

Research Article

The Comparison of Early Maladaptive Schemas and Perceived Stress between Iranian Single-Parent and Single-Child Adolescents

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The family is a group consisting of parents and children living together in a household. Adolescence is one of the most critical developmental stages. Single-parent and single-child phenomena can develop mental health problems in such adolescents. The aim of the study was to compare Early Maladaptive Schemas (EMSs) and perceived stress between Iranian single-parent adolescents and single-child adolescents. This was an Ex-Post Facto research. The sample was 60 Iranian female adolescents (30 single-parent and 30 single-child) who were selected from the Culture, Hazrat Zahra, and Farzanegan schools at Tehran city. The instruments were the Young-Short Form Schema Questionnaire, and Perceived Stress Scale. Data were analyzed using MANOVA, univariate ANOVA, and independent t-test by the SPSS23 software. There were significant differences between two groups in the EMSs of Emotional Deprivation, Mistrust/Abuse, Vulnerability, Emotional Inhibition, Unrelenting Standards, and Insufficient Self-Discipline ($p < 0.05$). There was a significant difference between two groups in perceived stress ($p < 0.001$). The single-parent adolescents showed more EMSs and higher perceived stress than single-child adolescents. The conditions of single-parent adolescents can lead to mental health problems. They should be considered as a high-risk group for the development of psychiatric disorders.

Keywords: Early Maladaptive Schemas; Perceived Stress; Single-Parent; Single-Child; Adolescents; Iran**Introduction**

The family is the first founder of personality, values, emotions, intellectual, and moral standards. Today, children and teens may not have one of parents in their life. In a single-guardian family, there is only one of the parents and the guardianship of child is left with another parent. Factors of single-guardian family may include death, and divorce. Also adopted children who were born without marriage of their parents together, may live in a single-guardian family [1,2]. Since a child has certain emotional needs in any of his developmental stage; a parent cannot solve them lonely. So the reactions are different at any age stage. In higher ages, the first reaction of children toward a parent's death or divorce includes a mourning period [3,4]. Because teens sometimes have tensions with their parents, additional to mourning, they are blamed themselves and constantly imagine that they were not a good offspring, so they lost their parents. Given the fact that teens are looking for identity and autonomy, they likely less pattern from their parents, tend to peers, or under influence of adults who are interested in them. Therefore, it is difficult for parents who are alone to raise their offsprings [5,6].

The single-guardian children are deprived of intimate relationships of parents. They suffer from mood disorders, insecurity, dependency or rejection. The incidence of mental disorders, suicide, addiction, and harm is high in single-parent children. Literature has shown self-regulation, emotional intelligence and self-concept were

significantly higher in Iranian children with two-parent family than children with divorced parents [7]. There is no a friendly and warm relationship in single-parent families. The teens of such families had behavioral and psychological problems [8,9]. Behavioral disorders were lower and academic self-concept was higher in two-parent students than single-parent students. Conduct and hyperactivity disorders were lower in mother single-parent students than father single-parent students, and there was no a significant difference in academic self-concept in mother single-parent and father single-parent students [10,11]. Adolescents with divorced parents had more educational problems such as low academic achievement, tendency to drop out of education, and academic failure than adolescents with two-parent family [12]. Single-parent teens living without their grandparents had more scores in maladaptive schemas compare to single-parent teens living with them [13]. Single-parent teens had more achieved identity, and two-parent teens had more forceclosure identity. There was no significant difference between quality of life among single-parent and two-parent teens. Single-parent teens were more depressive and anxious than two-parent teens [14]. Two-parent teens had more healthy lifestyle, academic achievement, higher self-esteem, and lower aggression than single-parent teens. Two-parent teens more displayed their feelings, emotions, and thoughts [15].

