



Childhood Maltreatment and Early Maladaptive Schemas: the Role of Self-Forgiveness

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Abstract

Previous findings suggest that childhood maltreatment leads to the development of early maladaptive schemas (EMS) which, in turn, can predispose individuals to future psychopathology. The aim of this study was to investigate the mediating roles of the quality of the early parent-child relationship and dispositional forgiveness, as potential protective factors, in the relationship between childhood maltreatment and maladaptive schemas. A total of 173 participants completed measures of the problematic relationship with their father and their mother, forgiveness, childhood maltreatment, and maladaptive schemas. Results revealed that participants with multi-type maltreatment had significantly higher maladaptive schema scores than those with a single type. In addition, the problematic relationship with the father mediated the relationship between childhood maltreatment and maladaptive schemas. Finally, self-forgiveness emerged as a significant predictor of lower early maladaptive schemas over and above all the other key variables. These results suggest that early interventions can benefit from including strategies focusing on promoting healthy parent-child relationships, as well as forgiveness of the self in children to cultivate their well-being. Furthermore, interventions in adulthood can target perceptions of parent-child relationships and self-forgiveness in the present moment.

Keywords Childhood maltreatment · Parent-Child Relationship · Forgiveness · Maladaptive Schemas

Highlights

- Self-forgiveness predicted lower early maladaptive schemas over and above childhood maltreatment, problematic relationships with parents, and forgiveness of others.
- Father-child problematic relationship mediated the link between childhood maltreatment and maladaptive schemas.
- Individuals with multi-type maltreatment had significantly higher maladaptive schema scores than those with a single type.

The WHO (2020) defines childhood maltreatment as “all types of physical and/or emotional ill-treatment, sexual abuse, neglect, negligence, and commercial or other exploitation, which results in actual or potential harm to the child’s health, survival, development or dignity in the context of a relationship of responsibility, trust or power.” Types of childhood maltreatment include but are not limited to

physical and emotional abuse, sexual abuse, and neglect (physical and emotional). The consequences of child maltreatment on both childhood and adult development have long been studied using retrospective studies, with consequences ranging from physical effects such as cerebral structural alterations (McCrory et al., 2010), to psychological problems including decreased executive functioning (Hostinar et al., 2012), as well as behavioral consequences, such as substance use and abuse (Elwyn & Smith, 2013). Evidence also points to possible long-term effects of abuse, with preliminary findings pointing towards the formation of information bias affecting brain development as a result of early childhood abuse (McCrory et al., 2010). A retrospective study comparing the effect of multi-type and single-type maltreatment in a sample of 384 college students found that, regardless of the type of maltreatment, individuals who

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reported more than one type of maltreatment were more depressed, suicidal, and promiscuous than individuals who only reported one type; they were also found to engage in more life-threatening behaviors and to have lower self-esteem (Arata et al., 2005). This suggests that individuals who suffer from multi-type maltreatment are at a higher risk for future negative life outcomes than those with a single type, regardless of the type of abuse (Arata et al., 2005). It can be argued that this heightened risk may be linked to the way individuals who have suffered multi-type maltreatment recall their childhood, potentially influencing the development of biases that focus on past negative events at the expense of positive ones. This, in turn, may predispose them to the development of negative life outcomes.

According to a recent meta-analysis, exposure to adversity is positively associated with distress levels, however, that association can be mitigated by the presence of protective factors at the individual, family, and community levels (Racine et al., 2020). Specifically, a prior meta-analysis research has shown that children with supportive caregivers, early secure attachment, self-efficacy, and self-regulation are less likely to develop psychopathology after experiencing trauma compared to those who lack these protective factors (Trickey et al., 2012; Cohrdes & Mauz, 2020; Zamir, 2021). Additionally, some factors such as forgiveness, defined as the release of resentment or anger towards a transgressor, appear to mitigate the effect of such maltreatment on future well-being (Denton & Martin, 1998; Snyder & Heinze, 2005).

Early Maladaptive Schemas (EMS)

The effects of childhood maltreatment can manifest through different channels as it has been shown to affect a child's behaviors, emotions, and cognitions. More notably, Young et al. (2003) argued that negative childhood experiences tend to correlate with early dysfunctional patterns of thoughts, emotions, memories, and beliefs about the self and others, which continue to develop and manifest throughout one's lifetime. The authors used the term "early maladaptive schemas" to refer to these pervasive thought patterns (Young et al., 2003). According to the schema therapy model, there are 18 schemas grouped into five broad categories of unmet emotional needs: (1) disconnection/rejection, (2) impaired autonomy and performance, (3) other-directedness, (4) over-vigilance and inhibition, (5) impaired limits. The disconnection/rejection schema is characterized by a lack of trust in others' ability to meet one's needs accompanied by a sense of being unwanted or isolated. On the other hand, individuals grappling with impaired autonomy and performance schema have not developed a consistent sense of who they are and lack self-agency. Meanwhile, individuals with an other-

directedness schema are overly concerned with the opinions, reactions, and approval of others and often neglect their desires. Individuals with an over-vigilance and inhibition schema adhere strongly to internalized moral principles and rules, often leading to the suppression of their emotions. In contrast, individuals with an impaired limits schema typically struggle with impulse control, goal-directed conduct, accepting responsibility, and adherence to rules (Young et al., 2003).

