

Relationships between Childhood Traumatic Experiences, Early Maladaptive Schemas and Interpersonal Styles

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ABSTRACT

Introduction: Cognitive theories of psychopathology have generally proposed that early experiences of childhood abuse and neglect may result in the development of early maladaptive self-schemas. Maladaptive core schemas are central in the development and maintenance of psychological symptoms in a schema-focused approach. Psychosocial dysfunction in individuals with psychological problems has been consistently found to be associated with symptom severity. However, till date, linkages between psychosocial functioning, early traumatic experiences and core schemas have received little attention. The aim of the present study was to explore the relations among maladaptive interpersonal styles, negative experiences in childhood and core self-schemas in non-clinical adults.

Methods: A total of 300 adults (58% women) participated in the study. The participants completed a socio-demographic questionnaire, Young Schema Questionnaire, Childhood Trauma Questionnaire and Interpersonal Style Scale.

Results: Hierarchical regression analyses revealed that the Disconnection and Rejection and Impaired Limits schema domains were significant antecedents of maladaptive interpersonal styles after controlling for demographic characteristics and childhood abuse and neglect. Associations of child sexual abuse with Emotionally Avoidant, Manipulative and Abusive interpersonal styles were mediated by early maladaptive schemas. Early maladaptive schemas mediated the relations of emotional abuse with Emotionally Avoidant and Avoidant interpersonal styles as well as the relations of physical abuse with Avoidant and Abusive interpersonal styles.

Conclusion: Interpersonal styles in adulthood are significantly associated with childhood traumatic experiences. Significant relations between early traumatic experiences and maladaptive interpersonal styles are mediated by early maladaptive schemas.

Keywords: Early maladaptive schemas, schema domains, interpersonal schemas, interpersonal styles, child abuse and neglect

INTRODUCTION

Negative influences of early traumatic experiences on psychological well-being have long been recognized and well-documented (1,2,3). Several studies have examined the connections between psychological distress and various types of childhood trauma such as sexual abuse (4,5,6), physical abuse (7,8), emotional abuse (9,10) and neglect (11,12). Recently, researchers have recognized higher rates of victimization in more than one type of childhood trauma and more negative outcomes of polyvictimization (13,14).

The experience of childhood abuse may also generate long-term deleterious effects on the victims' mental health and psychosocial functioning (15,16). Childhood traumatic experiences have been found to be associated with miscellaneous psychiatric disorders such as dissociative, posttraumatic stress, borderline personality disorder, generalized anxiety and major depression (2,17,18,19). Researchers have suggested that different types of adversities in childhood can produce similar patterns of negative outcomes in adulthood (17,20,21). Berlin and Dodge (22) have claimed that adults' internal working models of attachment and social information processing patterns mediate the association between childhood maltreatment and quality of intimate relationships in adulthood. Colman and Widom (23) integrate and extend the findings about the sequelae to maltreatment in childhood in 2 domains: (a) long-term effects of childhood trauma and (b) antecedents of adults' characteristics in terms of intimate relationships. In a 25-year longitudinal design study, the authors reported intergenerational continuities in the impaired quality of adults' intimate relationships mediated by childhood maltreatment.

It has been suggested that child abuse has harmful effects on the child's emerging sense of self and leads to multiple self-system impairments including deteriorations in self-awareness, agency, self-continuity and self-coherence (24). Such impairments during early self-development result in poor interpersonal relationships in adulthood (25,26,27,28). In a study of 85 college women, it was found that increased perception of social isolation and social isolation were significantly associated with childhood sexual abuse (29). Women who are victims of child abuse have a tendency to perpetrate intimate partner aggression compared with non-abused women (30,31). Given these previous findings, it appears that adults who were maltreated in their childhood may differ from non-maltreated adults in



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the overall quality of their interpersonal relationships. Research has evidenced for that enduring negative self-schemas, which are interacting with the abuse-specific schematic content, appear to be antecedents of poor self-functioning and maladaptation subsequent to abuse (32,33,34).

Although childhood adversity is a significant vulnerability factor for the late onset of psychopathology, it does not mean that everyone who has experienced such negative events will manifest severe psychological symptoms (35). In the cognitive literature, it has been proposed that internal cognitive processes play a mediating role in clinical symptoms associated with childhood traumatic experiences (36,37,38,39). These underlying cognitive patterns have been referred to as relational schemas or core beliefs or early maladaptive schemas (EMS) (40,41,42).

According to Beck's cognitive model of psychopathology, maladaptive self-schemas constitute a vulnerability factor for psychological problems (43,44). Beck proposed that the content of a maladaptive self-schema is developed in early childhood, ingrained by particularly adverse interpersonal experiences and activated by later negative life circumstances (44). In the concept of maladaptive cognitive schemas, which have been advanced by Young, core beliefs or maladaptive schemas underlying various types of psychopathological symptoms are described in a more detailed manner (42,45,46). Young clustered EMSs in 5 schema domains as follows: 1) Disconnection and Rejection, 2) Impaired Autonomy and Performance, 3) Impaired Limits, 4) Other-directedness and 5) Overvigilance and Inhibition (42).

A number of studies revealing the relationship between EMSs and late onset of psychopathology have been conducted and the subject has been receiving increased attention. Bernstein (47) proposed a cognitive model of personality disorders in patients with histories of emotional abuse or neglect based on Young's notion of maladaptive schemas, evaluating the relationship between early adverse experiences and later psychopathology. Lumley and Harkness (48) detected that sexual and physical abuse experienced in childhood may result in the development of schemas related to the 'hazard' theme (weakness against threats and a sense of insecurity), whereas childhood neglect may result in the development of schemas related to 'loss' and 'insignificance' themes (emotional deprivation and social isolation). It was reported that the relationship between childhood abuse and depression was mediated by the Disconnection/Rejection, Impaired Autonomy/Performance and Impaired Limits cognitive domains in a clinical outpatient sample (49). Another study examining the mediating role of EMSs among parental perception and depressive symptoms in young adults demonstrated that the symptom of depression was associated with the Defectiveness and Shame, Insufficient Self-control and Vulnerability to Harm schemas (50). Substantial linkages of childhood emotional abuse and neglect with symptoms of anxiety and depression were found to be mediated by the schemas of Vulnerability to Harm, Self-sacrifice and Defectiveness/shame in a non-clinical college sample (51). In a study conducted by Harding, Burns (52) on 127 women who were child sexual abuse survivors, it was found that participants who reported higher scores of EMSs also reported more severe PTSD symptoms. Researchers have provided further evidence that significant associations of childhood traumatic experiences with symptoms of bulimic behaviors, dissociation and suicidality are also mediated by core self-schemas (53,54,55).

