

Early Maladaptive Schemas and Interpersonal Problems in Iranian University Students

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ABSTRACT

Objective: In recent years, interpersonal relationships have become more complex and increasing number of people suffers from seclusion and loneliness. Early maladaptive schemas (EMSs), important cognitive structures, are expected to have a profound effect on interpersonal relationships. The present study aimed to investigate the relationship between EMSs and interpersonal problems among university students.

Methods: This study was a cross-sectional correlational study. A total of 150 female students selected using snowball sampling method out of Rasht universities and completed the Short Form of Young Schema Questionnaire (SF-YSQ) and the 64-item Inventory of Interpersonal Problems (IIP-32). For data analysis, Pearson correlation coefficient test and stepwise regression were administered. SPSS-20 was used for statistical analysis.

Results: Results showed positive significant correlations between EMSs' domains, especially the domains of disconnection/rejection and impaired autonomy and performance with interpersonal problems.

Conclusion: Given the important role of EMSs in interpersonal relationships, and the significant role of interpersonal relationships in psychological adjustment, further investigations on this field seem necessary.

1. Introduction

Social interactions play an important role in normal psychological adjustment; therefore, the ability of establishing effective social relationships has significant importance in personal and occupational life (Forgas, 1985). However, in recent years, interpersonal relationships have become more complicated and increasing numbers of people have suffered from seclusion and loneliness. According to various studies, loneliness and failure in fulfilling the need for belongingness will lead to adverse outcomes, such as low self-esteem, depression, reduced social relationships, low interpersonal self-efficacy, lack of self-regulation, neurosis, perception of low self-control, reduced social behavior, and increased aggression (Wilhelm, Boyce, & Brownhill, 2004; Butler, Doherty,

& Potter, 2007; Ayduk, Gyurak, & Luerssen, 2008; Gaertner, Iuzzini, & O'Mara, 2008). Bolton (1986) believes that loneliness is the most important problem of the world right now, and inappropriate style of communication is one of the most important and improvable causes of loneliness. Zarb (2007) suggests that inappropriate styles of communication are the foundation of interpersonal problems in adulthood. Interpersonal problems are those problems which occur in relations with others and cause psychological distresses, or are associated with them (Horowitz, et al., 1988).

Different variables affect one's interpersonal ability and contribute in the formation of interpersonal problems. According to social cognitive model, people develop working models of their relationships, which act as cognitive maps and help them direct their social world

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(Baldwin, 1992). According to Beck (1967), environmental factors do not directly affect peoples' behavior; rather the way they experience and interpret the events that affect behavioral outcomes more.

Psychologists use the term of schema to explain the process of collecting, storing, and organizing the information in the frame of one's perception of the world (Hargie, Saunders, & Dickson, 1994). Schema is a cognitive structure for perception, organizing, processing, and applying the information, interpreting the experiences, and controlling the behavior (Atkinson et al., 2000). According to Baldwin (1992), people's internalized feelings about their relationships with the important individuals of their lives form their schemas and affect their future interpersonal expectations; these schemas are reinforced by establishing specific patterns of behavior that lead to specific interpersonal experiences.

Schemas are not necessarily functional and adaptive. Young, Kolsko, and Weishar (2003) theorized 18 early maladaptive schemas (EMSs) that are dysfunctional, self-harming emotional and cognitive patterns, developing during childhood, elaborating throughout life time, and affecting interpretation of experiences and relationships.

EMSs cause some biases in interpretations which reflect as misunderstanding, distorted attitudes, incorrect assumptions, and unrealistic expectations in interpersonal psychopathology. According to Young's theory, these 18 EMSs fall into 5 broad domains as follows:

Disconnection and Rejection: owing to their early rejection-related experiences these individuals cannot establish satisfying secure relationships with others and believe that their needs for stability, security, love, and belongingness will not be fulfilled.

Impaired Autonomy and Performance: these people cannot gain independent identity and manage their life without help; so they fail to act efficaciously and competently.

Impaired Limits: this domain is characterized by ego-tistical behaviors and insufficient self-control. These people only care about their own needs and have some problems in being responsible, collaborative, and respectful towards others. **Other-Directedness:** these people always focus on fulfilling others' needs to gain their approval, maintain relationships, or avoid their anger and revenge.

Overvigilance/Inhibition: these people are over-controlled and inflexible, who try to act according to their rigid perfect standards at any cost (Young et al., 2003).

Up to now, various studies have indicated significant association between EMSs/EMSs-related constructs and social relationships (Koch, 2002; Ponce, Williams, & Allen, 2004; Pinto-Gouveia, Castilho, Galhard, & Cunha, 2006; Massman-Moore & Coates, 2007; Gaffey, 2009; Amani & Esfandiari, 2012; Attari, Nematizadeh, MirDorghi, Erfan, & Adabi, 2012).

In one study, Downey and Feldman (1996) found that individuals with high rejection sensitivity misinterpret the behaviors of others more frequently and show more dissatisfaction with their romantic relationships. Berenson et al., (2009) showed that over worrisome about rejection was involved in some maladaptive patterns, such as hostility, social avoidance, and over agreeableness. Also, Zolfaghari, Fatehizadeh, and Abedi (2008), and Attari et al., (2012) showed that the impaired autonomy and performance schemas have significant negative effect on marital satisfaction, close relationships, and emotional maturation.

