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Research Article

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Childhood Maltreatment and Suicide Ideation in Youth with Depression

Depresyon Tanılı Gençlerde Çocukluk Çağı Travmaları ve İntihar Düşüncesi

Songül Derin [1], İbrahim Genç [2], Saliha B. Selman [3]

[1] Bezmialem Vakif University, Child and Adolescent Psychiatry İstanbul, Türkiye
[2] Bezmialem Vakif University, Medicine Faculty, İstanbul, Türkiye
[3] Ibn Haldun University, Psychology, İstanbul, Türkiye

Abstract

Background: Childhood maltreatment is consistently associated with adolescent depression and suicidal ideation. Ideation-to-action frameworks (Integrated Motivational-Volitional model; Three-Step Theory) propose that suicidal ideation is closely related to proximal states such as depression, whereas other volitional factors may be relevant to movement from ideation to behavior. We examined whether depression status statistically accounted for the association between maltreatment severity and suicide ideation in youth, while also estimating any remaining direct association.

Methods: We analyzed 67 youths aged 11-18 years (M=15.7, SD=1.57). Cases were treatment-seeking outpatients with major depressive disorder (n=35), diagnosed by a child and adolescent psychiatrist using K-SADS-PL-DSM-5 interviews with youths and caregivers; controls (n=32) were community youths without K-SADS diagnoses. Participants completed the Childhood Trauma Questionnaire-Short Form (CTQ-SF) and the Suicide Probability Scale (SPS) (suicide-ideation subscale), with depressive symptoms corroborated using the Revised Child Anxiety and Depression Scale-Major Depressive Disorder (RCADS-MDD) subscale. A path model estimated associations for maltreatment→depression status (a), depression status→ideation (b), and maltreatment→ideation directly (c′).

Results: Depressed youths reported higher maltreatment and ideation than controls. Greater maltreatment severity was associated with depressed-group membership (a: β=0.167, p=0.003); depressed status was associated with higher ideation (b: β=1.102, p<0.001). A direct association remained (c′: β=0.300, p=0.008). The indirect association was significant (a×b: β=0.184, p=0.007), representing 38% of the total association.

Conclusion: Findings indicate substantial overlap between maltreatment, depression status, and suicide ideation, while suggesting additional correlates beyond depression; longitudinal research is needed.

Keywords Childhood maltreatment · Depression · Suicide ideation · Adolescents · Mediation · Path analysis

Öz

Arka Plan: Çocukluk çağı travmaları, ergenlikte depresyon ve intihar düşüncesiyle tutarlı biçimde ilişkilidir. Düşünceden-eyleme yaklaşımları (Bütünleyici Güdüsel-İradesel Kuramı [IMV] ve Üç Aşamalı İntihar Kuramı), intihar düşüncesinin depresyon gibi yakın etkenlerle bağlantılı olduğunu, davranışa geçişte ise ek iradesel etkenlerin rol oynayabileceğini belirtir. Bu çalışmada, travma şiddeti ile intihar düşüncesi arasındaki ilişkinin depresyonla ne ölçüde açıklandığını ve depresyondan bağımsız doğrudan ilişkinin sürüp sürmediğini inceledik.

Yöntemler: Yaşları 11-18 arasında değişen 67 genç (Ort.=15.7, SS=1.57) analiz edildi. Olgular, çocuk ve ergen psikiyatristi tarafından gençler ve ebeveynleriyle yapılan K-SADS-PL-DSM-5 görüşmeleri sonucunda majör depresif bozukluk tanısı konmuş hastalardan (n=35) oluşuyordu; kontroller (n=32) ise K-SADS tanısı olmayan toplum örnekleminden gençlerdi. Katılımcılar Çocukluk Çağı Travma Ölçeği-Kısa Formu (CTQ-SF) ve İntihar Olasılığı Ölçeği'ni (SPS) (intihar düşüncesi alt ölçeği) doldurdu; depresif belirtiler Gözden Geçirilmiş Çocuk Kaygı ve Depresyon Ölçeği-Majör Depresif Bozukluk (RCADS-MDD) alt ölçeği ile doğrulandı. Yol analizinde üç ilişki incelendi: (1) travmanın depresyon grubunda yer alma olasılığıyla ilişkisi (a yolu), (2) depresyon grubunda olmanın intihar düşüncesiyle ilişkisi (b yolu) ve (3) travmanın, depresyondan bağımsız olarak intihar düşüncesiyle doğrudan ilişkisi (c′ yolu).

