

A study on the Relationship between Emotional Intelligence and Job Performance of Software Professionals of Trivandrum Technopark, Kerala, India

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Abstract

Objectives: Emotional intelligence (EI), a recent construct which predicts various performance and leadership traits help companies to deploy quality work force. Higher productivity expectations from employers on one side and the automation and international uncertainty of IT jobs on the other exerts pressure on the software professionals to deliver quality outcome with competing resources. The software professional is called upon to execute projects within squeezed timelines. This in turn increases the delivery expectation from the professional and thereby influences performance. The purpose of the study is to understand relationship between trait emotional intelligence and job performance of software professionals working in Technopark Campus, Trivandrum, Kerala, India.

Design: A structured questionnaire with items selected from Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF) and Health and Work Performance Questionnaire (HPQ) is designed to capture the trait EI and job performance of the software professionals which in turn will help in capturing the variables that will contribute to the objective.

Setting: Software Professionals working in 282 companies operating in Technopark Campus, Trivandrum, Kerala, India.

Outcome: The trait emotional intelligence and job performance of software professionals is measured using self-reporting scales and the relationship established.

Results: The TEIQue-SF and HPQ administered to collect data on trait EI factors viz. well-being, self-control, emotionality, sociability and self-reported job performance scores indicate that the predictor variables are significantly correlated and 61 percent of the variance in job performance of software professionals working in Technopark Campus, Trivandrum, Kerala, India is explained by the model.

Conclusion: This paper highlights the influence of Trait EI factors on job performance of software professionals working in Technopark Campus, Trivandrum, Kerala, India which will help top management deploy productive human resources in these changing times.

Keywords: India, Trivandrum, Software Professionals, Trait EI, Job Performance

I. INTRODUCTION

Emotional Intelligence (EI), a predictor variable in important domains such as academic performance, job performance, leadership, trust, work-family conflict and stress (Ashkanasy & Aaus, 2002; Fulmer & Barry, 2004; Humphrey, Pollack & Hawver, 2008) has received substantial attention in various streams of study in recent times. Emotional Intelligence, a set of abilities or perceptions concerning the way individuals identify, make use of, deal with and process emotions has positive correlation with job performance (H Nel, WS De Villiers, 2004). Also, Emotional Intelligence better predicted performance on student teamwork projects and on ratings of leadership (Offermann, et. al, 2004) and both cognitive and EI measures predicted leadership emergence (Kellett, Humphrey and Sleeth, 2006).

In an attempt to emphasize the importance of measurement in the operationalization of EI, Petrides and Furnham proposed a differentiation between trait EI and ability EI (formerly referred to as information processing EI). The former encompassed behaviour dispositions and self-perceived abilities and is measured through self-report, whereas the latter is concerned with actual abilities and had to be measured with maximum performance rather than self-report tests. Petrides and Furnham argued that investigation of trait EI should be conducted primarily within a personality framework because it is related to behavioural tendencies and self-perceived abilities.

The distinction between trait EI (or trait emotional self-efficacy) and ability EI (or cognitive-emotional ability) takes into consideration the psychometric distinction between measures of typical and maximal performance (e.g., Ackerman & Heggestad, 1997; Cronbach, 1949), with particular emphasis on its implications for the conceptualization of emotion-related individual differences (Petrides & Furnham, 2000, 2001).

Trait EI which related to behavioural tendencies and self-perceived abilities, (Petrides and Furnham, 2001) is defined as a constellation of emotion-related self-perceptions and dispositions located at the lower levels of personality hierarchies (Petrides, Furnham, & Mavroveli, 2007).



