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Relation between Early Maladaptive Schemas and Anxiety in High School Students

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Early maladaptive schemas can increase anxiety in teenagers. The aim of this study is to determine the relationship between early maladaptive schemas and anxiety in both male and female high school students in the Tehran city. The design of this research is descriptive-correlational and the study sample includes all male and female high school students from district 5 of Tehran city enrolled in the academic year of 2012-13. Data collection tools include 4 measures of Demographic Questionnaire, The short version of Young schemas questionnaire (YSO- SF) and Zung Self-Rating Anxiety Scale (SAS). Pearson correlation and multiple regression analysis of data (P<.001) show that a significant positive relationship exists between the early maladaptive schemas and general anxiety in high school students. Furthermore, this research has determined that, there is a relation between early maladaptive schemas and physical signs of anxiety in male and female students of high schools. Moreover, according to the results of this study, there is a significant relation between the early maladaptive schemas and mental signs of anxiety. As a result, decreasing early maladaptive schemas in students helps reducing their anxiety as well.

Keywords: anxiety, early maladaptive schemas, mental signs of anxiety, physical signs of anxiety.

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Schemas are presumed absolute fundamental truths through which individuals filter perceptions of their experiences (Beck & Rush & Shaw & Emery, 1979). The term "schema" has been introduced earlier by Bartlett (1932) and Piaget (1952), as cognitive organizations that shape perceptual experiences and understanding of the world. Beck (1967) defined schemas as cognitive structures for screening, coding, and evaluating the incoming data (Beck, 1967). These underlying beliefs are present in all individuals and represent a framework for perceiving the world. Schemas are shaped through early experiences, often through experiences within the family system (Beck, Rush, Shaw & Emery, 1979). Schema Therapy (ST) is an integrative treatment approach developed by Jeffrey Young (1990) to treat patients with personality disorders or long-standing characterological problems (Thimm, 2013). According to this theory, negative experiences and childhood trauma with family during early childhood and later with peers and community may lead to the development of early maladaptive schemas (EMS) (Bortolon, Capdevielle, Boulenger, Gely-Nargeot & Raffard, 2013). EMSs develop through the interaction of the child's temperament with ''ongoing patterns of everyday noxious experiences with family members and peers, which cumulatively strengthen the schema'' (Young, 1999). Young (2007) introduces 18 types of schemas including: abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, social isolation/alienation, dependence/incompetence, vulnerability to harm or illness, enmeshment/ undeveloped self, failure to achieve, entitlement/ grandiosity, insufficient self-control/self-discipline, subjugation, self-sacrifice, approval-seeking/recognition-seeking, negativity/pessimism, emotional inhibition, unrelenting standards/ hypercriticalness, and punitiveness.

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Anxiety is a feeling of a diffuse, unpleasant, vague fears and worries of unknown origin, which happen to a person and includes the uncertainty of distress and physiological arousal (Davoudi, Abolghasemi & Vatan khah, 2013). In recent years, anxiety disorders have been found to be increasingly prevalent and the burden of illness associated with these disorders is often considerable (Asadi, Sadeghi, Basirani, Asadi, Bidmeshki, Panahi, Mirshekar, Amirshahi & Salehin, 2010).

Stressful situations that happen before or during an injury have been causing anxiety in individuals (Davoudi, et al., 2013). All humans are anxious about your life; however, chronic anxiety is unusual and problematic. Physical changes such as delayed puberty, particularly in boys, Early concerns about puberty, especially in girls, fear and shame of physical changes and suffering caused by the rejection of physical change, rejection by peers, being independent, aggressive behavior, irrational being, lack of skills for life, sexuality, confusion at the role of anxiety are of effective cause of anxiety in adolescents (Shahamat, 2011). Many different factors are involved in the advent of anxiety. Early maladaptive schemas are also the reasons of appearance and strengthening of anxiety in human being intervention (Asadi, et al., 2010). Empirical knowledge of the regional prevalence of anxiety is fundamental to understanding the relative demand for treatment services. Such knowledge is also necessary to identify the most appropriate avenues for intervention (Asadi, et al., 2010).

Daskzan (2004) documented that 37% of male and 53% of female high school students in Saghez city in Kurdistan province had test-anxiety. He found that there was a significant relationship between test-anxiety and academic achievement (Mozaffari, 2001).