On the other hand, some studies have investigated the association between social relationships and close structures to EMSs, such as rejection sensitivity (Butler et al., 2007; Berenson et al., 2009; Breen & Kashdan, 2011), shame (Kim, Talbot, & Cicchetti, 2009; Hasanvande Amoozadeh, Shaeeri, & Asghari Moghadam, 2012), perfectionism (Sherry, Law, Hewitt, Flett, & Besser, 2008; Ye, Rice, & Storch, 2008), entitlement and narcissism (Ogrodniczuk, Piper, Joyce, Steinberg, & Duggal, 2009; Mueller, Degen, Petitjean, Wiesbeck, & Walter, 2009), and factors like parent-child relationship (Robinson, 2000), maltreatment experiences (Gaffey, 2005; Gaffey, 2009), and childhood trauma (Drapeau & Perry, 2004). They have shown significant associations between these structures. However, the findings are inconsistent across cultures. For example, Yilmaz, Kumcagiz, Balci-Celik, and Eren (2011) investigated the relation of social skills and EMSs in college students and found no significant relationships between them. Apparently, numerous methodologies, different samples, and cultural differences have limited the generalization of the findings. In addition, few studies have investigated EMSs' contribution in interpersonal problems in Iranian samples. Because of the important role of culture in interpersonal behaviors, and given the inconsistencies between previous findings, current study aimed to investigate the relationship between EMSs and interpersonal problems in an Iranian college student sample.

Moreover, we used student sample because interpersonal relationships are very important during university years. Many people experience their first important romantic, academic, or professional relationships during their 20s or early 30s, and their social competency affects their future personal and occupational life strongly. Therefore, interpersonal problems could be worse during these years, and affect peoples' future lives adversely. Also, we administered a non-clinical sample, for in clinical groups the interpersonal problems can be the secondary outcome of a clinical disease rather the sole outcome of maladaptive schemas.

2. Methods

Participants

Our population consisted of female university students. One hundred and seventy female university students were selected using snowball sampling method out of the students of the Rasht universities. After collecting the questionnaires, 20 questionnaires were omitted due to incomplete responses, and 150 questionnaires were selected for statistic analysis. Because of the unknown population size, the sample size was calculated using the necessary number of participants needed to produce valid results (Tabachnick & Fidell, 2001; Stevens, 2002).

When students were at the university campus (where they gathered, waited, or got ready for the next class), they were asked to attend in a research project. Then,

Table 1. Descriptive statistics of the EMSs and interpersonal problems in the sample group.

Variable	n	Mean	SD
Disconnection/ rejection	150	1.39	0.722
Impaired performance	150	1.37	0.603
Impaired autonomy	150	2.67	1.024
Other directedness	150	2.44	0.794
Overvigilance/ inhibition	150	2.72	0.901
Social avoidant	150	1.33	0.833
Submissive	150	1.08	0.686
Over-nurturing	150	1.70	0.763
Vindictive	150	1.25	0.801
Domineering	150	1.46	0.626
Intrusive	150	1.37	0.684
Total	150	1.33	0.558

they were asked about their mental health situation. Students with clinical diagnosis were excluded from the study. After taking their consent and ensuring the anonymity of the questionnaires, a brief description was given about the goal of the research. Next, the participants were asked to answer the questionnaires. At the end, they were thanked for their cooperation. The participants did not receive any cash bonus.

Measures

Short Form of Young Schema Questionnaire (YSQ-SF) (Young et al., 2003) is a 75-item questionnaire evaluating 15 EMSs in 5 domains; including disconnection and rejection; impaired autonomy and performance; impaired limits; other-directedness; and overvigilance and inhibition. Respondents are asked to rate each statement on a Likert scale (1-6). Various studies have supported YSQ-SF's validity and reliability in Iranian samples (Ahi, Mohammadi Far, & Besharat, 2007; Divandari, Ahi, Akbari, & Mahdian, 2009). Divandari et al. (2009) reported this questionnaire subscales' internal consistency in a range between 0.65 and 0.93. In the present study, Cronbach's α for the five subscales were obtained as follows: disconnection and rejection: 0.89; impaired autonomy and performance: 0.91; impaired limits: 0.82; other-directedness: 0.77; and overvigilance and inhibition: 0.77.

The Inventory of Interpersonal Problems (IIP-64) (Horowitz et al., 1988) is one of the most widely used self-report measures assessing interpersonal difficulties, which was developed by Horowitz et al. (1988). This questionnaire consists of 64 items and 8 subscales. These 8 subscales assess different blends of dominance and affiliation, which are the two basic dimensions of the Circumplex Model. In this study, we used the Persian version of this questionnaire that was composed of 6 subscales, including: social avoidant, exploitable and submissive, overly nurturing, vindictive, domineering, and intrusive (Mojallal, 2012).

Respondents are asked to rate the extent to which they have had difficulty with each subscale on a 4-point Likert scale from 1 (not at all) to 4 (extremely). Acceptable psychometric properties of this scale have been reported by various studies (Horowitz et al., 1988; Vanheule, Desmet, & Rosseel, 2008). The scale showed good internal consistency in the present study as follows: social avoidant: $\alpha=0.95$, exploitable and submissive: $\alpha=0.88$, overly nurturing: $\alpha=0.78$, vindictive: $\alpha=0.74$, domineering: $\alpha=0.62$, intrusive: $\alpha=0.62$, and for total items: $\alpha=0.95$.