Young, Klosko (42) have accentuated the role of early frustrating experiences with parents, siblings and peers as the developmental origins of EMSs, which affect self-perception and strongly influence interpersonal relationships. Considering the variance of all Young Schema Questionnaire (YSQ) subscales taken together in a sample consisting of adult mental

health service users, Mason, Platts (56) found that the fearful and preoccupied attachment style groups reported significant more EMSs than secure and dismissing groups. Despite plausible links between adverse interpersonal experiences in childhood, EMSs and interpersonal styles, there has been a paucity of literature regarding how childhood traumatic experiences relate to psychosocial functioning in adulthood and which core schemas function as a conceptual bridge linking early traumatic experiences with adult interpersonal style. In a preliminary study, Messman-Moore and Coates (57) found that childhood traumatic experiences predict later psychosocial strains in a large social context, including romantic relationships, friendships and work or school-related relationships. Interpersonal problems related to early traumatic experiences in adulthood are mediated by EMSs. It appears that psychological abuse affects the development of EMSs, which in turn results in later interpersonal difficulties.

EMSs are accepted to act as templates for information processing that affect an individual's emotional reactions to life events and interpersonal relation style (56,58). Therefore, EMSs are assumed to shape self-perception and interpersonal relationships. Under the theoretical framework of the cognitive literature, we studied the possible relations between childhood abuse and adult interpersonal relationship styles. We aimed to address the possible connections among childhood traumatic experiences, EMSs and interpersonal relationship style in a non-clinical adult sample. We questioned whether EMSs play a mediating role in the linkages between early childhood traumatic experiences and adult interpersonal relationship style. The associations between psychological variables were assessed after controlling for the possible effects of demographic variables such as gender, age and income. Given the theoretical considerations and previous findings, it was hypothesized that individuals who report childhood traumatic experiences would show increased evidence of maladaptive schemas, particularly interpersonal themes such as the Disconnection and Rejection, Impaired Autonomy and Performance and Other-directedness schema domains. In addition, we predicted that the links between maladaptive interpersonal styles and childhood traumatic experiences would be mediated by EMSs. The study is a preliminary research addressing the relations between these variables and it is anticipated to make significant contribution to the literature in the theoretical and therapeutic sense.

METHODS

Participants

In total, 300 adults from Ankara and Istanbul, 2 metropolises in the western part of Turkey, participated in the study [175 (58%) women]. The mean age of the participants was 31.44 ± 6.24 years (range: 20–48 years). The demographic characteristics of the participants are presented in Table 1.

Procedure

The study was conducted at Ankara University and Marmara University. Undergraduates helped researchers in contacting their parents or adult friends who were willing to participate in the study. Before participation, each participant was provided information about the study. After written informed consent was obtained, the questionnaires were completed by the participants. All participants completed the questionnaires themselves; however, subjects with reading or comprehension problems completed the questionnaires with the aid of a researcher and the items were read to them and rated in line with their answers. This study was approved by the ethics committee of Ankara University.

Assessment Instruments

A demographic questionnaire, YSQ, the Childhood Trauma Questionnaire (CTQ) and the Interpersonal Style Scale (ISS) were administered in the study.

Demographic questionnaire: A demographic questionnaire was developed by the authors to assess demographic information pertaining to the participants. In the demographic form, age, sex, level of education, marital status, level of income, level of father's education and level of mother's education were assessed.

Young Schema Questionnaire

The YSQ was developed to assess EMSs (45,59). Participants completed the Turkish version of the YSQ Short Form 3 (YSQ-SF 3) for evaluation of EMSs. EMSs measured by the YSQ are clustered into 5 schema domains depending on the unmet emotional needs: 1) Disconnection and Rejection, 2) Impaired Autonomy and Performance, 3) Impaired Limits, 4) Other-directedness and 5) Overvigilance and Inhibition (42). The validity and reliability study of the Turkish version of the YSQ-SF 3 has been conducted by Soygut, Karaosmanoglu (60). The internal consistency coefficients of the Turkish version of the instrument range from 0.63 to 0.80.

Childhood Trauma Questionnaire

The CTQ is a self-report measure developed by Bernstein, Fink (61). The CTQ has 3 versions consisting of 53, 40 and 28 items; the 40-question version was used in the current study. It is a retrospective measure used for the evaluation of childhood abuse experienced before the age of 18. Participants rate each item on a Likert-type scale ranging from (1) Never to (5) Very Often. Higher scores indicate more severe childhood abuse and neglect. The Turkish version of the CTQ has adequate reliability and validity. The original form of the CTQ has 5 sub-scales; however, a 3-factor structure was confirmed for the Turkish version: Emotional Abuse and Neglect, Physical Abuse and Neglect and Sexual Abuse. The internal reliability of the Turkish version is 0.96 for the overall CTQ and 0.94–96 for the subscales of the instrument (62,63).

Interpersonal Style Scale

The ISS is a 60-item self-report questionnaire designed by Şahin, Çeri (64) in order to assess maladaptive interpersonal styles. The ISS has 6 factors: "Dominating," "Avoidant," "Aggressive," "Emotionally Avoidant," "Manipulative," and "Abusive." In the initial psychometric analysis of the

scale, the alpha coefficient of the total scale was 0.93. The internal reliability coefficients for the subscales are as follows: 0.88 for the "Dominating" sub-scale (14 items), 0.79 for the Avoidant sub-scale (11 items), 0.79 for the "Aggressive" sub-scale (9 items), 0.77 for the Emotionally Avoidant sub-scale (11 items), 0.74 for the Manipulative sub-scale (10 items) and 0.67 for the Abusive sub-scale (5 items). The measure has adequate validity and reliability (64).

