

# The Mediating Role of Early Maladaptive Schemas in the Relationship Between Maternal Rejection and Psychological Problems



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## SUMMARY

**Objective:** The aim of this study was to explore the mediating role of early maladaptive schemas (EMSs) in the relationship between perceived maternal rejection during childhood and current psychological problems, such as anxiety and depression, in Turkish university students. EMSs were categorized according to 3 schema domains; impaired limits-exaggerated standards, disconnection-rejection, and impaired autonomy-other directedness.

**Materials and Methods:** The study included 266 undergraduate university students (188 female and 78 male) aged 18-27 years. All the participants were administered the Young Schema Questionnaire-Short Form 3 (YSQ-SF3), Trait Anxiety Inventory (STAI-T), Beck Depression Inventory (BDI), and Parental Acceptance-Rejection Questionnaire (Adult PARQ: Mother).

**Results:** Disconnection-rejection schema domain mediated the relationship between perceived maternal rejection during childhood and anxiety, but not depression. Furthermore, impaired autonomy-other directedness schema domain mediated the relationship between perceived maternal rejection, and both anxiety and depression.

**Conclusion:** The present findings facilitate greater understanding of the possible mechanisms by which perceived maternal rejection during childhood might affect adult psychology. Furthermore, representations of the self that are internalized during childhood are centrally connected to psychological adjustment later in life; therefore, an understanding of these internalized representations may be important for developing targeted interventions and prevention strategies for those that have experienced maternal rejection.

**Keywords:** Early maladaptive schema, perceived maternal rejection, depression, anxiety

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## INTRODUCTION

The quality of the relationship between a child and his/her primary caregiver/s is crucial for the child's psychological adjustment (Rohner 1986). Families with high levels of conflict, aggression, and hostility are associated with such mental health risks as depression, suicidal behavior, and anxiety disorders (Repetti et al. 2002). Individuals raised in an environment of conflict and rejection are more vulnerable to depression (Nilzon & Palmerus 1997). Furthermore, such individuals are more likely to perceive ambiguous situations as threatening (Butler & Matthews 1983).

Based on Bowlby's attachment theory (1973), Rohner (2004) proposed that children that perceive parental rejection develop a distorted mental representation of self, significant others, and the world. Because of such distorted mental representations, individuals with negative childhood experiences with their parents and that perceive the world as hostile and rejecting are more likely to interpret new experiences in the light of their previous experiences. As such, these people generally seek out and perceive experiences, situations, and behaviors consistent with their mental representations of self, others, and the world, whereas they avoid situations that are inconsistent with their past experiences (Rohner et al. 2005).

Received: 01.07.2013 - Accepted: 28.10.2013

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Young (1999) defines mental representations as, “extremely stable and enduring themes developed during childhood that are elaborated throughout an individual’s life and are dysfunctional to a significant degree” (Young 1999, p. 9). According to Young (1999), there are 5 basic domains in which a child’s needs must be met. The first is secure attachment between parent and child. Individuals whose parents are emotionally distant, rejecting, abusive, unpredictable, and explosive tend to develop schemas of abandonment/instability, mistrust/abuse, emotional deprivation, social isolation, and defectiveness. The second domain is autonomy and identity development. Whereas children require intimacy, protection, and support, they also need autonomy and the ability to develop self-esteem via independent behavior; parents that are over-protective cannot meet these needs. Such children develop schemas characterized by dependency, vulnerability to harm or illness, enmeshment/undeveloped self, and failure. The third domain is fulfilling responsibility. Children whose parents are over-indulgent and permissive have difficulty fulfilling responsibilities towards others and respecting the rights of others, because internal limits concerning reciprocity and self-discipline have not developed. These children develop schemas of entitlement/grandiosity and insufficient self-control. The fourth domain is emotional expression. Children raised in an environment in which love is conditional learn to prioritize meeting the needs of others at the expense of their own needs in order to obtain approval, maintain emotional connection, and avoid discrimination. Such children develop schemas of subjugation, self-sacrifice, and seeking approval. The fifth domain is spontaneity and play. Children whose parents are generally rigid, perfectionistic and highly demanding suppress their spontaneous feelings and impulses, and instead adhere to the strict and internalized rigid rules and expectations at the expense of their happiness, self-expression, and relaxed and intimate relationships. As a result, they develop schemas characterized by negativity/pessimism, emotional inhibition, perfectionism, and punitiveness (Young et al. 2003).