The first three schema domains were shown to predict depressive and social anxiety symptoms (Calvete et al., 2012; 2013). A study on depressed patients highlighted that, generally, those with suicidal ideations had consistently higher subscale scores on most EMS; specifically, the "Vulnerability to Harm or Illness" subscale predicted current suicidal ideation independently from depression (Flink et al., 2017). These findings suggest that EMS constitutes a risk factor that can promote negative psychological outcomes later in life.

Investigating the development of EMS, Young et al. (2003) argued they are the result of dysfunctional experiences during childhood, especially ones that involve a family member or a primary caregiver. In fact, many studies found that childhood maltreatment and EMS were highly correlated, with Rostami et al. (2015) reporting that defectiveness/shame, sense of failure, dependence, and subjugation were significantly correlated with each type of childhood maltreatment (sexual, physical, emotional and neglect). The relationship between EMS and the quality of the parent-child relationship was also the focus of Zafiropoulou et al. (2013), concluding that high parental bonding scores were negatively associated with EMS scores, with higher maternal care protecting the child from social isolation, mistrust, and vulnerability. Indeed, a warm and supportive mother-child relationship, as manifested through high scores on parent-child bonding measures, was positively correlated with the parent's ability to teach the child emotional communication (Zafiropoulou et al., 2013). It can therefore be argued that positive and open communication could play the role of a protective factor against the development of maladaptive schemas within interpersonal relationships, as it may allow the child to overcome cognitive biases that might be linked to negative early childhood memories. This is explained by the fact that, in line with the attachment theory, a healthy bond with parents facilitates making emotional bonds with others across the lifespan, without being overwhelmed by feelings (Bowlby, 1969; Matsuoka et al., 2006; Zafiropoulou et al., 2013).

Childhood Maltreatment and Parent-Child Relationships

One line of research focused on exploring protective factors, buffering the negative effects of childhood

maltreatment, with extensive research examining the quality of the relationship with the caregiver and its influence on the child's development (Chahine, 2014; Tian et al., 2018). A positive parent-child relationship has been found to promote the child's healthy physical and psychological development, therefore impacting their overall well-being later in adolescence and adulthood (Chahine, 2014). For instance, college students describing a positive early relationship with both parents reported higher self-esteem than those who reported lower-quality relationships (Baharudin & Zulkefly, 2009).

Studies investigating the effects of a problematic parent-child relationship have been consistent in identifying this type of relationship as a risk factor for later psychopathology (Bradford et al., 2016). A negative relationship with the parent based on adolescents' perception of lack of closeness with the parent was found to increase the likelihood of involvement in delinquency and decrease the development of positive self-worth and educational achievement (Adedokun & Balschweid, 2008). These findings have been replicated cross-culturally as a study comparing four ethnic groups (Dutch, Moroccan, Turkish, and Surinamese) found no ethnic differences in the negative effects of the parent-adolescent relationship on adolescents' externalizing behavior problems (Arbona & Power, 2003; Wissink et al., 2006).

Other scholars have taken on the task of identifying factors that could put a strain on the parent-child relationship, for instance, parental abuse. Lin et al. (2016) showed that there is a negative correlation between parental abuse (neglect, emotional and physical abuse) and parent-child relationships. It is important to note that child abuse does not only put a strain on the parent-adolescent relationship; indeed, these effects might persist into adulthood as Kong and Martire (2019) found, in a retrospective study, that adults with a history of childhood maltreatment reported lower perceived closeness with their abusive parent. It is therefore crucial to explore predictors of adjustment following a history of childhood maltreatment, as well as protective factors against the development of negative outcomes in the case of EMS. The present study aims to contribute in this direction.

Forgiveness: A Potential Protective Factor

Intrinsic traits, such as dispositional forgiveness, have also been found to play a role as protective factors following childhood adversity. Forgiveness is a character strength that can be defined as the release of resentment or anger towards a transgressor (Denton & Martin, 1998). Many theories regarding forgiveness were developed; most notably, Thompson et al. (2005) divided forgiveness based on its sources including forgiveness of the self (self-forgiveness),

forgiveness of others, and forgiveness of situations (i.e. war or natural disaster), each impacting an individual's psyche in different ways. Another relevant construct to explore was self-forgiveness, as it is common for abuse survivors to blame themselves even when they are not at fault (Filipas & Ullman, 2006).

