

PREDICTION OF INTERPERSONAL SENSITIVITY, PSYCHOTICISM, PARANOIA, HOSTILITY BASED ON THE EARLY MALADAPTIVE SCHEMAS IN THE MURDERERS

Amin Alvani¹, Vahid Khosravani¹, Esmail Khademi², Mohammad Seidisarouei³

¹Masters in General Psychology Islamic Azad University, Arsenjan, Arsenjan, Fars, Iran.

¹Masters in General Psychology, University of Azarbaijan Shahid Madani. Tabriz. Iran.

²Masters in Clinical Psychology, Iran University of Shiraz. Shiraz, Fars, Iran.

³Masters in General Psychology Islamic Azad University, Marvdasht. Marvdasht, Fars, Iran

vahid.psy@gmail.com

Abstract— Early maladaptive schemas (EMSs) as key structures in the development of psychopathology. The purpose of current research was studying the role of EMSs as the predictor of psychiatric symptoms including interpersonal sensitivity, psychoticism, paranoia, and hostility in the murderers jailed in Shiraz city. **Methods:** Eighty male jailed murderers were selected at hand sampling method. To gather the data, Demographic Questionnaire, Young Maladaptive Schemas Questionnaire-Short Form (YSQ-SF) and Symptoms Checklist-90-Revised (SCL-90-R)(questions related to the symptoms of interpersonal sensitivity, psychoticism, paranoia, and hostility) were used. For data analysis, statistical methods of one way variance analysis (ANOVA), Pearson correlation and stepwise multiple-variable regression were used. **Results:** Data analysis using stepwise multiple-variable regression showed that strongest predictor related to any of interpersonal sensitivity, psychoticism, paranoia, hostility symptoms, listed respectively for these symptoms, were schemas of subjugation, emotional inhibition, entitlement/grandiosity, and emotional inhibition respectively. **Conclusions:** As a whole, it is concluded that the EMSs can predict psychiatric symptoms of interpersonal sensitivity, psychoticism, paranoia, and hostility in the murderers.

Keywords— Early maladaptive schemas, psychiatric symptoms, Murderers.

I. INTRODUCTION

Knowing the character of a criminal, diagnosing the antisocial behavior tendencies in human, and evaluating the institutional factors of response to such a tendency and the evolutionary process of it from potentiality to actuality, evaluating of self-awareness and responsibility in perpetration of the crime, and the role of the unconsciousness in the loss or deterioration of criminal liability (retributive), are the intellectual concerns of researchers, sociologists, criminologists and psychologists [1]. So far, several studies have been conducted on the relationship between creation and cognition. EMSs are among important and new schemas that deal with the study of cognitive processing style and its influence on emotional processing in human being. EMSs are cognitive, emotional and self-injurious patterns that are formed in the mind of the person at the beginning of development and are repeated throughout the life [2]. EMSs are created due to negative experiences in childhood that affect the style of thinking, feeling and behaviors of individuals in the subsequent intimate relationships and other aspects of life. EMSs fights for their existence [3] [4]. People tend to events that are consistent with their schemas. Therefore, the schema's changing is hard. These schemas turn back adult's life to unwilling conditions of childhood as contradictory and inevitable, which most of the time is harmful to patients.

EMSs at the deepest level of cognitive aspect usually operate outside of consciousness. And psychologically make the person vulnerable to the disturbances such as depression, anxiety, dysfunctional relationships, drug addiction and psychosomatic disorders. [4].

EMSs are caused as a result of failure to satisfy basic emotional needs in childhood. The origin of this scheme consists of five domains: 1) secure attachment to others, 2) autonomy, competence and sense of identity, 3) freedom to express needs and emotions, 4) game and spontaneity, and 5) the reasonable constraints, self-control, early life experiences (failure to satisfy basic needs, excessive satisfaction, and assimilation with the wrong behavior of parents) and child temperament (a set of child's behavioral characteristics which are inherent and discriminating the personality of the child. when schemas are activated can influence the perception of the individual's reality and cognitive processing [4] [5].

