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INVESTIGATING AND VALIDATING THE CONSTRUCTS OF EMOTIONAL INTELLIGENCE-MODEL DEVELOPMENT AND TESTING

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ABSTRACT- This research paper aims to explore the dimensions of Emotional Intelligence and investigate the causal effect of emotional dimensions on emotional intelligence. The study population compressors employees of IT and related sectors.The sampling unit covers respondents with selected age and experience background. A structured questionnaire was used to collect sample responses from 525 sample size. The questionnaire administrated through personal interview and online survey. The collected responses were purified before analysis and interpretation. That dimensions explorations of emotional intelligence was done through exploratory factor analysis. The testing of EFA with support of SPSS 23 version. Testing of hypothesis on the effect of emotional dimensions in emotional intelligence was performed through structural equation model in the support of Amos 21 version. It is found that there is a significant influence of Social Skill Emotional Receptivity and social awareness on emotional intelligence of IT employees.

KEY WORDS: **Emotional Intelligence, Social skill, Social awareness, Emotional Receptivity, Exploratory Factor Analysis, Confirmatory Factor Analysis.**

I. INTRODUCTION

EI emerged as a major psychological construct in the early 1990s, where it was conceptualized as a set of abilities largely analogous to general intelligence. Early influential work on EI was conducted by Salovey and Mayer (1990), who defined EI as the "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions"

Emotional Intelligence is a set of qualities and competencies that captures a broad collection of individual skills and dispositions, usually referred to as soft skills or inter and intra-personal skills, that are outside the traditional areas of specific knowledge, general intelligence, and technical or professional skills. Emotions are an intrinsic part of our biological makeup, and every morning they march into the office with us and influence our behaviour.

Emotional intelligence improves individual and organizational performance. It plays a significant role in the kind of work an employee produces, and the relationship he or she enjoys in the organization.Moreover, development professionals must consider which index has more predictive power than the others in explaining work-related phenomena and can be used to measure EI among individuals with markedly different demographic attributes operating in different contexts. Emotional intelligence measures also include indexes developed on an ad hoc basis or for which there is little or no research available on their psychometric properties. In our detailed literature review, we focus on a set of widely used measures and summarize evidence for their validity, reliability, and conceptual basis.

II. REVIEW OF LITERATURE

Barr-on (2000) believes that having done a effective efforts to take care of the students' emotional and social needs can result in the improvement of their academic performance. Taking into account the impact of emotional intelligence on the academic achievement of students,different experts and researchers.

Joibariaand**Mohammadtaherib (2011)** found significant correlation between main components of emotional intelligence including self motivation, self-awareness, self-regulation, social consciousness, social skills and students' academic achievement.

Jaeger (2003) explored the effect of emotional intelligence instruction on academic performance among a sample of 150 students of a general management graduate-level course in the northern United States. It was seen that there is statistically significant increase in EQ scores among the students who completed the emotional intelligence curriculum compared with scores of students in the group that was not given the emotional intelligence curriculum

Emotional intelligence (EI) is growing into a multimillion dollar training industry **(Kunnanatt, 2004; Adkins, 2004).** Because the major vendors of training use various means of measuring it, human resource development (HRD) professionals are forced to consider which index to choose for developmental purposes—that is, which index offers added value above and beyond existing tests (personality and intelligence), is conceptually sound, and is likely to have more face validity than another from the vantage point of managers and employees.

OBJECTIVES

- To evolve the attributes of EI
- To validate the effect of attributes on EI

HYPOTHESES

- There is a significant influence of self awareness of EI
- There is a significant effect of Self Motivation on EI.
- There is a significant impact of Social Awareness on EI.
- There is a significant effect of Emotional receptivity on EI
- There is a significant influence of social skill on EI

STATEMENT OF PROBLEM

The present day organizations are changing towards new dimension of working environment.The work place involvement embedded with multi culture work system and communication factors. The social demographic shift of employees in terms of their age,education and culture diversity demands new and innovative work in methodologies. The process of occupation and technological advantages need multi skilled of employees interacting at work places. Thesector like IT and IT's invoke unexpected work pressures in order to meet customer demands. The consequences brings Emotional imbalances. The employee- customer intact is a prominent source of success for IT sector.

Here the Emotional Intelligence and its intensity brings success to employees, customer and respective organizations. This research paper attempts to evoke the aspects of EI and its role on emotional outcome. This work hypothised the existing EI model and validated its constructs through SEM.