Childbearing is one of the most important functions of family. Single-child is a pervasive phenomenon in Iranian society [16,17]. Today, given the cultural and social conditions, economic problems,

concerned about the costs, multi-child problems, marriage in high ages, divorce, and other reasons, the number of single-child families have increased in Iran [18,19,20]. The decline in population growth was been influenced by cultural factors such as the process of globalization, and change from collectivist values to individualism values [21]. One study showed that attitudes toward gender roles had a significant relationship with ideal number of children among Iranian families [22]. Although, single-child is not problematic by itself, but inappropriate parenting styles may have poor consequences [23]. Single-child versus multi-child families can shape behavior and cognition of children in so many ways [24,25]. In single-child families, parents expect all of their wishes from children, and they want children show the best performance in all of areas of life. This demand develops perfectionism in single-children and harm to such children [26,27]. Single-child parents, who do not change their parenting styles during adolescent stage, will cause a double burden on the adolescents that can have adverse effects on them [28]. Found that conduct and attention deficit disorders were more common in multi-child families than single-child families. Some single-child damages include child's domination, early maturity, reduction in social relationships and family cohesion, poor familial ties, substituting media such as television, computer games, the Internet and satellite [29,30]. Reported children with siblings had more social adjustment [31]. Indicated that single-child families' kids were more destructive and aggressive, more scapegoated, less social skills, and less popularity in peer group than children with siblings [32]. Found that two-child families' kids had less internalization and externalization problems than single-child families' kids.

Early Maladaptive Schemas (EMSs) are deep and pervasive patterns that are formed during childhood or adolescence stages, are continuous in the course of life, associated with one's relationship with oneself and with others; and extremely dysfunctional. The EMSs result in child's dysfunctional experiences in the relation to parents, sisters, brothers and peers during the early years of life, and can be harmful. The EMSs have developed due to the lack of satisfaction of five essential emotional needs (secure attachment to others and self-regulation; adequacy and identity; freedom to express healthy needs and emotions; self-motivation and recreation; realistic limitations and self-control) in childhood stage. The 18 EMSs have introduced in five main domains [33]. Some interventional approaches such as schema therapy, cognitive therapy, and cognitive behavioral therapy were effective on the EMSs, and behavioral disorders [34,35,36]. Stress is a one's reaction to an environment that on the basis one's interpretation, is a threat to his potentials and resources, and is hazard to his healthy. Stressors are situations and events that people force to react to them [37]. Reactions to stress may manifest as physical, behavioral or psychological responses. The intensity of perceived stress refers to the one's belief in the seriousness of stress [38]. Previous studies have shown the EMSs can play a role in high perceived stress [39,40]; in ineffective coping strategies [41]; in maladaptive interpersonal behaviors [42]; failure in doing of psychosocial developmental tasks [43]; in low social functioning and high distress [44]. One study showed that the EMSs Self-sacrifice correlated with depression, and Defectiveness/shame predicted anxiety in Iranian female adolescents [45]. Another study found that the EMSs of Loneliness, Vulnerability, Mistrust/abuse, Defectiveness, Failure, Unrelated standards, and Entitlement correlated with depression, and predicted 38.4% of

depression in Iranian adolescents [46]. In this regard, the aim of the study was to compare the EMSs and perceived stress between Iranian single-parent female adolescents and single-child adolescents.

Methods and Materials

Participants

This was an Ex-Post Facto research. The sample was 60 Iranian female adolescents 15-17 years old (30 single-parent and 30 single-child) who were selected from the Culture, Hazrat Zahra, and Farzanegan schools at Tehran city.

Procedure

The study protocol was approved by an institutional review board. With reference to the mentioned schools, students who had criteria of the study were selected. The goals of study, being confidential of information were explained to them. The students provided written consent. They completed the Farsi versions of the Young-Short Form Schema Questionnaire (YSQ-SF), and Perceived Stress Scale (PSS). The questionnaires were performed in the sample individually. Data were analyzed using MANOVA, univariate ANOVA, and independent t-test by the SPSS23 software.