Based on these conceptualizations, the Young Schema Questionnaire (YSQ) was developed (Young et al. 2003; Young 1999). The psychometric properties of the long and short versions of the scale have been studied in many countries, including Turkey (Saritaş & Gençöz 2011; Soygüt et al. 2009; Lumley & Harkness 2007; Chevallet et al. 2006; Hoffart et al. 2005; Welburn et al. 2002; Lee et al. 1999; Schmidt et al. 1995). The factor structure of the scale obtained from these studies mostly overlap with Young’s (1999) proposed model, but differences in the representation of the theoretically proposed factors between clinical and university samples have been reported.

Some studies have examined the relationship between early maladaptive schemas (EMSs) and psychological problems, highlighting the role of EMSs on the occurrence of such

DSM Axis I and Axis II disorders as depression, anxiety, and personality disorders (Glaser et al. 2002; Welburn et al. 2002; Schmidt et al. 1995). For instance, Schmidt et al. (1995) reported that vulnerability, failure, and emotional inhibition schemas are associated with anxiety, but that dependency and defectiveness schemas are associated with depression. In addition, Welburn et al. (2002) observed that schemas of vulnerability, abandonment, dependency, self-sacrifice, and emotional inhibition are associated with anxiety, but that insufficient self-control schemas are associated with depression. Likewise, studies conducted in Turkey also report that there is a significant relationship between EMSs and psychological symptoms (Gök 2012; Ünal 2012; Kapçı & Hamamcı 2010; Soygüt et al. 2009).

Considering the effects of the parent-child relationship on the development of schemas, many studies conducted in the West examined the mediating role of EMSs in the relationship between childhood experiences and psychological problems (Lumley & Harkness 2007; Harris & Curtin 2002; Shah & Waller 2000). For instance, Harris and Curtin (2002) examined the mediating role of EMSs in the relationship between childhood parenting experiences and symptoms of depression. They observed that schemas of defectiveness, insufficient self-control, vulnerability to harm, and dependency were significant mediators. Moreover, Shah and Waller (2000) examined the mediating role of core beliefs between perceived parental bonding during childhood and adulthood depression by comparing depressed and non-depressed individuals. Their findings indicated that schemas of dependence, emotional inhibition, failure, perfectionism, and vulnerability to harm mediated the relationship between parental bonding and the severity of depression in the depressed group. Nonetheless, the findings of studies on the predictive power of schemas to differentiate the cognitive characteristics of affective disorders are inconsistent regarding the associations between certain schemas and symptoms of psychological problems (Glaser et al. 2002; Harris & Curtin 2002; Welburn et al. 2002; Schmidt et al. 1995). Calvete et al. (2005) concluded that slight differences between studies might due to use of YSQ long and short forms. In addition, the number of composition of the first order schemas used in studies might lead to differences between studies.

The literature contains few studies on the relationship between parenting style, schema domains, and psychological problems (Dale et al. 2010; Kapçı & Hamamcı 2010; McGinn et al. 2005). McGinn et al. (2005) reported that schema domains in general mediate the relationship between parenting style and psychopathology. As such, the domains according to which EMSs were grouped were considered in the present study, as suggested by Hoffart et al. (2005). The aim of the present study was to examine the mediating role of schema domains in the relationship between perceived

maternal rejection, and depression and anxiety. Only maternal rejection was considered, as mothers are generally considered to be the primary caregivers (Parke 1996).

