The Relationship Between Alexithymia and Self-Efficacy with Addiction Vulnerability of Students

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Abstract: The aim of the present study was to investigate the relationship between Alexithymia and students’ addiction vulnerability. 400 male and female students (201 males and 197 females) were chosen through stratified random sampling in different stages from the graduate level students of Islamic Azad University of Rasht (Pole Taleshan unit). They filled the questionnaires of Alexithymia of Toronto, Sherer’s self-efficacy questionnaire and Zargar’s addiction vulnerability questionnaires. For data analysis Pearson’s correlation coefficient, multivariable regression and multivariable variance analysis were used. Results showed that the difficulty in the recognition of feelings and self-efficacy are correlated and a significant predictor for students’ addiction vulnerability. In addition, findings showed that the grades of female students were higher than the male students in the difficulty to realize the feelings, external oriented thinking and Alexithymia. In contrast, male students gained higher grades in the scale of addiction vulnerability. But the difference between the two groups was not significant in self-efficacy. The present study discusses these findings.

Keywords: Alexithymia, self-efficacy, addiction vulnerability, students.

1. Introduction

Nowadays addiction has turned into a world-wide problem and societies suffer different forms and consequences of it based on their specific features (Bavi, 2009). The published statistics from international societies show an increase in the use of drugs in the world. Based on these statistics, 3% of world’s population, or 185 million people use drugs (Hajizadeh, 2009). In Iran’s young population, the existence of 2 million addicts makes it necessary to prevent and treat this phenomenon (Rasouli Azad, 2009).

Addiction is the psychological dependence to a substance and the creation of the behavior for the acquisition of that drug, the inability to stop the use of it because of physical dependence and the creation of tolerance to the drug and a diminish in health for the continuous use of the drug (Madadi and Noghani, 2005). The dependence to drugs is a result of different factors, but there is not a consent on what are the causes of the dependence to the drugs and what factors cause the dependence and continuous use after being dependent to the drug (Golparvar, Atashpour and Aghaei, 2002). Though a general summary can be mentioned for the reasons of people’s tendency to drugs as the personal endangering factors, environmental and interpersonal cases (Bovi, 2009). There are no doubts that psychological factors are
involves beside social factors. Horney believes that in order to escape anxiety a person can use any methods to ignore it, so that the person is inclined to use alcohol or drugs (Shayesteh, 2011). In Sevil’s idea (1977) the addiction to drugs is generally a personality disorder and is one of the types of ineffective adaptive measures of life that people might choose through specific personality tendencies under proper conditions and also specific cultural-social conditions.

One of the personality traits that can affect the tendency toward addiction is Alexithymia. Alexithymia is a Greek word for the ‘lack of words for the expression of emotions’ and includes difficulty in the recognition, differentiation and the process of emotions, physical inability to differentiate among emotions, difficulty in the description of feelings and others’, lack of imagination in life and inability to introspection and having a deep inner feeling (Bagbi, Parker and Taylor, 1994). People suffering from Alexithymia through the inability to realize the emotions and feelings, are not able to express their emotions. While emotional ability can have a proper adaptation in relation with the environment. People who realize their feelings and understand their implicit meanings and express their emotional states in a more effective way, they are more successful in dealing with their negative experiences (Golman, 1995).

In line with these, Parker, Taylor and Bagbi (1988) have shown the positive relationship of Alexithymia and immature and neurotic defensive styles and its negative relationship with mature defensive styles. On the other hand, there has been another hypothesis that the people suffering from Alexithymia can start stubborn behaviors and addiction through their lack of success in the regulation of feelings for the reduction of biological excitement resulted from these feelings instead of effective and healthy behaviors (Liborski and Cillessen, 2005).