Table 2. Skewness and Kurtosis test for EMSs and interpersonal problems.

Variable	Skewness		Kurtosis	
	Statistic	SE	Statistics	SE
Disconnection/ rejection	0.334	0.198	-0.707	0.394
Impaired performance	0.575	0.198	-0.202	0.394
Impaired autonomy	0.340	0.198	-0.134	0.394
Other directedness	0.865	0.198	-1.249	0.394
Overvigilance/ inhibition	0.569	0.198	0.651	0.394
Social avoidant	0.476	0.198	-0.854	0.394
Submissive	1.117	0.198	-1.319	0.394
Over-nurturing	0.387	0.198	-0.027	0.394
Vindictive	0.935	0.198	0.797	0.394
Domineering	0.273	0.198	-0.298	0.394
Intrusive	0.367	0.198	-0.334	0.394
Total	0.427	0.198	-0.444	0.394

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Also, its test-retest reliability obtained in a range from 0.97 (social avoidant) to 0.86 (domineering).

Stepwise regression analysis were administered to investigate the relations among EMSs and interpersonal problems.

3. Results

In the present study, the mean age of the sample was 33.17± 2.909 y. The sample consisted of 84 (56%) single

and 66 (44%) married students, also 123 students (82%) had bachelor and 27 students (18%) had M.A degrees.

Table 1 presents the results of descriptive statistics of EMSs and interpersonal problems in our sample group.

First, the skewness and kurtosis test was conducted to examine the normal distribution of data. As Table 2 shows, all values are less than 2; so the distribution of data is normal. Next, the colinearity assumption was examined. As Table 3 shows, all the linearity statistics are significant, while the deviation from linearity is not

Table 3. Linearity test for EMSs and interpersonal problems.

Variable	Linearity	Sig	Deviation from linearity	Sig
Rejection*social avoidant	3470.330	0.000	1.540	0.051
Rejection*submissive	20.044	0.000	1.083	0.363
Rejection*over-nurturing	34.498	0.000	1.406	0.072
Rejection*vindictive	14.604	0.000	1.502	0.058
Rejection*domineering	57.883	0.000	1.116	0.316
Rejection*intrusive	62.283	0.000	1.115	0.317
Rejection*total	529.899	0.000	0.880	0.699
Impaired autonomy* social avoidant	252.305	0.000	0.585	0.976
Impaired autonomy* submissive	75.476	0.000	1.096	0.347
Impaired autonomy* over-nurturing	146.591	0.000	1.105	0.334
Impaired autonomy* vindictive	9.541	0.003	1.050	0.410

Impaired autonomy* domineering	72.798	0.000	1.189	0.236
Impaired autonomy* intrusive	107.653	0.000	0.895	0.654
Impaired autonomy* total	35.146	0.000	0.809	0.783
Impaired limits* social avoidant	4.725	0.032	1.334	0.131
Impaired limits* submissive	11.486	0.001	1.193	0.242
Impaired limits* over-nurturing	4.707	0.039	1.309	0.147
Impaired limits* vindictive	18.926	0.000	1.340	0.127
Impaired limits* domineering	5.946	0.019	0.903	0.625
Impaired limits* intrusive	4.775	0.029	1.343	0.125
Impaired limits* total	10.621	0.001	1.414	0.089
Other-directedness* social avoidant	8.080	0.005	0.646	0.917
Other-directedness* submissive	14.162	0.000	0.902	0.616
Other-directedness* over-nurturing	31.771	0.000	1.114	0.333
Other-directedness* vindictive	17.279	0.000	0.828	0.745
Other-directedness* domineering	9.666	0.002	1.450	0.084
Other-directedness* intrusive	3.920	0.049	1.227	0.219
Other-directedness* total	22.070	0.000	0.873	0.657
Overvigilance* social avoidant	12.707	0.000	1.039	0.425
Overvigilance* submissive	10.816	0.001	1.389	0.099
Overvigilance* over-nurturing	5.488	.021	1.189	0.244
Overvigilance* vindictive	15.773	0.000	1.137	0.301
Overvigilance* domineering	5.150	0.025	1.133	0.305
Overvigilance* intrusive	5.019	0.027	1.074	0.378
Overvigilance* total	6.586	.012	1.140	0.297

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significant. Therefore, the results confirmed colinearity assumption.

The results of Pearson correlation coefficients between domains of EMSs and interpersonal problems are presented in Table 3. Results indicated positive significant correlations among total interpersonal problems and the domains of disconnection and rejection ($P < 0.001$), impaired autonomy and performance ($P < 0.001$), impaired limits ($P < 0.01$), other-directedness ($P < 0.001$), and overvigilance/inhibition ($P < 0.05$).

Stepwise regression was conducted to determine the contribution of EMSs in the variance of interpersonal problems. First, the significance level of 0.01 was determined as the appropriate level for entering the predictors

to the regression analysis. Then, the Cook's distance was used, which showed no outliers in the data.

Table 5 shows the results of stepwise regression analysis. To determine the contribution of EMSs in the variance of social avoidant, the domains of disconnection/rejection, impaired autonomy, and other-directedness were entered as predictors. Durbin-Watson statistic (2.010) detected no significant autocorrelation in the residuals. VIF of disconnection/rejection and impaired autonomy (2.389) indicated no multicollinearity. Also, the results supported HOV assumption. They indicated that disconnection/rejection and impaired autonomy could predict 96% of the variance of social avoidance.