Bulgular: Depresyon tanısı olan gençler, kontrol grubundaki gençlere kıyasla hem daha fazla çocukluk travması yaşadıklarını hem de daha fazla intihar düşüncesi bildirdiler. Travma şiddeti arttıkça depresyon grubunda olma olasılığının arttığı görüldü (a: β=0.167, p=0.003). Depresyon grubunda olmak da daha yüksek intihar düşüncesiyle ilişkiliydi (b: β=1.102, p<0.001). Bununla birlikte, travmanın intihar düşüncesiyle depresyondan bağımsız ilişkisi de sürdü (c′: β=0.300, p=0.008). Ayrıca travmanın, depresyon üzerinden intihar düşüncesiyle ilişkisini gösteren dolaylı yol da anlamlıydı (a×b: β=0.184, p=0.007) ve toplam ilişkinin %38'ini açıkladı.

Tartışma: Bulgular, çocukluk travması, depresyon ve intihar düşüncesinin önemli ölçüde birlikte seyrettiğini; ancak depresyonun tek başına yeterli açıklama sunmadığını düşündürmektedir. İlişkilerin zaman içindeki seyrini netleştirmek için boylamsal çalışmalara ihtiyaç vardır.

Anahtar Kelimeler Çocukluk çağı travmaları · Depresyon · İntihar düşüncesi · Ergen aracılık · Yol analizi

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Corresponding author: Songül Derin sderin@bezmialem.edu.tr

INTRODUCTION

Suicide is a major public health concern, with approximately 800,000 deaths occurring worldwide each year and at least 20 times as many attempts (1). Pathways to suicide are multifactorial, spanning biological, clinical, psychological, social, and cultural risks and protections (2, 3, 4). Yet, despite decades of research, population-level prediction has not improved meaningfully, partly due to low base rates and the tendency to assess risks in isolation and statically (5).

Adolescence confers elevated vulnerability to mood pathology and suicide risk (6, 7). In parallel, the prevalence of major depressive disorder increases (8, 9, 10, 11), and the disorder is linked to wide-ranging functional impairment and higher suicide risk (12, 13, 14). Childhood maltreatment, encompassing emotional, physical, and sexual abuse as well as neglect, shows a robust association with depression (15, 16, 17) and is reliably related to suicidal ideation and attempts (6, 7, 18, 19). According to stress-sensitisation models, early adversity calibrates stress-response and emotion-regulation processes and, in turn, heightens the risk for depressive psychopathology during adolescence (6, 7, 20).

Guided by ideation-to-action frameworks (21), including the Integrated Motivational-Volitional (IMV) model (22) and the Three-Step Theory (3ST) (23), depression may act as a proximal correlate of suicidal ideation, whereas volitional factors (e.g., capability for suicide, access to means, impulsivity, exposure to others' self-harm) are more relevant for the transition from ideation to behaviour. In line with these accounts, our focus is ideation, acknowledging that attempt-specific processes and dynamic risk escalations lie outside the present scope and may require distinct measurement strategies (5).

This study examines associations among childhood maltreatment, depression status (depressed/non-depressed), and suicide ideation. Our aims are to: (a) quantify the association between maltreatment severity and depressed-group membership; (b) estimate the association between depressed status and suicide-ideation scores while accounting for maltreatment; and (c) decompose the maltreatment-ideation link into direct and indirect (via depression) components. Consistent with theory and evidence, we expect maltreatment to be positively associated with depression, depression to be positively associated with ideation, and a substantive share of the maltreatment-ideation association to be indirect via depression, informing early screening and trauma-informed, depression-focused interventions for youth (6, 7, 22, 23).