Statistical Analysis

Initially, descriptive statistics for demographic characteristics and psychometric instruments were computed. To examine the associations between abuse subtype and cognitive schema domains, we computed Pearson correlations. Possible influences of demographic characteristics, severity of early traumatic experiences and EMSs on interpersonal style were assessed using 6 multiple regression models. Categorical variables in terms of gender, level of education and level of income were entered in the regression models after being converted into dummy variables. Changes in R^2 for each variable set in terms of demographic characteristics, childhood traumatic experiences and EMSs and total model R^2 were calculated. The statistical significance threshold was held at $p < 0.05$.

RESULTS

Demographic characteristics of the sample are shown in Table 1. The means, standard deviations and internal reliability coefficients for the psychometric instruments are presented in Table 2.

Pearson correlation coefficients were calculated to examine the associations between the subscale scores of the YSQ and CTQ. Significant correlations between early traumatic sexual experiences and maladaptive schema domains ranged from a low of $r = 0.13$ (Overvigilance and Inhibition Schema Domain) to a high of $r = 0.28$ (Disconnection and Rejection Schema Domain). Strong associations of EMSs with Physical Abuse and Neglect and with Emotional Abuse and Neglect were found. Pearson correlations are presented in Table 3.

We evaluated the mediating role of EMSs in accordance with the notion proposed by Baron and Kenny (65) to examine whether the associations between maladaptive interpersonal relationship styles and childhood abuse are mediated by EMSs or not. In the regression analyses, the continuous scores of participants obtained with the YSQ, CTQ and ISS were utilized. We conducted regression analyses in 2 steps. In the first step, we regressed the scores of each maladaptive interpersonal style on the severity scores of childhood traumatic experiences after controlling for demographic characteristics. In the second step, we assessed the possible influences of EMSs on maladaptive interpersonal styles after controlling for demographic characteristics and severity of childhood traumatic experiences.

In the first step, 6 regression models were obtained. Manipulative and Abusive interpersonal styles were positive correlates of child sexual abuse ($\beta = 0.14$, $t = -2.52$, $p < 0.05$ for the Manipulative subscale and $\beta = 0.12$, $t = -2.25$; $p < 0.05$ for the Abusive subscale). Dominating ($\beta = 0.30$, $t = 3.87$, $p < 0.01$), Avoidant ($\beta = 0.18$, $t = 2.30$, $p < 0.05$), Aggressive ($\beta = 0.27$, $t = 3.39$, $p < 0.01$) and Abusive ($\beta = 0.20$, $t = 2.51$, $p < 0.05$) interpersonal styles were found to be significantly associated with the severity of physical abuse and neglect. Avoidant ($\beta = 0.22$, $t = 2.81$, $p < 0.01$) and Emotionally Avoidant ($\beta = 0.36$, $t = 4.68$, $p < 0.01$) interpersonal styles were significantly predicted by emotional abuse and neglect.

To understand the influence of demographic characteristics, severity of childhood traumatic experiences and EMS content on the interpersonal styles of the participants, we conducted 6 additional multiple regression

Table 1. Demographic characteristics of the sample (n=300)

		n	%
Gender	Male	125	41.67
	Female	175	58.33
Level of education	Illiterate	3	1.00
	Literate	12	4.00
	Primary School	50	16.67
	Secondary School	27	9.00
	High School	84	28.00
	University	124	41.33
Income	Low	146	48.67
	Average	117	39.00
	Upper	37	12.33
Marital status [¶]	Single	94	32.87
	Engaged	13	4.55
	Married	159	55.59
	Divorced or Widow	20	6.99

[¶]The summation is less than the total n because of missing observations

analyses in which the subscales of the ISS were dependent variables. In the second step, 3 sets of variables were entered together into the multiple regression models. The partial effect of each independent variable was evaluated after controlling for other independent variables. In this way, the possible influences of childhood traumatic experiences on maladaptive interpersonal styles were assessed after controlling for demographic characteristics and EMSs. The results derived from the regression models in the second step are presented in Table 4.

The second step of regression analyses with respect to demographical characteristics indicated that age was negatively associated with Aggressive ($\beta=-0.15$, $t=-2.76$, $p<0.01$) and Abusive ($\beta=-0.22$, $t=-4.01$, $p<0.01$) interpersonal styles. Men were more prone to act as Dominating ($\beta=-0.13$, $t=-2.75$, $p<0.01$) and Manipulative ($\beta=-0.12$, $t=-2.39$, $p<0.05$) in their relations to others. Individuals with lower levels of education showed a tendency to have an Emotionally Avoidant interpersonal style ($\beta=-0.18$, $t=-2.99$, $p<0.01$). On the contrary, the economic status

was not a significant predictor of interpersonal styles after controlling for other independent variables.

For the possible associations between the severity of abuse subtypes and interpersonal styles after adjusting for the effects of demographic characteristics and EMSs, we found a negative linkage between sexual abuse and Emotionally Avoidant interpersonal style ($\beta=-0.12$, $t=-2.460$, $p<0.05$). However, significant linkages of Manipulative and Abusive interpersonal styles to child sexual abuse became trivial after we entered EMSs into the second step of regression models. The severity of physical abuse and neglect was significantly linked to both Dominating ($\beta=0.19$, $t=2.828$, $p<0.01$) and Aggressive ($\beta=0.16$, $t=2.262$, $p<0.05$) interpersonal styles. On the contrary, physical abuse and neglect was not a substantial antecedent of Avoidant and Abusive interpersonal styles after controlling for core beliefs. Similarly, emotional abuse was no longer the antecedent of Avoidant and Emotionally Avoidant interpersonal styles and linkages between the severity of emotional abuse and subtypes of interpersonal styles were not significant in the regression models adjusted for EMSs and demographical characteristics. Finally, in the second step of regression analyses, we addressed the partial influences of EMS domains on interpersonal style after controlling for the partial effects of demographic characteristics and severity of abuse subtype. All types of maladaptive interpersonal styles were significantly associated with the Impaired Limits schema domain as well as the Disconnection and Rejection schema domain, with an exception of Manipulative style, which was not substantially influenced by schemas included in the Disconnection and Rejection domain. A tendency to Other-directedness was negatively connected with Aggressive interpersonal style ($\beta=-0.16$, $t=-2.365$, $p<0.05$). The Overvigilance and Inhibition schemas were significantly linked to Aggressive ($\beta=0.16$, $t=2.021$; $p<0.05$) and Abusive interpersonal styles ($\beta=0.27$, $t=-3.256$; $p<0.01$). These results are presented in Table 4.