At the present time, one of the important factors which is considered and its effect on the crime rate has been proven, is personality and mental state of offenders. Because in every advanced society, crime prevention is considered as a goal, experts of various fields of psychology, psychiatry, social science, criminology, law and education are looking for a detailed understanding of this problem and its causes and means of prevention and containment [6].

According to initial description of Beck and Freeman [7] of psychopathology, each of the mental disorders associated with maladaptive schemas and habitual thought patterns are very popular and versatile, which specify the type of vulnerability to that disorder. EMSs as maladaptive cognitive foundations influence on the perception of the phenomena and the formation of schemas, and can create social and psychological injuries; thus, the crime perpetration is one of the major damages that is organized and formed based on inefficient foundations [2]. Young [4] believes any of the psychopathological symptoms is associated with one or more of the EMSs. The study also mentioned that EMSs are inefficient mechanisms that directly or indirectly lead to psychological distress [8] [9].

Researchers have proven that EMSs associated with a wide range of psychiatric diagnoses and psychosocial problems [10] [11] [12] [13] [14] [15] [16] [2], paranoid ideation [17], personality disorders [18] [19], anger [20] [21] [22] and interpersonal problems [23] [18] [19] [4] [3] [24]. According to what was mentioned, EMSs can be the root of many mental disorders; thus, the present study investigated the role of these schemas as the predictor of interpersonal sensitivity, psychoticism, paranoia, and hostility in the jailed murderers.

II. METHODS

Participants: The present study was descriptive - correlational. In this study, the examined population was all the murderers jailed in Fars province prison; these people are included in the category of intentional murder; and this study was conducted in a numbers of the prisons in the city of Shiraz. In order to do so, 80 male jailed murderers were selected at hand sampling methods, who were tested using a Demographic Questionnaire, Young Maladaptive Schemas Questionnaire-Short Form (YSQ-SF) and Symptoms Checklist-90-Revised (SCL-90-R)(questions related to the cited symptoms in this study).

Instruments: In the present investigation, two tools have been used to measure two variables. The detailed description of these has given below.

A. Schema Questionnaire-Short Form (SQ-SF):

The Schema Questionnaire-Short Form (SQ-SF) measures five domains containing 15 EMSs including: disconnection and rejection (abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, social isolation/alienation), impaired autonomy and performance (dependence / incompetence, vulnerability to harm or illness, enmeshment/undeveloped self, failure), impaired limits (entitlement/grandiosity, insufficient self-control/self-discipline), other-directedness (subjugation, self-sacrifice) and over vigilance and inhibition (emotional inhibition, unrelenting standards/hyper criticalness)[25] [26]. Respondents are asked to rate statements on a six point likert scale from „,completely untrue of me.to „,describes me perfectly. The SQ-SF has in different studies shown adequate reliability, validity in predicting psychopathology, and factor structure [27] [20] [17]. In Iran, Yousefi et al. [28] examined the validity and reliability of EMSs questionnaire on a sample of 579 people (in two stages of 394 and 185 people), and using split-half Cronbach's Alpha, the reliability for the whole sample, females and males was reported as 0.91 and 0.86, 0.87 and 0.84, and 0.84 and 0.81 respectively. The calculated Cronbach's Alpha for all factors was above 0.81, and it was 0.91 for the whole questionnaire. The highest and lowest Cronbach's Alpha was calculated for social isolation/alienation (a=0.91) and insufficient self- control/ self-discipline (a=0.81) respectively. Convergent validity of the total scores of questionnaire were assessed using measuring tools for psychological helplessness, positive and negative emotions, self-confidence, psychological vulnerability to depression, symptoms of personality disorders, and SCL90; reported correlation for these criteria was 0.37, 0.34, -0.40, -0.39, 0.35, 0.36, and 0.38 respectively.