Self efficacy is one of the other variables that is believed to be related to addiction to drugs. In Bandura’s idea (1997) self efficacy points to the beliefs and judgments of the person about his abilities in fulfilling his duties and responsibilities. People’s beliefs about their abilities affect the amount of psychological pressure, depression and anxiety that they experience in threatening situations. People who believe that they can control these potential pressures, do not allow disturbing thinking models into their minds and do not easily become anxious, but people who do not believe in their efficiency in the potential control of threats, experience more psychological pressure and anxiety (Bandura, 1993). One of the features of self efficacy is the regulation of feelings. So far, many studies have shown the relationship between self efficacy and Alexithymia (Rostami, 2001; Juhani, Riita, Tuuli and Sari, 2010; Malliss, Wagne Hill and Readdic, 2010). Emotional ability makes it easier to face the challenges of life and so makes people more psychologically healthy. People who are emotionally able and efficient, can realize their feelings, understand its implicit concepts and express their emotional states in a more effective way. They are more successful in comparison with people who do not have the ability to understand and express their emotional states in dealing with negative experiences and show more adaptation in relation with the environment and other people and so have less tendency to become addicted (Laze, et al, 2001). Lang et.al.’s (2011) study in line with this finding have shown that the aim of addictive behaviors is to reduce anxiety and promote self confidence.

Also Liborski and Cillessen (2005), Hajizade (2009) and Marlow, Schwarzer and Fuchs (2010) have shown the relationship between low self efficacy and addiction vulnerability.

The beginning of addiction to drugs in adolescence and the beginning of adulthood can be a sign of unhealthy life style. The vulnerability of adolescents and young people as the dynamic force of the
society, their tendency to dangerous behaviors, the importance of this period as an important period of life and the early age of the start of drug abuse, all show the need to intervene and protect this vulnerable age group (Ahmad, Khaliquei and Khan, 2009). Since more than one third of our country’s population is made of young people, and because of the beginning of drug addiction in this period and its damaging effects on the physical and psychological health of our young population, studies for the prevention and control of this problem are of prime importance. So, based on the reasons about the importance of psychological and emotional factors among addicts or the people who are prone to addiction, the present study tries to investigate the relationship between the variables of self efficacy and Alexithymia among students, the amount of predictability and addiction vulnerability by these two variables and their comparison among the male and female students.

2. Methods
The present study is a descriptive-correlative study with the aim of investigating the relationship between Alexithymia and self efficacy with addiction vulnerability of university students. Sample population of the study included all of the male and female undergraduate students of Islamic Azad University at Pole Taleshan and Resalat of Rasht in 2012-2013 academic year. Stratified random sampling has been used in multiple levels, first between the two University units is Rasht, the Pole Taleshan unit was randomly chosen. Students of this university were 7500, based on Morgan’s table 400 students were chosen. This university has 14 fields of study, among them 7 fields of study (including microbiology, nursing, accounting, computer, Chemistry, English language and Religious-Arabic Education) were randomly chosen. After gaining the permission of professors and students, 17 classrooms were chosen and in which students filled the questionnaires. From among these 400 students, 201 of them were male (50.3%), 197 females (49.3%), 381 were single (95.3%) and 17 were married (3.4%). 294 (73.5%) students were admitted in 2010-2011 and 104 students (26.5%) were admitted in 2012-2013 academic year. Two of the subjects did not complete the part related to their gender, marital status and their admission year. Mean age of the subjects was 21.36 year old (SD= 1.73). Also we tried to have the two groups similar to each other for the demographic variables.

The following tools were used for the present study:
Personal information and demographic questionnaire: this questionnaire evaluates the personal and demographic information such as the entrance year, field of study, job of parents, their education and marital status. Toronto Alexithymia criteria: is a 20 item questionnaire that evaluates the difficulty of realizing the feelings, difficulty in the description of feelings, objective thinking and general Alexithymia through a five point Likert Scale (Bagby et.al. 1994). Beshart (2007) reported a Chronbach’s alpha for general Alexithymia, difficulty in realizing feelings, difficulty in the description of feelings and objective thinking as 85%, 82%, 75% and 72% respectively, that shows the internal consistency of the test. In the present study also the Chronbach’s alpha was 69%. Sherer’s self efficacy scale: this test is made of 17 items that is graded through a 5 point scale. In Jlodaran’s study (2009) the reliability of this questionnaire was 86% both for Chornbach’s alpha and the division methods. Also, Shakerinia (2011) reported the reliability coefficient of this test through the Chronbach’s alpha equal to 82% and 77%. In the present study also Chronbach’s alpha of this test was 71%. The addiction vulnerability scale: this questionnaire was created by Zargar (2006) for the evaluation of the addiction vulnerability variable. This scale is made
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of 54 items in a yes, no format (1,0). This questionnaire was implemented on a sample population of 841 addicts volunteered at an addiction treatment center and also the employees of a working unit in Ahvaz and showed a Chronbach’s alpha of 90%. In Oreki’s study (2011) also the validity and reliability in comparison to the scale for psychological health was 55%. In the present study Chronbach’s alpha was equal to 64%.

