Early Maladaptive Schemas versus Emotional Intelligence in Substance Addicts and Non-addicts Living in Tehran

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Abstract: The objective of this research was to compare early maladaptive schemas with emotional intelligence of substance addicts and non-addicts. This research was a descriptive study. The statistical population included all male and female substance addicts who reported to public rehabilitation centers in Tehran in Aban 1391 (November 2012). The statistical population included 750 individuals. Study sample was selected by simple random sampling. The study sample included 100 subjects consisting of 50 addicts and 50 non-addicts. This study used Bar-on Emotional Intelligence Inventory and Young Early Maladaptive Schema Questionnaire (YSQ). Data analysis was carried out by applying independent t-test and multivariate regression. The results showed that the average emotional intelligence in non-addict individuals was higher than the average emotional intelligence in substance addicts at 95% confidence level. The average score of early maladaptive schemas in substance addicts is higher than the average score of non-addicts. Statistical significance is skewed toward substance addicts. Regression analysis showed that emotional intelligence and maladaptive schemas could predict 0.581 of the total variance for the propensity to addiction in substance addicts. The comparison of standard regression coefficients showed that disconnection and rejection schemas have higher share in prediction of the propensity to addiction in substance addicts ($\beta = -0.512$). The relation of emotional intelligence and maladaptive schema subscales (self-discipline, vigilance, and inhibition) versus the propensity to addiction in substance addicts is negative. Consequently, the higher the propensity to addiction in substance addicts, the lower the frequency of emotional intelligence and maladaptive schema subscales (self-discipline, vigilance, and inhibition), or vice versa.


Introduction

Substance abuse is a biological, psychological, and social ailment. Many factors influence the propensity to substance abuse. The interaction of these factors leads to substance abuse and later to substance dependency. These factors collectively intertwine into addiction. Addiction is a personal abnormality that affects body, mind, feelings, affection, and values influencing personal, family, social, spiritual, and moral relations.

Addiction is the outcome of biological and physiological changes which occur from substance abuse. The ensuing tolerance interferes with the normal balance of the general physical system. Substance abuse is a disorder when a person consumes harming amounts of medicinal, non-medicinal, or toxic materials. This consumption creates social problems for substance abuser. These problems make the individual irresponsible with inclination to absenteeism from work, school, or family causing legal problems for the person. Substance abuse may create dependency.

Maladaptive schemas may produce illogical beliefs as cognitive infrastructure. Schemas have cognitive, emotional, and behavioral subscales.

When early maladaptive schemas become active, they emit different levels of emotions. These emotions, directly or indirectly, produce various forms of psychological distress including depression, anxiety, job failure, substance abuse, interpersonal conflicts, and the like. Maladaptive schemas do not directly lead to a given personality disorder, but they make the person more prone to these disorders.

Young (1999) suggested that maladaptive schemas are not the result of shocking events, but rather, they are probably the result of a continuing pattern of daily "poisoning experience" with family members, colleagues, or peers that increasingly reinforce schemas. Young assumes the developmental root of early maladaptive schemas rests in unpleasant experiences during childhood, i.e., the unpleasant childhood experiences may produce personality disorder in adulthood. Young believes that early maladaptive schemas form due to unsatisfied basic needs during childhood.

Humans have five basic needs, namely, 1) Safe interest in others; 2) autonomy, competence, and identity; 3) freedom of expression for needs and healthy emotions; 4) self-satisfaction and recreation; and 5) realistic limits and self-control.
The interaction between child temperament and early environment may produce frustration instead of need satisfaction. This condition forms early maladaptive schemas (Sahabi et. al., 1386/2007). Early maladaptive schemas are self-destructive emotional and cognitive patterns that form in mind during early development periods and are repeated throughout life. Early maladaptive schemas fight for survival in human inclination toward "cognitive harmony."