MATERIALS AND METHODS

We provide a detailed explanation of the procedures followed for data exclusions, sample size determination, study manipulations, and measurement selection in the study, consistent with reporting standards for quantitative research (24, 25). The full dataset, codes operated for analysis, and research materials can be obtained by contacting the corresponding author via email. This study was not preregistered, as preregistration was not a standard practice in our research process at the time of its conception. The Bezmialem Vakif University Faculty of Medicine Institutional Review Board approved the study (No: E-54022451-050.04-144699, 14.03.2024).

Participants

A total of 67 youth aged 11–18 years (M = 15.74, SD = 1.57) who were referred to the Child and Adolescent Psychiatry Outpatient Clinic at Bezmialem Vakif University Faculty of Medicine in İstanbul, Türkiye participated in the study. Participants were selected from a pool of adolescents referred to the clinic through a variety of sources, both within and outside the hospital, such as paediatricians, psychotherapists, teachers, and self-referrals. Located in a central location of İstanbul, the clinic provides a specialised care and a comprehensive range of psychiatric services for children and adolescents with developmental, behavioural, and emotional difficulties, as well as typically developing children whose parents have given consent for their participation in research studies. Informed consent and assent were obtained from all parents and adolescents before their participation in the study.

Group Assignment

All youth and their accompanying parents underwent a comprehensive clinical interview, based on which their eligibility for the study was determined. Thirty-five youth were included in the case group based on the following criteria: (a) A formal major depressive disorder diagnosis made by a child and adolescent psychiatrist using a Kiddie Schedule for Affective Disorders and Schizophrenia - Present and Lifetime Version for DSM-5 (K-SADS-PL-DSM-5) interview conducted with both the parent and adolescent, which assesses symptom presence and severity across home and school settings based on DSM-5 criteria; (b) normal intellectual functioning as determined by clinical judgement, and the absence of any formal report indicating otherwise.

Thirty-two youth were included in the control group based on the following criteria: (a) Absence of any clinical diagnosis according to the K-SADS-PL-DSM-5 interview conducted with both the adolescent and their accompanying parent; (b) developmental history reported by the parent as being within normal limits. Youth in the control group were recruited through community schools, family acquaintances of referred children, and other community sources. Exclusion criteria included: (a) A history of significant neurological, sensory, or motor impairments, (b) a history of seizure disorders, (c) psychosis, or (d) intellectual disability.

Measures

Psychiatric diagnosis

Psychiatric diagnoses were assessed using the Kiddie Schedule for Affective Disorders and Schizophrenia-Present and Lifetime Version

for DSM-5 (K-SADS-PL-DSM-5) (26). This semi-structured interview, administered by trained clinicians, evaluates the onset, duration, severity, and impairment associated with current and past episodes of psychopathology in children and adolescents. Both the child and a parent or guardian were interviewed, allowing for integrating collateral information into diagnostic decisions. The K-SADS-PL-DSM-5 was the primary method for classifying participants into study groups, with youth in the case group meeting DSM-5 criteria for major depressive disorder and those in the control group not meeting criteria for depressive disorders. The instrument has well-documented reliability and validity, including in Turkish samples (27).

Depressive symptoms

The Revised Child Anxiety and Depression Scale (28) was administered as a self-report measure to corroborate the presence of depressive symptoms. Although the RCADS consists of 47 items assessing six DSM-aligned subscales (separation anxiety, social phobia, generalised anxiety, panic disorder, obsessive-compulsive disorder, and major depressive disorder), in the present study, only the major depressive disorder subscale was utilised. Items were rated on a 4-point Likert scale (0 = "*never*" to 3 = "*always*"). The scale was used solely to confirm symptom profiles across groups, with higher depressive symptoms in the case group and lower in the control group. The subscale demonstrated excellent internal consistency in this sample (α = .93), consistent with prior research validating the Turkish version (29).