After gaining the consent of professors and attending the classes, enough information was given to students for the research method and how they should fill the questionnaires and the questionnaires were distributed among students. Also, students were assured that these questionnaires were only used for research purposes. In order to analyze the data gained through the questionnaires the multi variable variance analysis, Pearson’s correlation test and multiple regression were used.

3. Results

In order to study the relationship between self efficacy and Alexithymia with addiction vulnerability, Pearson’s correlation test was used. Data resulted from Pearson’s correlation test between Alexithymia and its sub-criteria with addiction vulnerability showed that the variables of difficulty in the description of emotions (r=-0.065, p>0.05), external oriented thinking (r=0.054, p>0.05) and Alexithymia (r=0.092, p>0.05) did not have a significant correlation with the addiction vulnerability of students, but the variable of difficulty in the recognition of emotions showed a significant correlation (r=-0.157, n=400) with addiction vulnerability (p<0.01). On the other hand, the results of correlation between self efficacy and addiction vulnerability among students showed that the variable of self efficacy had a significant positive correlation (r=0.390, n=400) with students’ addiction vulnerability (p<0.0001).

In order to determine the share of variables of difficulty in the description of feelings, difficulty in the recognition of feelings and the external oriented thinking (predicting variable) in the variance of addiction vulnerability (the criterion variable) in the subjects, multi-variable regression analysis was used through the synchronized data entrance. Data related to the prediction of addiction vulnerability with the use of sub-criteria of Alexithymia showed that these dimensions are significant predictors for addiction vulnerability (quadrat of balanced correlation coefficient= 0.030 and P<0.01 and F_{3,396}=4.133). The amount of correlation quadrat showed that 3% of the criterion variable is predictable by the predicting variable. Based on the findings of multi-variable regression, the coefficients of the effect of difficulty in the description of feelings (β=0.047), difficulty in the realization of feelings (β=-0.192) and external oriented thinking (β=0.063) based on the t statistic show that the variable of difficulty in the realization of feelings can predict the changes related to addiction vulnerability with a 99% certainty.

In order to determine the share of the variable of general Alexithymia (the predicting variable) in the variance of addiction vulnerability (the criterion variable) among the subjects, the multi-variable regression analysis with synchronized entrances was used. Data related to the prediction of addiction vulnerability through the use of the general score of Alexithymia showed that this dimension is not a significant predictor for addiction vulnerability (quadrat of the balanced correlation coefficient=0.006 and p>0.05 and F_{1,398}=3.367). The value of correlation coefficient showed that about 0.01% of the criterion variable is predictable by the predicting variable. Based on the findings of multi-variable regression, the coefficient of general Alexithymia (β=-0.092) based on t statistic shows that this variable is not able to predict the changes of addiction vulnerability among students.
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In order to determine the share of self efficacy (predicting variable) in the addiction vulnerability variance (criterion variable) among the subjects, multi-variable regression synchronized entrance was used. Data showed that this dimension is a significant predictor for addiction vulnerability (quadrate of balanced correlation coefficient = 0.150 and p<0.0001 and \( F_{1,398} = 71.514 \)). The amount of correlation quadrate showed that about 15% of the criterion variable is predictable by the predictor variable. Based on the findings of multivariable regression, self efficacy coefficient \((\beta=0.390)\) based on the \( t \) statistic shows that this variable can predict the addiction vulnerability among students with a 99% certainty.

In order to determine the differences of the two groups of male and female students for self-efficacy, Alexithymia and its sub-criteria and addiction vulnerability, multi-variable variance analysis was used. Table 1 shows the mean, standard deviation of Alexithymia and its sub-criteria, self-efficacy and addiction vulnerability among male and female students.

