

Emotional Intelligence (EI) and Psycho-pathology in Iranian University Students

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ABSTRACT

Research on emotional intelligence and psychopathology, has had challenging findings. In order to enrich this area of knowledge, the present study was performed to investigate the relationship between emotional intelligence and psychopathology. A sample of 182 students (113 girls and 69 boys, aged 19-29 with 21.15 mean & 1.47 SD) from Tabriz University, who were selected by multi-level clustering method, were assessed by emotional intelligence scale (MSEIS) and symptom checklist (SCL-90-R). Results showed that emotional intelligence has a negative correlation with all pathological symptoms. Also, regression analysis indicated that emotional regulation as a factor of emotional intelligence, can significantly predict a symptom's variance. In general, these findings reveal that emotional intelligence and its factors has a considerable role in both prevention and treatment of pathological signs and symptoms.

Introduction

The human being's daily life is full of various stresses. Some of these stresses cause a lot of troubles that leads to people experiencing massive disorders. Emotional and affective disturbances are an important factor in developing mental disorders. Findings show that emotional disturbance is a fundamental aspect of schizophrenia, organic mental disorders, psychosomatic disorders, and personality disorders (Leible & Snell, 2004; Lane & Schwartz, 1987). Thus, emotional abilities are very important to mental health and adaptation to life situations.

The concept of Emotional Intelligence (EI) that has begun to attract the attention of researchers and mental health professionals, give hopeful findings in integrating broad emotional abilities. EI consists of the interaction between emotion and cognition that leads to adaptive functioning (e.g., Salovey & Grewal, 2005). The four-branch model of EI (Mayer, Salovey, & Caruso, 2004) posits that EI involves the interrelated abilities of (a) perception of emotion in the self and others, (b) using emotion to facilitate decision making, (c) understanding emotion, and (d) regulating emotion in the self and others.

Mayer et al. (2004) argued that EI is best conceived of as ability, so it is better to use maximal performance tests for assessment purposes. In this

regard, Mayer, Caruso, and Salovey (1999) developed first the Multifactor Emotional Intelligence Scale (MEIS) and then its successor, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, Caruso, & Sitarenios, 2003).

EI has also been conceptualized as a trait (Neubauer & Freudenthaler, 2005; Petrides & Furnham, 2001). This method is similar to personality characteristics such as extroversion or conscientiousness. Trait conceptualization of EI can be applied to a wide range of definitions in this area. On one side, we can see the mixed model definition of EI proposed by Bar-On (2000) that operationalized through the EQ-i, and on the other side, there are narrower definitions such as the one originally proposed by Salovey and Mayer (1990), operationalized through the Assessing Emotions measure (Schutte et al., 1998); or some aspects of their earlier definition operationalized through the Trait Meta-Mood Scale (Salovey et al., 1995).

Research on EI and its relationship with various levels of healthy behaviors, has had valuable outcomes. For example, Jain & Sinha (2005) showed that EI has a positive association with general health and can even predict it. Also, we found a positive association between EI, general health and adaptive problem-solving styles (Zarean, Asadollahpour, & Bakhshipour, in press).

A lot of studies, also, examined the relationship between EI and life satisfaction (e.g., Bastin, Borenz, & Nettlebeck, 2005; Austin, Saklofske, & Egan, 2005). Although, the largest part of life satisfaction variance is under the common variables such as personality and abstract intelligence; research indicates that EI can significantly explain a certain amount of life satisfaction variance (Exteremra & Fernands-Brocal, 2005; Gannon & Ranzin, 2005; Palmer, Donaldsen, 2002). The findings of these studies were significant through the control of mood, personality, and intellectual factors effects.

The factors named by Mayer et al. (2004) as the bases of EI, may contribute to mental and physical health in various ways. Matthews, Zeidner, and Roberts (2002) pointed out that level of EI may have implications for both mental disorders in which emotion plays a central role as well as disorders which have non-emotional properties.

Mood and anxiety disorders are examples of disorders that have maladaptive emotional states as core symptoms. The better perception, understanding, and management of emotion of those with higher EI may prevent development of maladaptive emotional states associated with mood and anxiety disorders (Matthews et al., 2002). Also, Schutte et al (2002) found that those with higher EI do tend to have typically a more positive mood and are better able to repair mood after a negative mood induction.