METHOD

The present study is exploratory cum descriptive in nature. it explore the dimensions of EI and outlined its effect on employees emotion.The study has considered employee working in it and its related sectors.

STUDY POPULATION

The sample had been chosen among employees with different departments and experiences. The sample for the study was estimated as 525. The require sample was arrived by conducting a pilot survey among the respondents.A questionnaire was prepared with three questions covered with the aspects of work place pressure, supervisory roleand work place emotion.

The responses were collected from 60 respondents in a interval scale. The obtained mean and Standard Deviationare substituted in the below formula to arrive the sample size.

$n = Z^2\infty^2 / (SE)^2$

MEASURES

In order to explore and validate EI and its related constructs and existing standardized questionnaire recommended by Salovey and Mayer on EI Scale was literally surveyed.The obtained items represents EI were validated through experts opinion based on the recommendations of experts opinion some corrections were made interms of sentence and language. There were 59 items developed to measure EI.The developed items were pilot tested for its scale reliability. The 59 items were converted as statements and measured in a likert scale (1=Strongly Disagree to 5=Strongly Agree).There were 35 respondents surveyed for pilot study on test and retest basis. The obtained responses for 59 items revealed an internal consistency of more than 0.7 cronbach alpha value(0.85) the validated questionnaire with reliable scale was further administrated for data collection are 525 samples.The questionnaire comprised 2 parts .the part one described sample characteristics like respondents age, gender, education ,experience, designation and department.the part 2 comprised 59 items to measure EI of employees.

EXPLORATORY FACTOR ANALYSIS

In exploratory factor analysis has been performed in order to evolve the dimensions of emotional intelligence of employees working in selected IT sectors considered for this study. There were 54 items (variables) identified through existing literatures of emotional intelligence developed by Mayer and Salovey (1993, 1997) and Pilot survey carried out among experts and selected respondents. The developed items were validated through judgemental validity process with experts and respondents. The validity items were checked for its internal consistency through pilot testing among 70 respondents. The result of Reliability analysis of 54 items has shown on a Cronbach Alpha value of 0.887 which is more than 0.7 permitted to consider all 53 items with reliability for performing exploratory factor analysis.

Exploratory Factor Analysis was conducted by considering 53 items. The KMO value obtained is 0.803 that is more than 0.7 produced the sample adequacy. The significant value of 0.000 and which is listen and 0.05 in Barlett's test of Sphercityrejected the null hypothesis that correlation matrix significance permitted to perform further process of Exploratory Factor Analysis.

The total variance explained table has grouped 53 variables under 12 factors with the item value of more than one and explain the total variance of 78.706 percentage. The initial rotated component Matrix showed the emergence of five major factors with the grouping of 38 variables. The remaining 15 variables where either loaded with poor sharing or unloading. After removing the 15 variables the remaining 38 variables scale reliability was further tested and found to be 0.877 and which is more than 0.7 showed and the internal consistency of items with reliability.

The fully loaded 38 items further taken for Exploratory Factor Analysis. The KMO value obtained is 0.846 more than 0.7 has shown the sample adequacy. The obtained significant value is 0.000 in Barlett's test of Sphercityproven the correlation Matrix significance and licence to to execute factor analysis the total variance table revealed that 38 variables are grouped under six factors with more than one agent value and explain the variance of 75.077 percentage.

Table-1
Sample Characteristics

Parameter	Category	Number of Respondents	Percentage to Total
Age	Less than 30	87	16.6
	31 to 40	164	31.2
	41 to 50	178	33.9
	Above 50	96	18.3
Gender	Male	260	49.5
	Female	265	50.5
Educational Background	Graduation	132	25.1
	Post-Graduation	260	49.5
	Professional	133	25.3
Designation	Software analyst	80	15.2

	Team leader	173	33.0
	Executive	181	34.5
	Others	91	17.3
Sector	IT	113	21.5
	ITES	254	48.4
	IT Aligned	158	30.1
Experience	Less than 5 Years	97	18.5
	6 to 10 Years	180	34.3
	11 to 15 Years	153	29.1
	More than 15 Years	95	18.1
Marital Status	Married	272	51.8
	Unmarried	253	48.2
Division	Technical	373	71.0
	Non-Technical	152	29.0
Total		525	100