Table 1: mean and standard deviation of Alexithymia, self-efficacy and addiction vulnerability among the two groups of male and female students

<table>
<thead>
<tr>
<th>variable</th>
<th>Male students</th>
<th>Female students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>SD</td>
</tr>
<tr>
<td>Difficulty in emotion description</td>
<td>7.51</td>
<td>3.02</td>
</tr>
<tr>
<td>Difficulty in emotion realization</td>
<td>5.19</td>
<td>3.00</td>
</tr>
<tr>
<td>External outgoing thinking</td>
<td>7.54</td>
<td>2.01</td>
</tr>
<tr>
<td>General Alexithymia</td>
<td>20.24</td>
<td>5.86</td>
</tr>
<tr>
<td>Self efficacy</td>
<td>17.78</td>
<td>3.83</td>
</tr>
<tr>
<td>Addiction vulnerability</td>
<td>22.70</td>
<td>4.28</td>
</tr>
</tbody>
</table>

Table 2: The results of variance analysis significance test on the scores of Alexithymia, self-efficacy and addiction vulnerability between the two male and female groups

<table>
<thead>
<tr>
<th>variable</th>
<th>value</th>
<th>F</th>
<th>DF hypothesis</th>
<th>DF error</th>
<th>significance</th>
<th>B quadrato</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilai effect</td>
<td>0.104</td>
<td>9.115</td>
<td>5</td>
<td>392</td>
<td>0.000</td>
<td>0.104</td>
</tr>
<tr>
<td>Wilks Lambada</td>
<td>0.896</td>
<td>9.115</td>
<td>5</td>
<td>392</td>
<td>0.000</td>
<td>0.104</td>
</tr>
<tr>
<td>Hotling effect</td>
<td>0.116</td>
<td>9.115</td>
<td>5</td>
<td>392</td>
<td>0.000</td>
<td>0.104</td>
</tr>
<tr>
<td>Maximum error root</td>
<td>0.116</td>
<td>9.115</td>
<td>5</td>
<td>392</td>
<td>0.000</td>
<td>0.104</td>
</tr>
</tbody>
</table>

The results of multi-variable variance analysis for the means of the scores of Alexithymia and its sub-criteria, self-efficacy and the addiction vulnerability among the male and female students are given in table 2. Based on the results of table 2 the group effect on the linear combination of dependent variable is
significant (Wilks Lambda =0.896, F=9.115, p<0.000). In other words, there is a significant difference between the male and female students at least in one of the components of Alexithymia, self-efficacy and addiction vulnerability.

**Table 3**: the results of significance test of variance analysis for the variables of Alexithymia, self-efficacy and addiction vulnerability in the two male and female groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sum of quadrate</th>
<th>Degree of freedom</th>
<th>Mean of quadrate</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty in the description of feelings</td>
<td>28.28</td>
<td>1</td>
<td>28.28</td>
<td>2.86</td>
<td>0.092</td>
</tr>
<tr>
<td>Difficulty in the realization of feelings</td>
<td>48.65</td>
<td>1</td>
<td>48.65</td>
<td>5.06</td>
<td>0.025</td>
</tr>
<tr>
<td>external oriented thinking</td>
<td>134.63</td>
<td>1</td>
<td>134.63</td>
<td>31.91</td>
<td>0.000</td>
</tr>
<tr>
<td>General Alexithymia</td>
<td>571.02</td>
<td>1</td>
<td>572.02</td>
<td>14.84</td>
<td>0.000</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>19.35</td>
<td>1</td>
<td>19.35</td>
<td>1.44</td>
<td>0.230</td>
</tr>
<tr>
<td>Addiction vulnerability</td>
<td>140.60</td>
<td>1</td>
<td>140.60</td>
<td>7.53</td>
<td>0.006</td>
</tr>
</tbody>
</table>

The results of variance analysis showed that the mean of female students’ scores in the sub-criteria of difficulty in the realization of feelings (F=5.06), external thinking (F=31.91) and general Alexithymia (F=14.84) was significantly higher than male students. Also, the male students gained higher scores in the component of addiction vulnerability (F=7.53) significantly higher scores compared to the female students.