B. Symptoms Checklist-90-Revised (SCL-90-R):

SCL-90-R is a well-validated self-report questionnaire that has been designed to reflect the psychological symptoms and respondents completed on 3rd and 13th day's menstruation cycles. SCL-90-R has been designed for those psychological and somatic disorders which respondents experienced during the last 7 days [29]. The items are divided into 9 subscales: somatization, depression, anxiety, hostility, phobia, interpersonal sensitivity, paranoia, obsessive-compulsive and psychoticism. Respondents rated the 9 symptoms of distress on a 5-point likert scale (0=" not at all" to 4="extreme"). SCL-90-R also has 3 global indexes: 1) The global severity index (GSI) 2); the positive symptom total (PST) 3); the positive symptom distress index (PSDI) [30]. The Iranian version of SCL-90 has been validated in several studies. Mirzai et al. [31] estimated its validity to be about 0.97; and its sensitivity, specificity and reliability were: 0.94, 0.98 and 0.96 respectively. In this study, we have examined only the symptoms of interpersonal sensitivity, psychoticism, paranoia, and hostility.

Data analysis: In this study, to investigate the relationship between EMSs and psychiatric symptoms, Pearson correlation analysis was used. Also, to predict psychiatric symptoms (interpersonal sensitivity, psychoticism, paranoia, and hostility) based on EMSs, methods of analysis of one way variance (ANOVA) and stepwise multiple-variable regression were used.

Ethical issues: The study was conducted in according with the 1989 revision of the Helsinki Declaration and was approved by our institutional review board. And when collecting data through questionnaires given to participants (murderers), they were assured that all of their information will be held confidential with us and this will be done for research purposes.

III. RESULTS

Section-1: Table 1 shows the descriptive data of the studied group.

| | | M | SD |
|----------------------|-----------------------------------|-------|-------|
| psychiatric symptoms | Interpersonal sensitivity | 15.16 | 6.40 |
| | Psychoticism | 15.14 | 7.34 |
| | Paranoid ideation | 11.31 | 5.12 |
| EMSs | Hostility | 9.96 | 5.88 |
| | Disconnection and rejection | 69.96 | 24.11 |
| | Impaired autonomy and performance | 51.34 | 21.18 |
| | Impaired limits | 35.16 | 9.36 |
| | Other-directedness | 32.54 | 8.22 |
| | Over vigilance and inhibition | 47.39 | 12.18 |

Table 1: Basic descriptive characteristics of the study groups.

Note: N= 80

Section-2: Correlation between EMSs with psychiatric symptoms

The results of Pearson correlation showed that between maladaptive schema of mistrust/abuse and symptom of psychosis (p< 0.05); between schema of social isolation/alienation and symptoms of paranoid ideation (p< 0.01), interpersonal sensitivity and psychotic (p< 0.05); between schema of emotional inhibition and symptom of psychoticism (p< 0.01); between schema of subjugation and symptom of interpersonal sensitivity (p< 0.05); between schema of entitlement / grandiosity and symptoms of psychoticism and paranoid ideation(p< 0.05) there were significant positive correlations (Table 2).

| | | PS | | | |
|------|---|-------|-------|--------|--------|
| | | IS | Ps | PI | Ho |
| Emss | Emotional deprivation | 0.04 | 0.02 | 0.06 | 0.19 |
| | Abandonment/instability | 0.20 | 0.16 | 0.05 | 0.41** |
| | Mistrust/abuse | 0.09 | 0.11 | 0.40** | 0.28* |
| | Social isolation/alienation | 0.24* | 0.19 | 0.26* | 0.29* |
| | Defectiveness/shame | 0.13 | 0.15 | 0.18 | 0.25* |
| | Failure | 0.13 | 0.13 | 0.29* | 0.17 |
| | Dependence/incompetence | 0.10 | 0.08 | 0.24* | 0.13 |
| | Vulnerability to harm or illness | 0.05 | 0.12 | 0.20 | 0.11 |
| | Enmeshment/undeveloped self | -0.06 | -0.06 | 0.07 | -0.11 |
| | Subjugation | 0.27* | 0.19 | 0.23 | 0.26* |
| | Self-sacrifice | -0.09 | 0.06 | 0.19 | 0.03 |
| | Emotional inhibition | 0.18 | 0.26* | 0.03 | 0.24* |
| | Unrelenting standards/hyper criticalness | -0.04 | -0.08 | -0.07 | -0.02 |
| | Entitlement/grandiosity | -0.05 | -0.03 | 0.10 | 0.07 |
| | Insufficient self-control/self-discipline | -0.02 | -0.04 | 0.18 | 0.05 |