Brock (2014) explored the role of forgiveness on EMS and found a significant negative correlation between the two constructs, especially regarding the mistrust schema. It was argued that a person who did not receive emotional support as part of the early parent-child relationship was more likely to have difficulty developing trust within relationships, as well as in forgiving oneself and others. This, in turn, may impede letting go of negative emotions and thoughts that could otherwise be a catalyst for developing maladaptive schemas (Brock, 2014; Ross et al., 2007).

A study on child sexual abuse survivors found that a higher disposition to forgive the self was highly correlated with life satisfaction in both abused and non-abused participants (Morton et al., 2018). Similarly, Snyder and Heinze (2005) found that a higher disposition towards forgiveness mediated the relationship between Post-Traumatic Stress Disorder in survivors of childhood abuse and hostility whereby the correlation between both was diminished in the presence of forgiveness. Therefore, forgiveness seems to shield individuals who experience trauma from negative life outcomes. Interestingly, forgiveness of self and situations were found to be stronger mediators than forgiveness of others (Snyder & Heinze, 2005), suggesting that forgiveness of the abuser might play a less important role than forgiving oneself and the situation in predicting better life outcomes.

The Differential Role of Mothers and Fathers

Focusing on parents' gender, children tend to perceive mothers as more caring and sensitive than fathers, providing a safe space for emotional expression (Zafiropoulou et al., 2013). This is in line with scholars arguing that mothers and fathers have different interaction styles with their children, in terms of quality and substance (Lucassen et al., 2011). They argued that mothers tend to spend more time in direct interaction with the child while fathers' interactions are mostly based on play and goal-oriented actions. Steinberg and Silk (2002) theorized that differences between mothers' and fathers' relationships with adolescents are based on adolescents' perceptions of their parents with mothers seen as providers of emotional support and fathers as providers of informational help. It can therefore be expected to find differences in results in terms of the mother-child and father-child relationships. Similarly, Yan et al. (2018) found that father-child and mother-child relationships may exert a

differential influence on children's social and emotional adjustment variables. It is important to highlight that the findings also seemed to differ across cultures, with more pronounced differences in maternal and paternal sensitivity in the Middle East. Nevertheless, additional studies are necessary to replicate these findings (Deneault et al., 2022).

In a recent meta-analysis, Deneault et al. (2022) found that there were significant, albeit small, differences between maternal and paternal levels of sensitivity, with mothers scoring higher than fathers on these measures. Interestingly, the authors argued these differences to be meaningless given that practically they can be explained by the fact that mothers spend more time with their children, which could partially explain why they scored higher on observed sensitivity in mother-child interactions. They argued for a shift in the conceptualization of parental behaviors to be different across gender, based on recent research consistently showing that mothers' and fathers' behaviors tend to be more similar than previously expected (Cooke et al., 2022; Deneault et al., 2022; Madigan et al., 2019). As such, given the limited and contradictory research on the effects of paternal and maternal influences on early maladaptive schemas, it is important to explore this further. Our study aims to contribute in this direction.

The Present Study

Although there is a breadth of research investigating childhood maltreatment, the quality of parent-child relationships, forgiveness, and their effect on an individual's well-being (Arata et al., 2005; Mendoza et al., 2019; Morton et al., 2018), few studies have explored the impact of different forms of forgiveness on psychological outcomes (Snyder & Heinze, 2005). One study focusing on the relationship between abuse and guilt found a direct association between the two constructs, which was argued to possibly impede one's ability to repair and overcome feelings in relation to the trauma, thus leading to continuous efforts to compensate for the wrongdoing (Mojallal et al., 2021). It could be hypothesized that these findings point at an increased difficulty in self-forgiveness following abuse. Additionally, few studies have investigated the direct link between maladaptive schemas and childhood maltreatment, and further exploration is needed to understand the impact of the parent-child relationship on this association, accounting for the possible differential roles played by mothers and fathers. The novel contribution of the present study lies in it being one of the few to explore maltreatment, the quality of the parent-child relationship, and forgiveness concerning the development of EMS.

The aims of this study were therefore to uncover the interactions between maltreatment, the quality of the parent-

child relationship, and forgiveness on the development of EMS.

Research question 1: How do EMS scores vary depending on the number of maltreatment types experienced?

H1. EMS scores will be significantly higher for individuals who have experienced two or more types of maltreatment compared to those with one type, and EMS scores for those with one type will be significantly higher than for those who did not experience maltreatment.

Research question 2: To what extent do forgiveness of the self and forgiveness of situations contribute to the prediction of EMS scores beyond the other key variables?

H2. Forgiveness of the self and of situations will have incremental validity over and above childhood maltreatment, problematic relationship with mother and father, and forgiveness of others, in predicting EMS scores.