Table 2. Descriptive statistics for the psychometric instruments (n=300)

	Mean	SD	Cronbach's Alpha
Young schema questionnaire			
Disconnection and rejection	47.81	20.35	0.91
Impaired autonomy and performance	39.66	14.33	0.87
Impaired limits	23.95	6.40	0.68
Other-directedness	36.65	8.62	0.73
Overvigilance and inhibition	56.33	14.07	0.82
Childhood trauma questionnaire			
Sexual abuse	5.68	2.05	0.83
Physical abuse and neglect	26.69	10.81	0.91
Emotional abuse and neglect	39.56	16.66	0.94
Interpersonal style scale			
Dominating	25.49	9.84	0.89
Avoidant	24.97	8.41	0.84
Aggressive	24.08	7.46	0.81
Emotionally avoidant	24.40	7.86	0.74
Manipulative	23.42	6.41	0.71
Abusive	10.51	4.10	0.69
SD: standard deviation			

Table 3. Pearson correlations between schema domains and abuse subtype (n=300)

	Sexual abuse	Physical abuse and neglect	Emotional abuse and neglect
Disconnection and rejection	0.28**	0.57**	0.67**
Impaired autonomy and performance	0.25**	0.49**	0.53**
Impaired limits	0.17**	0.29**	0.22**
Other-directedness	0.15**	0.26**	0.25**
Overvigilance and inhibition	0.13*	0.36**	0.38**
* $p<0.05$; ** $p<0.01$			

DISCUSSION

A schema-focused approach is a substantial cognitive model of psychotherapy that has been effectively utilized in therapeutic interventions for psychopathology, particularly in personality disorders (47,66,67). Interpersonal style is a key component in psychosocial functioning and relational problems are one of the benchmarks for severe affect regulation problems. Linehan delineates the pivotal role of psychosocial functioning for positive treatment outcomes and interpersonal effectiveness skill training is the first step in dialectic cognitive behavioral treatment of psychopathology (68,69). Ball and Young (66) asserted that positive improvements in interpersonal functioning and coping capacity occurred in patients successfully treated with a schema-focused therapy. Therefore, in this study, we focused on the associations between childhood traumatic experiences and interpersonal styles and the mediating role of EMSs on psychosocial functioning. We found that consistent with the theoretical considerations, significant relations between childhood traumatic experiences and interpersonal styles were mediated by EMSs.

Scholars have consistently emphasized short-term and long-term poor psychological outcomes that may be directly attributed to early traumatic experiences (16,70,71). In accordance with the cognitive models of psychopathology, researchers have provided strong evidence that EMSs are linked to traumatic experiences in childhood (48,49,54,57,72). Our findings are consistent with those of previous studies. In our analyses, we found mild associations between sexual abuse and interpersonal schema domains but strong associations of EMSs with both physical abuse and emotional abuse. Our findings supported and extended the assumptions of the schema therapy model. As noted by Young et al. (42), individuals who have schemas on the Disconnection and Rejection domain are

Table 4. Regression of demographic characteristics, severity of childhood trauma and EMSs on interpersonal style (n=300)

	Age		Gender ^A		Education ^B		Income ^C		ΔR^2	Sexual abuse		Physical abuse and neglect		Emotional abuse and neglect		ΔR^2
	β	t	β	T	β	t	β	t		β	t	β	t	β	t	
Dominating	-0.06	-1.212	-0.13	-2.754**	-0.04	-0.594	0.09	1.681	0.10	-0.02	-0.421	0.19	2.828**	-0.12	-1.650	0.14
Avoidant	-0.07	-1.405	-0.05	-1.156	-0.10	-1.716	0.03	0.658	0.10	-0.05	-1.092	0.06	0.840	-0.02	-0.272	0.12
Aggressive	-0.15	-2.760**	0.04	0.772	-0.11	-1.737	0.01	0.148	0.08	-0.09	-1.735	0.16	2.262*	-0.08	-1.014	0.10
Emotionally Avoidant	0.06	1.272	-0.07	-1.373	-0.18	-2.933**	0.04	0.847	0.17	-0.12	-2.460*	-0.13	-1.894	0.15	1.919	0.09
Manipulative	-0.03	-0.615	-0.12	-2.389*	-0.07	-1.007	-0.05	-0.878	0.08	0.09	1.742	0.04	0.560	-0.05	-0.544	0.08
Abusive	-0.22	-4.014**	-0.06	-1.093	0.04	0.650	0.06	0.981	0.08	0.06	1.131	0.12	1.565	-0.10	-1.145	0.10

*p<0.05; **p<0.01; β =Standardized beta coefficient
Gender^A: 0=Male, 1=Female
Education^B: 0=Illiterate, 1=Literate, 2=Primary School, 3=Secondary School, 4=High School, 5=University
Income^C: 0=Low, 1=Average, 2=Upper

thought to have a childhood abuse history. However, it appears that relations between childhood trauma and EMSs cannot be constrained to a specific schema domain such as Disconnection and Rejection. Negative consequences of traumatic experiences in terms of interpersonal problems are also typical among individuals who report negative experiences in childhood (15). It has been suggested that the concept of internal working models is central to the developmental outcomes of childhood trauma and neglect (22,73,74). According to the concept of EMSs, early abusive experiences become internalized as mental representations and shape reactions to interpersonal situations in the future (75,76). Given the theoretical background, our findings provide additional support that the Disconnection and Rejection and Impaired Autonomy and Performance schema domains are generally significant antecedents of maladaptive interpersonal styles. Moreover, the Overvigilance and Inhibition schema domain significantly predicted Aggressive and Abusive interpersonal styles.