## **MATERIALS and METHODS**

### **Participants**

The study included 266 students (188 female and 78 male) with a mean age of  $21.89 \pm 0.46$  years (range: 18-27 years) in the same year of undergraduate study in various departments of 4 universities. In all, 39.5% were from Middle East Technical University, Ankara, Turkey, 29.3% were from Abant İzzet Baysal University, Bolu, Turkey, 18.8% were from Bosphorus University, İstanbul, Turkey, and 12.4% were from Ankara University, Ankara, Turkey.

### **Instruments**

#### **The Young Schema Questionnaire-Short Form 3 (YSQ-SF3) Young 2006)**

The 90-item revised version of YSQ (YSQ-SF3) includes 18 EMSs. Each item is answered using a 6-point Likert-type scale. The scale has been reported to be valid reliable (Lee et al. 1999; Schmidt et al. 1995). Soygüt et al. (2009) adapted YSQ-SF3 for use in Turkey, and the reliability and validity of its 18 EMSs were determined in a sample of Turkish university students. Analysis of its test-retest reliability and internal consistency showed high coefficients, and correlation analysis of theoretically related variables (such as symptom checklist) showed significant coefficients, and that the directions of the relationships were congruent with theoretical expectations.

In the present study the scale's 18 EMSs were subjected to higher order factor analysis, which showed that there were 3 main domains: impaired autonomy-other directedness (including dependency, subjugation, failure, abandonment, enmeshment, and vulnerability to harm schemas) (alpha coefficient: 0.86); impaired limits-exaggerated standards (including pessimism, unrelenting standards, entitlement, approval seeking, self-sacrifice, and insufficient self-control schemas) (alpha coefficient: 0.80); disconnection-rejection (including emotional deprivation, social isolation, emotional inhibition, punitiveness, mistrust, and defectiveness schemas) (alpha coefficient: 0.80).

#### **State-Trait Anxiety Inventory-Trait Form (STAI-T ) (Spielberger, Gorsuch, & Lushene 1970)**

STAI is a widely used measure of anxiety. In the present study only the trait anxiety inventory was used. It includes 20 items with a 4-point Likert-type scale used to rate a number of anxiety-related symptoms based on how an individual feels in general. The construct validity, test-retest reliability, and alpha coefficients for STAI were reported to be sufficient (Spielberger et al. 1970). STAI was adapted for use in Turkey

by Öner and Le Comte (1985). In the present study the scale's Cronbach's alpha coefficient was 0.87.

#### **The Beck Depression Inventory (BDI) (Beck, Rush, Shaw, & Emery 1979)**

BDI is a 21-item self-report instrument used to assess the behavioral, cognitive, motivational, and somatic symptoms of depression. BDI was adapted for use in Turkey by Tegin (1980) and Hisli (1989, 1988). In the present study the scale's Cronbach's alpha coefficient was 0.88.

#### **Parental Acceptance-Rejection Questionnaire For Mothers-Adult Version (Adult PARQ-Mother) (Rohner 1990)**

Adult PARQ-Mother includes 60 items that are rated on a 4-point Likert-type scale, and is designed to assess an individual's perception of maternal acceptance-rejection. Scores range from 60 (maximum perceived acceptance) to 240 (maximum perceived rejection). The scale's internal consistency-reliability coefficients and convergent validity were reported to be sufficient (Rohner & Khaleque 2005). In the present study the scale's Cronbach's alpha coefficient was 0.94.

### **Procedures**

The study protocol was approved by the Middle East Technical University Human Participant Ethics Committee. Then, students at 4 universities in Ankara, İstanbul, and Bolu were contacted and informed about the study via in-class presentations. Following provision of informed consent, the students completed the questionnaires in a counter-balanced order.

### **Statistical Analysis**

Correlation analysis was performed in order to define the relationships between the study variables and to fulfill the required conditions prior to mediation analysis. Later, hierarchical regression analysis was used to examine the mediating role of EMSs in the relationship between perceived maternal rejection and psychological problems.