Research question 3: How does the parent-child relationship influence the link between childhood maltreatment and EMS scores?

H3. A problematic relationship with the father will mediate the relationship between childhood maltreatment and EMS scores.

H4. A problematic relationship with the mother will mediate the relationship between childhood maltreatment and EMS scores.

Methods

Participants

A total of 173 participants (116 women) aged between 18 and 25 years ($M = 20.63$, $SD = 1.67$) took part in this cross-sectional study in 2020. The participants were selected through convenience and snowball sampling and the questionnaires were distributed online. In terms of nationality, 60.1% were Lebanese, 34.7% were Non-Lebanese and 5.2% had a double nationality.

Measures

The *Young Schema Questionnaire 3 – Short Form* (YSQ-S3; Young and Brown, 2005) is a 90-item measure developed to assess an individual's 18 early maladaptive schemas (EMS), consisting of 5 items each. For the purpose of this study and based on the literature (Rostami et al., 2015; Estévez et al., 2017), 6 out of the 18 maladaptive schemas were selected: (1) Defectiveness/Shame (2) Social Isolation, (3) Dependence (4) Vulnerability to Harm (5) Sense of Failure and (6) Subjugation. Participants were therefore asked to rate 30 items on a 6-point Likert scale (1 = Completely untrue of me, 6 = Describes me perfectly). The scoring consists of adding up the scores, with higher

scores reflecting higher EMS. The YSQ-S3 was proven to have good internal reliability of 0.81 with Shame = 0.95, Failure = 0.93, Social isolation = 0.91, Vulnerability to harm = 0.97, Subjugation = 0.97, Dependence = 0.90 (Lyrakos, 2014). In this study, the total reliability of the EMS was high (Cronbach α = 0.91) with Defectiveness/Shame = 0.90, Social Isolation = 0.88, Dependence 0.82, Vulnerability to harm = 0.83, Sense of Failure = 0.94 and Subjugation = 0.77.

The *Child Trauma Questionnaire – Short Form* (CTQ-SF; Bernstein et al., 2003) is a 25-item retrospective self-report. It measures 5 types of maltreatment: Physical abuse (PA), Emotional abuse (EA), Physical neglect (PN), Emotional neglect (EN), and Sexual abuse (SA). Items require the participant to reflect on their childhood and adolescence and rate items such as “I thought that my parents wished I had never been born” on a 5-point Likert scale ranging (1 = Never true, 5 = Very often true). The CTQ-SF originally contained 28 items, however, the 3-item minimal/denial subscale designed to detect a tendency to minimize abuse was excluded, since they have been found to have controversial validity and clinical utility (MacDonald et al., 2015). There were different cutoff scores for moderate to severe levels of childhood abuse or neglect (SA > 7, PA > 9, EA > 12, EN > 14, and PN > 9). The measure presented good internal consistency (Cronbach α = 0.89) and a high four-week test–retest reliability (Spearman’s ρ = 0.75; Kim et al., 2013). In the present sample, the scale proved to have high reliability (Cronbach α = 0.92).

The *Heartland Forgiveness Scale* (HFS; Thompson et al., 2005) is an 18-item self-report scale that measures one’s tendency towards forgiveness also known as dispositional forgiveness. The HFS measures 3 subscales: forgiveness of the self (“It is really hard for me to accept myself once I’ve messed up”), forgiveness of others (“I continue to be hard on others who have hurt me”), and forgiveness of situations (“When things go wrong for reasons that can’t be controlled, I get stuck in negative thoughts about it”), the score of each consisting of the sum of scores of 6 items measured on a 7-point Likert scale (1 = Very untrue of me, 7 = Very true of me). Higher scores on the HFS reflect a higher disposition towards forgiveness. The HFS was shown to have a high test–retest reliability of 0.82, with Cronbach’s alphas ranging between 0.84 and 0.87 for the total scale score (Edwards et al., 2002). In this sample, the total scale had high reliability (Cronbach α = 0.84) and the reliability of the subscales was satisfactory (Self = 0.83, Others = 0.75, Situation = 0.78).

The *Child’s Attitude towards Father and Mother* (CAF & CAM; Hudson, 1997) are two 25-item questionnaires that measure problematic relationships with each of the parents based on the child’s perceived problems with each of his/her father and mother. In this study, to avoid fatigue, the

two questionnaires were combined into one item e.g.: “I get along well with my father/mother”. Participants were asked to answer each item twice, first about their relationship with their father and then about their relationship with their mother, using a 7-point Likert scale (1 = None of the time, 7 = All of the time), thus yielding two separate scores, one for each parent. Higher scores on these scales represent a more problematic relationship with the parent. The CAF and CAM were found to have a high internal reliability of 0.91 for young adults between 18 and 25 years of age (Segrin et al., 2013). In the current study, the internal consistency of the scales was satisfactory with Cronbach α = 0.75 for the CAF (relationship to father) and Cronbach α = 0.97 for the CAM (relationship to mother).