Source: Primary data

Table shows the sample characteristics background selected for the study. Regarding the age background of respondents, 33.9 percentage working in IT sector are between 41 to 50 and 31.2 percent between 31 to 40. 49.5 percent employed in IT sectors are male and 50.5 percent are female. In terms of their educational background 49.5 percentage are post graduates and 25.3 percent are professions. Regarding their designation 33 percent are team leaders, 34.5 percent are executives and 15.2 percent are software analyst. For this study, 21.5 percent are chosen from IT, 48.4 from ITES and 30.1 from IT aligned. It is observed that 34.3 percent carries 6 to 10 years of experience and 29.1 percent between 11 to 15 years. With respect to their marital status, 51.8 percent are married and 48.2 percent are unmarried. The division of working reveals that 71 percent belong to technical and 29 from non-technical.

Table-2
Rotated Component Matrix(a)

Item Description	Item	Factor Loading	Factor Label	Convergent Validity	AVE	Discriminant Validity	Composite Reliability
I am skilled at the art of convincing others	socialskill1	.909	Social Skill	0.855154	0.732116	0.7	0.73
It's quite easy for me to understand the non verbal messages of others	socialskill2	.896					
I am easy to get friendly and possess good social skills	socialskill3	.876					
I offer useful feedback and identify peoples needs for development	socialskill4	.875					
I extend support and advice to others when needed	socialskill5	.861					
I guide the performance of others while holding them accountable	socialskill6	.861					

I promote open communication and ready to accept both bad and good news	socialskill7	.858					
I help other people feel better when they are in bad mood	socialskill8	.855					
I am extremely polite &respectful to others irrespective of the unfavorable circumstances	socialskill9	.835					
I handle difficult people and tense situations with diplomacy and tact	soicalskill10	.834					
I help others in coming out of difficult situations.	socialskill10	.832					
I can tell how others are feeling by listening to their tone of voice	socialskill11	.824					
I listen well, seek mutual understanding and fully welcome sharing of information	socialskill12	.801					
I maintain a balance between work and relationships	emotrece1	.921	Emotional Reactivity	0.872286	0.762683	0.762683	0.786124
I find it difficult to get friendly with someone who is not known to me	emotrece2	.888					
I like to cooperate with others in accomplishing a task	emotrece3	.886					
I make and maintain personal friendships among work associates	emotrece4	.880					
I promote a friendly and cooperative climate	emotrece5	.879					
I look for opportunities to work in a team.	emotrece6	.878					
I keep others in a team and build a strong bond.	emotrece7	.774					
I maintain a balance between work and relationships	aware1	.878		0.851571	0.725341	0.7	0.756126
I find it difficult to get friendly with someone	aware2	.860					

who is not known to me			Self Awareness				
I am aware of my strenghts and weaknesses.	aware3	.852					
I am open to continuous learning,selfdevelopment, new perspective and honest feedback	aware4	.850					
I recognise how my feelings affect my performance	aware5	.844					
I understand the relationship between my feeling and wht I think, do and say	aware6	.839					
I try to learn from experiences.	aware7	.838					
I am aware of my strengths and weaknesses.	socialaware1	.904	Social Awareness	0.768878	0.741411	0.72	0.768878
I am open to continuous learning,selfdevelopment, new perspective and honest feedback	socialware2	.890					
I recognise how my feelings affect my performance	socialaware3	.827					
I understand the relationship between my feeling and wht I think, do and say	socialaware4	.820					
I respect and relate well to people from different backgrounds	selfmotiv1	.917	Self-Motivation	0.82575	0.686992	0.66	0.725132
I see variety in people as opportunity, creating an environment where diverse people can prosper	selfmotiv2	.866					
I show sensitivity and understand others' point of view	selfmotiv3	.791					
I recognize and reward people's strengths, accomplishments and development	selfmotiv4	.729					
I am determined in achieving goals	emoiton2	.831					

despite obstacles and setbacks			Emotional Intelligence	0.810333	0.657238	0.70	0.702746
Before beginning something new, I usually feel that I will succeed	emotion3	.824					
I possess good confidence in taking sole responsibility and taking decisions by my own	emoiton1	.776					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		846					
Bartlett's Test of Sphericity	Approx. Chi-Square	21370.278		Total Variance Explained			75.077
	df	703					
	Sig.	.000					

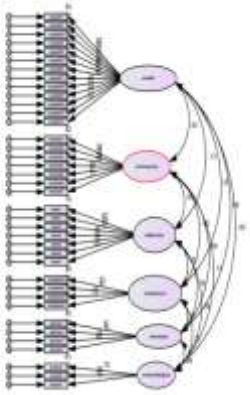
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 5 iterations.