## **RESULTS**

#### **Means, standard deviations, and inter-correlations between the measures**

Means, standard deviations, and inter-correlations between the EMSs derived from YSQ-SF3, perceived maternal rejection, anxiety, and depression measures are presented in Table 1. Pearson's correlation analysis showed that anxiety and depression measures results yielded moderate to high positive correlations with all 3 schema domains, ranging from  $r = 0.51$  to  $r = 0.68$  ( $P < 0.001$ ). Although the correlation between

**Table 1.** Means, standard deviations, and inter-correlations between the study variables

| Variables          | Mean  | SD      | IL-ES  | D-R    | Maternal Rejection | Depression | Anxiety |
|--------------------|-------|---------|--------|--------|--------------------|------------|---------|
| IA-OD              | 12.46 | (4.06)  | 0.72** | 0.70** | 0.13*              | 0.62**     | 0.68**  |
| IL-ES              | 18.14 | (4.18)  |        | 0.65** | 0.11               | 0.53**     | 0.51**  |
| D-R                | 12.73 | (2.94)  |        |        | 0.33**             | 0.54**     | 0.58**  |
| Maternal Rejection | 91.36 | (25.70) |        |        |                    | 0.13*      | 0.22**  |
| Depression         | 9.81  | (8.36)  |        |        |                    |            | 0.67**  |

IA-OD: Impaired autonomy-other directedness; IL-ES: impaired limits-exaggerated standards; DR: disconnection-rejection.

\* $P < 0.05$

\*\* $P < 0.001$

perceived maternal rejection and the disconnection-rejection schema domain was moderate ( $r = 0.33$ ,  $P < 0.001$ ), it exhibited a weak correlation with the impaired autonomy-other directedness schema domain ( $r = 0.13$ ,  $P < 0.05$ ) and a non-significant correlation with the impaired limits-exaggerated standards schema domain ( $r = 0.11$ ,  $P > 0.05$ ) domains. In addition, perceived maternal rejection was weakly correlated with depression ( $r = 0.13$ ,  $P < 0.05$ ), but moderately correlated with anxiety ( $r = 0.22$ ,  $P < 0.001$ )

### Mediating Role of EMSs

In order to determine if the 3 schema domains mediated the relationship between perceived maternal rejection, and anxiety and depression separate mediation analyses were conducted. Baron and Kenny (1986) proposed that as a first requirement all variables in the model must be inter-correlated. Due to this requirement the impaired limits-exaggerated standard schema domain was not included in the model and further analyses were carried out with the 2 remaining schema domains, as they had significant correlations with perceived maternal rejection, and symptoms of anxiety and depression. Thus, 4 separate sets of mediation analyses were examined, as per Baron and Kenny (1986).

#### The mediating role of the impaired autonomy-other directedness schema domain in the relationship between perceived maternal rejection and anxiety

Following Baron and Kenny's (1986) steps of mediation analysis, the impaired autonomy-other directedness schema domain was initially regressed onto perceived maternal rejection and was observed to have a significant association ( $\beta = 0.13$ ,  $t(257) = 2.09$ ,  $P < 0.05$ ). When analyzed a second time anxiety was regressed onto perceived maternal rejection as the first step variable and was observed to have a significant association ( $\beta = 0.22$ ,  $t(259) = 3.65$ ,  $P < 0.001$ ), and as the second step variable the impaired autonomy-other directedness schema domain also had a significant association ( $\beta = 0.66$ ,  $t(255) = 14.36$ ,  $P < 0.001$ ). Consistent with the mediation hypothesis, adding the impaired autonomy-other directedness schema domain into the equation the effect of perceived

maternal rejection was reduced significantly ( $\beta = 0.13$ ,  $t(255) = 2.93$ ,  $P < 0.01$ , see table 2A). The Sobel test confirmed this significant decrease caused by the impaired autonomy-other directedness domain ( $z = 2.07$ ,  $P < 0.05$ ). Further analysis of the results showed that 39% of the perceived maternal rejection-anxiety path was accounted for by this schema domain (for this analysis see Holmbeck 2002); therefore, the observed association between perceived maternal rejection and anxiety was partly mediated by the impaired autonomy-other directedness schema domain.