Procedure

The study was first approved by the International Review Board (IRB) at the Lebanese American University. The researchers then shared a Google Forms survey link through email and posted it on different platforms such as broadcasts and social media. They encouraged participants to share the survey with their contacts while ensuring that participants had no personal ties to the researchers. The participants read the informed consent form, then proceeded to fill out demographic information and the surveys in the following order: Child Attitude towards Father and Mother, Heartland Forgiveness Scale, Child Trauma Questionnaire, and finally the Young Schema Questionnaire. Given that a significant proportion of the population residing in Lebanon demonstrates proficiency in English, the questionnaires were circulated in this language (Banat, 2020). No incentives or rewards were offered and overall, it took around 15 to 25 min to complete the survey.

Results

We first ran descriptive statistics of the sample to determine the frequency of each type of abuse. The CTQ-SF cutoff scores described in the methods section were used to create categorical variables for the different maltreatment types. Sixty-eight participants qualified for emotional abuse (39.3%), 43 for emotional neglect (24.9%), 36 for physical abuse (20.8%), 28 for sexual abuse (16.2%) and 23 for physical neglect (13.3%). Additionally, 72 participants did not qualify for any maltreatment types (41.6%), 30 qualified for one (17.3%), and 71 qualified for 2 or more (41%). A small portion of the data was missing from the questionnaire (ranging from 0 to 4.57% with an average of 1.05%). Consequently, we conducted an imputation by substituting the missing values with the mean of the observed value for each variable.

Table 1 Correlations between key variables

	2	3	4	5	6	7	8
1. Problematic relationship with their mother	0.52**	−0.35**	0.69 **	0.43**	−0.23**	−0.22**	−0.34**
2. Problematic relationship with their father	1	−0.36**	0.71**	0.49**	−0.27**	−0.23**	−0.31**
3. Forgiveness total		1	−0.42**	−0.62**	0.81**	0.59**	0.86**
4. Childhood maltreatment total			1	0.55**	−0.38**	−0.16*	−0.39**
5. EMS total				1	−0.69**	−0.14	−0.54**
6. Forgiveness of Self					1	0.12	0.67**
7. Forgiveness of Others						1	0.26**
8. Forgiveness of Situations							1

** $p < 0.01$, * $p < 0.05$ **Table 2** Hierarchical Regression for the Key Variables

	β	t	F	ΔF	R^2	$AdjR^2$	ΔR^2
Step 1			66.39	66.39	0.29	0.28	0.29
Childhood Maltreatment	0.54	8.15***					
Step 2			24.77	3.11	0.31	0.30	0.03
Childhood Maltreatment	0.33	3.05**					
Problematic Relationship with their Mother	0.08	0.91					
Problematic Relationship with their Father	0.21	2.27*					
Step 3			18.56	0.24	0.31	0.30	0.00
Childhood Maltreatment	0.34	3.07**					
Problematic Relationship with their Mother	0.07	0.82					
Problematic Relationship with their Father	0.20	2.16*					
Forgiveness Others	−0.03	−0.49					
Step 4			40.73	58.66	0.60	0.59	0.29
Childhood Maltreatment	0.10	1.12					
Problematic Relationship with their Mother	0.11	1.60					
Problematic Relationship with their Father	0.21	2.90**					
Problematic Forgiveness Others	0.02	0.34					
Forgiveness Situations	−0.06	−0.83					
Forgiveness Self	−0.54	−8.11***					

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Bivariate correlations were run among the key study variables (see Table 1). EMS was positively correlated with the problematic relationship with their mother $r = 0.43$, $p < 0.01$, the problematic relationship with their father $r = 0.49$, $p < 0.01$ and childhood maltreatment $r = 0.55$, $p < 0.01$. EMS was also negatively correlated with forgiveness, $r = -0.62$, $p < 0.01$. In addition, the problematic relationship with their father and the problematic relationship with their mother were positively correlated, $r = 0.52$, $p < 0.01$. Childhood maltreatment was positively correlated with the problematic relationship with their mother and the problematic relationship with their father, with $r = 0.69$, $p < 0.01$ and $r = 0.71$, $p < 0.01$, respectively. Childhood maltreatment negatively correlated with forgiveness of self $r = -0.38$, $p < 0.01$, forgiveness of others $r = -0.16$,

$p < 0.05$, and forgiveness of situations $r = -0.39$, $p < 0.01$. Finally, Forgiveness of Self and of Situations were negatively correlated with EMS scores, with $r = -0.69$, $p < 0.05$ and $r = -0.54$, $p < 0.01$.

