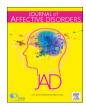
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Journal of Affective Disorders

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Research paper

The relations between childhood maltreatment, shame, guilt, depression and suicidal ideation in inpatient adolescents



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ARTICLE INFO

Keywords: childhood maltreatment generalized guilt and shame depression suicidal ideation adolescents

ABSTRACT

Background: Previous studies demonstrated positive relations between various forms of maltreatment and suicidal ideation in youth; however, mechanisms underlying these relationships are not well understood. We propose that the experience of maltreatment in childhood may lead to high levels of generalized guilt and shame, resulting in an increase of depressive symptoms and suicidal thoughts in adolescents. The aim of the current study was to test our model of relations between these constructs using path analysis.

Methods: 112 inpatient adolescents aged 12-17 years completed the Childhood Trauma Questionnaire to measure various types of maltreatment, the Personal Feelings Questionnaire to evaluate generalized guilt and shame, the Beck Depression Inventory-II to assess depressive symptoms, and the Columbia-Suicide Severity Rating Scale to assess suicidal ideation.

Results: Findings partly confirmed the theoretical model. Indirect positive effects of sexual and emotional abuse, as well as emotional and physical neglect on suicidal ideation via generalized self-conscious emotion and/or depression were demonstrated. In contrast to our predictions, indirect negative effects of physical abuse on suicidal thoughts via generalized guilt and shame and depression were found.

Limitations: Sample characterized by predominately Caucasian inpatient adolescents from financially stable and well-educated environments, over-reliance on self-report measures and the lack of a longitudinal design were main limitations of the study.

Conclusions: The study provides novel information on the potential mechanisms underlying the association between childhood maltreatment and suicidal ideation in adolescents. Generalized guilt and/or shame could be possible targets for interventions for victims of some forms of maltreatment to reduce depressive symptoms and suicidal ideation.

1. Introduction

Suicidal ideation in adolescents is a risk factor for suicidal death (Andrews and Lewinsohn, 1992; Van Orden et al., 2010) and for a variety of self-destructive behaviors (Han et al., 2015), and thus a serious social and clinical problem (Joffe et al., 2014; Shaffer and Pfeffer, 2001). Studies have demonstrated that childhood maltreatment, defined as any act of commission or omission by a caregiver resulting in harm, potential for harm, or threat of harm to a child

(Centers for Disease Control and Prevention, 2012), in particular when it is caused by close relatives, is related to increased levels of suicidal ideation and/or suicidal behavior (Campos et al., 2013; Hadland et al., 2015; Kealy et al., 2017; Pompili et al., 2013; You et al., 2012). However, mechanisms underlying this relationship are still not well understood. Based on the concept of identification with the aggressor by Ferenczi (1955a), the contribution of other clinicians (Bateman and Fonagy, 2004; Fonagy et al., 2002; Frankel, 2002, 2004; Kilborne, 1999; Mészáros, 2010), and referring to the issues of suicidal

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ideation, we propose a theoretical model in which different types of childhood maltreatment have an indirect effect on suicidal ideation in adolescence, via generalized shame and guilt, and depressive symptoms, and test this model in a sample of inpatient adolescents.

1.1. Childhood maltreatment and suicidal ideation

Studies conducted among adults (Campos et al., 2013; Kealy et al., 2017; You et al. 2012) and adolescents (Evans et al., 2004; Hadland et al., 2015; Thornberry et al., 2010) have demonstrated associations between childhood maltreatment and suicidal thoughts and behaviors. The effects of maltreatment include persistent and serious disruptions of adaptation and resilience, sometimes reflected in suicidal attitudes, and further that trauma during development may be a "perpetual" risk factor for suicide because it is an indelible element of individual life history for some individuals (Berman et al, 2006; Evans and Farberow, 2003; Jacobs et al., 2006). Understanding mechanisms underlying the relationship between these two phenomena would allow clinicians and researchers to properly target interventions to minimize risk of suicidal ideation for adolescents who experienced maltreatment.

1.2. Possible mechanisms underlying relations between childhood maltreatment and suicidal ideation: The role of shame, guilt and depression

Ferenczi (1955a) theorized that a child exposed to a traumatic situation (e.g. violence, harsh punishments, sexual abuse, neglect) often must remain in the relationship with the perpetrator, which can result in the experience of helplessness. The child may not be mature enough to deal with the experience of abuse from a significant adult and may identify with the aggressor's negative attitude towards him/her. These complex identification processes - defined as identification with the aggressor - may result in the tendency to experience negative self-conscious feelings, such as: (i) shame that pertains to a painful focus on the self and often leads to defensive/avoidance behavior; and/or (ii) guilt an interpersonally driven emotion arising from the belief that one has hurt another and is often accompanied by feelings of regret and remorse over a transgression (Kim et al., 2011; Lewis, 1971), leading to depressive states (Ferenczi, 1955a). Ferenczi's followers point out that the child may take blame for the traumatic event and develop a sense of being bad, humiliated, weak, and worthy of shame and guilt (Frankel, 2002, 2004). The child is traumatized and shamed also by the fact that caregiver is the abuser and the child must seek help and safety from the person who causes trauma (Kilborne, 1999). Besides, maltreatment may result in a strong ambivalence towards the caregiver (Holmes, 2015); to protect a positive representation of the caregiver, the child may turn responsibility and negative emotions inward, leading to guilt, shame, depression, and directing aggression towards the self (Holmes, 2015; Kilborne, 1999).

Attachment figures who are perpetrators of maltreatment are not only sources of distress, but usually are emotionally unavailable and not capable of mirroring, soothing, and mentalizing the traumatic experiences that they cause (Allen et al., 2008; Bateman and Fonagy, 2004; Fonagy et al., 2002). In effect, the child experiences unmentalized, pervasive self-conscious emotions. Self-critical emotions of guilt and shame, which are strongly related to each other, represent the internalizations of the attitudes of the abusing or neglecting figures, or the imputation of the mental attitude of the figures, who were supposed to care but in essence, one way or another, failed to do so. Thus the representation of the caregivers' attitudes (emotional and cognitive) becomes a self-critical or even self-persecutory experience - referred to in the mentalization-based literature as the alien self - in the minds of individuals who suffered maltreatment at the hands of caregivers (Bateman and Fonagy, 2004; Fonagy et al., 2002). Therefore, we may hypothesize that various forms of childhood maltreatment may be associated with self-conscious emotions that are divorced from specific contexts and generalized: (i) generalized guilt that is often associated