To determine the contribution of EMSs in the variance of submissive, the domains of disconnection/rejection,

Table 4. Pearson correlation coefficients between early maladaptive schemas and interpersonal problems.

Variable	Social avoidant	Submissive	Over-nurturing	Vindictive	Domineering	Intrusive	Total
Disconnection	0.97**	0.34**	0.41**	0.27**	0.52**	0.53**	0.89**
Impaired autonomy	0.81**	0.58**	0.70**	0.24**	0.56**	0.65**	0.92**
Impaired limits	0.17*	0.26**	0.12	0.31**	0.13	0.08	0.25**
Other-directedness	0.24**	0.30**	0.42**	0.33**	0.24**	0.15	0.36**
Inhibition	0.13	0.13	0.18*	0.31**	0.18*	0.08	0.20*

n = 150

* P < 0.05

** P < 0.001

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impaired autonomy, impaired limits, and other-directedness were entered as predictors. Durbin-Watson statistic (1.528) detected no significant autocorrelation in the residuals. VIF of impaired autonomy (2.389), impaired limits (1.038), and disconnection/rejection (2.433) indicated no multicollinearity. The results supported HOV assumption. They indicated that impaired autonomy, impaired limits, and disconnection/rejection were the significant predictors of submissiveness and could predict 40% of the variance of this factor (Table 6).

To determine the contribution of EMSs in the variance of over-nurturing, the domains of disconnection/rejection, impaired autonomy, and other-directedness were entered as predictors. Durbin-Watson statistic (1.813) detected no significant autocorrelation in the residuals. VIF of impaired autonomy (2.546), disconnection/rejection (2.391), and other-directedness (1.131) indicated no multicollinearity. The results supported HOV assumption. They indicated that impaired autonomy, disconnection/rejection, and other-directedness were the significant predictors of over-nurturing behavior and could predict 56% of the variance of this factor (Table 7).

To determine the contribution of EMSs in the variance of vindictive, the domains of disconnection/rejection, impaired autonomy, impaired limits, other-directedness, and inhibition were entered as predictors. Durbin-Watson statistic (1.690) detected no significant autocorrelation in the residuals. VIF of other-directedness (1.194),

impaired limits (1.168), and disconnection/rejection (1.075) indicated no multicollinearity. The results supported HOV assumption and indicated that other-directedness, impaired limits, and disconnection/rejection were the significant predictors of vindictiveness and could predict 16% of the variance of this factor (Table 8).

To determine the contribution of EMSs in the variance of domineering, the domains of disconnection/rejection, impaired autonomy, and other-directedness were entered as predictors. Durbin-Watson statistic (1.922) detected no significant autocorrelation in the residuals. VIF of impaired autonomy and disconnection/rejection (2.389) indicated no multicollinearity. The results supported HOV assumption and indicated that impaired autonomy and disconnection/rejection were the significant predictors of domineering and could predict 34% of the variance of this factor (Table 9).

To determine the contribution of EMSs in the variance of intrusive, the domains of disconnection/rejection and impaired autonomy were entered as predictors. Durbin-Watson statistic (2.048) detected no significant autocorrelation in the residuals. VIF of impaired autonomy (1.000) indicated no multicollinearity. The results supported HOV assumption. And indicated that impaired autonomy was the significant predictor of intrusive behavior and could predict 43% of the variance of this factor (Table 10).

Table 5. Stepwise regression analysis to determine the contribution of EMSs in the variance of social avoidant.

Model	Predictor	R	R ²	SE	df	F	B	β	t
	Constant	-	-	-	-	-	-0.231	-	-6.834**
1	Disconnection/ rejection	0.974	0.948	0.190	1, 148	2706.909**	1.123	0.974	52.028**
	Constant	-	-	-	-	-	-0.343	-	-9.986**
2	Disconnection/ rejection	0.980	0.960	0.168	2, 147	1760.633**	0.976	0.846	33.148**
	Impaired autonomy						0.231	0.168	6.570**

* P < .05

** P < .001

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Table 6. Stepwise regression analysis to determine the contribution of EMSs in the variance of submissive.

Model	Predictor	R	R ²	SE	df	F	B	β	t
1	Constant	-	-	-	-	-	0.188	-	0.102
	Impaired autonomy	0.576	0.331	0.563	1, 148	73.391**	0.655	0.576	8.567**
2	Constant	-	-	-	-	-	-0.108	-	-0.706
	Impaired autonomy	0.605	0.366	0.550	2, 147	42.126**	0.626	0.550	8.300**
	Impaired limits						0.126	0.188	2.835**
3	Constant	-	-	-	-	-	-0.109	-	-0.732
	Impaired autonomy	0.631	0.398	0.538	3, 146	32.211**	0.864	0.760	7.658**
	Impaired limits						0.142	0.212	3.249**
	Disconnection/ rejection						-0.266	-0.280	-2.792**

* P < 0.05

** P < 0.001

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To determine the contribution of EMSs in the variance of interpersonal problems, the domains of disconnection/rejection, impaired autonomy, impaired limits, and other-directedness were entered as predictors. Durbin-Watson statistic (1.565) detected no significant autocorrelation in the residuals. VIF of impaired autonomy (2.389), disconnection/rejection (2.433), and impaired limits (1.038) indicated no multicollinearity. The results supported HOV assumption. They indicated that impaired autonomy, disconnection/rejection, and impaired limits were the significant predictors of submissiveness and could predict 93% of the variance of this factor (Table 11).