We first hypothesized that EMS scores will be significantly higher for individuals who have experienced two or more types of maltreatment compared to those with one type, and EMS scores for those with one type will be significantly higher than for those who did not experience maltreatment. A one-way ANOVA was performed to compare the EMS scores among participants who reported 2 or more maltreatment types, those who reported one maltreatment type, and those who did not report any maltreatment. The results revealed a statistically significant difference among the groups ($F = 31.71$, $p < 0.001$). Tukey's HSD

post-hoc test indicated that participants who reported one maltreatment type had significantly greater EMS scores ($M = 97.81$) than those who did not report any maltreatment types ($M = 76.57$, $p < 0.01$). Additionally, participants who experienced two or more maltreatment type had significantly greater EMS scores ($M = 115.72$) than those who reported one maltreatment type ($M = 97.81$, $p < 0.05$).

Second, a four-step hierarchical regression analysis was carried out with maladaptive schemas (EMS scores) as the criterion (hypothesis 2, see Table 2). At step 1, childhood maltreatment ($F = 66.38$, $p < 0.001$, $Adj R^2 = 0.28$) was inputted in the model as the only predictor and was found to be a positive significant predictor ($\beta = 0.54$, $p < 0.001$). At step 2, the problematic relationship with their father and the problematic relationship with their mother were added to the model ($F = 24.77$, $p < 0.001$, $Adj R^2 = 0.30$) whereby the problematic relationship with their father ($\beta = 0.21$, $p < 0.05$) was a significant predictor but the problematic relationship with their mother was not. The model gained additional explanatory power ($\Delta F = 3.11$, $p < 0.05$, $\Delta R^2 = 0.03$). At step 3, the forgiveness of others was added to the equation, but the model was not significant. At step 4, the forgiveness of self and of situations were added to the model ($F = 40.73$, $p < 0.001$, $Adj R^2 = 0.60$) whereby forgiveness of self ($\beta = -0.54$, $p < 0.001$) was a significant negative predictor but forgiveness of situation was not. At this stage, the model explained significantly more variance in the outcome measure than at the previous steps ($\Delta F = 58.66$, $p < 0.001$, $\Delta R^2 = 0.29$).

Third, we aimed to explore whether a problematic relationship with each of the parents will mediate the relationship between childhood maltreatment and EMS scores. Mediation was tested through regression analyses using the Process Macro for SPSS (Hayes & Little, 2018), with EMS scores as the outcome variable. The predictor variable was childhood maltreatment, and the mediator variable was the problematic relationship with the father (hypothesis 3). In step 1 of the mediation model, the path from childhood maltreatment to the problematic relationship with their father was positive and statistically significant ($b = 1.01$, $s.e. = 0.08$, $p < 0.001$). In step 2, the path from the problematic relationship with their father to EMS was also positive and significant ($b = 0.29$, $s.e. = 0.13$, $p < 0.05$). In step 3 of the mediation model, the regression of the childhood maltreatment on EMS scores, ignoring the mediator (direct effect) was significant ($b = 0.75$, $s.e. = 0.18$, $p < 0.001$), therefore the problematic relationship with their father partially mediated the relationship between childhood maltreatment and EMS scores. A 95% bias-corrected confidence interval based on 5000 bootstrap samples indicated that there was a significant indirect effect of childhood maltreatment on EMS scores through the problematic relationship with their father ($IE = 0.29$) $CI = [0.0198, 0.5961]$.

Similarly, a mediation analysis was conducted to test the effect of a problematic relationship with their mother in the connection between childhood maltreatment and EMS scores (hypothesis 4). In step 1 of the mediation model, the path from childhood maltreatment to the problematic relationship with their mother was positive and statistically significant ($b = 0.8970$, $s.e. = 0.07$, $p < 0.001$). However, in step 2, the path from the problematic relationship with their mother to EMS was non-significant. Therefore, no further analysis was conducted, and this hypothesis was rejected.

Discussion

The main objective of this study was to investigate predictors of early maladaptive schemas including forgiveness, the parent-child relationship, and childhood maltreatment. We found that more than half of the participants qualified for one or more types of maltreatment (58.4%). The results of this study partly align with the ones in the literature review. Noteworthy is the prevalence of maltreatment types in this sample, which greatly differed from the finding of the US Department of Health & Human Services (2020); drawing direct comparisons to other samples in the country is difficult due to the lack of official data with regards to the prevalence of childhood maltreatment in Lebanon. In the US sample, child neglect was the most common type of abuse while, in this study, emotional abuse was the most common form of maltreatment (40%). Furthermore, multi-type maltreatment (41%) was more common than single-type (17.3%), suggesting that children rarely experience just one type of abuse, and that often, there is polyvictimization in the context of abuse. These findings are in line with a recent meta-analysis revealing higher rates of abuse – physical, psychological, and sexual – in the Arab region when compared to global averages. The authors explained that the higher prevalence of abuse could relate to cultural factors, such as the belief that corporal punishment is needed to ensure the application of values, but also alluded to the possible effect of the uncertainty in the region, namely regarding collective violence, conflict, and displacement, which tends to create a gap between attitudes and practices, thus possibly increasing chances of abuse or a tendency to normalize it (Elghossain et al. 2019).