with feelings of remorse, regret, and worries about hurting or injuring another; (ii) generalized shame that is often associated with beliefs that negative personal characteristics are not susceptible to change and reinforces feelings of being worthless, powerless, and inferior (Gambin and Sharp, 2018; Kim et al., 2011). Such pervasive self-conscious emotions can lead to the development of depressive symptoms (Ferenczi, 1955a; Gambin and Sharp, 2018). Finally, clinicians argued that shame and guilt, which may manifest as self-blame, humiliation, worthlessness, unlovability, and depression, can cause hopelessnesshelplessness and unbearable psychic pain, increasing the risk of suicide (Farberow, 2002; Jacobs et al., 2006; Shneidman, 1990), especially during adolescence (Berman et al., 2006; Laufer, 1995). So, it seems that in some circumstances, a severe sense of guilt can activate suicidal thoughts and behaviors as an extreme form of self-punishment, whereas a severe sense of shame may lead to extreme devaluation of the self and direction of hostility towards the self, leading to attempts to take away one's own right to life (Wille, 2014).

1.3. Empirical research on relations between childhood maltreatment, shame, guilt, depression and suicidal ideation

Studies conducted in both clinical (Alix et al., 2017; Docter et al., 2018; Huh et al., 2017; Marshall et al., 2018) and nonclinical samples (Chapman et al., 2004, de Castro-Catala et al., 2017; Kim et al., 2017) have indicated a positive relationship between childhood maltreatment and depression and, of course, suicidal thoughts and behaviors are empirically associated with depression and depressive hopelessness (e.g. Beck, 1986; Wenzel et al., 2009). DSM-5 lists suicidal ideation as one of the symptoms of major depressive disorder (American Psychiatric Association, 2013). Studies in adolescents (Gambin and Sharp, 2018; Muris and Meesters, 2014) and adults (Kim et al., 2011) report that generalized guilt and shame are related to depression, with shame having the stronger association; this may occur because shame is a severe experience of inferiority that is difficult to repair or expiate (Leach and Cidam, 2015). Studies have investigated relations between shame and guilt or self-blame and suicidal ideation in people with experiences of maltreatment, indicating positive associations between these in victims of childhood sexual abuse (e.g. Alix et al., 2017; Kealy et al., 2017; You et al., 2012). Associations between sexual abuse and trauma-related shame, shame related to one's body and sexuality, or pervasive shame and guilt were noted in most of studies (e.g. Aakvaag et al., 2016; Dyer et al., 2015; Pettersen, 2013). It is unclear if these associations are specific to sexual abuse or extend to those who have experienced neglect and other forms of non-sexual abuse.

Research on the relationship between non-sexual forms of maltreatment and shame and guilt in children, adolescents, and adults has yielded inconclusive results. Several studies reported positive relationships between shame and emotional abuse (Claesson and Sohlberg, 2002; Ellenbogen et al., 2015; Hoglund and Nicholas, 1995; Kealy et al., 2018; Stuewig and McCloskey, 2005; Webb et al., 2007) or emotional neglect (Kealy et al., 2018; Stuewig and McCloskey, 2005; Webb et al., 2007). However, studies that have examined associations between guilt and experiences of emotional abuse are limited and revealed mixed findings (Kealy et al., 2018; Ellenbogen et al., 2015; Hoglund and Nicholas, 1995; Stuewig and McCloskey, 2005; Webb et al., 2007). Relations between physical forms of maltreatment and self-conscious emotions have been examined less frequently, and when studied, inconsistent results were obtained (Ellenbogen et al., 2015; Hoglund and Nicholas, 1995). Most of the research on the relations between various forms of maltreatment and self-conscious emotions included only shame and not guilt. Additionally, previous studies often focused on one or two specific types of maltreatment, without examining other forms of abuse and neglect, although different types of maltreatment often coexist. Most of the studies cited were conducted using the Test of Self-Conscious Affect (TOSCA) to measure selfconscious emotions, which assesses these emotions in specific contexts, when failures can be reparable and may lead to compensatory actions (in case of experience of guilt) or self-improvement attempts (in case of experience of shame). In contrast, clinical or maladaptive guilt and shame refer to feelings that are generalized across situations and are divided from specific contexts. Moreover, the guilt subscale of the TOSCA does not appear to relate to self-conscious affect or guilty feelings, but rather to compensatory actions (Giner-Sorolla et al., 2011; Luyten et al., 2002).

Thus, the relationship between various forms of non-sexual maltreatment and generalized or clinical shame as well as guilt is still in question. There is a particular need for further research in this area focusing on clinical groups, who are likely to have histories of childhood abuse and neglect, and examining whether guilt and shame-proneness play a part in their predisposition to depression and suicidal ideation. Further, such research should explore measures of *generalized* self-conscious emotions and distinguish between different types of maltreatment. Such studies would indicate more accurately which types of abuse and neglect are more strongly related to generalized guilt and which to generalized shame.

1.4. Theoretical Model

Based on Ferenczi's conception of identification with the aggressor, other clinicians' contributions, and referring to the issues of suicidal ideation, we propose a theoretical model (see Fig. 1). The aim of the current study was to test our theoretical model in a sample of inpatient adolescents. We focused on a clinical sample: (i) to include participants with elevated intensity and a range of depressive symptoms, suicidal ideation, and increased likelihood of childhood maltreatment, and (ii) because previous studies have shown that 80% to 90% of adolescents who complete suicide have a psychiatric diagnosis (Spirito, 2003; Wenzel et al., 2009). In addition, to date, no studies have been conducted on the relationships between various types of maltreatment and generalized self-conscious emotions in a sample of inpatient adolescents.

We hypothesized that when using measures of generalized shame and guilt, different types of maltreatment, including non-sexual maltreatment, would be positively associated with shame and guilt (hypothesis 1), at least among adolescents, who tend to experience self-conscious emotions to a greater degree than people in other periods of life (Rankin et al., 2004; Somerville et al., 2013). Considering that in emotional abuse, the victim receives negative messages and criticisms that potentially undermine self-esteem (Campos et al., 2013; Frankel, 2004; Hoglund and Nicholas, 1995), we predicted that this form of maltreatment would be more strongly associated with the self-

referencing emotion of shame, relative to guilt. On the other hand, since physically neglected youth may feel increased responsibility for the family in the face of difficult home situations (Ferenczi, 1955a; Jurkovic, 1997; Wilson et al., 2006), we anticipated that this form of maltreatment would be more strongly associated with guilt than shame. Pursuing the causal chain, we further predicted that generalized shame and guilt would both be positively associated with depressive symptoms (hypothesis 2), and depressive symptoms in turn would be positively related to suicidal ideation intensity and severity (hypothesis 3). Our fourth hypothesis then links these associations into a model, which assumes that sexual, physical and emotional abuse, as well as physical and emotional neglect, would be associated with suicidal ideation through generalized shame and guilt feelings in turn linked to depressive symptoms (hypothesis 4). To the best of our knowledge, our study is the first to examine a model of relations between various forms of childhood maltreatment, generalized guilt and shame, depression, and suicidal ideation.