Early maladaptive schemas are the reason for anxiety. This

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issue is based on experiences and visions that people have dealt with in the past. Because of the importance of the effect of early maladaptive schemas on anxiety of students, this article works on this issue. Disorders related to anxiety are the most important disturbances of students and their parents. Shahamat (2011) studied the relation between health symptoms (somatization, anxiety and depression) and early maladaptive schemas payment. The results showed that significant relationships exist between early maladaptive schemas and symptom triad of somatization, anxiety, and depression (Shahamat, 2011). Davoudi et al. (2013) studied the relationship between early maladaptive schemas and happiness with anxiety of female students of Tonekabon city. The results showed that there are significant positive relations between early maladaptive schemas and anxiety. However, there is a negative relation between happiness and anxiety. The result of the regression analysis showed that happiness variables orientation-disrupt limits can predict the students anxiety (Davoudi, et al., 2013). Qrue & Calvete (2012) found that some maladaptive schemas predict automatic thoughts which in turn predict social anxiety. These results have important implications for intervention with adolescents who suffer social anxiety. Ball and Cecero (2001) studied the symptoms of anxiety and the early maladaptive schemas in adolescence and found a significant correlation. Astane, Bahrami & Farahani (2013) found that a significant relationship exists between the schemas of emotional deprivation, abandonment/instability, mistrust/abuse, social isolation/alienation, and defectiveness/shame schemas in adultness and anxious/ambivalent attachment of individuals with borderline personality disorder.

Most of the researchers in the field of mental health have a consensus about the fact that mental health has a significant

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effect on all of the personality aspects, activity and also their reactions to all of the life events. Yet, this is also an accepted fact that schemas have a correlation with life negative events and mental pressures. When an early maladaptive schema is activated some levels of emotions are released and they directly or indirectly result in different types of cognitive disturbances such as depression, anxiety, occupational disability, lack of academic progress, drug abuse and interpersonal conflicts (Lotfi, 2006). On the other hand, by the increase of maladaptive cognitive schemas some of the disorders increase and presence of such disorders result in individuals' drop in performance in jobs and education (Griffith, 2003). In a study Calvete & Estévez & López de Arroyabe & Ruiz (2005) found a significant correlation between the signs of emotional disorders (depression, anxiety and aggression) and the early maladaptive schemas. Despite the numerous studies on the subject of anxiety and early maladaptive schemas, there is a huge gap for new research in this field. For example, there are just a few studies on the connection of anxiety and early maladaptive schema while previous studies were mainly focused on students' anxiety and their exams. Also, prevalence and frequency of anxiety in students is so high that it is necessary to study the correlation between these two variables systematically, at different time intervals and different levels of education. Since this subject has rarely been studied before, this paper is an attempt to determine the relationship between early maladaptive schemas and anxiety in both male and female high school students.

Five hypotheses are tested in this study and the test results for these hypotheses are presented subsequently.

First hypothesis*:* there is a relation between early maladaptive schemas and general anxiety symptoms in male and female high school students.

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Second hypothesis*:* there is a relation between early maladaptive schemas and somatic symptoms of anxiety in female students of high schools.

Third hypothesis*:* there is a relation between anxiety somatic symptoms and early maladaptive schemas in male students of high schools.

Forth hypothesis*:* There is a relation between early maladaptive schemas and anxiety subjective symptoms in female students of high schools.

Fifth hypothesis*:* There is a relation between early maladaptive schemas and anxiety subjective symptoms in male students of high schools.

Method

The present research is a correlational study. The statistical population of this research includes all the male and female high school students from district 5 of Tehran enrolled for the academic year of 2013-2014. The sampling method used in this research is the basic random sampling and the number of participants in the study, determined by Morgan's table and Cochran's formula, is 384.