Individual knows that the schemas are disturbing, yet, feels comfortable with them. This feeling makes individual to conclude about the rightfulness of schemas. People are attracted to the events that correspond to their schemas. This attraction makes schema alteration rather difficult. Schemas have vital roles in thinking, feeling, behaving, and communicating with others. Schemas form accurate reflections of surrounding environment from early childhood or adolescence. These schemas continue their development and impose themselves on the following life experiences (Hamid Pour and Andooz, 1386/2007).

Schemas are divided into five groups according to five child developmental needs: disconnection and rejection, impaired autonomy and performance, impaired limits, other-directedness, plus over-vigilance and inhibition. Each group includes several sub-schemas (Hamid Pour and Andooz, 1386/2007).

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- Abandonment/Instability
- Mistrust/Abuse,
- Emotional Deprivation
- Defectiveness/Shame
- Social Isolation/Alienation

**Impaired Autonomy and Performance:**

- Dependence and Incompetence
- Vulnerability to Harm or Illness
- Undeveloped Self/Enmeshment
- Failure

**Impaired Limits**

- Entitlement/Grandiosity
- Inadequate Self-Control/Self-Discipline

**Other-directedness:**

- Subjugation
- Self-sacrifice
- Approval-seeking/Recognition-seeking

**Over-vigilance and Inhibition:**

- Negativity/Pessimism
- Emotional Inhibition
- Unrelenting Standards/Hyper Criticalness
- Punitiveness

Etymology of substance addiction shows that early maladaptive schemas and the inefficient approaches used by addicts in dealing with others are often the basis for chronic disorder symptoms on I coordinate. The disorder symptoms include anxiety, depression, substance abuse, and psychosomatic disorders. Early maladaptive schemas are the oldest cognitive subscales. They form sometimes even before children learn language and often exert their influence on the human data processing system under consciousness threshold. Schemas are continuous structures of the cognitive system that acts as filter and stereotype to purify individual experiences and help him organize his behaviors. Schemas are organized patterns of thinking, feeling, and behaving formed over the collection of schemas.

Emotional intelligence was first introduced at the end of twentieth century. Based on this concept, thinking and emotions are not separable as were thought earlier. Emotional intelligence is the latest significant conceptualization for understanding the relation between thinking and emotions. The unique and valuable contribution of this concept is that it assumed emotions and thoughts to be compatible and combined them intelligently. This treatment was quite different from earlier thoughts.

Emotional intelligence represents the understanding of emotions and the way this understanding influences the interpersonal relations. Emotional intelligence controls emotions in interpersonal relations and provides the motivation to focus internal forces in the direction of success. Cooper and Sawaf defined emotional intelligence in terms of early emotional literacy, emotional fitness, emotional depth, and emotional alchemy. Early emotional literacy is obtained from individual's nature and feelings. Emotional fitness is the flexibility and strength of feelings and emotions. Emotional depth is the capacity for growing and strengthening or deepening the emotions. Emotional alchemy is the ability to use feelings and emotions for creativity.

Gollman (2000) defined five clusters for emotional intelligence, namely, emotional awareness, emotional management, self-motivation, social-awareness, and relationship management. With this minor change, the attention of researchers changed from emotional intelligence to motivation concept (self-motivation) and social relations (relation management).

Baron proposed a different model in 1997 based on this combined approach. The model provided a new definition for emotional intelligence as "a collection of non-cognitive abilities, competences, and skills that influences individual capabilities to attain success within constricts of environmental
Various evidences prove that emotional intelligence is directly related to individual's success or failure in different areas of life (Schute, Malouff, Thorsteinsdsson, Bhullar, & Rook, 2007; Jain and Sinha, 2005; Jacobs and Dagan, 2008). However, only a few research studied the relation between emotional intelligence and substance abuse (e.g. Parker, Taylor, Estabrook, Shell, & Wood, 2008).

Low level of emotional intelligence, which stems from the inability to efficiently encounter emotions and to effectively manage them, has a role in starting substance abuse (Gollman, 1995; Parker et. al, 2008). When an individual comes under peer pressure for substance abuse, effective emotion management reduces the danger as an emotional intelligence subscale. The ability to manage emotions enables an individual to use proper counter approach in high risk situations for substance abuse.