2. Method

2.1. Participants

This study included a sample of 116 consecutive admissions of adolescents between the ages of 12 and 17 years to the adolescent unit of a private psychiatric hospital in a major metropolitan city in the Southwestern United States between April 2013 and October 2015. Inclusion criteria for study participation consisted of: (i) any adolescent patient between 12 and 17 years of age, and (ii) adolescents who were sufficiently fluent in English to complete all research. To obtain reliable results, exclusion criteria for study participation comprised the following: (i) diagnosis of schizophrenia or any psychotic disorder, (ii) active mania, (iii) advisement by clinician to exclude (i.e., due to delirium), and/or (iv) IQ below 70. Based on these criteria, 4 patients were excluded from participation in the assessment protocol. After these exclusions, a total of 112 inpatient adolescents (73 girls and 39 boys) between the ages of 12 and 17 (M = 15.36; SD = 1.53) were used in subsequent analysis. At least one suicide attempt was reported by 38.4% of respondents, 33.9% of whom did so in the last year. Considering the cut-off scores in The Childhood Trauma Questionnaire (Bernstein and Fink, 1998) for moderate-severe exposure for various types of maltreatment, 48.2% participants declared experience of at least one type of maltreatment (in this maltreated group in our sample 61.1% experienced moderate-severe exposure for multiple forms of abuse and/or neglect). Participants' reports of maltreatment experiences in moderate to severe severity were as follows: 31.3% of respondents reported having experienced emotional abuse, 28.6%

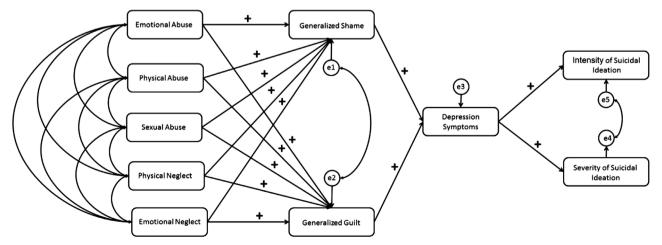


Fig. 1. Theoretical model of relations between childhood maltreatment, shame, guilt, depression and suicidal ideation intensity and severity in inpatient adolescents.

emotional neglect, 17% physical neglect, 11.6% physical abuse, and 11.6% sexual abuse. At admission, the most common diagnoses (not mutually exclusive) in last year in this sample, based on a structured clinical interview, The Computerized Diagnostic Interview Schedule for Children (C-DISC; Shaffer et al., 2000), were: major depressive disorder (67.9%), OCD (32.1%), social phobia (29.5 %), specific phobia (25.9%), generalized anxiety disorder (27.7%), panic disorder (24.1%), ADHD (24.1%), ODD (20.5%), CD (14.3%), and separation anxiety disorder (17%). The racial breakdown was as follows: 70.5% White/ Caucasian, 2.7% Asian, 1.8% Black, 0.9% American Indian/Alaska Native, 6.3% multiracial or other, and 17.9% did not report. Moreover, 66.1% of the adolescents' parents were married, 15.2% were divorced. 1.8% were widowed parents, 1.8% were living with someone as married, and 15.2% did not report. The sample was generally of high socioeconomic status and well-educated: 12% of the participants, for which family socioeconomic data was available (83% of the sample) reported to have monthly income between \$40,000 and \$99,999 USD, 17.2% between \$100,000 and \$149,999 USD, 7.6% between \$150,000 and \$199,999 USD, 55.9% over \$200,000 USD, and 7.5% decline to answer. Moreover, 43.1% of parents reported having a bachelor's degree, 20.7% a master's degree, 12.1% a professional degree (JD, MD), 1.7% a technical or associates degree, 0.9% a doctoral degree, 0.9% high school diploma or equivalent, 5.4% reported completing some college, and 15.5% did not report.

2.2. Measures

The Childhood Trauma Questionnaire (CTQ; Bernstein and Fink, 1998) is a 28-item self-report inventory with five subscales assessing severity of different types of childhood maltreatment: Emotional Abuse (e.g. "People in my family called me things like 'stupid,' 'lazy,' or 'ugly.""), Physical Abuse (e.g. "People in my family hit me so hard that it left me with bruises or marks."), Sexual Abuse (e.g. "Someone tried to touch me in a sexual way or tried to make me touch them."), Emotional Neglect (e.g. reversed item: "There was someone in my family who helped me feel that I was important or special."), and Physical Neglect (e.g. "I had to wear dirty clothes"), and one scale assessing tendencies of respondents to minimize/deny maltreatment experiences. Each subscale is composed of 5 items (except Minimalization/Denial scale which is composed of 3) rated on a 5-point scale (from 1 =never true to 5 = every often true). A previous study indicated the CTQ is characterized by acceptable to good internal reliability and good criterionrelated validity in a sample of adolescents (Bernstein et al., 2003). In the current study, Cronbach's alpha was 0.87 for Emotional Abuse, 0.66 for Physical Abuse, 0.90 for Emotional Neglect, 0.95 for Sexual Abuse and 0.52 for the Physical Neglect subscale; these values of alpha coefficients are similar or higher than in other studies on adolescents with serious psychosocial problems, i.e. youth receiving child protective services (Ellenbogen et al., 2015).