In line with our first hypothesis, we found that individuals who qualified for two or more maltreatment types had significantly higher EMS scores than those who reported one type only or those who reported no maltreatment. This finding adds to the existing body of research on polyvictimization and its detrimental effects on development (Ford & Delker, 2018; Finkelhor et al., 2011). As previously noted, EMS has been associated with multiple negative life outcomes, such as anxiety and depressive symptoms (Calvete et al., 2012; 2013 & Flink et al., 2017).

This suggests that individuals who suffer from multi-type maltreatment are at a higher risk for future negative life outcomes than those with a single type, regardless of the type of abuse (Arata et al., 2005). This finding aligns with the substantial body of research demonstrating the cumulative impact of multiple types of adverse childhood experiences on psychopathology and suicidality (Wiens et al., 2020), as well as other health outcomes (Felitti et al., 2019 & Dube et al., 2009). It can be argued that this could relate to the way a person who has suffered multi-type maltreatment recalls their childhood, possibly affecting the development of biases in focusing on past negative events at the expense of positive ones; this can, in turn, predispose them to the development of negative life outcomes.

Second, we hypothesized that forgiveness of the self and of situations will have incremental validity, over and above other variables, in predicting EMS scores. This was partially supported as the “forgiveness of the self” subscale alone emerged a significant predictor of EMS scores. While previous research has shown there is a correlation between EMS and childhood maltreatment (Estévez et al., 2017; Rostami et al., 2015), our findings revealed a predictive relationship, whereby childhood maltreatment was a positive predictor of EMS. There was a differential effect of parental influence; a problematic relationship with their father provided additional explanatory power to the model while the problematic relationship with their mother scores did not. Notably, a lower quality father-child relationship predicted higher ingrained and dysfunctional beliefs. This discrepancy between parents is intriguing and was not discussed in previous findings. It could be argued that, in line with the gender differences highlighted by Zafropoulou et al. (2013), children tend to view their mothers as more caring than their fathers. Those perceived recollections, as well as the traditional role of their mother as the emotional caregiver (Cinamon & Rich, 2002; Lucassen et al., 2011), might play a protective role in preventing the development of maladaptive schemas in the child, regardless of their actual lived relationship with their mother. Another explanation could relate to the finding that some fathers usually spend less time with their children (Deneault et al., 2022); it could therefore be argued that children tend to be more sensitive to negative changes in paternal behaviors, as these moments tend to occur less frequently, making the child more influenced by them, thus affecting the development of maladaptive schemas. It would be interesting for future studies to explore the interaction between parent and child genders to shed more light on these findings.

It is interesting to note that forgiveness of others and forgiveness of situations did not add predictive power to the model, despite the significant correlations found between EMS scores and forgiveness of the situation. Forgiveness of the self was the only negative predictor of maladaptive schemas even after controlling for childhood maltreatment

and parent-child relationship. This is in line with previous findings (Morton et al., 2018; Snyder & Heinze, 2005) and provides further evidence with regard to the unique role of self-forgiveness in protecting individuals from developing EMS. This suggests that forgiveness of the self and of others can be considered as two distinct constructs that ought to be studied separately when researching forgiveness since, as Thompson et al. (2005) explained, these subtypes of forgiveness tend to affect individuals in different ways. Although the exact role and mechanism of self-forgiveness are unclear, it could be hypothesized that the correlation between self-forgiveness and other constructs, such as self-compassion and resilience, could shed some light on the results of this study. In fact, in the self-forgiveness subscale, the item “Although I feel badly at first when I mess up, over time I can give myself some slack” reflects on self-compassion while the item “Learning from bad things that I’ve done helps me get over them” echoes some characteristics of resilience. This is in line with Neff (2003) positing that self-forgiveness and self-compassion are closely related constructs, with Neff and McGehee (2010) finding that self-compassion partially mediated the association between cognitive factors and well-being. Therefore, it can be argued that accepting one’s flaws or mistakes and committing to change instead of ruminating, can promote resilience by protecting individuals from developing maladaptive cognitive appraisals, operationalized in this study as early maladaptive schemas.