Table 2: Correlation between EMSs with psychiatric symptoms.

the variance in somatization symptom ($p < 0.001$, $F_{2,73} = 7.56$, $R^2 = 17\%$)(Table4).

3-2. The results of the stepwise multiple-variable regression analysis showed that for explaining interpersonal sensitivity symptom, the maladaptive schemas of subjugation (step 1)($p < 0.001$, $T = 2.45$, $Beta = 0.27$, $R^2 = 11\%$), enmeshment/undeveloped -self as reversely (step 2)($p < 0.01$, $T = -2.69$, $Beta = -0.35$, $R^2 = 5\%$), and unrelenting standards/hyper criticalness as reversely (step 3) ($p < 0.05$, $T = -2.01$, $Beta = -0.23$, $R^2 = 5\%$) respectively predict 20% of the variance in interpersonal sensitivity ($p < 0.01$, $F_{3,74} = 6.11$, $R^2 = 20\%$)(Table4).

3-3. The results showed that for explaining psychoticism symptom, the maladaptive schema of emotional inhibition predicts 10% of the variance in psychoticism symptom (step 1) ($p < 0.05$, $T = 2.81$, $Beta = 0.31$, $F_{3,74} = 7.88$, $R^2 = 10\%$)(Table4).

3-4. The results showed that for explaining paranoid ideation symptom, the maladaptive schemas of entitlement/grandiosity (step 1)($p < 0.01$, $T = 2.59$, $Beta = 0.29$, $R^2 = 8\%$), and self-sacrifice as reversely (step 2) ($p < 0.05$, $T = -2.12$, $Beta = -0.24$, $R^2 = 6\%$) respectively predict 14% of the variance in paranoid ideation in the murderers ($p < 0.01$, $F_{2,71} = 5.75$, $R^2 = 14\%$)(Table 4).

3-5. The results showed that for explaining hostility symptom, the maladaptive schemas of emotional inhibition(step 1) ($p < 0.01$, $T = 2.02$, $Beta = 0.23$, $R^2 = 10\%$), and unrelenting standards/hyper criticalness variance as reversely(step 2)($p < 0.01$, $T = -2.65$, $Beta = -0.32$, $R^2 = 6\%$) respectively predict 16% of the variance in hostility in the murderers ($p < 0.01$, $F_{2,73} = 5.71$, $R^2 = 16\%$)(Table 4).

Note: N= 80; PS: psychiatric symptoms; IS: interpersonal sensitivity; Ps: psychoticism; PI: paranoid ideation; Ho: hostility * $p < 0.05$ ** $p < 0.01$.

Section-3: The stepwise multiple regression analysis for the psychiatric symptoms

The results of analysis of one way variance (ANOVA) indicated that the whole of regression models were significant for explaining interpersonal sensitivity symptom, ($p < 0.01$), psychoticism symptom ($p < 0.01$), paranoid ideation symptom ($p < 0.01$), and hostility symptom ($p < 0.01$), (Table 3).