The Personal Feelings Questionnaire (PFQ-2; Harder and Zalma, 1990) is a self-report adjective checklist with each item rated on a 4-point scale (from 0 = you never experience the feeling to 4 = you experience the feeling continuously or almost continuously) that measures the degree of generalized shame and guilt experienced by a participant. The shame subscale includes ten items (e.g. feeling humiliated, embarrassed; feelings of blushing), the guilt subscale includes six items (e.g. intense guilt, remorse, regret), and there are six additional 'filter' items. Previous studies indicated the PFQ-2 is characterized by acceptable to good internal reliability and adequate test-retest reliability (e.g. Di Sarno et al., 2019; Harder and Greenwald, 1999; Harder and Zalma, 1990; Piotrowski, 2013). Most of the studies have supported strongly or moderately the discriminant validity of the shame and guilt subscales (e.g. Di Sarno et al., 2019; Harder and Greenwald, 1999; Harder and Zalma, 1990; Harder et al., 1992; Harder et al., 1993). Furthermore, studies that used the PFQ-2 in adolescent samples demonstrated, consistent with predictions, relations of guilt and shame to

other constructs (Donatelli et al., 2007; Piotrowski, 2013). In the current study, Cronbach's alpha was 0.84 for the shame subscale and 0.83 for the guilt subscale.

The Beck Depression Inventory-II (BDI-II; Beck et al., 1996) is a 21-item self-report measure of depressive symptoms based on DSM-IV criteria. Each item is rated on a 0–3 scale (e.g. from 0 = "I have not lost interest in other people or activities" to 3 = "It's hard to get interested in anything") and total scores range from 0 to 63. The BDI-II has demonstrated excellent validity and reliability in samples of adolescent inpatients (Osman et al., 2004). Internal consistency was excellent for the current study (α = 0.93).

The Columbia-Suicide Severity Rating Scale (C-SSRS: Posner et al., 2011) Lifetime Version is systematic clinical interview used to measure the occurrence of suicidal ideation and behaviors over a lifetime. Two suicidal ideation subscales were used in the present study, measuring the severity and intensity of suicidal thoughts. The severity subscale grades the potential suicidal ideation thus: (1) wish to be dead, (2) nonspecific active suicidal thoughts, (3) active suicidal thoughts with methods, (4) suicidal intent, and (5) suicidal intent with a plan. If the participant received at least one point on the Suicidal Ideation Severity subscale, the Suicidal Ideation Intensity subscale is used (e.g. "How many times have you had these thoughts?"). In previous studies, the suicidal ideation subscales of the C-SSRS have demonstrated good convergent and divergent validity with other suicidal ideation scales (Posner et al., 2011) and predictive validity for short-term suicidal behavior of any type (Conway et al., 2016; Posner et al., 2011) among high-risk adolescents. In the current study, Cronbach's alpha was 0.64 for the severity subscale and 0.68 for the intensity subscale.

2.3. Procedures

This study was approved by appropriate institutional review boards. All adolescents admitted to an inpatient psychiatric unit were approached on the day of admission about participating in this study. Informed consent from the parents was collected first, and if granted, assent from the adolescent was obtained in person. Assessments occurred within the first two weeks of admission. Specifically, the BDI-II and the CTQ were given priority and assessed within the first few days of admission (up to one week after admission), as these were used for diagnostic conferences on the unit. The C-SSRS, which assesses lifetime events, and the PFQ-2, which is a measure of general personal characteristics, were assessed within the first two weeks.

2.4. Data analytic strategy

Spearman's rank-order was used to calculate correlations between the variables. Taking into account the non-normal distribution of variables, the Mann-Whitney two-sample test was used to verify whether there were differences between male and female adolescents in the analyzed variables. Additionally, descriptive statistics were presented in the form of means (M), standard deviations (SD), median (Me) and quartile deviation (Q). Multivariate tests of normality including the Doornik–Hansen omnibus test ($\chi^2_{(df=20)}=676.32;\ p<0.001$), Henze–Zirkler's consistent test ($\chi^2_{(df=1)}=253.99;\ p<0.001$) and Mardia's multivariate kurtosis test ($\chi^2_{(df=220)}=611.41;\ p<0.001$) were used to examine the multivariate normality assumption. Their results indicated violation of the multivariate normal distribution.

The theoretical model of relations between five dimensions of childhood maltreatment, shame, guilt, depression and suicidal ideation intensity and severity was tested using path analysis. The Stata 14 software with ado-file: swain_gof (Antonakis and Bastardoz, 2013; Langer, 2017) was used to estimate the structural equation model. The model was examined using the maximum likelihood method. However, due to the non-normally distributed data, the Sattora-Bentler adjustment (Satorra and Bentler, 1994) was applied. Fouladi (2000) and

Nevitt and Hancock (2004) have recommended using the Bartlett correction of the Sattora-Bentler adjusted likelihood ratio test for nonnormally distributed data and small samples. However, previous studies revealed that the Swain correction is better than the Bartlett correction for small samples and large models with many indicators (Herzog et al., 2007). The proposed model fits the data well when the chi-square value is statistically insignificant (p > 0.05). The values of root mean square error of approximation (RMSEA) should be lower than 0.08 to indicate that the model is well-fitted, and optimally lower than 0.05. Values of standardized root mean square residual (SRMR) lower than 0.08 suggest that the model is a good fit to data. The comparative fit index (CFI) should be higher than 0.90 for an acceptable model and equal to 1 for a perfect model. Values of Tucker-Lewis Index (TLI) higher than 0.95 suggest that the model fits the dataset well (Byrne 2010; Kline, 2011). The Swain correction of the Sattora-Bentler adjusted likelihood ratio test, CFI, TLI, and RMSEA were used (see Antonakis and Bastardoz, 2013; Langer, 2017). In order to analyze the indirect effects of childhood maltreatment on suicidal ideation intensity and severity via generalized shame, generalized guilt, and depressive symptoms, we calculated indirect effects for these relations.

3. Results

Descriptive statistics of all variables and Spearman's rank-order correlations between variables are presented in Table 1. Depressive symptoms correlated positively with emotional abuse, emotional neglect, physical neglect, generalized shame, generalized guilt, intensity of suicidal ideation, and severity of suicidal ideation, but not with physical and sexual abuse. Moreover, there was a positive correlation between generalized guilt and other variables except for physical abuse. Also, generalized shame correlated negatively with other variables except for physical and sexual abuse. The detailed results are presented in Table 1.

In order to assess the differences between girls and boys, we performed independent samples Mann-Whitney tests. There was a difference between adolescent girls and boys in sexual abuse (z = -2.16; p = 0.031). However, the results showed no differences between adolescent girls and boys in other analyzed variables (see Table 2).