Measures

Early maladaptive schemes questionnaire. This questionnaire was developed by Young (Young & Brown, 1990). This self-report questionnaire contains 90 items for the 18 early maladaptive schemes. Each domain contains 5 items which are graded based on a 6-grade scale. Young, Norman and Thomas (1995) examined the psychometric features of this questionnaire on a 564-participantr sample) and verified its validity and reliability (Schmidt, Joiner, Young, & Telch, 1995; Welburn, Corisne, Dagg, Pontefract, & Jordan, 2002). Moreover, in Iran,

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Yousefi and Etemadi (2008) tested the reliability and validity of the questionnaire on a 597- participant sample (394 participant at the first stage and 185 ones at the second stage). Using the Cronbach's alpha and the split-half methods, the reliability of this questionnaire was calculated to be .86 and .91 for the whole sample, .84 and .87 for girls and .84 and .81 for boys and the extracted factors had high and satisfying validity. Convergent validity of the questionnaire was determined using measurement tools for psychological despair, positive and negative emotions, self-confidence, cognitive vulnerability for the symptoms of depression and identity disorder and the results for these factors were (.37, .34, -.40, -.39, .35, .36), respectively, which were significant on ($p<.0001$) (Schmidt, Joiner, Young, & Telch, 1995; Welburn, Corisne, Dagg, Pontefract, & Jordan, 2002). In this study the reliability of the questionnaire on the early 40-participant sample using Cronbach's alpha was estimated as higher than .70 for all factors and .84 for the whole questionnaire.

Zung Self-Rating Anxiety Scale (SAS). The Zung SAS is a 20-item, self-report questionnaire that measures the presence and magnitude of anxiety-based symptoms. The SAS was constructed according to the DSM-II (American Psychiatric Association [APA], 1968) criteria for anxiety and still contains the criteria listed in DSM-IV-TR (APA, 2000), giving it good content and face validity. The SAS contains items that assess both physiological (e.g., muscle tremors, physical pain, urinary frequency, sweating, face flushing, insomnia) and psychological (e.g., nervousness, fear, mental disintegration, panic, apprehension, restlessness, nightmares) symptoms commonly associated with anxiety (APA, 1968), (APA, 2000). The SAS correlates .75 with the Hamilton Anxiety Scale (Zung, 1971) and has been shown to significantly discriminate between a

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normal adult sample and patients with anxiety disorders (Zung, 1971). Reliability data are .71 (split-half: Zung, 1971) and .77, .79, and .85 (coefficient alpha), the latter three data points being from three Australian samples (Sharpley & Christie, 2007). This scale also possesses good discriminant validity as it can differentiate between individuals with a clinical diagnosis of an anxiety disorder and those with other psychiatric illnesses, as well as between patient and non-patient groups (Corcoran & Fischer, 1987). We found the internal consistency to be .89 and the split-half reliability coefficient as .83.

Design and Procedure

As mentioned earlier the study was designed as a correlational study. Ethical approval was granted by educational office of Tehran. The conditions for participating in the study included the consent of the school health counselors, as well as the consent of the student. The questionnaires were filled in homeroom classes during the regular school day. The purpose of the study was explained and anonymity was assured. The students were told that questionnaires would be collected by a researcher and that their answers would not be accessible to classmates or teachers. Test completed by pen and paper format.

The sampling method was multiphasic. First of all, four regions of district 5 were chosen from male and female high schools. Then four female high schools and four male high schools were chosen from each region. Afterward, from the chosen high school classes, three classes, one class in each grade, were selected. Finally, from students of those classes the required numbers of students were selected. Sampling continued till desired sample size was obtained. By using Cochran formula 384 students (192 girls and 192 boys) were chosen for this study.

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Results

The data obtained from this study were analyzed using the appropriate analyses. In Table 1, K-S test is represented for goodness of fit of scores.

Table 1

K-S Test for Goodness of Fit of Scores

Statistical index	Somatic Symptoms of Anxiety	Subjective Symptoms of Anxiety	General Anxiety Symptoms
Number	384	384	384
Average	4.445	3.234	4.671
Standard Deviation	.456	1.612	.893
Equal	.172	.086	.165
Quite Positive Differences	.289	.082	.278
Quite Negative Differences	-.034	-.078	-.063
Z	1.114	.781	1.134
Significance	.05	.234	.142

According to Table 1, since the significant level for this study is lower than 95 percent, the distribution of data is normal and the mean of data is a central index; moreover, parametric statistical methods can be used.

In Table 2, Pearson correlation significance test is implemented between early maladaptive schemas and general anxiety symptoms in high school students.