The schematic theory of psychopathology asserts that maladaptive schemas are developed in early childhood by virtue of negative interpersonal experiences (41,42). To date, relations between child abuse, core beliefs and interpersonal functioning have received little attention and few studies have found that childhood traumatic experiences are associated with later interpersonal dyfunctions mediated by EMSs (56,57). Our results are in line with the previous findings that child sexual abuse is significantly linked to Manipulative and Abusive interpersonal styles after controlling for demographic features. However, the relations between sexual abuse and maladaptive interpersonal styles became unsubstantial and the connection between Emotionally Avoidant style and sexual abuse reversed, indicating that the associations of sexual abuse with Emotionally Avoidant, Manipulative and Abusive interpersonal styles were mediated by EMSs. Dominating, Avoidant, Abusive and Aggressive interpersonal styles were found to be associated with physical abuse and neglect after controlling for only demographic characteristics. However, significant associations of Dominating and Aggressive interpersonal styles with physical abuse and neglect disappeared after the 5 domains of EMSs were entered in the model. These findings indicated that proneness to Dominating and Aggressive behaviors among physically abused individuals were mediated by core negative beliefs that probably originated from early aversive physical experiences. On the contrary, connections of Avoidant and Abusive interpersonal styles with physical abuse remained significant after controlling for EMSs. Moreover, linkages of Avoidant and Emotionally Avoidant interpersonal styles to emotional abuse and neglect were also mediated

by negative core schemas, because the significant relations became trivial after controlling for EMSs. These results are consistent with the findings that EMSs mediate the relations between early childhood trauma and later psychosocial difficulties in adulthood (56,57). Adults with an abuse history are more prone to perform poorly in their intrapersonal contacts and to have problems in emotion regulation abilities such as recognizing, understanding and expressing emotions (77,78,79,80). There are findings in the literature suggesting that an abused child undergoes a process in which he identifies himself with the abuser and tends to exhibit aggressive and offensive behaviors (11,81). Particularly, psychological stress caused by parents' early traumatic experiences appears to be an agent of intergenerational transmission of childhood trauma (82,83). However, in our results, it was obvious that maladaptive interpersonal styles among abused individuals were significantly predicted by negative self-schemas among abused subjects. Abuse in childhood affects the understanding of self and others, which in turn shapes psychological well-being and interpersonal relations. These findings also support the mediating role of EMSs defined in the schema model, which emphasizes the impact of EMSs on information processing and interpretation of experiences (42,46). In addition, interpersonal skill training in cognitive behavioral interventions for abused individuals appears to be important for more positive treatment outcomes (66,69).

The study has several limitations. Assessment of child abuse appears to be sensitive to design and language of research in its nature (84,85). Child abuse is generally not reported or underreported in studies (86). Similar to most studies concerning childhood traumatic experiences, this study used retrospective self-reports of participants to assess childhood abuse and neglect. The non-abused sample may have included participants who experienced child abuse but did not disclose their situation. Second, in the current study, we obtained excessively high rates of both emotional abuse and neglect and physical abuse and neglect. In the original form of the CTI developed by Bernstein et al. (61), physical neglect is assessed separately from physical abuse and emotional abuse. On the contrary, in the Turkish form of the CTI, the neglect subscales are merged with the abuse subscales for physical and emotional trauma in childhood. Therefore, we obtained excessively high rates of both physical abuse and neglect and emotional abuse and neglect. Abuse and neglect should have been assessed separately and this was the most important limitation of our study. Third, the research design of the study was cross-sectional. A longitudinal research design may have provided more reliable and profound information pertaining to the relations addressed in the study.

Table 4. Continued

	Disconnection and rejection		Impaired autonomy and performance		Impaired limits		Others-directedness		Overvigilance and inhibition		ΔR^2	R^2	F(12, 287)
	β	t	β	t	β	t	β	t	β	t			
Dominating	0.48	4.838**	-0.12	-1.405	0.29	5.560**	-0.07	-1.062	0.07	0.934	0.21	0.45	19.482**
Avoidant	0.38	3.844**	0.11	1.279	0.29	5.434**	-0.11	-1.734	0.04	0.542	0.22	0.44	19.052**
Aggressive	0.28	2.660**	0.04	0.392	0.28	4.868**	-0.16	-2.365*	0.16	2.021*	0.18	0.36	13.479**
Emotionally Avoidant	0.27	2.703**	0.16	1.895	0.19	3.576**	-0.11	-1.809	0.12	1.526	0.18	0.44	18.390**
Manipulative	0.17	1.568	-0.01	-0.102	0.15	2.647**	0.01	0.202	0.27	3.256**	0.17	0.33	11.893**
Abusive	0.46	4.185**	-0.19	-2.090*	0.27	4.556**	-0.07	-1.070	0.07	0.817	0.15	0.33	12.001**

*p<0.05; **p<0.01; β =Standardized beta coefficient**Conflict of Interest:** No conflict of interest was declared by the authors.**Financial Disclosure:** The authors declared that this study has received no financial support.**REFERENCES**