Childhood maltreatment

Childhood maltreatment was assessed using the Childhood Trauma Questionnaire (CTQ) (15). The original CTQ-28 is a self-report measure of emotional, physical, and sexual abuse and emotional and physical neglect, plus three minimization/denial items. In this study, we used the Turkish adaptation of the expanded 33-item (CTQ-33) Turkish version (43), which adds a 5-item overprotection/overcontrol (OP-OC) subscale to the five original trauma subscales while retaining the three minimization/denial items. Items are rated on a 5-point Likert scale (1 = "never true" to 5 = "very often true"), with each trauma subscale (including OP-OC) ranging from 5 to 25 and the overall trauma score (sum of six subscales) ranging from 30 to 150; higher scores indicate greater exposure to childhood maltreatment and overcontrolling caregiving. The Turkish version of CTQ and CTQ-33 versions have demonstrated good reliability and validity in clinical and community samples (30, 43). In the present study, the reliability coefficients were sexual abuse (α = .89), physical abuse (α = .70), emotional abuse (α = .83), physical neglect (α = .46), emotional neglect (α = .68), and the total score (α = .83).

Suicide ideation

Suicide ideation was assessed using the suicide ideation subscale of the Suicide Probability Scale (SPS) (31), a 36-item self-report measure comprising four subscales: hopelessness, suicide ideation, hostility, and negative self-evaluation. Items are rated on a 4-point scale (1 = *never or rarely* to 4 = *most of the time or always*), with higher scores indicating greater risk. The SPS has been validated for Turkish adolescents (32). In this sample, reliability was satisfactory for the total score (α = .79) and excellent for the suicide ideation subscale (α = .90).

Demographic characteristics

Demographic characteristics were collected using a parent-report questionnaire. Information obtained included youth age and gender, parental education level, employment status, and monthly family income.

Analysis Plan

The data were analysed using a combination of descriptive statistics, group comparisons, bivariate correlations, and path analysis to examine associations between childhood maltreatment, depression, and suicidal ideation. Preliminary analyses assessed sociodemographic differences between the case and control groups using chi-square tests for categorical variables and independent-sample t-tests for continuous variables. Group comparisons of psychological measures were conducted using independent-sample t-tests to identify significant differences across key outcomes. Bivariate correlations were calculated to evaluate the strength and direction of associations among the study variables.

For the primary analysis, we specified a single-group path model in which the standardised childhood maltreatment total score served as the exogenous predictor, binary clinical case status (group; 1 = patient, 0 = control) functioned as the intermediate variable, and the standardised suicide ideation score was the distal outcome. Three structural paths were freely estimated: (a) childhood maltreatment to depression status, (b) depression status to suicide ideation, and (c′) childhood maltreatment to suicide ideation (direct effect). The indirect effect was defined as a x b and the total effect (c) as c′ + ab; the proportion mediated was calculated as ab / c. Covariates were entered only on the path in line with prior evidence and observed group differences: socioeconomic status (average parental education and household income), number of siblings, and parental-marital status.

Statistical analyses were conducted using the lavaan package (version 0.6.15) in R (version 4.2.3). Structural Equation Modelling (SEM) was performed using the Maximum Likelihood (ML) estimator with bootstrap standard errors based on 1,000 bootstrap draws to obtain robust inference for the indirect effects. Missing data were addressed with full information maximum likelihood (FIML), which allows unbiased parameter estimates under the assumption of missing at random. The ML estimator was used to obtain parameter estimates, given its suitability for continuous variables. To ensure accurate inference for indirect effects, we employed nonparametric bootstrapping with 1,000 resamples and percentile-based 95% confidence intervals. Bootstrapping was chosen because it does not

assume normality of the indirect effect distribution and provides more robust estimates of uncertainty.

Goodness-of-fit statistics were evaluated to assess model performance. A nonsignificant chi-square (χ^2) indicated good fit. The Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI), which compare model fit to a baseline model, with values above 0.95, indicated excellent fit (33). Furthermore, both the root mean square error of approximation (RMSEA) and the Standardised Root Mean Square Residual (SRMR), with values below 0.08, confirmed adequate fit in accordance with established guidelines (34, 35). Percentile bootstrapping was used to generate 95% confidence intervals.