In the first step we examined the proposed model (see Fig. 1). Based on the analyses, it was established that the model was characterized by not fully satisfactory fit: $\chi^2_{(df=19)} = 30.27$, p=0.049, $\chi^2/df=1.59$, RMSEA = 0.073, SRMR = 0.056, CFI = 0.968, TLI = 0.942. Consequently, taking into account: (i) that Ferenczi (1955b) described situations in which a person neglected in childhood (so-called "unwelcome child"), although aware that he or she is not responsible for his or her family situation, may develop depressive symptoms in the form of emotional coldness, deep pessimism, aversion to life, and suicidal ideation and behavior, (ii) previous studies indicating a relation between emotional neglect and depression (e.g. Hanson et al., 2015; Jessar et al., 2017; Neumann, 2017); and (iii) modification indices, the path between emotional neglect and depressive symptoms was included

(see Fig. 2). We decided to add a direct path only from this form of maltreatment to depression, because Ferenczi (1955b) described how specific emotional neglect (in an "unwelcome child") results in the development of anhedonic depressive symptoms (that are not accompanied by excessive guilt and shame) and suicidality. We did not add a direct path between other forms of childhood trauma and depression in the model because, according to Ferenczi (1955a), in these cases depressive symptoms are the result of internalization of the harsh and negative attitudes of caregivers, leading to the development of severe guilt and/or shame. After this change, the model was characterized by a good fit: $\chi^2_{(df = 18)} = 16.77$, p = 0.539, $\chi^2/df = 0.93$, RMSEA = 0.001, SRMR = 0.033, CFI = 1.000, TLI = 1.007. Comparisons of these models via a χ^2 difference test (Steiger et al., 1985) showed a significant difference between analyzed models: $\chi^2_{\text{diff } (df = 1)} = 13.50$; p = 0.002. Additionally, the Akaike information criterion (AIC; Akaike, 1987) and the Browne-Cudeck criterion (BCC; Browne and Cudeck, 1989) were used to compare these models. The values of AIC and BCC were lower for the model with a path between emotional neglect and depressive symptoms (AIC = 6186.86, BCC = 6314.63) than for the initial model (AIC = 6197.48, BCC = 6322.53). As models with lower AIC and BCC are considered to be more informative, our results can be interpreted as showing that the model with a path between emotional neglect and depressive symptoms was better than the initial model (see Fig. 2).

Our findings showed that emotional abuse ($\beta = 0.270, p = 0.044$) was positively related to generalized shame, while physical abuse ($\beta = -0.282$, p = 0.001) was negatively related to generalized shame. There was also a positive relationship between sexual abuse $(\beta = 0.266, p = 0.006)$ as well as physical neglect $(\beta = 0.250, p = 0.006)$ p = 0.009) and generalized guilt. Moreover, physical abuse ($\beta = -$ 0.327, p < 0.001) was negatively and significantly related to generalized guilt. Our findings showed that generalized shame ($\beta = 0.371, p <$ 0.008) and guilt ($\beta = 0.335$, p < 0.001) were positively associated with depressive symptoms. Moreover, depressive symptoms were positively related to suicidal ideation intensity ($\beta = 0.589$, p < 0.001) and severity ($\beta = 0.552$, p < 0.001). In addition, there was a positive correlation between the residuals of generalized shame and guilt (r = 0.699, p < 0.001). Also, there was a positive correlation between the residuals of suicidal ideation intensity and severity (r = 0.659, p <0.001). Detailed results are shown in Fig. 2.

The standardized indirect effects of childhood maltreatment on suicidal ideation intensity and severity via generalized shame, generalized guilt, and depressive symptoms are presented in Table 3. Our results showed significant standardized indirect negative effects of physical abuse on suicidal ideation intensity and severity via generalized shame, generalized guilt, and depressive symptoms. There were also indirect positive effects of sexual abuse and physical neglect on suicidal ideation intensity and severity via generalized guilt and depressive symptoms. Finally, there was a significant indirect positive effect of emotional neglect on suicidal ideation intensity and severity via depressive symptoms (see Table 3).

Means, standard deviations, and correlations between variables (N = 112).

Variables	M	SD	1	2	3	4	5	6	7	8	9
1. Emotional Abuse	10.81	5.34	_								
2. Physical Abuse	6.63	2.69	.521***	_							
3. Sexual Abuse	6.49	4.44	.359***	.263**	_						
4. Emotional Neglect	11.71	4.94	.713***	.406***	.247**	_					
5. Physical Neglect	7.27	2.54	.446***	.306**	.263**	.538***	_				
6. Generalized Shame	21.38	8.16	.386***	028	.145	.290**	.216*	_			
7. Generalized Guilt	12.61	5.63	.296**	056	.189*	.281**	.388***	.718***	_		
8. Depressive Symptoms	29.98	14.39	.467***	.104	.149	.425***	.311**	.673***	.653***	_	
9. SI Intensity	13.89	5.98	.329***	.125	.245**	.277**	.155	.508***	.489***	.584***	_
10. SI Severity	3.75	1.72	.341***	.085	.225*	.262**	.013	.412***	.406***	.467***	.588***

Note. SI Intensity - intensity of suicidal ideation; SI Severity - severity of suicidal ideation; ***p < .001, **p < .01, *p < .05.

Table 2
The differences between girls and boys.

Variables	Girls $(n = 73)$				Boys (n =	Boys $(n = 39)$				р
	M	SD	Ме	Q	M	SD	Ме	Q		•
Emotional Abuse	10.96	5.53	10.00	4.00	10.54	5.04	9.00	4.50	0.29	0.773
Physical Abuse	6.56	2.75	5.00	1.00	6.77	2.62	6.00	1.00	-1.03	0.301
Sexual Abuse	6.95	5.09	5.00	0.50	5.64	2.72	5.00	0.00	-2.16	0.031*
Emotional Neglect	11.84	5.23	12.00	4.50	11.46	4.42	11.00	3.50	-0.18	0.854
Physical Neglect	7.25	2.72	6.00	1.50	7.31	2.18	7.00	2.00	-0.73	0.467
Generalized Shame	22.16	7.58	23.00	5.50	19.92	9.06	18.00	6.50	1.50	0.133
Generalized Guilt	13.07	5.60	12.00	4.50	11.74	5.64	11.00	4.00	1.19	0.233
Depressive Symptoms	30.86	14.13	32.00	11.50	28.33	14.91	29.00	12.00	0.82	0.414
SI Intensity	14.21	5.71	15.00	3.00	13.31	6.49	14.00	3.50	-0.78	0.438
SI Severity	3.92	1.66	5.00	0.50	3.44	1.82	4.00	1.50	-1.44	0.149

Note. SI Intensity - intensity of suicidal ideation; SI Severity - severity of suicidal ideation; *p < .05

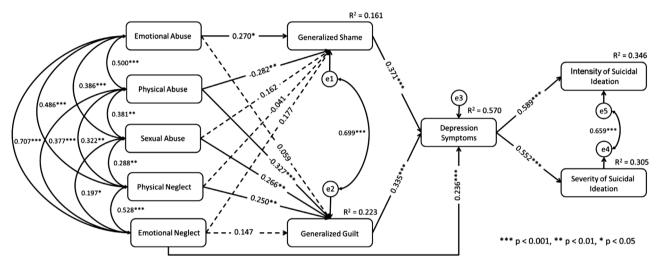


Fig. 2. Structural model of relations between childhood maltreatment, shame, guilt, depression and suicidal ideation intensity and severity in inpatient adolescents.