Rotated component Matrix depicted that the factor 1 comprises 12 items (variables) is termed as "Social Skill" with the convergent validity of 0.85, Average Variance Extracted (AVE) of 0.73 Discriminant validity 0.73 and composite reliability 0.76. It explains that total variance of 25.808% . The factor 2 emerged with 7 items with the convergent validity of 0.85,AVE 0.73 and Discriminant validity 0.71 and Composite Reliability 0.78 which explains the total variance of 15.05 is termed as Emotional Receptivity. There are 7 items converge with 0.85 AVE with 0.72, Discriminant validity 0.7 and Composite Reliability 0.75 explains the variance of 13.038 percentage is labeled as "Self awareness".

The factor Four comprises 4 variables is grouped as a 'Social Awareness' with a convergent validity of 0.76 AVE of 0.74, Discriminant validity of 0.72 and Composite Reliability of 0.76 that explains 10.116 percentage of variance. The factor five emerged with 4 variables which explains the variance of 6.59 % is labeled as a 'Self Motivation'. The convergent validity of the 4 items in fifth construct is 0.82 and it explains more than 50 percentage of variance. The last factor is converged with three items is directly measures the attributes of emotion is termed as 'Emotional Intelligence' that explains 6.59 % of variance with the convergence of more than 80% and 50% and above variance.

Confirmatory Factor Analysis

Measurement Model without Modification Indices



Measurement Model with Modification Indices

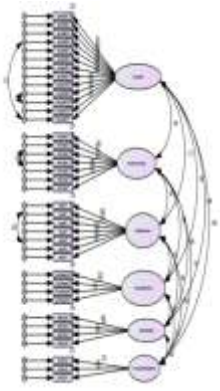


Table-3
Fit Indices

Fit statistic	Recommended	Obtained Before Modification Indices (Initial Model)	Obtained After Modification Indices (Revised Model)
x^2	-	5999.537	4646.870
Df	-	650	646
x^2 significance	$p \leq 0.05$	0.000	0.000
x^2 /df	≤2- 5.0	9.230	7.193
GFI	≥ 0.90	0.611	0.656
AGFI	>0.80	0.557	0.605
NFI	≥ 0.90	0.726	0.780
RFI	≥ 0.90	0.704	0.726
CFI	≥ 0.95	0.748	0.812
TLI	≥ 0.90	0.749	0.795
RMSEA	≤0.08	0.125	0.109
RMR	≤0.05	0.049	0.047

Table-4
Structural Equation Model

	CR	AVE	MSV	MaxR(H)	social Skill	Emotional receptivity	Self awareness	Social awareness	Self motivation	Emotional intelligence
social skill	0.969	0.710	0.015	0.972	**0.843**					
Emotional receptivity	0.946	0.716	0.020	0.955	0.041	**0.846**				
Self awareness	0.936	0.675	0.024	0.939	-0.122**	0.072	**0.822**			
Social awareness	0.900	0.694	0.072	0.930	0.075	0.006	-0.008	**0.833**		
Self-motivation	0.863	0.618	0.045	0.955	0.080†	0.057	0.156***	0.211***	**0.786**	
Emotionalintelligence	0.779	0.546	0.072	0.819	-0.059	0.140**	0.036	0.268***	0.044	**0/739**