Individuals with high emotional intelligence are more capable of predicting others' demands. They detect unwelcomed peer pressures and exert better control over own emotions. They are able to show higher resistance toward substance abuse (Trinidad and Johnson, 2002). Individuals with low emotional intelligence are prone to substance abuse as a means to control their negative emotions (Trinidad, Unger, Chou, & Johnson, 2004).

Substance abuse is a rising social problem. No country is immune against the spread and danger of substance abuse. Psychologists and social researchers have offered various reasons for substance abuse. Some believe that the propensity to substance abuse lies in the attempt for attaining social approval and showing personal maturity (Jessor, 1989). Others believe that group acceptance and peer encouragement are among the important factors effective in increasing the likelihood of substance abuse. The inability to control one's impulses (Doran, McCharque, & Cohen, 2007), and the propensity to seek adventure and diversification (Von Knorrin, & Oreland, 1985; Wills, et. al, 1999) are among the effective psychological factors in substance abuse.

Not many research studied the relation between emotional intelligence and psychological health of substance addicts. However, there are enough evidences to show that emotional distress is related to certain aspects of maladaptive schemas or psychotic, psychosomatic, and/or personality disorder. Emotional intelligence is related to high quality of social interaction, life satisfaction, social responsibilities, and certain personal properties such as mood adjustment. Thus, a strong emotional intelligence is positively related to better stress management and low levels of psychological ailments. It is negatively correlated with psychological disorders.

This research attempts to find answer to the main study question by comparing early maladaptive schemas and emotional intelligence in substance addicts and normal individuals.

Research Hypothesis

Average scores of emotional intelligence and maladaptive schemas for substance addicts are different from the average scores of normal individuals. The propensity to substance abuse in addicts is predictable by scores of emotional intelligence and maladaptive schemas (disconnection and rejection, impaired autonomy and performance, impaired limits, other-directedness, and over-vigilance and inhibition).

Research Methodology

Present study is a descriptive research. The statistical population included all male and female substance addicts who reported to public rehabilitation centers in Tehran in Aban 1391 (November 2012). The statistical population included 750 individuals. Study sample was selected by simple random sampling. The total study sample was 100 individuals consisting of 50 addicts and 50 non-addicts. This study used Bar-on Emotional Intelligence Inventory and Young Early Maladaptive Schema Questionnaire (YSQ). Data analysis was carried out by applying independent t-test and multivariate regression.

Research Findings

Hypothesis 1: Average scores of emotional intelligence and maladaptive schemas for substance addicts are different from the average scores of normal individuals.

Tables 1 and 2 show the testing of this hypothesis.

Table 1- Independent t-test to Compare Emotional Intelligence Scores of Substance Addicts and Non-addicts

<table>
<thead>
<tr>
<th>Subjects</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SE</th>
<th>t</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addicts</td>
<td>50</td>
<td>98.01</td>
<td>3.321</td>
<td>0.54</td>
<td>30.885</td>
<td>98</td>
<td>0.000</td>
</tr>
<tr>
<td>Normal</td>
<td>50</td>
<td>146.25</td>
<td>4.546</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The obtained t (t_0.05 =30.855) is higher than the reference t in the table at 98 degree of freedom. Therefore, we reject zero hypotheses and confirm the
research hypothesis at 95% confidence level, i.e., emotional intelligence is different in addicts and non-addicts. The average emotional intelligence of non-addicts is higher than the average emotional intelligence of addicts. The significance is skewed toward non-addicts.

**Hypothesis 2:** The propensity to substance addiction is predictable in substance addicts by emotional intelligence and maladaptive schemas in addicts. Therefore, we reject zero hypotheses and confirm the hypothesis at 95% confidence level, i.e., maladaptive schemas are different in addicts and non-addicts. The average score of maladaptive schemas in non-addicts is higher than the average score of maladaptive schemas in addicts. The significance is skewed toward addicts.