Lack of emotional awareness and inability to manage emotions are key symptoms in some personality disorders and impulse control disorders (Leible & Snell, 2004; Matthews et al.,

2002). Supporting a link between these variables, Schutte et al (1998) found that EI is associated with alexithymia and impulse control. Further, those with higher EI might be better able to follow through on commitments to health behaviors and show better medical compliance (Schutte et al., 2007).

Overall, findings show a strong relationship between EI and mental disorders. However, existing studies often contain one or two disorders, and there is limited knowledge about EI and its relation to the broad spectrum of mental disorders noted in DSM.

According to these findings, we can hypothesize that there is a systematic relationship between EI and some of mental disorders - at least in the level of symptomatology. Thus, the current study was performed to investigate the relationship between EI and a set of mental disorders. In other words, this study was carried out to determine which pathological symptoms - presented in DSM - have a significant and systematic relationship with EI.

Methods

Participants

The sample in the present study consisted of 182 students (69 males and 113 females) aged 19-29 (mean=21.15 & SD=1.47) from Tabriz university, who were selected through multi-level clustering method.

Measures

Modified Schutte Emotional Intelligence Scale (MSEIS): Austin et al (2004) introduced a modified version of Schutte Emotional Intelligence Scale (Schutte et al., 1998). New questionnaires consisted of 41 items along a 5-point Likert scale, of whicj

21 of the items were reverse keyed. Austin et al (2004) used Cronbach's coefficient alpha to evaluate its internal consistency (0.85). This scale was translated to Farsi by the authors of current study and obtained psychometric properties through three separate sets of research. Internal consistency of Farsi version is 0.84 (Bakhshipour, Zarean, & Asadollahpour, in press). Also, we found that the present scale has a positive association with GHQ-28 (Zarean et al., in press), and a negative association with psychosocial deviation (Zarean, Asadollahpour, & Bakhshipour, unpublished data).

Symptom Check-List - 90 - Revised (SCL-90-R): This check-list is one of the most useful tools for psychological screening. It has 90 items for assessing psychological symptoms that include depression, somatization, obsession, anxiety, psychoticism, phobia, hostility, paranoid ideation, and interpersonal sensitivity. A 5-point Likert scale was used to measure a participant's responses. In the study of Javidi (1372) on an Iranian sample, high reliability coefficients were obtained (sensitivity= 0.88, specificity= 0.81, & validity= 0.95).

Procedure

The statistical methods used in the present study are Pearson correlation coefficient and regression analysis carried out through SPSS (version 11.5, 2002) software.

Results

Means and Standard Deviations for the MSEIS and its four factors and the SCL-90-R and its indexes for boys, girls, and total sample are presented in Table 1.

Table 1 Means and standard deviations for the MSEIS and SCL-90-R

	Boys (n=69)		Girls (n=113)		Total sample (182)	
	Mean	SD	Mean	SD	Mean	SD
Somatization	9.17	7.82	10.8	8.39	10.8	8.2
Obsession	11.97	7.67	11.12	7.07	11.45	7.29
Interpersonal sensitivity	9.25	7.3	10.33	7.06	9.92	7.15
Depression	14.32	9.81	16.83	11.74	15.88	11.09
Anxiety	9.33	7.33	10.31	8.23	9.94	7.89
Hostility	6.17	5.75	5.42	6.06	5.7	5.94
Psychoticism	9.45	6.51	8.65	6.69	8.95	6.61
Paranoid ideation	9.59	5.42	9.29	4.51	9.41	4.86
Phobia	3.45	3.65	4.12	4.51	3.86	4.21
Add items	7.41	5.24	6.91	4.51	7.1	5.03
GSI	1	0.5	1.04	0.65	1.03	0.63
PSDI	1.85	0.55	1.88	0.56	1.87	0.56
Emotional appraisal	38.45	5.5	39.1	5	38.86	5.19
Emotional regulation	25	5.06	24.34	4.85	24.59	4.93
Utilization of emotion	26.75	3.93	26.37	3.5	26.52	3.66
Social skills	28.26	5.06	27.8	4.48	27.97	4.71
Total EI	149.3	17.98	148.52	15.18	148.82	16.21

The relationship between emotional intelligence and its four factors and the SCL-90-R indexes were examined using Pearson correlations. As shown

in Table 2, emotional intelligence and its four factors correlated significantly with all indexes of SCL-90-R. Although some correlations - such as paranoid

ideation - were weak ($r=-0.17$), but regarding other correlations, our hypothesis was confirmed in the high level of significance.