RESULTS

Preliminary Analysis

Sociodemographic differences

Table 1. Demographic characteristics of participants

Variable	Case (N = 35)	Control (N = 32)	*p*
Gender (Female)	9 (25.7%)	11 (34.4%)	0.612
Age	15.6 (1.48)	15.9 (1.68)	0.35
Number of Siblings			
0	9 (25.7%)	1 (3.1%)	
1	15 (42.9%)	12 (37.5%)	0.0161
2	10 (28.6%)	11 (34.4%)	
3+	1 (2.9%)	8 (25.0%)	
Mother's Age	44.2 (5.42)	43.8 (4.83)	0.794
Mother's Education			
Primary school	18 (51.4%)	11 (34.4%)	
High school	8 (22.9%)	5 (15.6%)	0.112
University	9 (25.7%)	13 (40.6%)	
Master's/PhD	0 (0%)	3 (9.4%)	
Mother's Employment			
Unemployed	21 (60.0%)	19 (59.4%)	
Worker	8 (22.9%)	1 (3.1%)	0.0289
Civil servant	2 (5.7%)	8 (25.0%)	
Self-employed	4 (11.4%)	4 (12.5%)	
Father's Age	47.2 (5.89%)	47.4 (6.03%)	0.856
Father's Education			
Illiterate	1 (2.9%)	0(0.0%)	
Primary School	11 (31.4%)	6 (18.8%)	
High school	14 (40.0%)	6 (18.8%)	0.040
University	8 (22.9%)	16 (50.0%)	
Master's/PhD	1 (2.9%)	4 (12.5%)	
Father's Employment			
Unemployed	3 (8.6%)	2 (6.3%)	
Worker	11 (31.4%)	10 (31.3%)	0.810
Civil servant	5 (14.3%)	7 (21.9%)	
Self-employed	15 (42.9%)	13 (40.6%)	
Consanguineous Marriage (Yes)	4 (11.4%)	1 (3.1%)	0.408
Parental Marital Status (Married)	26 (74.3%)	30 (93.8%)	0.069
Household Income			
0–22,000 ₺ (Minimum wage)	10 (28.6%)	3 (9.4%)	
22,000-44,000 ₺	11 (31.4%)	4 (12.5%)	0.161
44,000+ ₺	14 (40.0%)	25 (78.1%)	

Note. Continuous variables are presented as mean and standard deviation (M, SD); categorical variables are presented as counts and percentages (N, %); p-values were calculated using independent two-sample t-tests for continuous variables and chi-squared tests of independence for categorical variables.

No significant differences were found between groups in age, gender, parental age, mother's education, or father's employment (all $p > 0.05$). However, the case group more often had no siblings (25.7% vs. 3.1%), whereas the control group more often had three or more siblings (25.0% vs. 2.9%; $p = 0.016$). Father's education also differed, with a higher proportion of university graduates in the control group (50.0% vs. 22.9%) and more primary school graduates in the case group (31.4% vs. 18.8%; $p = 0.040$). Mother's employment varied as well, with more case mothers working as labourers (22.9% vs. 3.1%; $p = 0.029$). Finally, household income was lower in the case group, with only 40.0% reporting >44,000 ₺ compared to 78.1% in the control group ($p = .006$). Additional demographic characteristics are presented in Table 1.

Group comparisons

The case group scored significantly higher across all measures than the control group. Childhood maltreatment subscale scores were elevated in the case group for sexual abuse ($M = 6.37$, $SD = 3.34$ vs. $M = 5.03$, $SD = 0.177$; $p = 0.023$), physical abuse ($M = 6.54$, $SD = 2.89$ vs. $M = 5.19$, $SD = 0.738$; $p = 0.010$), emotional abuse ($M = 10.4$, $SD = 5.01$ vs. $M = 6.16$, $SD = 1.48$; $p < 0.001$), physical neglect ($M = 6.43$, $SD = 1.69$ vs. $M = 5.34$, $SD = 0.827$; $p = 0.001$), and emotional neglect ($M = 9.46$, $SD = 2.75$ vs. $M = 7.25$, $SD = 2.21$; $p = <0.001$). The maltreatment total score was also significantly higher in the case group ($M = 50.1$, $SD = 14.1$ vs. $M = 37.0$, $SD = 5.81$; $p = 0.001$). Additionally, the case group exhibited significantly higher depression symptoms ($M = 21.3$, $SD = 4.53$ vs. $M = 6.31$, $SD = 4.27$; $p < 0.001$), suicide probability scores ($M = 84.5$, $SD = 10.9$ vs. $M = 65.6$, $SD = 6.44$; $p < 0.001$), and suicide ideation scores ($M = 17.9$, $SD = 5.56$ vs. $M = 9.41$, $SD = 2.59$; $p < 0.001$). Group comparisons are presented in Table 2.