Table 3
Standardized indirect effects with 95% confidence intervals.

Model pathways	Point estimates	959	%CI	z	p	
		Lower	Upper			
Emotional Abuse – GG – DS – ISI	0.011	-0.035	0.058	0.49	0.622	
Emotional Abuse – GG – DS – SSI	0.011	-0.033	0.055	0.49	0.623	
Emotional Abuse – GS – DS – ISI	0.053	-0.004	0.110	1.83	0.067	
Emotional Abuse – GS – DS – SSI	0.050	-0.004	0.105	1.80	0.072	
Physical Abuse – GG – DS – ISI	-0.064	-0.109	-0.020	-2.82	0.005**	
Physical Abuse – GG – DS – SSI	-0.061	-0.103	-0.018	-2.78	0.006**	
Physical Abuse – GS – DS – ISI	-0.056	-0.100	-0.011	-2.45	0.014*	
Physical Abuse – GS – DS – SSI	-0.052	-0.093	-0.011	-2.45	0.014*	
Sexual Abuse – GG – DS – ISI	0.052	0.002	0.104	2.02	0.043*	
Sexual Abuse – GG – DS – SSI	0.049	0.002	0.097	2.03	0.042*	
Sexual Abuse – GS – DS – ISI	0.032	-0.011	0.074	1.47	0.143	
Sexual Abuse – GS – DS – SSI	0.030	-0.010	0.070	1.47	0.141	
Emotional Neglect – GG – DS – ISI	0.029	-0.019	0.077	1.18	0.238	
Emotional Neglect – GG – DS – SSI	0.027	-0.018	0.073	1.17	0.243	
Emotional Neglect – GS – DS – ISI	0.034	-0.022	0.092	1.20	0.229	
Emotional Neglect – GS – DS – SSI	0.032	-0.020	0.086	1.21	0.227	
Physical Neglect – GG – DS – ISI	0.049	0.007	0.092	2.26	0.024*	
Physical Neglect – GG – DS – SSI	0.046	0.007	0.085	2.33	0.020*	
Physical Neglect – GS – DS – ISI	-0.008	-0.045	0.029	-0.42	0.674	
Physical Neglect – GS – DS – SSI	-0.008	-0.042	0.028	-0.42	0.675	
Emotional Neglect – DS – SSI	0.130	0.055	0.206	3.38	0.001*	
Emotional Neglect – DS – ISI	0.139	0.061	0.217	3.50	0.001*	

Note. GG - generalized guilt; GS - generalized shame; DS - depressive symptoms; ISI - intensity of suicidal ideation; SSI - severity of suicidal ideation; ***p < .001, **p < .05

4. Discussion

Results partly confirmed the proposed theoretical model (Fig. 1), indicating that some of the forms of childhood maltreatment have indirect significant positive effects on suicidal ideation via guilt and/or shame and depressive symptoms. Hypothesis 1 was partly confirmed because our results show that sexual abuse and physical neglect are positively associated with generalized guilt (but not shame), and emotional abuse is positively related to generalized shame (but not guilt) in the model. Contrary to hypothesis 1, negative relationships between physical abuse and both guilt and shame were obtained, and emotional neglect was not associated with generalized self-conscious emotions in the model. Both the presence of positive relationships between generalized shame and guilt with depressive symptoms (hypothesis 2) and positive relations of depressive symptoms and suicidal ideation severity and intensity (hypothesis 3) in the model were confirmed. The results partially confirmed hypothesis 4, indicating that some of the forms of childhood maltreatment have indirect positive effects on suicidal ideation via guilt and/or shame, and depressive symptoms.

Physical neglect was positively correlated with generalized shame and guilt, and sexual abuse was positively related to guilt but not shame at a bivariate level. In addition, these forms of maltreatment were positively related to generalized guilt but not shame in our model, and there were indirect positive effects of sexual abuse and physical neglect on suicidal ideation via generalized guilt and depressive symptoms. An adolescent who experienced sexual abuse and/or physical neglect may feel guilty because of strong ambivalent feelings towards the caregivers; in the case of sexual abuse, the victim may have a strong bitterness toward the perpetrator and those who allowed abuse, kept it secret, or made the victim keep silent (Holmes, 2015; Kilroy et al., 2014; Mészáros, 2010). In turn, the adolescent who experiences physical neglect depends on people who do not provide elementary support and satisfaction of basic needs. Emotional entanglements of victims of this type of childhood trauma can lead to guilt for experiencing strong, negative feelings towards attachment figures. In addition, both sexual abuse and physical neglect are often associated with parentification, which is a kind of reversal of roles in the family. Physically neglected adolescents may feel burdened with a great responsibility for the difficult situation of parents (Burton et al., 2018; Jurkovic, 1997), and sexually abused adolescents may experience guilt about the role of the sexual partner of the caregiver. Sexually abused youth may feel responsible for the event or the perpetrator's failure to take responsibility (Ferenczi, 1955a; Frankel, 2002; Ginzburg et al., 2009). Feelings of guilt could reflect negative self-appraisals for failed actions that the individual believes would have protected against abuse or created a less harmful outcome (Wilson et al., 2006). Perpetrators of sexual abuse may also strengthen the sense of guilt in the victim. Thus, adolescents who have experienced such forms of maltreatment may overly take responsibility for their own and their family's situation, to protect a positive image of caregivers (Holmes, 2015).