**4. Discussions and conclusion**

The aim of the present study was to investigate the relationship between Alexithymia and self-efficacy with addiction vulnerability and realizing the predictability of addiction vulnerability by these two variables and comparing them among the male and female students. Results showed a negative significant correlation for the difficulty in the realization of feelings and positive significant correlation for self-efficacy with addiction vulnerability among students and also addiction vulnerability was predictable by these two variables, but the correlation of other variables was not significant with addiction vulnerability. In researcher’s idea it is indirectly related to behaviors such as smoking, drug abuse, malnutrition, passive life style, dangerous sexual relations, insomnia and diet with less drugs and physical illnesses (Liborski and Cillessen 2005). It seems that people suffering from Alexithymia for the lack of success in the regulation of differentiated feelings, are prone to higher levels of negative emotions and go after tenacious behaviors and addiction to drugs to reduce the excitement produced by these emotions instead of healthy behaviors. So, the above finding is in line with the findings of Liborski and Cillessen (2005) and Lang et.al (2011). On the other hand, Besharat (2007) also in a study showed that people suffering from Alexithymia experience more problems about interpersonal relations. It can be expected...
that more problems about interpersonal behaviors such as depression and anxiety can increase the possibility of addiction. The results of the present study was different from some of the results of the study of Libreski and Klinsen (2005), because in their study Alexithymia was the most important predictor of addiction, but in the present study only the sub-criteria of difficulty in realization of feelings was able to predict the vulnerability to addiction. One of the possible reasons for this difference is related to the characteristics of the sample population. Based on the importance of cognitive issues in comparison to emotional factors among the university students, it is expected that self-efficacy as a cognitive variable plays a more important role in the behaviors and decisions of this group. Based on their social status, students think more and do not face issues in an emotional and affective way.

The other finding of this study based on the correlation of self-efficacy and addiction vulnerability is in line with the findings of Rostami (2001), Zargar, Najjarian and Naami (2008), Liborski and Cillessen (2005), Maliso et.al (2010), Marlo et.al (2010) and Yohani etal (2010). Among the variables under study, self-efficacy was the most important predictor of addiction vulnerability and this can be for the effect of this variable on the reaction of people to events and different situations of life, since in experts’ idea, self-efficacy affects thinking, behavior and emotional patterns in different experiencing levels (Schwartz, 1999). It seems that people with high self-efficacy even with the existence of numerous obstacles, are persevere and are able to resist frustrations and continue their way. These people are courageous and sociable and have a high self-confidence and psychological health (Nasiri, 2008). In contrast, people with a low self-efficacy, feel they are controlled by the events of life, their efforts are futile and become instantly disappointed when faced with an obstacle. Low self efficacy can destroy motivation, discolor wishes, intervene with cognitive abilities and affect physical health (Rayan and DC, 2000; Bandura, 1989, 2001; quoted by Kolinijer, 2004). As it was mentioned, one of the features of self-efficacy is the regulation of feelings and emotions. People who are emotionally able and efficient, can realize their feelings, understand their implicit concepts and compared to people who lack this ability, are more successful in dealing with negative experiences, they experience less negative emotions and show a more proper adaptation in relation with environment and other people and so, they are less inclined toward becoming addicted (Liz et.al, 2001).

The last finding of this study shows a higher grade of female students for the sub-criteria in difficulty in the realization of feelings, external oriented thinking and general Alexithymia and the higher grade of male students in the addiction vulnerability component. There has been different reports concerning the relationship between Alexithymia and gender. Parker et.al (1998) criticized previous studies and mentioned that some weak criteria have been used for the evaluation of this construct. Dion (1996), Shot et.al (1998) and Kokkonen et.al (2001) have reported a higher rate of Alexithymia in men. So the results of the present study is different from theirs. In order to explain this difference, a difference in culture can be considered. On the other hand, Ferguson (2010), Web et.al (2011) in some studies showed that addiction in men is more common than women. So, the findings of our study are in line with the findings of their study for the higher rate of addiction among male students.


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