Table 2. Comparisons between the patient and control groups across measures

Variable	Case (N = 35)	Control (N = 32)	*p*
Sexual Abuse	6.37 (3.34) [5.00, 22.0]	5.03 (0.177) [5.00, 6.00]	0.023
Physical Abuse	6.54 (2.89) [5.00, 19.0]	5.19 (0.738) [5.00, 9.00]	0.010
Emotional Abuse	10.4 (5.01) [5.00, 23.0]	6.16 (1.48) [5.00, 10.0]	<0.001
Physical Neglect	6.43 (1.69) [5.00, 12.0]	5.34 (0.82) [5.00, 8.00]	0.001
Emotional Neglect	9.46 (2.75) [5.00, 14.0]	7.25 (2.21) [5.00, 12.0]	<0.001
Overprotection-Overcontrol	10.9 (4.81) [5.00, 21.0]	8.03 (3.12) [5.00, 19.0]	0.005
Maltreatment Total Score	50.1 (14.1) [34.0, 100]	37.0 (5.81) [30.0, 51.0]	<0.001
Depression Symptoms	21.3 (4.53) [12.0, 28.0]	6.31 (4.27) [0.0, 15.0]	<0.001
Suicide Ideation Score	17.9 (5.56) [8.00, 28.0]	9.41 (2.59) [8.00, 22.0]	<0.001
Suicide Probability Score	84.5 (10.0) [63.0, 106]	65.6 (6.44) [58.0, 90.0]	<0.001

Note. All variables in this table are continuous and are presented as mean and standard deviation (M, SD); p-values were calculated using independent two-sample t-tests. Abuse and neglect subscales and total maltreatment were measured with the CTQ; Depression symptoms with the RCADS; and suicide ideation and probability with the SPS.

Primary Analysis

The hypothesised model provided an excellent representation of the data (Figure 1). The χ^2 goodness-of-fit test was non-significant, $\chi^2(3) = 3.57$, $p = .31$, and all incremental-fit indices comfortably exceeded recommended cut-offs, CFI = .99, TLI = .97, while absolute fit indices met or surpassed conventional criteria (RMSEA = .05, 90 % CI [0,.22]; SRMR = .03). Taken together, these statistics satisfy contemporary guidelines for a well-fitting model (33, 36).

A one-standard-deviation (SD) increase in childhood maltreatment severity predicted a 0.17-unit rise in the probability of belonging to the clinical case group (path a: β = 0.167, 95 % CI [0.083, 0.299], p = .003). Higher SES and a greater number of siblings remained protective (SES: β = −0.149, p = .003; siblings: β = −0.138, p = .009), whereas parental-marital status was non-significant (β = 0.024, p = .659). Belonging to the case group, in turn, increased standardised suicide probability scores by a full SD (path b: β = 1.102, 95 % CI [0.743, 1.452], p < .001). Childhood maltreatment also retained a smaller but significant direct effect on suicide risk (path c′: β = 0.300, 95 % CI [0.113, 0.584], p = .008). The bootstrapped indirect effect (β = 0.184, 95 % CI [0.080, 0.351], p = .007) accounted for 38 % of the total childhood maltreatment impact on suicide ideation (total effect = 0.484, 95 % CI [0.297, 0.772], p < .001), confirming the statistical indirect association consistent with partial decomposition. Thus, childhood maltreatment showed a substantial indirect statistical association with suicide ideation via depressed-group membership, while SES and number of siblings were inversely associated with depressed-group membership. Table 3 and Figure 1 summarise the path analysis results.