Measures

Young-Short Form Schema Questionnaire (YSQ-SF): The YSQ-SF is a self-report tool and consists of 75 items measuring 15 Early Maladaptive Schemas (EMSs). Five main domains of the EMSs contain Disconnection and Rejection (Emotional deprivation, Abandonment, Mistrust, Social Isolation, Defectiveness); Impaired Autonomy and Performance (Failure, Dependence, Vulnerability, Enmeshment); Other-directedness (Subjugation, Self-sacrifice); Over-vigilance and Inhibition (Emotional Inhibition, Unrelenting Standards); and Impaired Limits (Entitlement, Insufficient Self-Discipline). Items are answered on a six-point Likert scale: Completely false (1), False (2), More true than false (3), Somewhat true (4), True (5), and Completely true (6). Each 5 items measure one schema. If mean score of one schema is higher 3, the schema is considered as a maladaptive schema [47,48]. Research has demonstrated that the various version of the YSQ-SF such as Norwegian, Persian, had adequate internal consistency and factor structure [44,49-52]. Found that the Cronbach's α coefficients of EMSs were between 0.49 for Enmeshment/undeveloped self and 0.82 for Abandonment/instability in Iranian single-parent and two-parent female adolescents. In the present study the Cronbach's α of the EMSs were between 0.74 and 0.89, indicating high internal consistency.

Perceived Stress Scale (PSS): The PSS was developed by [53]. The scale measures psychological distress and that how ones interpret stress in unpredictable and uncontrollable events of life. It has 4, 10, and 14-items versions. Each item is scored five-point Likert scale. The subjects asked to indicate in the last month, how often have you been/felt or thought a certain way? The PSS total score for the 14-items ranges from 0 to 4: Never (0), Almost never (1), Sometimes (2), Fairly often (3), and Very often (4). Items 4, 5, 6, 7, 9, 10, and 13 are scored in the reverse direction. The scores range from 0 to 56. The PSS has no classified scores and cut points. The higher scores indicate more perceived stress. The PSS is appropriate for comparing of perceived stress among different populations [54,55,56]. Acceptable psychometric properties have been reported for the PSS [53,56-65]. In

Table 1: Descriptive statistics of variables for the sample.

Age	Single-parent		Single-child	
	F	%	F	%
15 years old	8	13.3	7	11.7
16 years old	13	21.7	13	21.7
17 years old	9	15	10	16.7
Scales/Subscales	M	SD	M	SD
Young-Short Form Schema Questionnaire (YSQ-SF)	236.56	16.31	179.26	15.35
Emotional Deprivation (ED)	16.54	7.55	11.94	4.32
Nurturance (N)	17.22	6.86	12.58	4.58
Mistrust/Abuse (MA)	15.84	7.8	11.25	4.3
Entitlement/Grandiosity (ET)	15.36	8.2	9.22	4.52
Defectiveness/Shame (DS)	13.7	9.27	8.21	4.38
Dependence/Incompetence (DI)	14.8	8.5	8.72	4.76
Subjugation (SB)	14.56	8.51	9.92	4.43
Enmeshment (EM)	15.12	8.06	10.13	4.64
Vulnerability (V)	14.98	8.18	10.64	4.84
Failure (FA)	20.01	6.95	14.84	5.11
Emotional Inhibition (EI)	18.74	8.43	12.6	4.4
Unrelenting Standards (US)	18.23	7.41	14.76	4.88
Insufficient Self-Discipline (IS)	18.41	8.03	12.66	4.31
Social Isolation/Alienation (SI)	18.84	6.46	13.57	4.41
Sacrifice Self (SS)	14.23	7.11	10.26	4.44
Perceived Stress Scale (PSS)	42.3	5.84	36.66	5.98

the present study the 14-items version was used, and the Cronbach's α coefficient was 0.90, denoting high internal consistency.