**Table 2- Independent t-test to Compare Maladaptive Schema Scores of Substance Addicts and Non-addicts**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SE</th>
<th>t</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addicts</td>
<td>50</td>
<td>313.12</td>
<td>11.321</td>
<td>0.93</td>
<td>41.028</td>
<td>98</td>
<td>0.000</td>
</tr>
<tr>
<td>Normal</td>
<td>50</td>
<td>175.25</td>
<td>6.546</td>
<td>0.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The obtained t (t0b =41.028) is higher than the reference t in the table at 98 degree of freedom. Therefore, we reject zero hypotheses and confirm the research hypothesis at 95% confidence level, i.e., maladaptive schemas are different in addicts and non-addicts. The average score of maladaptive schemas of non-addicts is higher than the average score of maladaptive schemas in addicts. The significance is skewed toward addicts.

**Hypothesis 2:** The propensity to substance addiction is predictable in substance addicts by emotional intelligence and maladaptive schema scores (disconnection and rejection, impaired autonomy and performance, impaired limits, other-directedness, and over-vigilance and inhibition).

**Table 3- Regression Model and Its Statistical Parameters of the Propensity to Substance Addiction versus Emotional Intelligence and Maladaptive Schemas**

<table>
<thead>
<tr>
<th>Index Model</th>
<th>SS</th>
<th>df</th>
<th>Ms</th>
<th>F</th>
<th>P</th>
<th>R</th>
<th>R²</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3687.0</td>
<td>2</td>
<td>1089.3</td>
<td>8.41</td>
<td>0.01</td>
<td>0.20</td>
<td>0.38</td>
<td>26.74</td>
</tr>
<tr>
<td>Residual</td>
<td>48221</td>
<td>98</td>
<td>301.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>51909</td>
<td>10</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assuming that $R^2$ represents the percentage covariance of emotional intelligence and maladaptive schemas in predicting the propensity to addiction, the results stated in table 3 show that emotional intelligence and maladaptive schemas can predict 0.581 of total variance for the propensity to substance addiction. Considering the calculated F is significant at a value lower than 0.01 (p=0.013, $F=8.419$), therefore, the linear regression model is significant. It means that emotional intelligence and maladaptive schemas have a significant linear relationship with the propensity to substance addiction. Table 4 presents the results of the significant predictive model in form of regression coefficients table.

**Table 4- Regression Coefficients of Propensity to Substance Addiction versus Emotional Intelligence and Maladaptive Schemas**

<table>
<thead>
<tr>
<th>Index Variable</th>
<th>B</th>
<th>SEB</th>
<th>$\beta$</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>43.158</td>
<td>9.875</td>
<td></td>
<td>7.415</td>
<td>0.0001</td>
</tr>
<tr>
<td>Emotional Intelligence</td>
<td>-0.614</td>
<td>0.101</td>
<td>-0.479</td>
<td>0.047</td>
<td>0.001</td>
</tr>
<tr>
<td>Disconnection and Rejection</td>
<td>0.322</td>
<td>0.321</td>
<td>0.512</td>
<td>0.049</td>
<td>0.001</td>
</tr>
<tr>
<td>Impaired Limits</td>
<td>0.418</td>
<td>0.105</td>
<td>0.401</td>
<td>0.012</td>
<td>0.001</td>
</tr>
<tr>
<td>Autonomy</td>
<td>-0.321</td>
<td>0.415</td>
<td>-0.214</td>
<td>0.098</td>
<td>0.001</td>
</tr>
<tr>
<td>Other-Directedness</td>
<td>0.541</td>
<td>0.213</td>
<td>0.407</td>
<td>0.067</td>
<td>0.001</td>
</tr>
<tr>
<td>Vigilance and Inhibition</td>
<td>-0.489</td>
<td>0.148</td>
<td>-0.314</td>
<td>0.053</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Table 4 shows that the variance of emotional intelligence and maladaptive schemas are good predictors for propensity to addiction in substance addicts. The t-test is significant for regression coefficients values lower than 0.01. Since $b$ is non-standard regression coefficient, we recommend using standard regression coefficient.