- Herman JL. Trauma and recovery. New York: Basic Books; 1997.
- Sar V, Akyüz G, Kundakçı T, Kızıltan E, Dogan O. Childhood trauma, dissociation, and psychiatric comorbidity in patients with conversion disorder. *Am J Psychiatry* 2004; 161:2271-2276. [\[CrossRef\]](#)
- Zoroglu SS, Tuzun U, Sar V, Tutkun H, Savas HA, Ozturk M, Alyanak B, Kora ME. Suicide attempt and self-mutilation among Turkish high school students in relation with abuse, neglect and dissociation. *Psychiatry Clin Neurosci* 2003; 57:119-126. [\[CrossRef\]](#)
- Barthauer LM, Leventhal JM. Prevalence and effects of child sexual abuse in a poor, rural community in El Salvador: A retrospective study of women after 12 years of civil war. *Child Abuse Negl* 1999; 23:1117-1126. [\[CrossRef\]](#)
- Calam R, Horne L, Glasgow D, Cox A. Psychological disturbance and child sexual abuse: A follow-up study. *Child Abuse Negl* 1998; 22:901-913. [\[CrossRef\]](#)
- Ullman SE, Filipas HH. Gender differences in social reactions to abuse disclosures, post-abuse coping, and PTSD of child sexual abuse survivors. *Child Abuse Negl* 2005; 29:767-82. [\[CrossRef\]](#)
- Chaffin M, Kelleher K, Hollenberg J. Onset of physical abuse and neglect: Psychiatric, substance abuse, and social risk factors from prospective community data. *Child Abuse Negl* 1996; 20:191-203. [\[CrossRef\]](#)
- Gauthier L, Stollak G, Messe L, Aronoff J. Recall of childhood neglect and physical abuse as differential predictors of current psychological functioning. *Child Abuse Negl* 1996; 20:549-559. [\[CrossRef\]](#)
- Spertus IL, Yehuda R, Wong CM, Halligan S, Seremetis SV. Childhood emotional abuse and neglect as predictors of psychological and physical symptoms in women presenting to a primary care practice. *Child Abuse Negl* 2003; 27:1247-1258. [\[CrossRef\]](#)
- Trickett PK, Kim K, Prindle J. Variations in emotional abuse experiences among multiply maltreated young adolescents and relations with developmental outcomes. *Child Abuse Negl* 2011; 35:876-886. [\[CrossRef\]](#)
- Prino CT, Peyrot M. The effect of child physical abuse and neglect on aggressive, withdrawn, and prosocial behavior. *Child Abuse Negl* 1994; 18:871-884. [\[CrossRef\]](#)
- Grassi-Oliveira R, Stein LM. Childhood maltreatment associated with PTSD and emotional distress in low-income adults: The burden of neglect. *Child Abuse Negl* 2008; 32:1089-1094. [\[CrossRef\]](#)
- Higgins DJ, McCabe MR. Multiple forms of child abuse and neglect: adult retrospective reports. *Aggression and Violent Behavior* 2001; 6:547-578. [\[CrossRef\]](#)
- Dong M, Anda RF, Felitti VJ, Dube SR, Williamson DF, Thompson TJ, Loo CM, Giles WH. The interrelatedness of multiple forms of childhood abuse, neglect, and household dysfunction. *Child Abuse Negl* 2004; 28:771-784. [\[CrossRef\]](#)
- Mullen PE, Martin JL, Anderson JC, Romans SE, Herbison GP. The long-term impact of the physical, emotional, and sexual abuse of children: A community study. *Child Abuse Negl* 1996; 20:7-21. [\[CrossRef\]](#)
- Beitchman JH, Zucker KJ, Hood JE, Dacosta GA, Akman D, Cassavia E. A review of the long-term effects of child sexual abuse. *Child Abuse Negl* 1992; 16:101-118. [\[CrossRef\]](#)
- Boysan M, Goldsmith RE, Cavaş H, Kayrı M, Keskin S. Relations among anxiety, depression, and dissociative symptoms: the influence of abuse subtype. *J Trauma Dissociation* 2009; 10:83-101. [\[CrossRef\]](#)
- Ellason JW, Ross CA, Fuchs DL. Lifetime axis I and II comorbidity and childhood trauma history in dissociative identity disorder. *Psychiatry* 1996; 59:255-266.
- Yehuda R, Halligan SL, Grossman R. Childhood trauma and risk for PTSD: Relationship to intergenerational effects of trauma, parental PTSD, and cortisol excretion. *Dev Psychopathol* 2001; 13:733-753. [\[CrossRef\]](#)
- Briere J, Runtz M. Multivariate correlates of childhood psychological and physical maltreatment among university women. *Child Abuse Negl* 1988; 12:331-341. [\[CrossRef\]](#)
- Briere J, Runtz M. Differential adult symptomatology associated with three types of child abuse histories. *Child Abuse Negl* 1990; 14:357-364. [\[CrossRef\]](#)
- Berlin LJ, Dodge KA. Relations among relationships. *Child Abuse Negl* 2004; 28:1127-1132. [\[CrossRef\]](#)
- Colman RA, Widom CS. Childhood abuse and neglect and adult intimate relationships: a prospective study. *Child Abuse Negl* 2004; 28:1133-1151. [\[CrossRef\]](#)
- Harter S. The construction of the self: a developmental perspective. New York: Guilford Press; 1999. p. 413.
- Berzanski SR, Yates TM. A developmental process analysis of the contribution of childhood emotional abuse to relationship violence. *J Aggress Maltreat Trauma* 2010; 19:180-203. [\[CrossRef\]](#)
- Dodge-Reyome N. Childhood emotional maltreatment and later intimate relationships: Themes from the empirical literature. *J Aggress Maltreat Trauma* 2010; 19:224-242. [\[CrossRef\]](#)
- Riggs SA. Childhood emotional abuse and the attachment system across the life cycle: What theory and research tell us. *J Aggress Maltreat Trauma* 2010; 19:5-51. [\[CrossRef\]](#)
- Taussig HN, Culhane SE. Emotional maltreatment and psychosocial functioning in preadolescent youth placed in out-of-home care. *J Aggress Maltreat Trauma* 2010; 19:52-74. [\[CrossRef\]](#)
- Harter S, Alexander PC, Neimeyer RA. Long-term effects of incestuous child abuse in college women: Social adjustment, social cognition, and family characteristics. *J Consult Clin Psychol* 1988; 56:5-8. [\[CrossRef\]](#)
- Clarke J, Stein MD, Sobota M, Marisi M, Hanna L. Victims as victimizers: Physical aggression by persons with a history of childhood abuse. *Arch Intern Med* 1999; 159:1920-1924. [\[CrossRef\]](#)
- White HR, Widom CS. Intimate partner violence among abused and neglected children in young adulthood: The mediating effects of early aggression, antisocial personality, hostility and alcohol problems. *Aggressive Behavior* 2003; 29:332-345. [\[CrossRef\]](#)
- Feiring C, Taska L, Lewis M. A process model for understanding adaptation to sexual abuse: The role of shame in defining stigmatization. *Child Abuse Negl* 1996; 20:767-782. [\[CrossRef\]](#)
- Feiring C, Taska L, Lewis M. Adjustment following sexual abuse discovery: The role of shame and attributional style. *Dev Psychol* 2002; 38:79-92. [\[CrossRef\]](#)
- Feiring C, Cleland CM, Simon VA. Abuse-specific self-schemas and self-functioning: A prospective study of sexually abused youth. *J Clin Child Adolesc Psychol* 2010; 39:35-50. [\[CrossRef\]](#)
- Trickett PK, Noll JG, Reiffman A, Putnam FW. Variants of intrafamilial sexual abuse experience: Implications for short- and long-term development. *Dev Psychopathol* 2001; 13:1001-1019.
- Gibb BE, Alloy LB, Abramson LY, Rose DT, Whitehouse WG, Donovan P, Hogan ME, Cronholm J, Tierney S. History of childhood maltreatment, negative cognitive styles, and episodes of depression in adulthood. *Cognit Ther Res* 2001; 25:425-446. [\[CrossRef\]](#)
- Gibb BE. Childhood maltreatment and negative cognitive styles - A quantitative and qualitative review. *Clin Psychol Rev* 2002; 22:223-246. [\[CrossRef\]](#)