Results

Table 1 shows descriptive statistics (percent, frequency, mean and standard deviation) of the variables for the sample. The results of χ^2 test showed that there were no significant differences between two groups in variable of age, and the groups was homogeneous ($\chi^2=0.12$, $df=1$, $p>0.05$). The single-parent adolescents showed higher mean scores in both of early maladaptive schemas (EMSs) and perceived stress than single-child adolescents.

For determination of normality of the data, Kolmogorov-Smirnov test was used. The obtained significant levels in EMSs ($z=0.83$, $sig=0.51$, $p>0.05$) and in perceived stress ($z=1.07$, $sig=0.19$, $p>0.05$) were greater than 0.05. As for the normality distribution of data, parametric statistical tests were used to analyze the data.

The prerequisites of normality distribution of data, the equality of variance, and the equality of matrix of covariances were confirmed. The significance levels of all tests allow the use of multivariate analysis of variance (MANOVA) to testing the statistical significance of the mean differences in EMSs between the groups. There is a significant difference at least in the one of the EMSs as the dependent variables. The amount of this difference was (Wilk's lambda=0.11, $p<0.05$) (Table 2).

For determine of difference between the groups in each of the

Table 2: Results of the Multivariate Tests^a.

Effect	Value	F	Hypothesis df	Error df	Sig	Eta (Effect size)
Intercept						
Pillai's Trace	0.955	62.465 ^b	15	44	0	0.47
Wilks' Lambda	0.045	62.465 ^b	15	44	0	0.47
Hotelling's Trace	21.295	62.465 ^b	15	44	0	0.47
Roy's Largest Root	21.295	62.465 ^b	15	44	0	0.47
Group						
Pillai's Trace	0.678	6.167 ^b	15	44	0	0.47
Wilks' Lambda	0.322	6.167 ^b	15	44	0	0.47
Hotelling's Trace	2.102	6.167 ^b	15	44	0	0.47
Roy's Largest Root	2.102	6.167 ^b	15	44	0	0.47

^aDesign: Intercept + group.

^bExact statistic.

variables, the univariate analysis of variance (ANOVA) was used. Table 3 shows the results of ANOVA for comparison of groups in EMSs. there is a significant difference between two groups in the EMSs of Emotional Deprivation, Mistrust/Abuse, Vulnerability to harm or illness, Emotional Inhibition, Unrelenting Standards, and Insufficient Self-Discipline ($p<0.05$). The mean scores of EMSs in the single-parent adolescents were significantly higher than single-child adolescents (236.56, $SD=16.31$ vs. 179.20, $SD=15.35$). The obtained significance level of the EMSs is smaller than the Benfronni's correction (the division of the significance level of 0.05 to 15 EMSs components). For all of EMSs, the effect size (Eta) was 0.47, $p=0.001$. That means 47% of the total variance or individual differences in EMSs was related to group differences (single-parent and single-child adolescents).

Table 4 shows means, standard deviation and t-test on the PSS scores. Findings showed that there were significant differences between two groups. Single-parent adolescents had higher scores than single-child adolescents ($t=3.68$, $df=58$, $p<0.001$).

Discussion

The aim of the study was to compare Early Maladaptive Schemas (EMSs) and perceived stress in single-parent and single-child adolescents. The results showed that there were significant differences between single-parent adolescents in the EMSs of Emotional Deprivation, Mistrust/Abuse, Vulnerability to harm or illness, Emotional Inhibition, Unrelenting Standards, and Insufficient Self-Discipline compare to single-parent adolescents. It seems Iranian single-parent adolescents experience more emotional harms. Based on the Beck's cognitive theory, the absence of one of parents can depress adolescents. Due to the absence of one of their parents, single-parent adolescents have negative schemas: if they encounter with environmental stressors, caused by being single parent, the EMSs will be activated in their minds. In other words, stressors are triggered for developing the EMSs in them [66,67]. Based on the hierarchical model of social interaction anxiety and depression [68,69], argued that the EMSs impact on the thought levels, and mutually, these levels of thoughts contribute to the continuity of schemas [70]. Calvete [69] found that emotional abuse and brooding rumination can predict and mediate EMSs and a role play to develop of depressive and social anxiety

Table 3: Univariate ANOVA for the EMSs scores.