Surprisingly, an association between sexual abuse and shame was not found in the current study. Previous research has shown that shame that is generalized to other areas (e.g. regarding family who did not protect the victim, one's own body, self-image, sex, and talking about experience of abuse during therapy) can be extensive in sexual abuse survivors (e.g. Feiring and Taska, 2005; Pettersen, 2013). Failure to demonstrate this relationship in our study may be due to the specifics of the measure of shame that was used; four out of ten items from the shame subscale of the PFQ-2 may be better indicators of embarrassment rather than shame. Earlier studies using the PFQ-2 also did not reveal relations between sexual abuse and shame (Kealy et al., 2017, 2018). Thus, it could be that PFQ-2 does not capture shame-related feelings experienced by victims of sexual abuse. Perhaps the inclusion of measures of self-conscious emotions that assess not only generalized shame, but also various dimensions of shame, would reveal that sexual abuse is

related not only to generalized guilt, but also to some of the above dimensions of shame (e.g. shame related to abuse, one's body and sexuality), which can also be positively associated with depression and suicidal ideation.

Also, contrary to expectations, a positive relationship between physical neglect and shame in our model was not revealed. Children who experience physical neglect may often have to perform parental roles and feel highly responsible for taking care of various family needs. Some of them seem to experience a sense of efficacy in performing adult roles that could protect them from experiencing shame and associated feelings of being worthless and powerless (Mayseless et al., 2004). In addition, the inclusion of guilt (which co-occurs with shame but is more strongly associated with sexual abuse and physical neglect) could be the cause of the insignificant relationship of this form of maltreatment with generalized shame in our model.

The experience of emotional abuse was positively associated with generalized shame but not guilt in the model (although it was positively correlated at a bivariate level with both shame and guilt). The results of earlier studies also suggest stronger relationships of this type of childhood trauma with shame than guilt (Kealy et al., 2018), or indicate that it is associated only with shame but not with guilt (Hoglund and Nicholas, 1995; Webb et al., 2007). A tendency to experience generalized shame in victims of emotional abuse may arise from the awareness of being humiliated and could be a result of internalization of the negative messages and criticisms received that refer mostly to the self. Perpetrators of emotional abuse focus most often on a child's alleged negative characteristics (e.g. being stupid or ugly) as a cause of various negative outcomes, not on his/her actions that could be modified and repaired (Campos et al., 2013; Frankel, 2004). In effect, youth who experienced emotional abuse may experience mostly shame as an emotion that concerns one's entire being, not guilt that motivates a repair of the perceived failure.

In the above situations, i.e. in cases of sexual and emotional abuse and physical neglect, the lack of reflecting and mentalizing painful and overwhelming self-conscious emotions related to maltreatment within close and supportive relationships may result in the internalization and generalization of severe guilt and/or shame (Ferenczi, 1955a; Holmes, 2018; Mészáros, 2010); this is referred to in the mentalization-based literature as the "alien self" (Bateman and Fonagy, 2004; Fonagy et al., 2002). In such circumstances, pathological guilt and excessive responsibility may be associated with a tendency to experience depressive states, and to activate suicidal ideation as a form of self-punishment (Holmes, 2018; Kealy et al., 2017; Wille, 2014; You et al., 2012). In turn, shameful experiences may become generalized, leading to depressive symptoms and activating suicidal thoughts as an expression of self-hatred (Campos et al., 2013; Holmes, 2018; Wille, 2014).

Results also showed that the experience of emotional neglect was positively correlated with generalized shame and guilt, but not significantly related to these variables when other types of maltreatment were included in the model, suggesting that other types of childhood trauma are more closely associated with generalized shame and guilt than emotional neglect. However, this kind of childhood trauma was directly associated with depressive symptoms and had a significant positive indirect effect via depressive symptoms on suicidal ideation, which partly confirms the hypothesis 4. It is possible that variables other than shame and guilt mediate the relationship between emotional neglect and depression. Ferenczi (1955b) described how emotional neglect of the "unwelcome child" leads to the development of symptoms in the form of emotional coldness, pessimism, aversion to life, and suicidal ideation and behavior. In the context of emotional neglect, in the absence of an emotional mirroring environment, the child may generate a vulnerability to emotion dysregulation which can manifest as a difficulty in managing emotional triggers, against a background of low mood. When parents are emotionally unresponsive and unavailable to the child's needs, the child may develop and use deactivating emotion regulation strategies associated with emotional suppression,

deactivation of proximity seeking, inhibition of support seeking, and attempts to handle distress alone (e.g. Faravelli et al., 2014; Main et al., 1985; Mikulincer and Shaver, 2012), resulting in increased risk for anhedonic symptoms of depression and in effect for suicidal ideation (Faravelli et al., 2014; Malik et al., 2014).

When included together with other forms of maltreatment, contrary to hypothesis 1, physical abuse was negatively associated with generalized guilt and shame in our model (and unrelated at a bivariate level with self-conscious emotions); in addition, contrary to hypothesis 4, it also had significant, negative indirect effects on suicidal ideation via generalized guilt and shame and depressive symptoms in the model. It seems that physical abuse could be such a harmful form of maltreatment that adolescents react with emotional detachment to cope with overwhelming feelings of fear and sadness, especially when the perpetrator is a person with whom the adolescent has a close relationship (Freyd, 1996). In the long-term, emotional numbing may have negative consequences such as withdrawal of empathy, maintenance of callousness toward others, and deficits in recognition of one's own internal emotions, including feelings of guilt and shame (Kerig et al., 2012). Low levels of empathy and problems with emotional awareness and regulation could result in aggressive and antisocial behaviors. Such an explanation would be consistent with the results of the research, indicating positive relationships of this form of maltreatment with externalization of negative emotions and directing blame and aggression toward other people (Renner, 2012; Renner and Boel-Studt, 2017; Williamson et al., 1991; Yoon et al., 2018). On the other hand, contrary to our results, previous studies of adolescents (Kaplan et al., 1999) and adults (Lindert et al., 2014) indicate that physical abuse can be a risk factor for depression. To some extent, the obtained findings may result from the self-reported assessment approach. Adolescents may not remember incidents of physical abuse during early childhood, or in cases when physical abuse occurred recently, adolescents may underreport physical abuse out of fear that it would cause greater family disruption and/or would cause them to stay longer in the inpatient setting.