#### The mediating role of the disconnection-rejection schema domain in the relationship between perceived maternal rejection and anxiety

Following Baron and Kenny's (1986) steps of mediation analysis, the disconnection-rejection schema domain was initially regressed onto perceived maternal rejection and was observed to have a significant association ( $\beta = 0.33$ ,  $t(258) = 5.68$ ,  $P < 0.001$ ). When analyzed a second time anxiety was regressed onto perceived maternal rejection as the first step variable and was observed to have a significant association ( $\beta = 0.22$ ,  $t(259) = 3.65$ ,  $P < 0.001$ ), and as the second step variable the disconnection-rejection schema domain also had a significant association ( $\beta = 0.57$ ,  $t(256) = 10.47$ ,  $P < 0.001$ ). Consistent with the mediation hypothesis, with the addition of the disconnection-rejection schema domain into the equation perceived maternal rejection lost its significance ( $\beta = 0.03$ ,  $t(256) = 0.62$ ,  $P > 0.05$ , see Table 2B). The Sobel test confirmed the significant decrease caused by the disconnection-rejection schema domain ( $z = 4.98$ ,  $P < 0.05$ ); therefore, the observed association between perceived maternal rejection and anxiety was mediated by the disconnection-rejection schema domain and further analysis showed that the disconnection-rejection schema domain accounted for 84% of this association.

#### The mediating role of the impaired autonomy-other directedness schema domain in the relationship between perceived maternal rejection and depression

Following Baron and Kenny's (1986) steps of mediation analysis, the impaired autonomy-other directedness schema domain was initially regressed onto perceived maternal rejection

**Table 2.** Summary of the regression models used to test for schema domains as mediators between perceived maternal rejection, and anxiety, and depression

| DV and Independent Variables | df     | F        | B    | T       | Pr   | R2   |
|------------------------------|--------|----------|------|---------|------|------|
| <b>A</b>                     |        |          |      |         |      |      |
| DV: IA-OD                    |        |          |      |         |      |      |
| Rejection                    | 1, 257 | 4.38**   | 0.13 | 2.09*   | 0.13 | 0.02 |
| DV: Anxiety                  |        |          |      |         |      |      |
| 1. Rejection                 | 1, 259 | 13.16**  | 0.22 | 3.65**  | 0.22 | 0.05 |
| 2. IA-OD                     | 2, 255 | 115.09** | 0.66 | 14.36** | 0.67 | 0.47 |
| (rejection )                 | 255    |          | 0.13 | 2.93*   | 0.18 |      |
| <b>B</b>                     |        |          |      |         |      |      |
| DV: D-R                      |        |          |      |         |      |      |
| Rejection                    | 1, 258 | 32.31*   | 0.33 | 5.68*   | 0.33 | 0.11 |
| DV: Anxiety                  |        |          |      |         |      |      |
| 1. Rejection                 | 1, 259 | 13.16*   | 0.22 | 3.65*   | 0.22 | 0.05 |
| 2. D-R                       | 2, 256 | 64.37*   | 0.57 | 10.47*  | 0.55 | 0.34 |
| (rejection)                  | 256    |          | 0.03 | 0.62    | 0.04 |      |
| <b>C</b>                     |        |          |      |         |      |      |
| DV: IA-OD                    |        |          |      |         |      |      |
| Rejection                    | 1, 257 | 4.38**   | 0.13 | 2.09*   | 0.13 | 0.02 |
| DV: Depression               |        |          |      |         |      |      |
| 1. rejection                 | 1, 256 | 5.04*    | 0.14 | 2.25*   | 0.14 | 0.02 |
| 2. IA-OD                     | 2, 255 | 153.16** | 0.61 | 12.38** | 0.61 | 0.39 |
| (rejection)                  | 255    |          | 0.06 | 1.14    | 0.07 |      |