Table 2 Correlations between MSEIS and SCL-90-R (n=182)

	Emotional appraisal	Emotional regulation	Utilization of emotion	Social skills	Total EI
Somatization	-0.35***	-0.46***	-0.21**	-0.2**	-0.39***
Obsession	-0.31***	-0.5***	0.08	-0.22**	-0.37***
Interpersonal sensitivity	-0.23***	-0.55***	-0.03	-0.2**	-0.34***
Depression	-0.25***	-0.57***	-0.1	-0.21**	-0.35***
Anxiety	-0.32***	-0.54***	-0.15*	-0.19**	-0.38***
Hostility	-0.23**	-0.4***	-0.19**	-0.09	-0.27***
Psychoticism	-0.2**	-0.5***	-0.04	-0.17*	-0.3***
Paranoid ideation	-0.12	-0.33***	-0.06	-0.02	-0.17*
Phobia	-0.34***	-0.4***	-0.15*	-0.16*	-0.36***
GSI	-0.32***	-0.58***	-0.14*	-0.2**	-0.4***
PSDI	-0.17*	-0.38***	-0.05	-0.1	-0.22**

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In order to determine if emotional intelligence can predict the variance of psychopathological symptoms, we used regression analysis for each symptom. Detailed findings for these analyses are presented in Table 3 and

4.

a) Emotional Appraisal: Table 3 shows that emotional appraisal can explain just some part of the variance of somatization, obsession, and

phobia. So, it seems that emotional appraisal that includes perception and expression of emotion in self and others; is the area that patients with somatic, obsessive, and phobic symptoms are suffering from.

Table 3 Regression analysis of MSEIS on SCL-90-R

	Emotional appraisal		Emotiona Iregulation		Utilization of emotion		Social skills		Constant
	Beta	t	Beta	t	Beta	t	Beta	t	
Somatization	-0.19	-2.02*	-0.39	-4.94***	-0.01	-0.05	0.05	0.68	35.59
Obsession	-0.22	-2.32*	-0.44	-5.78***	0.16	1.93	0.01	0.14	30.24
Interpersonal sensitivity	-0.06	-0.92	-0.57	-7.65***	0.15	1.85	0.04	0.49	25.22
Depression	-0.03	-0.32	-0.59	-7.93***	0.04	0.53	0.05	0.67	43.95
Anxiety	-0.14	-1.51	-0.53	-6.99***	0.03	0.38	0.1	1.31	32.35
Hostility	-0.01	-0.09	-0.43	-5.34***	-0.13	-1.42	0.15	1.92	19.03
Psychoticism	-0.04	-0.45	-0.53	-6.86***	0.1	1.2	0.05	0.62	21.73
Paranoid ideation	0.02	0.18	-0.4	-4.82***	-0.03	-0.31	0.16	1.99*	14.85
Phobia	-0.27	-2.77**	-0.33	-4.064***	0.07	0.83	0.06	0.97	15.08

* p< 0.05 , ** p< 0.01 , *** p< 0.001

Table 4 The amount of SCL-90-R variance predicted by MSEIS factors

	R	R2
Depression	0.57	0.33
Interpersonal sensitivity	0.57	0.32
Anxiety	0.55	0.3
Obsession	0.52	0.27
Psychoticism	0.51	0.26
Somatization	0.49	0.24
Phobia	0.45	0.2
Hostility	0.43	0.19
Paranoid ideation	0.36	0.13

b) Emotional Regulation: An inspection of Table 3 indicates an important role of emotional regulation in all psychopathological symptoms. The comparison of the “Beta” and “t” coefficients between this factor and the other three factors reveals the considerable role of emotional regulation in the explanation of symptoms variance. It means that some emotional abilities such as understanding and perception of emotion; reducing emotions to micro-elements; understanding and perception of one affective mode changing to another; and understanding complicated feelings

in social situations; are areas that commonly have a deficit and present a massive spectrum of psychopathological symptoms.