38. Hankin BL. Childhood maltreatment and psychopathology: Prospective tests of attachment, cognitive vulnerability, and stress as mediating processes. *Cognit Ther Res* 2005; 29:645-671. [\[CrossRef\]](#)
39. Rekart KN, Mineka S, Zinbarg RE, Griffith JW. Perceived family environment and symptoms of emotional disorders: The role of perceived control, attributional style, and attachment. *Cognit Ther Res* 2007; 31:419-436. [\[CrossRef\]](#)
40. Baldwin MW. Relational schemas and the processing of social information. *Psychol Bull* 1992; 112:461-484. [\[CrossRef\]](#)
41. Beck JS. *Cognitive therapy: basics and beyond*. New York: Guilford Press; 1995.
42. Young JE, Klosko JS, Weishaar ME. *Schema therapy: a practitioner's guide*. New York: The Guilford Press; 2003. p. 436.
43. Beck AT. *Depression; causes and treatment*. Philadelphia.: University of Pennsylvania Press; 1972.
44. Beck AT, Rush AJ, Shaw BF, Emery G. *Cognitive therapy of depression*. New York: Guilford Press; 1979. p. 425.
45. Young JE. *Cognitive therapy for personality disorders: a schema-focused approach*. 3rd ed. Sarasota, Fla.: Professional Resource Press; 1999. p. 83.
46. Young JE, Rygh JL, Weinberger AD, Beck AT. Cognitive therapy for depression. In: Barlow DH, editor. *Clinical handbook of psychological disorders*. 4. New York: Guilford Press; 2008. p. 250-305.
47. Bernstein DP. Cognitive therapy of personality disorders in patients with histories of emotional abuse or neglect. *Psychiatric Annals* 2002; 32:618-628. [\[CrossRef\]](#)
48. Lumley MN, Harkness KL. Specificity in the relations among childhood adversity, early maladaptive schemas, and symptom profiles in adolescent depression. *Cognit Ther Res* 2007; 31:639-657. [\[CrossRef\]](#)
49. McGinn LK, Cukor D, Sanderson WC. The relationship between parenting style, cognitive style, and anxiety and depression: Does increased early adversity influence symptom severity through the mediating role of cognitive style? *Cognit Ther Res* 2005; 29:219-242. [\[CrossRef\]](#)
50. Harris AE, Curtin L. Parental perceptions, early maladaptive schemas, and depressive symptoms in young adults. *Cognit Ther Res* 2002; 26:405-416. [\[CrossRef\]](#)
51. Wright MO, Crawford E, Del Castillo D. Childhood emotional maltreatment and later psychological distress among college students: The mediating role of maladaptive schemas. *Child Abuse Negl* 2009; 33:59-68. [\[CrossRef\]](#)
52. Harding HG, Burns EE, Jackson JL. Identification of child sexual abuse survivor subgroups based on early maladaptive schemas: Implications for understanding differences in posttraumatic stress disorder symptom severity. *Cognit Ther Res* 2011; 35:1-16.
53. Hartt J, Waller G. Child abuse, dissociation, and core beliefs in bulimic disorders. *Child Abuse Negl* 2002; 26:923-938. [\[CrossRef\]](#)
54. Waller G, Meyer C, Ohanian V, Elliott P, Dickson C, Sellings J. The psychopathology of bulimic women who report childhood sexual abuse: The mediating role of core beliefs. *J Nerv Ment Dis* 2001; 189:700-708. [\[CrossRef\]](#)
55. Dutra L, Callahan K, Forman E, Mendelsohn M, Herman J. Core schemas and suicidality in a chronically traumatized population. *J Nerv Ment Dis* 2008; 196:71-74. [\[CrossRef\]](#)
56. Mason O, Platts H, Tyson M. Early maladaptive schemas and adult attachment in a UK clinical population. *Psychol Psychother* 2005; 78:549-564. [\[CrossRef\]](#)
57. Messman-Moore TL, Coates AA. Impact of childhood psychological abuse on adult interpersonal conflict: The role of early maladaptive schemas and patterns of interpersonal behavior. *Journal of Emotional Abuse* 2007; 7:75-92. [\[CrossRef\]](#)
58. Dozois DJA, Martin RA, Bieling PJ. Early maladaptive schemas and adaptive/maladaptive styles of humor. *Cognit Ther Res* 2009; 33:585-596. [\[CrossRef\]](#)
59. Young JE. *Young Schema Questionnaire Short Form*. 1 ed. New York: Cognitive Therapy Centre; 1998.
60. Soygut G, Karaosmanoglu A, Kahir Z. Assessment of early maladaptive schemas: A psychometric study of the Turkish Young Schema Questionnaire-Short Form-3. *Türk Psikiyatri Derg* 2009; 20:75-84.
61. Bernstein DP, Fink L, Handelsman L, Foote J, Lovejoy M, Wenzel K, Sapareto E, Ruggiero J. Initial reliability and validity of a new retrospective measure of child abuse and neglect. *Am J Psychiatry* 1994; 151:1132-1136. [\[CrossRef\]](#)
62. Aslan SH, Alparslan ZN. The reliability, validity and factor structure of the Childhood Trauma Questionnaire among a group of university students *Türk Psikiyatri Derg* 1999; 10:275-285.