The last aim of this study was to explore the mediating roles of a problematic relationship with their father and their mother between childhood maltreatment and EMS scores. Results revealed that a problematic relationship with their father positively mediated the relationship between childhood maltreatment and EMS; however, a problematic relationship with their mother did not. This could be explained from a gender-role expectations perspective as it can be argued that, in some cultures, children might value their father’s support more than their mother’s, as they tend to spend less time with the latter (Pearson & Child, 2007), which could explain why a problematic relationship with their father solely revealed to have negative repercussions in the type of schemas. Akin to Erozkhan’s (2016) findings, these results indicate that childhood maltreatment tends to put a strain on a child’s relationship with their father, thus increasing the risk of developing EMS. This aligns well with the finding of a study by Zafropoulou et al. (2013), who demonstrated that parental bonding and a healthy parent-child relationship can act as protective factors against the development of those schemas.

Limitations, recommendations for future research, and implications

This study explored the unique interaction between childhood maltreatment, problematic parent-child relationship,

and forgiveness, as well as their effect on the development of EMS. One of the main limitations of this study stems from the fact that the data was collected through convenience snowball sampling and online surveys, which limits the representativeness of the sample and the generalizability of the results. More specifically, this approach introduces a certain level of selection bias, limiting the generalizability of our results to individuals who are proficient in technology usage and have access to the devices and internet connection required to complete the questionnaire. Also, the results might be subject to mono-method bias, as all measures were self-reports, as is usually the case in similar research. Additionally, the childhood maltreatment measure used does not specify the identity of the perpetrator of the abuse; future studies could observe how the dynamics among the present variable might change depending on whether the abuse was done by one of the parents or another person. Furthermore, it is important to note that socio-economic status variables were not collected or controlled for in this study. Future studies could explore the potential moderating effect of such variables on the key variables studied.

Other limitations could form the basis of recommendations for future research. First, this study did not account for the unique effect of having a deceased or missing parent, which can be considered an important extraneous variable. Also, results suggest that there is a difference in the effect of the relationship with their father and the relationship with their mother on EMS; therefore, future research could further investigate the reason behind this discrepancy. In addition, it would be important to further replicate our results in larger samples to explore the effects of different permutations of maltreatment types (Higgins and McCabe, 2001).

Additionally, the enduring impact of child maltreatment on EMS also needs to be investigated through longitudinal studies for a more comprehensive understanding of its long-term effects. In addition, longitudinal studies decrease the possible impact of biased recall among adults facing negative life outcomes, which may lead to inaccurate reporting of childhood maltreatment (Sroufe et al., 2010).

Our findings provide clear implications for therapy and interventions focusing on self-forgiveness, and although research has studied the role of self-forgiveness as an intervention strategy for individuals who have hurt others (Cornish & Wade, 2015), almost no research has investigated a therapeutic model of self-forgiveness for survivors of abuse. For instance, research conducted by McLean et al. (2017) and Vrabel et al. (2024) has demonstrated the efficacy and enduring advantages of Compassion Focused Therapy (CFT) among individuals with a history of childhood trauma. Self-compassion and self-forgiveness have a positive impact on mental health outcomes within the context of adverse life events, and interventions integrating

both Cognitive Behavioral Therapy (CBT) and compassion-focused approaches hold promise for reducing early maladaptive schemas (Cleare et al., 2019). Hence, it would be advisable to formulate intervention strategies that integrate cognitive therapeutic modalities such as CBT and compassion-focused therapy, alongside attachment theory principles. Such approaches aim to enhance self-forgiveness and cultivate healthy, supportive parent-child relationships, thereby safeguarding the individual's well-being across the lifespan.

Due to the heterogeneity of our sample, we are not able to make cultural inferences, however, we acknowledge the importance of exploring the role of culture in future studies. Researchers could consider conducting comparative studies using data from different countries on the interactions between childhood maltreatment, parent-child relationships, forgiveness, and EMS.

Conclusion

The main contribution of this study lies in providing insight into possible protective factors that can prevent children from developing EMS, which have deleterious psychological effects. Results suggest that, if possible, focusing on improving a child's relationship with their parents could greatly decrease the risk of developing EMS. Additionally, this study is one of the first to emphasize the importance of self-forgiveness rather than the ability to forgive the aggressor or perpetrator of the abuse. As such, promoting self-forgiveness or similar concepts such as self-compassion (Neff, 2003) may play an important role in alleviating the negative effects of maltreatment on a child's self-defeating cognitive patterns. Interventions in adulthood are also key, targeting individuals' perceptions of parent-child relationships and self-forgiveness in the present moment, focusing on their effects on wellbeing. In conclusion, early maltreatment, especially multiple types of maltreatment, is considered to constitute a vulnerability that can later develop into psychopathologies.

Data availability

The datasets generated during and/or analyzed during the current study are available from the the corresponding author on reasonable request.

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Compliance with Ethical Standards

Conflict of interest The authors declare no competing interests.

Ethical approval Received IRB approval.

Informed consent Included at the beginning of the survey.

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