| Criterion variable | Model | sum of squares | Df | mean square | F | P |
|---------------------------|------------|----------------|----|-------------|------|--------|
| interpersonal sensitivity | regression | 637.51 | 3 | 212.50 | 6.11 | 0.01* |
| | residual | 2573.17 | 74 | 34.77 | | |
| | total | 3210.68 | 77 | | | |
| psychoticism | regression | 399.95 | 1 | 399.95 | 7.88 | 0.006* |
| | residual | 3753.46 | 74 | 50.72 | | |
| | total | 4153.41 | 75 | | | |
| paranoid ideation | regression | 266.83 | 2 | 133.42 | 5.75 | 0.005* |
| | residual | 1647.02 | 71 | 23.20 | | |
| | total | 1913.85 | 73 | | | |
| hostility | regression | 341.95 | 2 | 170.97 | 5.71 | 0.005* |
| | residual | 2186.30 | 73 | 29.95 | | |
| | total | 2528.25 | 75 | | | |

Table 3: Indices one way analysis of variance (ANOVA) to determine the significance of the whole of regression model of psychiatric symptoms.

Note: N= 80 * $p < 0.01$.

3-1. The results of the stepwise multiple-variable regression analysis showed that for explaining somatization symptom, the maladaptive schemas of social isolation / alienation($p < 0.01$, $T = 3.27$, $Beta = 0.35$, $R^2 = 13\%$), and unrelenting standards/hyper criticalness as reversely($p < 0.05$, $T = -2.02$, $Beta = -0.21$, $R^2 = 4\%$) respectively predict 17% of

| Criterion variable | Predictive variable | B | SD | Beta | R ² | F | T | P | |
|---------------------------|---------------------|----|-------|------|----------------|------|------|-------|----------|
| Interpersonal sensitivity | Step1 | Su | 0.32 | 0.13 | 0.27 | 0.11 | 6.01 | 2.45 | 0.001*** |
| | Step2 | EU | -0.36 | 0.13 | -0.35 | 0.16 | 6.87 | -2.69 | 0.009** |
| | Step3 | UH | -0.21 | 0.10 | -0.23 | 0.20 | 6.11 | -2.01 | 0.04* |
| Psychoticism | Step1 | EI | 0.43 | 0.15 | 0.31 | 0.10 | 7.88 | 2.81 | 0.006** |
| Paranoid ideation | Step1 | EG | 0.28 | 0.11 | 0.29 | 0.08 | 6.69 | 2.59 | 0.01** |
| | Step2 | Ss | -0.22 | 0.10 | -0.24 | 0.14 | 5.75 | -2.12 | 0.03* |
| Hostility | Step1 | EI | 0.24 | 0.12 | 0.23 | 0.10 | 4.06 | 2.02 | 0.002** |
| | Step2 | UH | -0.26 | 0.10 | -0.32 | 0.16 | 5.41 | -2.65 | 0.01** |

Table 4: Index of the stepwise multiple regression analysis for the psychiatric symptoms.

Note: N= 80; EU: enmeshment/undeveloped self; Su: subjugation; Ss: self-sacrifice EI: emotional inhibition; UH: unrelenting standards/hyper criticalness; EG: entitlement/grandiosity

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$.

IV. DISCUSSION

The EMSs as cognitive substructures lead to the creation of irrational beliefs. Schemas contain cognitive, emotional and behavioral elements. When EMSs are activated, levels of emotion are spread, and directly or indirectly lead to various forms of psychological distress such as depression, anxiety, occupational disability, substance abuse, interpersonal conflict and etc. The purpose of current research was to study of the role of EMSs as the predictors of interpersonal sensitivity, psychoticism, paranoia, and hostility in the jailed murderers. The results showed that there are significant relationships between some of the EMSs and psychiatric symptoms. These results are consistent with the previous findings [10] [11] [12] [13] [14] [15] [16] [2] [17] [18] [19] [20] [21] [22] [23] [4] [2] [24] [3] [7] [8] [9].