4. Discussion

Current study aimed to investigate the relationship between EMSs and interpersonal problems among university students. Results showed that disconnection/rejec-

tion was one of the strongest correlates of interpersonal problem and its factors. It was also the strong predictor of interpersonal problems, social avoidance, submissiveness, over-nurturing, vindictiveness, and domineering. This finding is consistent with the results of Ayduk, Downey, Testa, and Shoda (1999); Baldwin (1999); Holmes (2000); Drapeau and Perry (2004); Gaffey (2005); Gaffey (2009); Berenson et al., (2009); Khamseh and Hosseinian (2010); Yousefi, Abedin, Targari, and Fathabadi (2010); Nikmanesh, Keikha, Mahmoudi, and Mousavi (2010); Breen and Kashdan (2011); and Amani and Esfandiari (2012). According to Young et al. (2003), people who score high in this domain, believe that their needs for love and belongingness will not be fulfilled, so they may show increased rejection sensitivity due to their early rejection-related experiences. These people may react to these feelings through different coping strategies. For example, they may either try to protect themselves from rejections through social avoidance and

Table 7. Stepwise regression analysis to determine the contribution of EMSs in the variance of over-nurturing.

Model	Predictor	R	R ²	SE	df	F	B	β	t
1	Constant	-	-	-	-	-	0.494	-	4.446**
	Impaired autonomy	0.700	0.490	0.547	1.148	142.149**	0.885	0.700	11.923**
2	Constant	-	-	-	-	-	0.538	-	4.984**
	Impaired autonomy	0.726	0.528	0.528	2.147	82.113**	1.175	0.929	10.603**
	Disconnection/ rejection						-0.317	-0.300	-3.428**
3	Constant	-	-	-	-	-	0.190	-	1.297
	Impaired autonomy	0.750	0.562	0.510	3.146	62.399**	1.082	0.856	9.788**
	Disconnection/ rejection						-0.308	-0.291	-3.441**
	Other directedness						0.189	0.196	3.373**

* P < 0.05

** P < 0.001

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Table 8. Stepwise regression analysis to determine the contribution of EMSs in the variance of vindictive.

Model	Predictor	R	R ²	SE	df	F	B	β	t
1	Constant	-	-	-	-	-	0.438	-	2.174*
	Other directedness	0.329	0.108	0.759	1.148	17.978**	0.332	0.329	4.240**
2	Constant	-	-	-	-	-	0.177	-	0.805
	Other directedness	0.387	0.138	0.744	2.147	12.968**	0.252	0.249	3.054**
	Impaired limits						0.171	0.219	2.684**
3	Constant	-	-	-	-	-	0.027	-	0.119
	Other directedness						0.215	0.213	2.603*
	Impaired limits	0.427	0.165	0.732	3.146	10.826**	0.154	0.197	2.437*
	Disconnection/ rejection						0.206	0.185	2.390*

* P < 0.05

** P < 0.001

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coldness; or react vindictively toward subjective and objective cues of rejections, or show domineering manner to control others and maintain their relationships, or try to gain others' love and save their relationships through over-nurturing and submissive behaviors.

Impaired autonomy was the strongest correlate of the interpersonal problem and most of its factors. This domain could predict interpersonal problems, social avoidant, over-nurturing, domineering, and intrusiveness. This finding is consistent with the results of Zolfaghari et al., (2008) and Attari et al., (2012) studies. Presumably, the people who score high on this domain may avoid social relationships due to their feelings of incompetency and low self-esteem, or show domineering and intrusive manner owing to their overdependence. However, some of them may behave submissively because of their low self-esteem and overdependence, or use overcompensation and show over-nurturing manner to enhance their damaged self-esteem.

Impaired limit was the significant correlate of social avoidant, submissiveness, vindictiveness, and interper-

sonal problems. It could predict submissiveness, vindictiveness, and total interpersonal problems. Our result is partially in line with the findings of Pinto-Gouveia et al. (2006), Mueller et al. (2009), and Tremblay and Dozois (2009). According to Zolfaghari et al. (2008), as well as Amani and Esfandiari (2012), this domain is accompanied by some problems in marital satisfaction and emotional maturation. Because of their egotistical irresponsible manner, people who score high on this domain are expected to experience many problems in their interpersonal relationships. It was assumed that unfulfillment of their needs and expectations leads to hostility that reflects as vindictiveness. In contrast, these people may use overcompensation and show submissive manner.

Other-directedness was the significant correlate of interpersonal problem and all its factors, except intrusiveness. It could predict over-nurturing and was the strongest predictor of vindictiveness. Our result is partially in line with the findings of Mason, Platts, and Tyson (2005), Muris (2006), and Henning and Walker (2008). Presumably, ignoring one's own needs or feelings, which are the interpersonal characteristic of the people who score

Table 9. Stepwise regression analysis to determine the contribution of EMSs in the variance of domineering.