Table 3. Path coefficients

Path	β	95 % Bootstrap CI	p
Covariates			
SES → Depression Status	−0.15	−0.24,-0.04	0.003
Number of Siblings → Depression Status	−0.14	−0.24,-0.03	0.009
Parental Marital Status → Depression Status	0.02	−0.08, 0.12	0.659
Direct Effects			
Childhood Trauma → Depression Status (a)	0.16	0.08, 0,29	0.003
Depression Status → Suicide Ideation (b)	1.10	0.74, 1.45	< .001
Childhood Trauma → Suicide Ideation (c′)	0.30	0.11, 0.58	0.008
Indirect and Total Effects			
Indirect (a × b)	0.18	0.08, 0.35	0.007
Total (c = c′ + a × b)	0.48	0.29, 0.77	< .001

Note. Standardized path coefficients (β) are reported. Bootstrap confidence intervals (95% CI) were estimated using 1,000 bootstrap resamples with percentile correction. SES = socioeconomic status. Group = depression status (intermediate variable). Suicide ideation was assessed via standardized suicidal ideation subscale score. Reported p values are based on bootstrap-estimated standard errors. Covariates (SES, number of siblings, parental marital status) were included only in the path to the mediator (depression status).

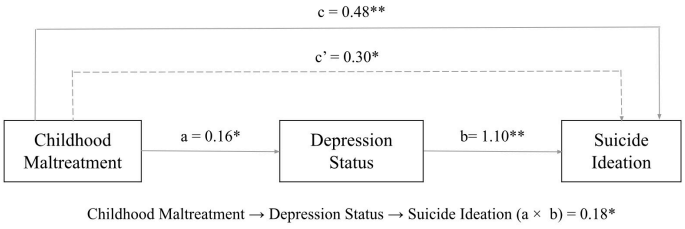

Figure 1. Standardized path coefficients (β) are shown, with significance levels indicated: *p < .05, **p < .001. The path model examining the association between childhood maltreatment, depression status and suicide ideation

DISCUSSION

We found that the association between childhood maltreatment and suicide ideation in youth was statistically shared with depressed-group membership, with a smaller residual direct association from maltreatment to ideation. According to the Integrated Motivational-Volitional (IMV) model, distal adversities (e.g., maltreatment) contribute to defeat and entrapment, which in turn are proximally tied to suicidal ideation within the motivational phase (22). Consistent with this, the Three-Step Theory (3ST) argues that ideation emerges from psychological pain paired with hopelessness (23). Within this framework, our results support depression as a proximal correlate of ideation.

These findings are consistent with extensive evidence that childhood maltreatment is linked to both depressive psychopathology and suicide ideation (6, 7, 16, 17, 18, 19, 37). Results from the decomposition show that depressed status captures an appreciable portion of the maltreatment-ideation link, in keeping with the broader literature on elevated adolescent vulnerability to depression and suicide risk (8, 9, 10, 11, 12, 13).

The residual direct association from maltreatment to ideation may indicate additional ideation-proximal mechanisms not fully represented by the depression grouping variable. Candidates include hopelessness, shame, thwarted belongingness/low connectedness, and entrapment/pain, constructs emphasised by IMV and 3ST (22, 23, 38). Measuring these alongside depression may clarify whether depression primarily indexes broader motivational-phase liabilities or whether maltreatment contributes unique ideation variance independent of depressive status.

Clinical Implications

Because depression statistically accounted for a large share of maltreatment-related ideation, brief paired screening for maltreatment exposure and depressive symptoms may be efficient for triage in youth services that lack resources for full diagnostic interviews. This should not be taken as evidence that treating depression alone will eliminate ideation; rather, it supports trauma-informed, depression-attentive pathways that also consider motivational and volitional factors when risk is elevated (21, 22,

23). Our results demonstrated suggest that higher SES and greater numbers of siblings are linked to reduced odds of depressed-group membership. While this conforms with work on contextual buffering and resource access, the cross-sectional design warrants caution as these patterns likely reflect social context and possible service pathways more than established protective mechanisms (39).

Strengths, Limitations, and Future Directions

This study has several notable strengths. First, we accounted for plausible confounding influences, socioeconomic status (average parental education and household income), number of siblings, and parental-marital status, thereby sharpening inference about the statistical links among childhood maltreatment, depression status, and suicide ideation. Second, focusing specifically on suicide ideation (an ideation-proximal outcome) clarifies which processes are most relevant to ideation, offering clinically actionable insight. Third, the use of clinician-administered diagnostic interviews (K-SADS-PL-DSM-5) for group assignment and validated self-report instruments enhances construct validity. Fourth, the Turkish clinical context broadens the evidence base beyond frequently studied settings and supports cross-cultural generalizability. Finally, our analytic approach, single-group path analysis within an SEM framework using maximum likelihood estimation, FIML for missing data, and nonparametric bootstrapping (1,000 resamples) for indirect-effect inference, provides a rigorous decomposition of direct and indirect associations and improves the robustness and reproducibility of the findings.