Comparison of the standard regression coefficient shows that disconnection and rejection schemas ($\beta =-0.512$) have higher contribution in predicting the propensity to substance addiction in addicts. The relation between emotional intelligence and maladaptive schema subscales (autonomy, vigilance, and inhibition) versus the propensity to addiction in addicts is negative. Therefore, the higher the propensity to addiction in addicts, the lower the frequency of emotional intelligence and maladaptive schema subscales (autonomy, vigilance, and inhibition), or vise versa.
Discussion and Conclusion

In emotional intelligence hypotheses, the results of analysis showed that there is a significant difference between emotional intelligence of non-addicts and emotional intelligence of addicts at 95% confidence level. This significance is skewed toward non-addicts. This finding corresponds to findings of Jack Bellak (2005, as quoted in Husseini, 1387/2008). Bellak’s study compared substance addicts and non-addicts. The mentioned characteristics of individuals with high emotional intelligence are notable. Some of these personal characteristics are: sociable personality, feeling comfortable with self, others, and the social groups in life or at work, acceptance of responsibility, bravery, high capacity for serving people and solving their problems, sympathy, and attentiveness in communicating with self and others.

Mayer & Salovey (1990) and Gollman (1995) classifications of emotional intelligence subscales show why an individual with high emotional intelligence is able to avoid substance abuse. Another similar research is a study conducted by Hosseini (1387/2008). Asadi found a positive and significant relation between emotional intelligence and avoidance of substance addiction in another study.

Other characteristics of individuals with high emotional intelligence include 1) understanding personal emotions (self-consciousness), 2) proper use of emotions (self-control), 3) self- arousal (self-motivation), 4) understanding emotions of others (sympathy), 5) maintaining communication (communication and social skills).

Research on positive self-motivation as an emotional intelligence subscale (Sadat, 1388/2009), and on spontaneity and absorption in activities can represent the role of self-motivation in avoidance from substance addiction and, consequently, better performance.

The result of analysis showed significant difference between early maladaptive schemas in non-addicts and addicts at 95% confidence level. These results correspond to other research findings. The results from Andooz and Hamid Pour (1386/2007) showed that the higher the number of maladaptive schemas, the higher the likelihood of substance addiction.

The present research found a significant difference between early maladaptive schemas in addicts and non-addicts, which conforms to findings of earlier studies. Lotfi (1385/2006) found that non-addicts probably have less number of maladaptive schemas compared to addicts. His finding is similar to this research hypothesis. According to Young, the average score of early maladaptive schema subscales in non-addicts was significantly lower than the average score in addicts.

The frequency of schemas show that high scores in other-directiveness schema mean excessive focus on satisfying needs of others in daily life at the cost of non-fulfillment of own needs. The most common reasons are: prevention of harm to others and avoidance of guilt feeling from selfishness.

High scores in impaired autonomy and performance schema mean lack of personal belief in achieving the internalized and exaggerated standards about own behavior and performance even with excessive efforts. The reason for this belief is to avoid criticism. This condition occurs in families who are under pressure and excessively criticize themselves and others.

The favorable scores of maladaptive schemas in non-addicts show their definite belief in their own superiority next to others. These people consider special rights for themselves. They often insist on getting what they want. These individuals focus on seeking preference (as the most talented, successful, and/or wealthy) in order to increase their influence. These individuals enter into competition, show off their power, and impose their views on others in order to satisfy their own desires, attract sympathy, and make others to attend to their needs and feelings.

The unfavorable scores of maladaptive schemas in addicts show that they are imperfect, undesirable, belittle, and unreliable in the most important aspects of their personality. These scores also show that substance addicts are considered as unwanted individuals in view of the important persons in their life. They are excessively sensitive to criticisms, rejections, reproach, and unjustified comparisons. This sensitivity shows itself in the form of shyness and insecurity. The weaknesses may manifest themselves in private (angry impulses, unacceptable instincts, and selfishness) or in public (undesirable physic and social problems).

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References


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