The Trait EI incrementally contributed to the higher order personality dimensions with the main contribution from well-being and self-control factors (*Federica, A. et al., 2016*)

Even though, cross-cultural differences study was conducted among German (individualistic culture) and Indian (collectivistic culture) in the extent to which general emotional intelligence was linked to life satisfaction (*Koydemir, Selda, et al., 2013*) and managerial perspectives on EI differences between India and the United States analyzed (*Ilangovan et al., 2007*), no performance related studies were attempted. Thus, it became pertinent to find out the relationship between emotional intelligence and job performance of Software Professionals of Trivandrum Technopark, Kerala, India.

II. DATA AND METHODS

The total software companies operating in Techno Park Campus, Thiruvananthapuram, Kerala is 282 nos. and cater to the needs of the IT industry within India and abroad. All the companies in the campus are included in the sample frame for the study.

A questionnaire is developed to understand the emotional intelligence of software professionals working in Techno Park Campus, Thiruvananthapuram and its impact on job performance of professionals using items of the Trait Emotional Intelligence Questionnaire TEIQue – Short Form (*K.V. Petrides, 2004*), which incorporates four factors viz. well-being, self-control, emotionality and sociability. The TEIQue is predicated on trait EI theory, which conceptualizes emotional intelligence as a personality trait, located at the lower levels of personality hierarchies (*K.V. Petrides, Pita, & Kokkinaki, 2007*).

The TEIQue – SF has a good construct validity (*Freudenthaler, H. Harald, et al; 2008; Gardner & Qualler, 2010; Martins et. al., 2010*), incremental validity (*Sieglings, A B et. al, 2015*), reliability (*Furnham, 2003*) and several independent studies have demonstrated the ability of the TEIQue to predict criteria (outcomes) significantly better than other questionnaires (*Martins, Ramalho, & Morin, 2010*).

The performance of the software professionals is measured using a self-report work performance measure of Health and Work Performance Questionnaire (HPQ).

Previous research has included self-reported measures whereby participants evaluate their own performance compared with that of their colleagues. Moreover, good concordance is found between individual-level HPQ reports and archival measures of work performance and absenteeism obtained from employer archives. (*Kessler, Ronald C., et al.*).

III. SAMPLING AND DATA COLLECTION

Samples of 425 software professionals working in Technopark Campus, Thiruvananthapuram were drawn using simple random sampling and the developed questionnaire administered. Out of the 425 administered, only 396 returned the questionnaire. After evaluating the questionnaire received, a total of n=384 respondents were finalized for analysis. The respondents mainly are male professionals and are below 40 years of age. Among the respondents with completed data, 58% are single and 80% reported having a university-level education. About 46% have around 5 year experience and whereby 25% earning more than Rs.40,000 per month.

IV. STATISTICAL METHODS

An attempt is made to investigate the statistically significant relationship between the profile variables and management category, life orientation using chi-square technique and the effect size was measured using Phi/Cramer's V. Also, a multiple regression is conducted to predict the job performance from a combination of scale variables viz., well-being, self-control, emotionality, sociability of the Trait EI construct and nominal independent variables like age, education and experience using the enter method (simultaneous regression). Also inter-correlation among the variables is tested.

V. RESULTS

The statistical significance between profile variables and management category is analyzed with the null hypothesis that there is no association between the variables is tested and the results shown in Table 1.

Table 1
Relationship between ProfileVariables and Management Category

Variable	Group	Management Category		Total	χ^2	Phi/ Cramer's V
		Juniors	Seniors			
Gender	Male	110 (61.80)	127 (61.65)	237 (61.72)	0.976	0.002
	Female	68 (38.20)	79 (38.35)	147 (38.28)		
	Total	178	206	384		
Marital Status	Single	135 (75.84)	87 (42.23)	222 (57.81)	45.425	0.344
	Married	38 (21.35)	103 (50.00)	141 (36.72)		
	Divorced/Separated	5 (2.81)	16 (7.77)	21 (5.47)		
	Total	178	206	384		
Education	Diploma	44 (24.72)	37 (17.96)	81 (21.09)	20.000*	0.228
	Graduate	91 (51.12)	80 (38.83)	171 (44.53)		
	Post Graduate/ Doctorate	43 (24.16)	89 (43.20)	132 (34.38)		
	Total	178	206	384		
Monthly Income	Upto Rs.20,000	133 (74.72)	51 (25.37)	56 (47.92)	123.958*	0.568
	Rs.20,001 to Rs.40,000	39 (21.91)	89 (44.28)	48 (33.33)		
	Above 40,000	6 (3.37)	61 (30.35)	28 (18.75)		
	Total	178	206	384		