Model	Predictor	R	R ²	SE	df	F	B	β	t
1	Constant	-	-	-	-	-	0.663	-	6.291**
	Impaired autonomy	0.564	0.318	0.519	1.148	68.927**	0.585	0.564	8.302**
2	Constant	-	-	-	-	-	0.636	-	6.063**
	Impaired autonomy	0.581	0.338	0.513	2.147	37.487**	0.412	0.397	3.827**
	Disconnection/ rejection						0.190	0.219	2.108*

* P < 0.05

** P < 0.001

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Table 10. Stepwise regression analysis to determine the contribution of EMSs in the variance of intrusive.

Model	Predictor	R	R ²	SE	df	F	B	β	t
	Constant	-	-	-	-	-	0.355	-	3.370**
1	Impaired autonomy	0.655	0.429	0.519	1.148	111.111**	0.743	0.655	10.541**

* P < 0.05

** P < 0.001

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high on this domain, can lead to vindictiveness through gradual increase of anger. Moreover, these people may try to gain others' approval, avoid others' anger or abandonment, and improve their self-esteem through submissiveness or self-sacrifice.

Finally, inhibition/overvigilance was the significant correlate of over-nurturing, vindictiveness, domineering, and interpersonal problems, but it could not predict interpersonal problem and its factors in our sample. It was assumed that this domain's association with social anxiety (Pinto-Gouveia et al., 2006), and low extroversion and agreeableness (Thimm, 2010; Bahrami Ehsan & Bahramizadeh, 2011) has various negative influences on interpersonal relationships. Characteristics, such as emotional inhibition and anger restraint can gradually increase aggression and hostility, which reflect as vindictiveness. Some people may cope with this schema through overcompensating strategy and show over-nurturing behaviors to improve their social deficits. So far, many studies have confirmed the association between perfectionism and interpersonal problems (Ye et al., 2008; Gilman, Adams, & Nounopoulos, 2011; Chen et al., 2012; Roxborough et al., in press). Because of the relative similarity of perfectionism and unrealistic standards, as one of the schemas of this domain, it was expected that this domain shows a significant correlation with interpersonal problems, a finding that did not yield

in the current study. The samples' differences may explain this inconsistency, for mentioned studies' samples consisted of adolescence or clinical population that were different from ours with respect to their age and health situation. Also, the difference between measured constructs and administered materials can be another reason for this inconsistency. Finally, our findings were inconsistent with the results of Yilmaz et al. (2011). According to their study, EMSs did not have a significant association with students' social skills. Presumably, cultural differences, disparate measurements, and the dissimilarity of social skills and interpersonal problems are among the main reasons of this inconsistency.

In conclusion, our research supported the Young's theory and presented strong evidence regarding the associations of EMSs, especially its first two domains, with the interpersonal problems. With respect to the important role of EMSs in the interpersonal relations of students as a normal and non-clinical group, and due to the significant role of interpersonal relationships in psychological adjustment, further investigations on this field seem necessary. In addition, given the strong association between EMSs and interpersonal problems, schema therapy can be used to decrease peoples' problems in interpersonal problems.

Table 11. Stepwise regression analysis to determine the contribution of EMSs in the variance of interpersonal problems.

Model	Predictor	R	R ²	SE	df	F	B	β	t
	Constant	-	-	-	-	-	0.165	-	3.633**
1	Impaired autonomy	0.917	0.840	0.224	1.148	779.377**	0.848	0.917	27.917**
	Constant	-	-	-	-	-	0.165	-	3.716**
2	Impaired autonomy		0.927	0.152			0.528	0.571	16.525**
	Disconnection/ rejection	0.963			2.147	927.544**	0.351	0.454	13.134**
	Constant	-	-	-	-	-	0.006	-	0.158
3	Impaired autonomy		0.934	0.145			0.530	0.573	17.403**
	Disconnection/ rejection	0.966			3.146	686.935**	0.337	0.436	13.126**
	Impaired limits						0.047	0.087	4.004**

* P < 0.05

** P < 0.001

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Our study has some limitations too. First, our sample consisted of female students, so the generalization of results to men and non-student groups should be done cautiously. Second, our research investigated females' general interpersonal problems, so the generalization of results to specific levels of interpersonal problems should be done cautiously. In this study, some of our subscales (other-directedness, overvigilance, nurturing, vindictiveness, domineering, and intrusiveness) showed relatively low internal consistency, and this issue could affect our findings. We suggest that future studies investigate different levels of social relationships in various cultural, non-student, and male groups to obtain more generalized results. One important note refers to this fact that our study was correlational, so casual relationships cannot be inferred from these findings. We recommend that future studies investigate the casual relationships between these two constructs using experimental design.