IA-OD: Impaired autonomy-other directedness; IL-ES: impaired limits-exaggerated standards; DR: disconnection-rejection.  
 \*P < 0.05  
 \*\*P < 0.001

and was observed to have a significant association ( $\beta = 0.13$ ,  $t(257) = 2.09$   $P < 0.05$ ). When analyzed a second time depression was regressed onto perceived maternal rejection as the first step variable and was observed to have a significant association ( $\beta = 0.14$ ,  $t(256) = 2.25$   $P < 0.05$ ), and as the second step variable the impaired autonomy-other directedness schema domain also had a significant association ( $\beta = 0.61$ ,  $t(255) = 12.38$   $P < 0.001$ ). Consistent with the mediation hypothesis, with the addition of the impaired autonomy-other directedness schema domain into the equation perceived maternal rejection lost its significance ( $\beta = 0.06$ ,  $t(255) = 1.14$   $P > 0.05$ , see Table 2C). The Sobel test confirmed the significant decrease caused by the impaired autonomy-other directedness schema domain ( $z = 2.07$ ,  $P < 0.05$ ); therefore, the observed association between perceived maternal rejection and depression was mediated by the impaired autonomy-other directedness schema domain, and further analysis showed that the impaired autonomy-other directedness schema domain accounted for 57% of this association.

#### The mediating role of the disconnection-rejection schema domain in the relationships between perceived maternal rejection and depression

A mediating role for the disconnection-rejection schema domain in the relationship between perceived maternal rejection and depression was not observed.

## DISCUSSION

The present study examined the mediating role of Young's (1999) schema domains in the relationship between perceived maternal rejection and psychological problems in a sample of non-clinical undergraduate university students. The primary findings are, as follows: all 3 schema domains were significantly associated with both depression and anxiety; maternal rejection was associated with the impaired autonomy-other directedness and disconnection-rejection schema domains, but not with the impaired limits-exaggerated standards schema domain; mediation analysis showed that the disconnection-rejection schema domain mediated the relationship between perceived maternal rejection and anxiety. In addition, the impaired autonomy-other directedness schema domain mediated the relationship between perceived maternal rejection, and anxiety and depression; however, the impaired limits-exaggerated standards schema domain did not have a significant mediating role.

The cognitive content-specificity hypothesis suggests that each psychological disorder consists of specific cognitive content. For instance, depression includes cognitions of loss, deprivation, and failure, whereas anxiety includes cognitions of harm and danger (Beck et al. 1987). Earlier studies (Calvete et al. 2005; Glaser et al. 2002; Welburn et al. 2002; Schmidt et al. 1995) concluded such schemas as vulnerability to harm,

abandonment, and self-sacrifice were related to anxiety, whereas such schemas as failure, defectiveness, and insufficient self-control were associated with depression. Nonetheless, findings related to EMSs are inconsistent. For instance, Schmidt et al. (1995) reported the importance of dependency and defectiveness in depression, whereas Welburn et al. (2002) indicated that abandonment and insufficient self-control are linked to depression. As such, in the present study EMSs were categorized according to 3 schema domains corresponding to the unmet needs of children, as previously reported (Saritaş & Gençöz 2011; Calvete et al. 2005; Lee et al. 1999; Schmidt et al. 1995). Examination of the cognitive contents of the schema domains showed that there was no sharp distinction as threat or loss perception. For instance, the impaired autonomy-other directedness schema domain includes failure and dependency schema which are thought to be associated with depression, and vulnerability schema thought to be associated with anxiety. As a result, correlations between the 3 schema domains, and depression and anxiety were high. Because depression and anxiety are comorbid disorders, these findings are especially meaningful. The present study's findings support those of other studies conducted in the West (McGinn et al. 2005) and in Turkey (Gök 2012; Ünal 2012; Saritaş & Gençöz 2011), which indicates the generalizability of EMSs across cultures.