Source : Primary Data

Note : Figures in parenthesis indicates percentage

* Significant at five percent level

The Pearson Chi-square results indicate that education ($\chi^2=20.000$, $df=2$, $N=384$, $p=0.000$), monthly income ($\chi^2=123.958$, $df=2$, $N=384$, $p=0.000$) and management category groups are statistically different. Thus, the null hypothesis that there is no association between the profile variables (marital status, education and monthly income) and management category is rejected. The Cramer's V which indicates the strength of the association between variables (marital status = 0.344, education = 0.228, monthly income = 0.568) is considered to be medium or typical (Cohen, 1998).

In other words, profile variables viz., marital status, education and monthly income significantly differentiate junior and senior software professionals working in Technopark Campus, Trivandrum, Kerala, India.

The statistical significance between profile variables and life orientation measured using Life Orientation Test – Revised is analyzed with the null hypothesis that there is no association between the variables is tested and the results shown in Table 2.

Table 2
Relationship between Profile Variables and Life Orientation

Variable	Group	Life Orientation		Total	χ^2	Phi/ Cramer's V
		Pessimism	Optimism			
Gender	Male	81 (72.32)	156 (57.35)	237 (61.70)	7.523*	0.140
	Female	31 (27.68)	116 (42.65)	147 (38.28)		
	Total	112	272	384		
Age	Upto 30 years	88 (78.57)	159 (58.46)	247 (64.32)	18.779*	0.221
	31 to 40 years	13 (11.61)	86 (31.62)	99 (25.78)		
	Above 40 years	11 (9.82)	27 (9.93)	38 (9.90)		
	Total	112	272	384		
Education	Diploma	33 (39.46)	48 (17.65)	81 (21.09)	12.421*	0.180
	Graduate	52 (46.43)	119 (43.75)	171 (44.53)		
	Post Graduate/ Doctorate	27 (24.11)	105 (38.60)	132 (34.38)		
	Total	112	272	384		
Monthly Income	Upto Rs.20,000	64 (57.14)	125 (45.96)	189 (49.22)	42.980*	0.335
	Rs.20,001 to Rs.40,000	27 (24.11)	101 (37.13)	128 (33.33)		
	Above 40,000	21 (18.75)	46 (16.91)	67 (17.45)		
	Total	112	272	384		

Source : Primary Data

Note : Figures in parenthesis indicates percentage

* Significant at five percent level

The Pearson Chi-square results indicate that gender ($\chi^2=7.523$, $df=1$, $N=384$, $p=0.006$), age ($\chi^2=18.779$, $df=2$, $N=384$, $p=0.000$), education ($\chi^2=12.421$, $df=2$, $N=384$, $p=0.006$), monthly income ($\chi^2=42.980$, $df=2$, $N=384$, $p=0.000$) and life orientation groups are statistically different. Thus, the null hypothesis that there is no association between the profile variables (gender, age, education and monthly income) and life orientation of software professionals working in Techno Park Campus, Trivandrum, Kerala India is rejected. The Cramer's V which indicates the strength of the association between

variables (gender = 0.140, age = 0.221, education = 0.180, monthly income = 0.335) is considered to be medium or typical (Cohen, 1998). In other words, profile variables viz., gender, age, education and monthly income significantly differentiate pessimists' and optimists' software professionals working in Technopark Campus, Trivandrum, Kerala, India.