Two core limitations of drawing causal inferences from cross-sectional mediation models have been identified: the temporal order of variables cannot be established, and purely statistical associations may be misinterpreted as causal processes (40). These caveats apply to the present analysis, where we posit that childhood maltreatment relates to suicide ideation in part through depressed-group membership. Although this pathway is theoretically coherent and maltreatment is associated with depression (7, 16), while depression is proximally tied to suicidal ideation (13), our design cannot verify temporal sequencing or rule out alternative explanations (e.g., reciprocal influences, unmeasured common causes). Nevertheless, the well-documented connections between maltreatment and depressive psychopathology (7, 16) and between depression and ideation in youth (13) lend plausibility to the proposed pattern. Even so, the indirect pathway is interpreted as a statistical association rather than a causal mechanism, and the need for longitudinal or experimental studies to establish temporal precedence and clarify directionality is emphasised (40).

Following guidance for percentile-bootstrap mediation, our sample size (N = 67) is below what is typically recommended to detect small indirect effects (41). We therefore emphasise standardised effect sizes with bootstrap 95% CIs (1,000 resamples) rather than post hoc observed power, which can be unstable in small samples (42). To preserve parsimony in this context, covariate adjustment (SES, number of siblings, parental marital status) was restricted to the a-path (maltreatment to depression status); therefore, coefficients are conditional on this path-specific adjustment. Estimates should therefore be interpreted as conditional on this path-specific adjustment, and limited precision means smaller effects may have gone undetected.

Furthermore, CTQ internal consistency was low for physical neglect (α = .46) and marginal for emotional neglect (α = .68). To reduce instability from weaker subscale reliability, our primary predictor was the CTQ total score (α = .83), which aligns with the study's aim to model cumulative maltreatment burden rather than subtype-specific effects. Even so, measurement errors in lower-reliability subscales can still contribute noise to the total index; therefore, maltreatment-related associations may be attenuated (i.e., conservative), and subtype-level interpretations should be made cautiously.

Although clinical group status was determined with a clinician-administered K-SADS-PL-DSM-5 interview, we excluded standardised parent ratings, limiting cross-informant corroboration. Depression was modelled as a binary diagnostic status (depressed vs. non-depressed), which is clinically meaningful for case-control contrast but may mask within-group heterogeneity and dimensional symptom severity; future work should use continuous depression measures and repeated assessments. In addition, maltreatment and ideation were primarily self-reported, raising potential recall, social-desirability, and shared-method variance biases; cross-informant and multimethod assessment was limited.

Moreover, parental psychopathology was not comprehensively measured; only a subset of parents reported a psychiatric condition, which constrains our ability to evaluate informant effects or familial liability. Moreover, no standardised cognitive testing was administered, and recruitment from a treatment-seeking clinical setting may constrain generalizability to broader community populations. Finally, our outcome targeted ideation-proximal variance (suicide ideation) and did not include volitional moderators implicated in attempts (e.g., acquired capability, access to means), narrowing inference to the ideation phase of risk.

CONCLUSION

In this treatment-seeking youth sample, maltreatment and suicide ideation correlated, with most overlap aligning with depression status and a smaller residual link. These associations support trauma-informed, depression-attentive screening and motivate longitudinal, theory-guided work.

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Author Details

Songül Derin (Asst. Prof. Dr.)

[1] Bezmialem Vakif University, Child and Adolescent Psychiatry İstanbul, Türkiye

0000-0001-8099-4460 sderin@bezmialem.edu.tr

İbrahim Genç

[2] Bezmialem Vakif University, Medicine Faculty, İstanbul, Türkiye

0009-0004-7040-119X

Saliha B. Selman

[3] Ibn Haldun University, Psychology, İstanbul, Türkiye

0000-0003-4444-9582

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