The study suggests some clinical recommendations. We suggest that effective psychotherapeutic interventions for reducing the intensity and severity of suicidal ideation in adolescents who are victims of childhood maltreatment should place a focus on pathological feelings of guilt and/ or shame, including the mirroring and mentalization of self-conscious emotions, in the context of the current and past mental states of the adolescent and perpetrator(s) (Allen et al., 2008; Fonagy et al., 2002). Consistent with the idea of the alien self, it is important that the clinician has a full appreciation of the intensity of feelings of defectiveness, shame and guilt. Working through the painful experiences of maltreatment and their effects on generalized guilt and/or shame may reduce the tendency to experience self-criticism, depressive symptoms, and suicidal ideation. It is important for victims of maltreatment to develop abilities to reflect upon their own and others' mental states in the context of a secure therapeutic relationship. Such conditions favor meaningful, flexible, and exploratory mentalizing and in effect promote both regulation of emotions and understanding the sources of psychological problems (Allen et al., 2008; Bateman and Fonagy, 2004; Fonagy et al., 2002). Otherwise, there may be a risk of co-rumination with the patient, i.e. excessive and inflexible discussion of emotional problems (Stone et al., 2011), which may lead to an increase in selfconscious emotions and depression symptoms (Orth et al., 2006). In the case when a victim of maltreatment is ruminating, mentalization-based therapy enables reflection on the maladaptive character of a ruminative state of mind and directs change at moving from ruminating to effective problem solving (Allen et al., 2008; Wells and King, 2006). Existing research on the effectiveness of therapy for childhood sexual abuse victims indicates that treatment based on different theoretical orientations has helped to reduce feelings of guilt and/or shame and depressive symptoms (e.g. Ginzburg et al., 2009; Morrison and Treliving, 2002; Rieckert and Möller, 2000; Saha et al., 2011; Talbot et al., 2011). Most of this type of exploration, however,

concerned adult women, and moreover, it has rarely focused on treating the effects of types of maltreatment other than sexual abuse (e.g. Lee et al., 2012). Given our results and gaps in this literature, there is a special need to undertake research on the effectiveness of therapeutic interventions focused on generalized guilt in adolescents with physical neglect history, as well as research focused on generalized shame in adolescents who experienced emotional abuse, for reduction of depressive symptoms and suicidal ideation. In this context, it may be important to start treatment quickly because a shorter duration of untreated depression is associated with more favorable outcomes in depressed individuals (Ghio et al., 2015).

There are several limitations to the current study. First, participants of the study were patients of a private psychiatric hospital. While conducting research in a clinical sample allowed the use of a relatively large sample with higher severity and intensity of suicidal ideation than a community sample, our findings may not generalize to other adolescent populations including community and inpatient samples from diverse backgrounds. Moreover, most participants were Caucasian adolescents from well-educated and financially stable environments, and the number of participants who experienced sexual or physical abuse was not large. Therefore it would be important to investigate relations between suicidal ideation and measured variables in a larger group of adolescents from other clinical and community samples. Secondly, experiences of maltreatment, generalized shame and guilt, and depressive symptoms were measured only with self-report measures that are subjective and vulnerable to biases such as the participants' mood or social desirability (Podsakoff et al., 2003). Although there were no significant differences between boys and girls in the most of the measured variables, it would be valuable to consider gender as a moderator of relations in future studies; unfortunately, the group of male participants was not large enough to test our model separately in girls and boys. In addition, although the use of path analysis provides some evidence for our theoretical model, it is impossible to determine temporal and causal relations between measured constructs, given the correlational and cross-sectional nature of the study. Furthermore, in accordance with our theoretical assumptions, some of the constructs included in our study were measured retrospectively across the lifespan (childhood maltreatment, suicidal ideation) or as a general tendency (generalized shame and guilt). However, participants were asked to assess their depressive symptoms in the last two weeks in BDI-II. It would be more appropriate and consistent with the theoretical assumptions to measure the tendency to experience depressive states over years after experience of maltreatment instead of assessing it at only one current point in time. Furthermore, only use of a longitudinal design would allow for the investigation of temporal relations between childhood maltreatment, generalized shame and guilt, depressive states and suicidal ideation. In addition, a conceptual and psychometric limitation is also the fact that depressive symptoms partly overlap with some aspects of generalized shame and guilt and suicidal ideation severity and intensity, which may result in inflation of the relationship between the shame and guilt subscales of the PFQ-2 and the BDI-II, as well as between the BDI-II and C-SSRS subscales. Another psychometric limitation is the questionable reliability of the C-SSRS and emotional neglect subscale in CTO. In particular, the results from the CTO physical neglect subscale should be treated with caution, as this is characterized by poor reliability in our study; this may be due to the fact that adolescents from families with high socioeconomic status were studied, in which some forms of physical neglect, such as lack of food, may rarely occur. Nevertheless, subscales for which reliability in the study is questionable or weak consist of five items, and in such cases weaker Cronbach's alpha values are often obtained, due to the method of calculating this coefficient (its value increases with the number of items in the subscale).

Despite these limitations, the current results provide novel information about factors that may underlie the relation between different forms of maltreatment and adolescent suicidal ideation. Various aspects of our study design, such as the measurement of different forms of maltreatment and generalized guilt and shame, inclusion of an inpatient sample, and usage of path analysis, allowed us to demonstrate significant relationships between various forms of maltreatment, generalized guilt and shame, depressive symptoms and suicidal ideation that were previously described by clinicians (e.g. Ferenczi, 1955a; Fonagy et al., 2002; Frankel, 2002; Holmes, 2015, 2018). Our results emphasize a need to further explore complex associations between these constructs. Future work should investigate various pathways leading from childhood maltreatment to suicidal ideation in different age groups, applying longitudinal design, and using various self-report, observational and interview measures (see Dohary Clearwater, 2012; Pettersen, 2013; Stuewig and McCloskev, 2005), It would be important to further investigate which types of maltreatment and what combinations of various forms of abuse are the most strongly related to generalized guilt versus shame, depressive symptoms and suicidal ideation, as well as suicide attempts. Furthermore, it would be worthwhile to include other variables that could mediate relations between experiences of various forms of maltreatment and suicidal ideation, such as insecure attachment styles and states of mind, emotion regulation, mentalizing abilities, and identity diffusion. Finally, it would be important to investigate characteristics of various forms of dealing with experiences of maltreatment by victims and to explore under what conditions such traumatic experiences lead to emotional numbing, and when they lead to high levels of emotional reactivity and high severity of self-conscious emotions.

Our study shows that various types of childhood maltreatment seem to be differentially related to guilt versus shame, as well as to depression and suicidal thoughts in adolescents. Understanding these complex associations has consequences for preventive and therapeutic interventions aimed at reducing depressive symptoms and severity and intensity of suicidal ideation in youth.

Declaration of Competing Interest

None

Funding source

This research was funded by the McNair Family Foundation. The Maria Grzegorzewska University funded open access publication fees.

Acknowledgments

We wish to thank all the families and adolescents who participated in the research.

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