Further, in order to investigate the association between job performance and trait EI factors viz. well-being, self-control, emotionality and sociability, a correlation is conducted and the details tabulated in Table 3.

Table 3
Inter Correlations, Mean and Standard Deviation for Trait EI and Job Performance Variables (N=384)

Sl. No.	Variable	Well-being	Self-Control	Emotionality	Sociability	Job Performance	Mean	SD
1	Well-being	-	0.439*	0.713*	0.393*	0.124*	3.43	0.80
2	Self-control	-	-	0.490*	0.418*	0.384*	3.21	0.63
3	Emotionality	-		-	0.452*	0.190*	3.59	0.57
4	Sociability	-	-	-	-	0.132*	3.24	0.65
5	Job Performance	-	-	-	-	-	2.59	0.66

* Significant at 0.01 level (2-tailed)

The inter correlation results indicate that ‘self-control’ $r(384) = 0.384$, $p = 0.000$ has the medium positive correlation, which is considered as medium or typical effect size. The trait EI factor ‘emotionality’ $r(384) = 0.190$, $p = 0.000$, ‘wellbeing’, $r(384) = 0.124$, $p = 0.000$ and ‘sociability’ $r(384) = 0.132$, $p = 0.000$ have smaller positive correlation, which is considered as small or smaller than typical effect size. The analysis infers that Trait EI factor self-control is correlated at the medium level against job performance of software professionals working in Technopark Campus, Trivandrum, Kerala, India. Also, when a combination of variables to predict job performance of the software professional working in Technopark

Campus, Trivandrum, Kerala, India viz., well-being, self-control, emotionality, sociability, experience, education and age are included, the predictor variables are significantly correlated $F(7,376) = 14.432$, $p = 0.00$. The trait emotional intelligence factor (self-control), experience, education significantly predicts job performance when all the seven variables are included. The adjusted R squared value was 0.617 indicate that 62 percent of the variance in job performance of the software professionals working in Technopark Campus, Trivandrum, Kerala, India is explained by the model (depicted in the table) and the interpretation of the strength of the relationship (effect size) is considered to be larger than typical (Cohen, 1988).

Table 4
Simultaneous Multiple Regression Analysis Summary

Variable	B	Standard Error	β
Trait EI – Well-being	0.03	0.23	0.03
Trait EI – Self-Control	0.41	0.06	0.40*
Trait EI – Emotionality	0.04	0.05	0.04
Trait EI – Sociability	0.21	0.08	0.02
Experience	0.07	0.05	0.13*
Education	0.10	0.03	0.12*
Age	0.08	0.05	0.09
Constant	3.46	0.26	

Note : $R^2 = 0.61$, $F(7,376) = 14.43$, $p = 0.00$

* $p < 0.05$

VI. DISCUSSION

The multiple regression model that predicts the job performance of software professionals from a combination of variables indicate that trait emotional intelligence factor – self-control, experience and education have a significant contribution to the model. The trait emotional intelligence factor – self-control has three different traits viz., impulse control, stress management and emotional regulation.

The table indicate that the strongest predictor of job performance is self-control ($\beta = 0.40$) which is significant and the model explains 61% of the variance in job performance. The variables like well-being, emotionality, sociability and age are not significantly contributing to the equation and hence it is assumed that these variables play a secondary role in job performance of software professional working in Technopark Campus, Trivandrum, Kerala, India. Also, the self-control has positive correlation with job performance.



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The software professionals in different gender, age, education and income group have different life orientation with an average 34 percent effect size. Also, software professionals with different marital status, education and income have been placed in various levels of management in their respective organization.

In summary, this paper has provided support for the relationship between trait emotional intelligence and job performance and has facilitated further insight into the relationship between profile variables and job performance. Hence, it is important for top management of IT companies to focus on getting emotionally competent professionals for the various management positions, so that the job performance can be improved and the productive workforce thus deployed can compete globally during this turbulent period of IT.

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