The EMSs as cognitive substructures lead to the creation of irrational beliefs. Schemas contain cognitive, emotional and behavioral elements. EMSs operate on the deepest level of cognition, usually outside of awareness, and make the

individual psychologically vulnerable to develop depression, anxiety, dysfunctional relationships, addiction, childhood trauma, social phobia, substance abuse, eating disorders, Personality disorders, mental disorders, panic disorder with agoraphobia and psychosomatic disorders [4] [2]. According to initial description of Beck and Freeman [7] of psychopathology, each of the mental disorders associated with maladaptive schemas and habitual thought patterns are very popular and versatile, which specify the type of vulnerability to that disorder. EMSs as maladaptive cognitive foundations influence on the perception of the phenomena and the formation of schemas, and can create social and psychological injuries; thus, the crime perpetration is one of the major damages that is organized and formed based on inefficient foundations [2]. Young [4] believes any of the psychopathological symptoms is associated with one or more of the EMSs [32]. The study also mentioned that EMSs are inefficient mechanisms that directly or indirectly lead to psychological distress [8]. EMSs represent the core beliefs

(unconditional defaults) on self and others, and divert processing of external information to an inefficient direction; Thus, they influence interpersonal relationships and self-perceptions [4] [33].

ACKNOWLEDGEMENTS

The present research has had no financial support. The authors have no conflict of interest to declare.