References

- Ahi, G. H., Mohammadi Far, M. A., Besharat, M. A. (2007). Validity and reliability of the short form of Young Schema Questionnaire. *Psychology & Educational Science*, 37(3), 5-20.
- Amani, A., & Esfandiari, H. (2012). Early maladaptive schemas as preventive factors of emotional maturation of male students with romantic break experience. *The 6th Seminar of College Students Mental Health*, 99-101. Rasht: Guilan University.
- Atkinson, R. L., Atkinson, R. C., Smith, E. E., Bem, D. G., & Nolen-Hoeksema, S. (2000). *Hilgard's Introduction to Psychology*. (13th ed). Tehran: Roshd.
- Attari, A., Nemati Yazdi, A., MirDorghi, F., Erfan, Z., & Adabi, R. (2012). The Role of early maladaptive schemas in predicting close relationships experiment in students. *The 6th Seminar of College Students Mental Health*, 646-648. Rasht: Guilan University.
- Ayduk, O., Downey, G., Testa, A., Yen, Y., & Shoda, Y. (1999). Does rejection elicit hostility in rejection sensitive women? *Social Cognition*, 17(2), 245-271.
- Ayduk, O., Gyurak, A., & Luerssen, A. (2008). Individual differences in the rejection-aggression link in the hot sauce paradigm: The case of rejection sensitivity. *Journal of Experimental Social Psychology*, 44(3), 775-582.
- Bahrami Ehsan, H., & Bahramizadeh, H. (2011). Early maladaptive schemas and agreeableness in personality five factor model. *Procedia- Social and Behavioral Sciences*, 30,547-551.
- Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin*, 112(3), 461-484.
- Baldwin, M. W. (1999). The cued activation of attachment relational schemas. *Social Cognition*, 17(2), 209-227.
- Beck, A.T. (1967). *Depression: causes and treatment*. Philadelphia: University of Pennsylvania Press.
- Berenson, K. R., Gyurak, A., Ayduk, O., Downey, G., Garner, M. J., Mogg, K.- et al. (2009). Rejection sensitivity and disruption of attention by social threat cues. *Journal of Research in Personality*, 43(6),1064-1072.
- Bolton, R. (1986). *People skills: How to assert yourself*. Tehran: Roshd.
- Breen, W. E., & Kashdan, T. B. (2011). Anger suppression after imagined rejection among individuals with social anxiety. *Journal of Anxiety Disorders*, 25(7), 879-887.
- Butler, J. C. Doherty, M. S., & Potter, R. M. (2007). Social antecedents and consequences of interpersonal rejection sensitivity. *Personality and Individual Differences*, 43(6),1376-1385.
- Chen, C., Hewitt, P. L., Flett, G. L., Cassels, T. G., Birch, S., & Blasberg, J. S. (2012). Insecure attachment, Perfectionistic self-presentation, and social disconnection in adolescents. *Personality and Individual Differences*, 52(8),936-941.
- Divandari, H., Ahi, Gh., Akbari, H., & Mahdian, H. (2009). The Short Form of Young Schema Questionnaire (SQ-SF): An investigation of the psychometric properties and factorial structure among the students of Islamic Azad University of Kashmir on 2006-2007 Academic year. *Educational Bulletin of Islamic Azad University of Bojnourd*, 5, 20, 103-133.
- Downey, G., & Feldman, S. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology*, 70(6), 1327-1343.
- Drapeau, M., & Perry, J. C. (2004). Childhood trauma and adult interpersonal functioning: A study using the core conflictual relationship theme method (CCRT). *Child Abuse and Neglect*, 28(10),1049-1066.
- Forgas, J. P. (1985). *Interpersonal behavior: The psychology of social interaction*. Tehran: Abjad.
- Gaertner, L., Iuzzini, J., & O'Mara, E. M. (2008). When rejection by one fosters aggression against many: Multiple-victim aggression as a consequence of social rejection and perceived groupness. *Journal of Experimental Social Psychology*, 44(4),958-970.
- Gaffey, K. J. (2005). *Effects of witnessing interpersonal violence on young adults' interpersonal relationships*. (Unpublished Master's Thesis). Miami University, Oxford Ohio.
- Gaffey, K. J. (2009). *Child maltreatment experiences and romantic relationship functioning: The role of emotion dysregulation and early maladaptive schemas*. (Unpublished Doctoral Dissertation). Miami University, Oxford Ohio.
- Gilman, R., Adams, R., & Nounopoulos, A. (2011). The interpersonal relationships and social perceptions of adolescent perfectionists. *Journal of Research on Adolescence*, 21(2), 505-511.
- Hargie, O., Saunders, Ch., & Dickson, D. (1994). *Social skills in interpersonal communication*. Tehran: Roshd.
- Hasanvand Amoozadeh, M., Shaeeri, M. R., & Asghari Moghadam, M. A. (2012). The simple and multivariate relationship of anger, shame, behavioral inhibition, and depression with social anxiety in female students. *The 6th Seminar of College Students Mental Health*, 274-277. Rasht: Guilan University.
- Hennig, K. H., & Walker, L. J. (2008). The darker side of accommodating others: Examining the interpersonal structure of