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Table 2

Pearson Correlation Significance Test between Early Maladaptive Schemas and General Anxiety Symptoms in High School Students

Statistical Index	Number	Average	Correlation Coefficient	Sig.
Early Maladaptive Schemas / General Anxiety Symptoms	384	3.32	.859	.01

As shown in Table 2, there is a significant and positive correlation of .859 between early maladaptive schemas and general anxiety symptoms in male and female high school students which is direct and positive.

In Table 3, Pearson correlation significance test between early maladaptive schemas and anxiety somatic symptoms in male and female high school students is presented.

Table 3

Pearson Correlation Significance Test between early Maladaptive Schemas and Anxiety Somatic Symptoms in High Schools Students

Statistical Index	Group	Number	Average	Correlation Coefficient	Sig.
Schema / Somatic Symptoms	Females	192	3.1181	.723	.01
	Males	192	3.1819	.863	.01

The correlation between early maladaptive schemas and somatic symptoms of anxiety, in female students of high schools, is .723 which is significant and positive.

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The correlation between early maladaptive schemas and anxiety somatic symptoms, in male students of high schools, is .863 which is significant and positive.

In Table 4, Pearson correlation significance test between early maladaptive schemas and anxiety subjective symptoms in male and female high school students is presented.

Table 4

Pearson Correlation Significance Test between Early Maladaptive Schemas and Anxiety Subjective Symptoms in High Schools Students

Statistical index	Group	Number	Average	Correlation Coefficient	Sig.
Schema / subjective symptoms	females	192	3.7446	.671	.01
	males	192	3.5671	.723	.01

As shown in Table 4, the correlation between early maladaptive schemas and anxiety subjective symptoms in female students of high school is .671 which is significant and positive.

As indicated in Table 4, the correlation between early maladaptive schemas and anxiety subjective symptoms in male students of high school is .723 which is significant and positive.

Discussion and Conclusions

This study examined the relationship between early maladaptive schemas and the anxiety of both male and female high school students from district 5 of Tehran. Results show that a significant and positive correlation exists between the anxiety and the early maladaptive schemas.

The first hypothesis in this study which is about the relation between early maladaptive schemas and the total anxiety

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symptoms in male and female students is tested and confirmed. According to the significance of the test value which is 0.01, the relation between early maladaptive schemas and total anxiety symptoms in both male and female high school students is significant. This result is consistent with the findings of Van Orden et al. (2008), which states that total anxiety level in students would increases as a result of increase in early maladaptive schemas.

The second hypothesis in this study, about the relation between early maladaptive schemas and somatic symptoms of anxiety in female students, is tested and confirmed. This result is consistent with the findings of Walker, Meyer and Ohanian (2001). It shows that when patients surrender to an early maladaptive schema, they think that this schema is correct and do not try to change it. This increases the anxiety level on the patients.

The third hypothesis in this study, about the relation between early maladaptive schemas and somatic symptoms of anxiety in male students of high schools is tested and confirmed. This result is consistent with the findings of Welbern et al. (2002), which suggests that students with higher grades in early maladaptive schemas test had more difficulty in mathematics learning. Someone with early maladaptive schemas has physical reactions and sensations and might connect this with early reminiscence consciously or unconsciously. This experience may weaken the educational performance of this person.

The forth hypothesis in this study, about the relation between early maladaptive schemas and subjective symptoms of anxiety in female high school students is tested and confirmed as well.

The fifth hypothesis in this study, about the relation between early maladaptive schemas and subjective symptoms of anxiety in male high school students is tested and confirmed. Results of

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hypotheses four and five are consistent with the findings of Arefnia et al. (2012), who compared students with and without anxiety and the effect of early maladaptive schemas on them. He found that there is a relation between early maladaptive schemas and school anxiety.

To sum up, these results show that, if early maladaptive schemas decrease in students, it may decrease their anxiety.

The limitations of this research are as follows:

Relatively, the long time required to answer the two questionnaire forms by students is one of the restrictions of this research. Distrust and skepticism of some students and their indifference to the researcher lead to the uncertainty of the results.

According to the research results it seems that studying the schemas in other age groups, other cities and awareness about their differences is useful for the therapists in the fields of schema therapy, couple therapy and family therapy. Also, it is suggested to survey the existence of schemas in parents and the relationship of schemas with insecure families.

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