Source	Sum of Squares	df	Mean Square	F	P	Eta (Effect size)	Power
Emotional Deprivation (ED)	317.4	1	317.4	16.22	0.001	0.17	0.93
Nurturance (N)	122.94	1	122.94	5.04	0.04	0.07	0.53
Mistrust/Abuse (MA)	315.56	1	315.56	12.51	0.001	0.16	0.91
Entitlement/Grandiosity (ET)	164.26	1	164.26	5.28	0.03	0.11	0.73
Defectiveness/Shame (DS)	152.65	1	152.65	7.49	0.008	0.2	0.97
Dependence/Incompetence (DI)	54.49	1	54.49	2.01	0.09	0.04	0.38
Subjugation (SB)	122.94	1	122.94	7.92	0.006	0.19	0.96
Enmeshment (EM)	73.01	1	73.01	3.45	0.04	0.07	0.53
Vulnerability (V)	283.4	1	283.4	13.44	0.001	0.27	0.99
Failure (FA)	301.45	1	301.45	11.97	0.003	0.15	0.88
Emotional Inhibition (EI)	365.49	1	365.49	14.61	0.001	0.17	0.92
Unrelenting Standards (US)	380.96	1	380.96	19.49	0.001	0.25	0.99
Insufficient Self-Discipline (IS)	195.36	1	195.36	10.58	0.002	0.15	0.87
Social Isolation/Alienation (SI)	216.06	1	216.06	9.76	0.003	0.15	0.87
Sacrifice Self (SS)	32.01	1	32.01	3.08	0.045	0.06	0.52

Table 4: Means, standard deviation and t-test for perceived stress scores.

Groups	M	SD	T	df	P
Single-parent	42.3	5.84	3.68	58	0.000
Single-child	36.66	5.98			

disorders in adolescents. Abedini [52] reported that Iranian single-parent female adolescents had significant higher scores on the EMSs of Social Isolation/Alienation, Failure, Dependence/Incompetence, Vulnerability, Subjugation, Sacrifice Self, and higher scores on the anxious/depressed, withdrawn/depressed, social problems, attention problems, and aggressive behavior subscales; and also had significant lower scores on the social self-esteem subscale than two-parent female adolescents. Bidar Tabie [13] reported that Iranian single-parent adolescents living without their grandparents had significant higher scores in the EMSs of Disconnection/Rejection, Mistrust/Abuse, Emotional deprivation, Vulnerability, Defectiveness/Shame, Failure, Emotional inhibition, Insufficient Self-Discipline, Social isolation, Subjugation, and Enmeshment compare to single-parent adolescents living with them. There were no significant differences between the two groups in the EMSs of Sacrifice Self, Unrelenting Standards, and Entitlement/ Grandiosity. Also single-parent adolescents living with their grandparents had significant higher scores in the social performance dimensions (academic performance, relationships with peers, family relationships, and self-care) than adolescents living without them.

A single-parent family causes to develop of behavior problems and impact on the progress and prognosis of these problems [71]. Indicated that Iranian single-parent students had significantly more behavior problems (aggression-hyperactivity, anxiety, depression, antisocial behaviors) than two-parent students. The female single-parent students reported higher levels of anxiety, depression, and attention deficit disorder than two-parent and male single-parent students [72]. Reported that Iranian two-parent children had higher social skills and academic performance, less physical symptoms,