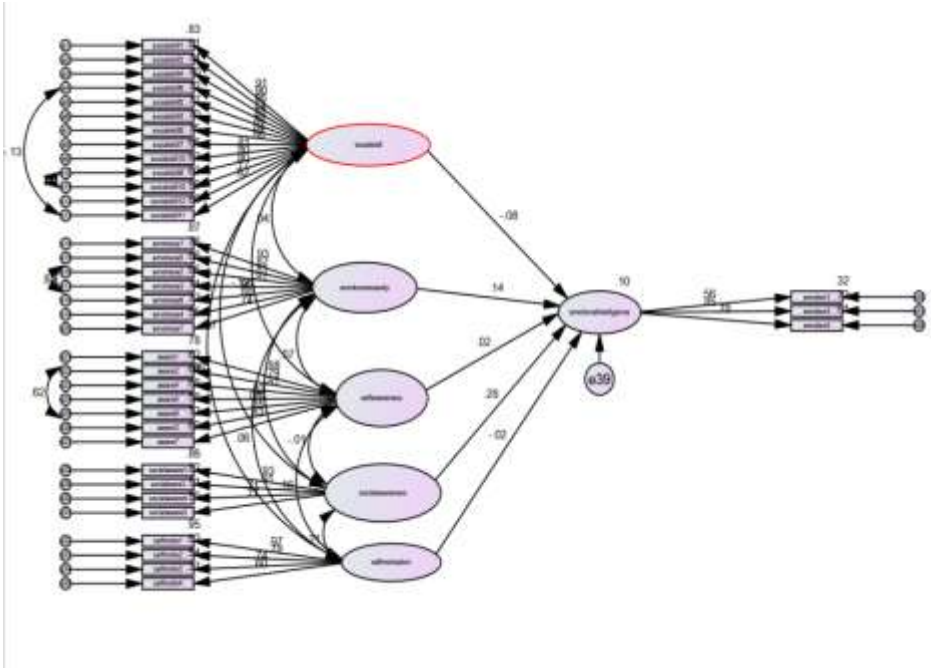


Table-5
Hypothesis Testing

		Estimate	S.E.	C.R.	P	Label
emotional intelligence	social skill	-.059	.035	-1.697	.090*	Supported
emotional intelligence	Emotional receivity	.118	.040	2.917	.004**	Supported
emotional intelligence	self-awareness	.018	.042	.440	.660	Not Supported
emotional intelligence	social awareness	.229	.042	5.399	***	Supported
emotional intelligence	self motivation	-.018	.046	-.395	.693	Not Supported

- at 10 percent level **- at 5 percent level

The confirmatory factor analysis has been carried out in order to test and validate the hypothesis framed that the Emotional Intelligence dimensions like Self-awareness, Social Skill Self-motivation Social awareness and Emotional resistivity have significant influence on Emotional Intelligence of employees in IT sectors. In order to prove thishypotheses the measurement and structural models were employed. The measurement model is executed to verify the validity of items convergent on respective constructs, the construct correlation and intensity of model fit. An initial measurement model was verified without applying modification indices in which the goodness of fit obtained is 0.611, AGFI=0.557, CMIN/Df = 9.230 RMSEA=0.125 and RMR=0.049. Since the required fits were not obtained, the revised measurement model is executed by including four modification indices (e4-e13, e10-e11, e16-e17 and e22-e25).

The results of applied modification indices have shown improved model fit GFI= 0.56,RMSEA= 0.10,RMR= 0.47 and CMIN/Df=7.19. The improved measurement model also generated the required convergent discriminant validity, composite reliability and AVE for defined constructs.

The improved model is further taken for structural equation in order to validate and test the hypothesis of emotional dimensions influence on emotional intelligence.Here the emotional dimensions like Social Skill self motivation self-awareness Social awareness and emotional resistivity have been taken as exogeneous

constructs. The aspect of emotional intelligence has been taken as endogeneous constructs. The outcome of structural equation modelling revealed that the Social awareness and emotional resistivity have significant positive influence on emotional intelligence with the standardized estimations of 0.141 and 0.277 @ 5% level of significance. The Social Skill of employees has inverse influence on emotional intelligence with standardized estimates of -0.082 at 10% level of significance. The aspects of self awareness and self motivation do not have significant influence on emotional intelligence among the employees in IT sector considered for this study.

III. CONCLUSION

Employees of IT sectors perceive their lives more difficult and secure. They are more comfy with their life. The study concluded that it is the fact that a `woman is involved in employment outside the home does not necessarily imply that she willdevote less effort to homemaking activities than her non-working counterpart; conversely, a nonworkingwife is not necessarily highly committed to her domestic role. Nonetheless involvementin a full-time job imposes time constraints on the performance of household duties. This impliesthat having paid employment either in the public or private sector, been a business person or afull time house wife does not disrupt a woman's family.

However, the study needs to be widened as the sample collected for the present study is fromparticular state therefore cannot be generalized. It is an encouraging sign that more research intothis area should be carried out considering different state so that better knowledge can beacquired about women in different jobs and different life styles.

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