteristics. A convenience sample consisting of thirty six faculty members working in various B-Schools participated in the study. Questionnaire method was used for data collection. A higher level of SWB was observed among the respondents of 40-50 years age group. There was a significant difference in SWB among the respondents of different age groups. A high level of SWB was observed among the respondents belonging to joint family type. There was a significant difference in SWB among the respondents of nuclear and joint family. A high level of SWB was seen among the respondents of above 30000 income group. There was a significant difference in SWB among the respondents of

different income groups. There was a significant correlation between the chronological age of the respondents and their SWB. Regression test revealed that eighteen per cent of the variance in subjective well-being was explained by age.

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