anxiety, social dysfunction, depression and general mental disorder than children with divorced and divorcing parents [73]. Found Iranian single-parent adolescents had higher significant scores on the own position subscale of self- differentiation index (DSI) than two-parent adolescents. Single-parent families directly and indirectly impact on the growth, behavior, mental health, physical health and adjustment of children. The development of personality the child and adolescent is strongly influenced by their parents. The absence of one parent or both of them, have an adverse effect on their development, and predispose them to subsequent mental or behavioral disorders. Father's absence can have a direct effect (e.g. depriving a child of a male role model) and indirect (e.g. support) on the children [2]. Single-parent children have low inner inhibition and fail to identify and understand emotions of themselves and others [74,75]. Father-single parent children had more problematic behaviors than mother-single parent children [76]. Iranian children who were deprived from father had more behavioral and emotional disorders such as anxiety, depression, somatic problems, oppositional defiant disorders, and poorer academic performance than children who had father [77,78]. Single-parent children and adolescents suffer more likely of economic poverty, low self-confidence, low self-esteem, low social skills, low academic achievement, and academic dropouts, worried, anxious, disappointed, depressed, aggression, antisocial behavior, delinquency, and psychosocial problems than two-parent children and adolescents [4,5,75,79-84]. Stress, and anxiety are higher in single-parent adolescents, parents spend less time interacting with them because they are engaging in more problems. Therefore, the adolescents have less financial resources and less social support [1,3,14,80,85-87]. Showed that single-child students had lower significant mean scores in the EMSs than multi-child students. The mean scores of over control parenting styles in multi-child students were higher than single -child students and the mean scores of inhibitor parenting style in single-child students were higher than multi-child students. The rejective parenting style significant positive correlated with the EMSs of Failure, Dependence, and Enmeshment; over control parenting

styles significant positive correlated with the EMSs of Social Isolation, Failure, Enmeshment, and Subjugation; permissive parenting style significant positive correlated with the EMSs of Social Isolation, Defectiveness, Failure, Vulnerability, Enmeshment, and Subjugation in single-child students.

The findings showed single-parent adolescents had significant higher scores in perceived stress compare to single-child adolescents. According to Carl Rogers, the humanistic theorist, the lack of unconditional positive regard in some single-parent families (especially mother single-parent families) may develop personality disorder in adolescents. Single-parent adolescents cannot cope with their conditions. Lack of honest acceptance of self and lack of acceptance of their circumstances cause single-parent adolescents try to change their thoughts and emotions, which cause higher perceived stress in them. Also, based on the cognitive theory of anxiety, it seems that stress and anxiety that a father/mother single-parent encounters may also transfer to their children. Lack of control of events and unpredictability of conditions in single-parent families can lead to increased stress and anxiety in family members and disturb their calm and peace. When adolescents imagine that there are no accessible goals for them, their anxiety increase, and the stress deriving from these conditions overcomes to rational thoughts of them. Nematollah [7] showed that self-regulation, emotional intelligence and self-concept in Iranian two-parent children were significantly higher than divorced families' children [88]. Reported that Iranian multi-child families' adolescents had significant higher scores in hope, resiliency, and differentiation than single-child families' adolescents [89-93]. Found that social cognition was higher in Iranian multi-child families than single-child families.

The study has some limitations. The project was a causal comparative study, and causal relationships between the variables were not assessed. Other factors such as social and cultural issues may impact on the results. The sample was limited to Iranian female adolescents. The phenomenon of single-parent can lead to mental health problems in adolescents. They are a high-risk group for the development of psychiatric disorders. Using of psychological and counseling services for single-parent and low-income families, is recommended. Insurance companies should be coverage these services for them. The establishment of an independent organization with financial credits in Iran that can provide economic, cultural, social, and educational support for single-parent families is suggested. Providing more knowledge about single-parent adolescents' characteristics, as well as training of appropriate parenting styles for single-parent families, is necessary. Longitudinal and prospective studies, using of qualitative, interview methods and large sample size, are recommended. Combination of schema therapy and cognitive behavioral therapy for reducing the ESMs in single-parent adolescents will be effective.

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