Examination of the relationship between perceived maternal rejection and schema domains in the present study showed that, as expected, the relationship between the disconnection-rejection schema domain and perceived maternal rejection was stronger, as compared to the other 2 schema domains. According to Young (1999), children require acceptance, security, safety, nurturance, and shared emotions, and that when these basic needs are not provided by parents, children tend to feel disconnected and rejected. On the other hand, the relationship between the impaired autonomy-other directedness schema domain and perceived maternal rejection can be explained according to attachment theory (Bowlby 1973). Accordingly, when a child's needs are not met predictably and consistently intense anxiety arises; thus, such children cling to their mothers in order to manage this anxiety, which interferes with the development of autonomy. Similarly, in a study that included university students Gök (2012) reported that whereas maternal parenting behaviors predict disconnection-rejection and impaired autonomy-other directedness, paternal parenting behaviors predict impaired limits-exaggerated standards.

In the present study only the maternal relationship was considered and there wasn't a relationship noted between maternal rejection and impaired limits-exaggerated standards, which could be explained in 2 ways. First, maternal and paternal attitudes towards children may activate different schema in children; therefore, future studies should include relationships with both parents. Second, when we considered cognitive content it is possible that the impaired limits-exaggerated

standards schema domain was not associated with the warmth dimension of parenting, which is one of the 2 most commonly examined dimensions of parenting—the other is the control dimension (McGinn et al. 2005; Harris & Curtin 2002; Shah & Waller 2000). As such, use of both the warmth and control dimensions of parental acceptance and rejection theory is strongly recommended for subsequent studies.

Mediation analysis in the present study showed that the disconnection-rejection schema domain mediated the relationship between perceived maternal rejection and anxiety. The disconnection-rejection schema domain, which refers to the unsatisfied need for acceptance, security, safety, stability, and nurturing, underlies a family environment characterized by emotionally distant, rejecting, abusive, unpredictable, and explosive parents. Thus, threats to safety and stability, along with an aloof and unpredictable mother were associated with symptoms of anxiety. Furthermore, the impaired autonomy-other directedness schema domain mediated the relationship between perceived maternal rejection, and both anxiety and depression. The impaired autonomy-other directedness schema domain, which refers to unsatisfied needs of separating and functioning independently, involves an exaggerated dependence on others, lack of assertiveness, and anxiety about future physical and social harm. It is possible that children that perceive rejection by their mothers, especially when it is inconsistent and unpredictable, give top priority to meeting their needs of warmth and intimacy at the expense of their autonomy. Otherwise, when they become independent they may lose their mothers. As a result, children have an intense anxiety since they lose their autonomy. Because of this loss they may have symptoms of depression. Additional research that includes an examination of insecure attachment styles is warranted.

The present findings should be interpreted with caution, as the present study has some limitations. Firstly, it is important to note that the conceptualization of mediation suggests causal pathways (maternal rejection leads to early maladaptive schemas, which then lead to symptoms of psychopathology); however, cross-sectional data (as in the present study) can only be used to infer correlational relationships, not causality. As such, future studies should investigate these associations using longitudinal research designs. Secondly, the study data were generated via self-reports, precluding corroboration by an objective observer and, therefore, may contain a degree of bias. A methodologically related point is that the monomethod of assessment might have inflated to some extent the correlations between the study variables. Thirdly, this study included a non-clinical population; therefore, the findings may not be similar in clinical samples. Nonetheless, it is important to note that many studies on EMSs have been conducted with non-clinical samples. Lastly, because mothers are considered primary caregivers, the relationships between maternal rejection, and schema domains and psychological problems were examined in this study; however, the role of

fathers on the development of cognitive schemas and psychopathology also needs to be investigated.

Despite the present study's limitations, the findings provide a better understanding of the possible mechanisms via which perceived maternal rejection during childhood might have an important effect on adult psychological functioning. Furthermore, internalized representations of the self are centrally connected to later psychological adjustment (Bowlby 1988); therefore, understanding these internalized representations could be very important for developing targeted interventions and prevention strategies for the negative effects of maternal rejection. The present findings highlight the necessity of early intervention programs for individuals that have developed strong schemas related to disconnection-rejection and impaired autonomy-other directedness as a result of perceived maternal rejection.

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