63. Bostancı N, Albayrak B, Bakoğlu İ, Çoban Ş. Üniversite öğrencilerinde çocukluk çağı travmalarının depresif belirtileri üzerine etkisi. *Yeni Symposium* 2006; 44:100-106.
64. Şahin NH, Çeri Ö, Düzgün G, Ergün H, Karşlı E, Koç V. *Çocuklararası Taz Ölçeği: Geliştirilmesi ve psikometrik özellikleri*. *Türk Psikoloji Yazıları* (In press).
65. Baron RM, Kenny DA. The moderator mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *J Pers Soc Psychol* 1986; 51:1173-1182. [\[CrossRef\]](#)
66. Ball SA, Young JE. Dual focus schema therapy for personality disorders and substance dependence: Case study results. *Cognitive and Behavioral Practice* 2000; 7:270-281. [\[CrossRef\]](#)
67. Giesen-Bloo J, van Dyck R, Spinhoven P, van Tilburg W, Dirksen C, van Asselt T, Kremers I, Nadort M. Outpatient psychotherapy for borderline personality disorder: Randomized trial of schema-focused therapy vs transference-focused psychotherapy. *Arch Gen Psychiatry* 2006; 63:649-58. [\[CrossRef\]](#)
68. Linehan M. *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford Press; 1993. xvii, 558.
69. Linehan M. *Skills training manual for treating borderline personality disorder*. New York: Guilford Press; 1993. xii, 180.
70. Beitchman JH, Zucker KJ, Hood JE, Dacosta GA, Akman D. A review of the short-term effects of child sexual abuse. *Child Abuse Negl* 1991; 15:537-556. [\[CrossRef\]](#)
71. Malinosky-Rummell R, Hansen DJ. Long-term consequences of childhood physical abuse. *Psychol Bull* 1993; 114:68-79. [\[CrossRef\]](#)
72. Cecero JJ, Nelson JD, Gillie JM. Tools and tenets of Schema therapy: Toward the construct validity of the Early Maladaptive Schema Questionnaire-Research Version (EMSQR). *Clin Psychol Psychother* 2004; 11:344-357. [\[CrossRef\]](#)
73. George C. A representational perspective of child abuse and prevention: Internal working models of attachment and caregiving. *Child Abuse Negl* 1996; 20:411-424. [\[CrossRef\]](#)
74. Hildyard KL, Wolfe DA. Child neglect: developmental issues and outcomes. *Child Abuse Negl* 2002; 26:679-695. [\[CrossRef\]](#)
75. Baldwin MW, Dandaneau SD. Understanding and modifying the relational schemas underlying insecurity. In: Baldwin MW, editor. *Interpersonal Cognition*. New York: Guilford Press; 2005. p. 33-61.
76. Pearce JW, Pezzot-Pearce TD. *Psychotherapy of abused and neglected children*. 2nd ed. New York: Guilford Press; 2007. xv, 411.
77. Asla N, de Paul J, Perez-Albeniz A. Emotion recognition in fathers and mothers at high-risk for child physical abuse. *Child Abuse Negl* 2011; 35:712-721. [\[CrossRef\]](#)
78. Zaza-Page A. Çocuk cinsel istismarı: Cinsel istismara neden olan etkenler ve cinsel istismarın çocuklar üzerindeki etkileri. *Türk Psikoloji Yazıları* 2004; 7:103-113.
79. Luterek JA, Orsillo SM, Marx BP. An experimental examination of emotional experience, expression, and disclosure in women reporting a history of childhood sexual abuse. *J Trauma Stress* 2005; 18:237-244. [\[CrossRef\]](#)
80. Balge KA, Milner JS. Emotion recognition ability in mothers at high and low risk for child physical abuse. *Child Abuse Negl* 2000; 24:1289-1298. [\[CrossRef\]](#)
81. Shields A, Ryan RM, Cicchetti D. Narrative representations of caregivers and emotion dysregulation as predictors of maltreated children's rejection by peers. *Dev Psychol* 2001; 37:321-337. [\[CrossRef\]](#)
82. Milner JS, Thomsen CJ, Crouch JL, Rabenhorst MM, Martens PM, Dyslin CVW, Guimond JM, Stander VA, Merrill LL. Do trauma symptoms mediate the relationship between childhood physical abuse and adult child abuse risk? *Child Abuse Negl* 2010; 34:332-344. [\[CrossRef\]](#)
83. Guterman NB, Lee SJ, Taylor CA, Rathouz PJ. Parental perceptions of neighborhood processes, stress, personal control, and risk for physical child abuse and neglect. *Child Abuse Negl* 2009; 33:897-906. [\[CrossRef\]](#)
84. Wyatt GE, Peters SD. Issues in the definition of child sexual abuse in prevalence research. *Child Abuse Negl* 1986; 10:231-240. [\[CrossRef\]](#)
85. Dill DL, Chu JA, Grob MC, Eisen SV. The reliability of abuse history reports: a comparison of 2 inquiry formats. *Compr Psychiatry* 1991; 32:166-169. [\[CrossRef\]](#)
86. Berger AM, Knutson JF, Mehm JG, Perkins KA. The self-report of punitive childhood experiences of young adults and adolescents. *Child Abuse Negl* 1988; 12:251-262. [\[CrossRef\]](#)