REFERENCES

- [1] De Silva P (2001). Handbook of Emotion and Cognition. In: Dalglish T & Power MJ, editor. Wiley Chi Chester. Behavior Research and Therapy 39: 125-127.
- [2] Young JE, Klosko JS, Weishaarm M (2003). Schema Therapy: A Practitioner's Guide. The Guilford Publications, New York.
- [3] Young JE, Weinberger AD, Beck AT (2001). Cognitive therapy for depression. In: Barlow D, editors. Clinical handbook of psychological disorders. 3rd ed. New York, Guilford Press.
- [4] Young JE (1999). Cognitive Therapy for Personality Disorders: A Schema-Focused Approach (3rd ed). Professional Resource Press.
- [5] Cormier A, Jourda B, Laros C, Walburg V, Callahan S, (2011). Influence between early maladaptive schemas and depression. *L'Encéphale* 37: 293-298.
- [6] Rabiee N (2009). The relationship between personality characteristics and rating of the crimes of young offenders. *Iranian Eslah Tarbiyat* 83: 30-34.
- [7] Beck AT, Freeman A (1990). Cognitive therapy of personality disorders. New York, Guilford Press.
- [8] Cecero JJ, Marmon TS, Beitel M, Hutz A, Jones C (2004). Images of mother, self, and God as predictors of dysphoria in non-clinical Samples. *Personality and Individual Differences* 36: 1669-1680.
- [9] Beech AR, Bartels RM, Dixon L (2013). Assessment and Treatment of distorted schemas in sexual offenders. *Trauma Violence Abuse* 14: 54-66.
- [10] Brotchie J, Meyer C, Copello A, Kidney R, Waller G (2004). Cognitive representations in alcohol and opiate abuse: The role of core beliefs. *British Journal of Clinical Psychology* 43: 337-342.
- [11] Dutra L, Callahan K, Forman E, Mendelsohn M, Herman J (2008). Core schemas and suicidality in a chronically traumatized population. *Journal of Nervous and Mental Disease* 196: 71-74.
- [12] Hawke LD, Provencher MD (2011). Schema theory and schema therapy in mood and anxiety disorders: A review. *Journal of Cognitive Psychotherapy* 25: 257-276.
- [13] Lee CW, Taylor G, Dunn J (1999). Factor structure of the Schema Questionnaire in a large clinical sample. *Cognitive Therapy and Research* 23: 441-451.
- [14] Waller G, Kennerly H, Ohanian V (2007). Schema-focused cognitive-behavioral therapy for eating disorders. In LP Riso, PL du Toit, DJ Stein, & JE Young (Eds.). *Cognitive schemas and core beliefs in psychological problems. A scientist-practitioner guide*. Washington, DC: American Psychological Association, pp. 139-175.
- [15] Sadooghi Z, Aguilar – Vafaie ME, Rasoulzade-Tabatabaee DR, Esfahanian N (2008). Factor analysis of the Young schema questionnaire-short form in a nonclinical Iranian sample. *Iranian Journal Psychiatry and Clinical Psychology* 14: 214- 221.
- [16] Ahmadian-Gorgim M, Fata L, Asgharnejad-Faridm A, Malakooti K (2009). Comparison of early maladaptive schema and attempting to commit suicide in depressed patients with non-depressed patients attempting suicide and nonclinical population. *Iranian Journal of new cognitive sciences* 10: 49-59.
- [17] Welburn K, Coristine M, Dagg P, Pontefract A, Jordan S (2002). The schema questionnaire short form: Factor analysis and relationship between schemas and symptoms. *Cognitive Therapy and Research* 26: 519–530.
- [18] Greenhaus JH, Collins KM, Shaw J (2003). The relation between work-family balance and quality of life. *Journal of Vocational Behavior* 63: 510-531.
- [19] Seligman MEP, Schulman P, Tryon A (2007). Group prevention of depression and anxiety symptoms. *Behavior Research and Therapy* 45:1111-1126.
- [20] Calvete E, Estevez A, Lopez de Arroyabe E, Ruiz P (2005). The Schema Questionnaire- Short Form: Structure and Relationship with Automatic Thoughts and Symptoms of Affective Disorders. *European Journal of Psychological Assessment* 21: 90-99.
- [21] Muris P (2006). Maladaptive schemas in non-clinical adolescents: relations to perceived parental rearing behaviours, big five personality factors and psychopathological symptoms. *Clinical Psychology & Psychotherapy* 13: 405-413.
- [22] Renner F, Lobbstaal J, Peeters F, Arntz A, Huibers M (2011). Early maladaptive schemas in depressed patients: stability and relation with depressive symptoms over the course of treatment. *Journal of Affective Disorders* 136: 581-590.
- [23] Thim JC (2013). Early maladaptive schemas and interpersonal problems: A circumplex analysis of the YSQ-SF. *International Journal of Psychology & Psychological Therapy* 13: 113-124.
- [24] Thimm JC (2010). Personality and early maladaptive schemas: A five-factor model perspective. *Journal of Behavior Therapy and Experimental Psychiatry* 41: 373-380.
- [25] Young JF (1998). The Young Schema Questionnaire: Short Form, Available at [http:// home. sprynet. Com / sprynet /schema/ysqs.htm](http://home.sprynet.com/~sprynet/schema/ysqs.htm).
- [26] Schmidt NB, Joiner TE, Young JE, Telch MJ (1995). The schema questionnaire: Investigation of psychometric properties and the hierarchical structure of a measure of maladaptive schemas. *Cognitive Therapy and Research* 19: 295–321.
- [27] Baranoff J, Oei TPS, Cho SH, Kwon SM (2006). Factors structure and internal consistency of the Young schema questionnaire (short form) in Korean and Astralian samples. *Journal of Affective Disorders* 93: 133-140.
- [28] Yousefi R, Abedin AR, Tirgari A, Fathabadi J (2011). The effectiveness of training intervention based on “schemas model” on marital satisfaction enhancement. *Iranian Journal of clinical psychology* 2, 25-37.
- [29] Derogatis R, Rickels K, Rock A (1979). The SCL-90 and the MMPI: a step in the validation of a new self-report scale. *British Journal of Psychiatry* 29: 128-280.
- [30] Derogotis LR (1983). *SCL-90-R administration, scoring procedures: Manual-II*. Printed in U.S.A.
- [31] Mirzai R (1980). Assess the reliability and validity of SCL-90-R in Iran. MSc Thesis, Tehran: Tehran Psychiatric Institute.
- [32] Delattre V, Servant D, Rusinek S, Lorette C, Parquet PJ, Goudemand M, Hautekeete M (2004). The Early Maladaptive Schemas: A Study in Adult Patients with Anxiety Disorders. *L'Encéphale* 30: 255-258.
- [33] Pinto-Gouveia I, Castilho P, Galhardo A, Cunha M (2006). Early maladaptive schemas and social phobia. *Cognitive Therapy Research* 30: 571-584.