c) Utilization of Emotion: an interesting finding in the present study is related to the role of utilization of emotion in psychopathology. Table 3 indicates that there is no significant role for utilization of emotion in predicting the variance of psychopathological symptoms; although, this role is close to significance about obsession and interpersonal sensitivity. Thus, deficits on the components of utilization of emotion such as cognitive flexibility, creative thinking, re-attention, and motivational processes show

themselves more in the obsession and interpersonal sensitivity.

d) Social Skills: Like the utilization of emotion, this factor has no more power in predicting the variance of psychopathological symptoms. Regarding paranoid ideation it seems that deficits in effective communication along with others, is the vulnerable aspect.

Overall, the current study findings demonstrate a link between emotional intelligence and psychopathology, and there is a certain role for emotional intelligence factors in predicting the variance of psychopathological symptoms. However, more

conclusions about the results are presented in discussion.

Discussion

The findings of the present study show that emotional intelligence and its four factors had a negative association with somatization symptoms that are consistent with the findings of Thompson et al. (2007), and Lane & Schwartz (1987). Also, emotional symptoms such as depression, anxiety, obsession, and phobia are negatively correlated with total score and factors of emotional intelligence as in previous studies (see Thompson et al., 2007; Schutte et al., 2007; Jain & Sinha, 2005; Matthews et al., 2002; Dawda & Hart, 2000; and Zarean et al., in press). However, we should say there is limited knowledge about emotional intelligence and its relationship with obsession and phobia, and the present study might be the primary data in this area. Also, the relationship of emotional intelligence with paranoid ideation and interpersonal sensitivity is under debate and we found no data in this regard.

The association of emotional intelligence and four factors with psychoticism, is significantly negative, confirmed Each et al. (2007) and Lane & Schwartz (1987) findings. And the latest result about a negative relationship between emotional intelligence and hostility is consistent with the findings of Leible & Snell (2004), Quebbeman & Rozell (2002), and Ramazani & Abdollahi (2006). According to these findings, it is clear that in the broad range of psychopathology we can find emotional and affective components, and various investigations performed to explain these associations.

We should consider that emotion - has an important factor in human life and a vital role in species survival - has specific complexities, so psychologists and mental health professionals explained different aspects in its description. On the other hand, emotional intelligence is a multidimensional construct. Thus, it is necessary to consider these dimensions in treatment and rehabilitation planning.

As noted in the results, emotional intelligence studied in this research, has four factors:

- a) emotional appraisal,
- b) emotional regulation,
- c) utilization of emotion, and
- d) social skills.

An inspection of Table 2 and 3 shows that emotional regulation has a negative association with SCL-90-R and in comparison with the other three factors, can better predict amount of symptom variance.

Intellectual regulation of emotion is necessary for emotional promotion and adaptive development. Individuals with high skill in emotional regulation, moderate and minimize negative affect mode, and intensify positive affects without the manipulation or repression of related cognitive information. Skills in emotional regulation cause people to maintain their positive mood, and effective use of mood repairing strategies, when they experience negative mood and affect.

Emotional knowledge can also help in the regulation of emotions. For this purpose, an individual must first acquire some information about causal relationship between circumstances and emotional experiences. Then according to this knowledge, he/she conceptualizes some hypotheses about his/her arousability in such situations, and finally, trains his/her effective emotions due to the ability of emotional experiences analysis.

It is clear that becoming skillful in emotional regulation one needs to have necessary abilities in other components of emotional intelligence. It means that we should perceive different affective modes, correctly; effectively utilize our emotional abilities in solving everyday life problems; and be sensitive and aware of affective elements in interpersonal relationships.

Overall, according to the current study, it seems that there are hopeful findings about the association of emotional intelligence and its factors with psychopathological symptoms; although well-controlled research is needed for prevention and therapeutic purposes. Also, because of challenging

ideas about the construct validity of emotional intelligence and its differentiation from cognitive abilities and personality characteristics, it is important to undertake investigations considering these variables.

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