- maladaptive constructs. *Journal of Research in Personality*, 42(1), 2-21.
- Holmes, J. G. (2000). Social relationships: The nature and function of relational schemas. *European Journal of Social Psychology*, 30(4), 447-495.
- Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureno, G., & Villaseñor, V. S. (1988). Inventory of interpersonal problems: Psychometric properties and clinical applications. *Journal of Consulting and Clinical Psychology*, 56(6), 885-892.
- Khamseh, A., & Hosseinian, S. (2010). [Investigating the role of violence experience in childhood and behavioral patterns of violence and intimacy in married students (Persian)]. *Danesh-var (Raftar) Clinical Psychology & Personality*, 17, 39-48.
- Kim, J., Talbot, N. L., & Cicchetti, D. (2009). Childhood abuse and current interpersonal conflict: The role of shame. *Child Abuse and Neglect*, 33(6), 362-371.
- Koch, E. J. (2002). Relational schemas, self-esteem, and the processing of social stimuli. *Self and Identity*, 1(3), 271-279.
- Mason, O., Platts, H., & Tyson, M. (2005). Early maladaptive schemas and adult attachment in a UK clinical population. *Psychology and Psychotherapy: Theory, Research and Practice*, 78(4), 549-564.
- Massman-Moore, T. L., & Coates, A. A. (2007). The impact of childhood psychological abuse on adult interpersonal conflict: The role of early maladaptive schemas & patterns of interpersonal behavior. *Journal of Emotional Abuse*, 7(2), 75-92.
- Mojallal, M. (2012). [The relationship between early maladaptive schemas with interpersonal problems between single and married female university students with 30 to 40 years old (Persian)]. Unpublished Master's thesis, Guilan University.
- Mueller, S. E., Degen, B., Petitjean, S., Wiesbeck, G. A., & Walter, M. (2009). Gender differences in interpersonal problems of alcohol dependent patients and healthy controls. *International Journal of Environmental Research and Public Health*, 6(12), 3010-3022.
- Muris, P. (2006). Maladaptive schemas in non-clinical adolescents: Relations to perceived parental rearing behaviors, big five personality factors and psychopathological symptoms. *Clinical Psychology and Psychotherapy*, 13(6), 405-413.
- Nikmanesh, Z., Keikha, F., Mahmoudi, M., & Mousavi, S. S. (2010). The Relationship between early maladaptive schemas and marital satisfaction. *The 5th Seminar of College Student's Mental Health*, 392-394. Tehran: Shahed University.
- Ogrodniczuk, J. S., Piper, W. E., Joyce, A. S., Steinberg, P. I., & Duggal, S. (2009). Interpersonal problems associated with narcissism among psychiatric outpatients. *Journal of Psychiatric Research*, 43(9), 837-842.
- Pinto-Gouveia, J., Castilho, P., Galhardo, A., & Cunha, M. (2006). Early maladaptive schemas and social phobia. *Cognitive Therapy Research*, 30, 571-584.
- Ponce, N. A., Williams, M. K., & Allen, G. J. (2004). Experience of maltreatment as a child and acceptance of violence in adult intimate relationships: mediating effects of distortions in cognitive schemas. *Violence Victims*, 19(1), 97-108.
- Robinson, L. C. (2000). Interpersonal relationship quality in young adulthood: A gender analysis-statistical data included. *Adolescence*, 35(140), 775-584.
- Roxborough, H. M., Hewitt, P. L., Kaldas, J., Flett, G. L., Caelian, C., Sherry, S., & Sherry, D. (in press). Interpersonal components of perfectionism and suicide in youth: A test of the perfectionism social disconnection model. *Suicide and Life-Threatening Behaviors*.
- Sherry, S. B., Law, A., Hewitt, P. L., Flett, G. L., & Besser, A. (2008). Social support as a mediator of the relationships between perfectionism and depression: A preliminary test of the social disconnection model. *Personality and Individual Differences*, 45(4), 339-344.
- Stevens, J. (2002). Applied multivariate statistics for the social sciences (4th Ed). Mahwah, NJ: Erlbaum.
- Tabachnick, B. G., Fidell, L. S. (2001). *Using multivariate statistics* (4th Ed). Boston: Allyn and Bacon.
- Thimm, J. C. (2010). Personality and early maladaptive schemas: A five-factor model perspective. *Journal of Behavioral Therapy and Experimental Psychiatry*, 41(4), 373-380.
- Tremblay, P. F., & Dozois, D. J. A. (2009). Another perspective on trait aggressiveness: Overlap with early maladaptive schemas. *Personality and Individual Differences*, 46(5-6), 569-574.
- Vanheule, S., Desmet, M., & Rosseel, Y. (2008). The factorial structure of the Dutch translation of the Inventory of Interpersonal Problems: A test of the long and short version. *Psychological Assessment*, 18(1), 112-117.
- Wilhelm, K., Boyce, Ph., & Brownhill, S. (2004). The relationship between interpersonal sensitivity, anxiety disorders and major depression. *Journal of Affective Disorders*, 79(1-3), 33-41.
- Ye, H. J., Rice, K. G., & Storch, E. A. (2008). Perfectionism and peer relations among children with obsessive-compulsive disorder. *Child Psychiatry and Human Development*, 39(4), 415-426.
- Yilmaz, M., Kumcagiz, H., Balci-Celik, S., & Eren, Z. (2011). Investigating communication skill of university students with respect to early maladaptive schemas. *Procedia- Social and Behavioral Sciences*, 30, 968-972.
- Young, J. E., Klosko, J. S., & Weishoer, M.E. (2003). *Schema therapy: A practitioner's guide*. Arjmand Press: Tehran.
- Yousefi, R., Abedin, A. R., Tirkari, A. H., & Fathabadi, J. (2010). The efficacy of schema based training intervention on marital satisfaction enhancement. *Journal of Clinical Psychology*, 2(3), 25-37.
- Zarb, J. M. (2007). *Developmental Cognitive Therapy with Adults*. Tehran: Arjmand: Nasle Farda.
- Zolfaghari, M. A., Fatehizadeh, M., & Abedi, M. R. (2008). Determining relationships between early maladaptive schemas and marital intimacy among Mobarakeh steel complex personnel. *Journal of Family Research*, 4(15), 247-261.

