

Association of Suicide Attempts with Childhood Traumatic Experiences in Patients with Major Depression



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SUMMARY

Objective: Childhood traumatic experiences are widely known risk factors in the development of various psychiatric disorders and unfavorable behavior patterns, including suicide attempts. Moreover, in the course of some psychiatric disorders, suicide attempts are more frequent in patients with childhood traumatic experiences. This study explores the influence of childhood traumatic experiences on suicide attempts in patients with major depression.

Method: Our study involved 30 patients with major depressive disorder in full remission who had attempted suicide, and 30 patients with major depressive disorder in full remission who had never attempted suicide, as well as 30 healthy controls matched with patients for age, gender, and education. All the subjects were interviewed with Structural Clinical Interview for DSM-IV (SCID-I). Subsequently, all subjects were administered Childhood Trauma Questionnaire (CTQ).

Results: Patients who had attempted suicide reported significantly higher CTQ scores for emotional abuse and emotional neglect, physical abuse, and sexual abuse than healthy controls. Moreover, patients who had attempted suicide reported significantly higher CTQ scores for each three subdomains than patients who had never attempted suicide. There were no significant difference between patients who had never attempted suicide and healthy controls in any of the CTQ subdomains.

Conclusion: Childhood trauma may be a risk factor for suicide attempts in patients with depression. Inquiring childhood traumatic experiences could make an important contribution to predict suicide risk in patients with depression.

Key words: Childhood trauma, suicide, depression

INTRODUCTION

The term trauma broadly refers to any event that hurts or harms an individual's emotional and physical being (Öztürk and Uluşahin 2008). Childhood trauma encompasses any action or inaction from parents or other caregiver adults that hinders or arrests a child's development, leading to physical, emotional, sexual, or social harm (Taner and Gökler 2004). Traumatic abuse in children and adolescents includes any physical or emotional abuse, physical or emotional neglect, as well as sexual abuse. Physical abuse involves any corporal punishment or harm from caregivers. Emotional abuse involves verbal threats, disparaging criticisms, and mocking comments so extreme as to endanger the child's emotional and psychological health. Emotional neglect involves not fulfilling the child's emotional needs, such as love, support,

attention, attachment/bonding, or care. Physical neglect involves not fulfilling the child's physical needs such as food, education, or medical attention. Sexual abuse is defined as interaction between the child/adolescent and someone at least five years older, that involves forced indecent exposure of genitals, sexual petting and stimulation, vaginal/anal intercourse, or production of pornographic material (Walker et al. 1988).

Childhood trauma is known to cause long-term problems. Studies show associations between childhood trauma and physical disorders, including obesity (Thomas et al. 2008), psoriasis (Simonic et al. 2011), migraine (Tietjen et al. 2010), chronic pain (Davis et al. 2005) and various psychiatric disorders such as posttraumatic stress disorder (McCutcheon et al. 2010), substance abuse (Toker et al. 2011), personality disorders (Haller and Miles 2004), eating disorders (Kent et

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al. 1999), somatization disorder (Spitzer et al 2008), bipolar disorder (Etain et al. 2010) in the adulthood. Many studies on psychiatric disorders emphasize the association between childhood trauma and anxiety/depression (Örsel et al. 2011, Hovens et al. 2010, Tietjen et al. 2010, Widom et al. 2007, Moskvina et al. 2007). Furthermore, depression patients with childhood trauma history are reported to have earlier onset of the disease, greater number of depressive episodes (Bernet and Stein 1999); more frequent persistent depressive symptoms (Tanskanen et al. 2004) and more frequent psychotic findings (Gaudiano and Zimmerman 2010).

On the other hand, increasing number of studies keep observing the association between suicide attempts and childhood trauma (Örsel et al. 2011, Afifi et al. 2008, McHolm et al. 2003, Molnar et al. 2001, Dube et al. 2001). In addition, suicidal behavior is believed to be associated with childhood trauma in several psychiatric disorders such as schizophrenia and substance abuse (Roy 2005, Roy 2004). While depression is thought to be closely related with both childhood trauma and suicide, very few studies have actually investigated the association between suicidal behavior in depression and childhood traumatic experiences, and only during the course of depressive episodes (Sarchiapone et al. 2007, Gladstone et al. 2004, Brodsky et al. 2001).

In contrast, our study investigates the association between suicidal behavior in depression and childhood trauma, during *remission*. We hypothesize that major depression patients with history of suicide attempts have a higher rate of childhood trauma.

METHOD

Subjects and Design

Our study involved 30 outpatients with major depressive disorder in full remission who had attempted suicide, and 30 outpatients with major depressive disorder in full remission who had never attempted suicide followed up in İzmir Atatürk Education and Research Hospital, Clinic of Psychiatry, along with 30 healthy controls matched to patients with respect to age, gender, and education. All subjects were required to be in the age 18–65, and literate. Those subjects with mental retardation, organic brain disorders, or other physical disorders that could influence mental functions were excluded.

Subsequent to obtaining written informed consent, each potential subject was interviewed with Structured Clinical Interview for DSM-IV (SCID-I). Only those patients diagnosed with major depressive disorder in full remission via SCID-I, and healthy controls that were diagnosed with no psychiatric disorder via SCID-I, were included in the study. Patients with comorbid psychiatric disorders and those with psychotic depressive episodes were excluded.

A total of 88 patients from the psychiatry clinic were consecutively evaluated as candidates for the study. Of those, 23 were excluded because they were not in full remission, one because of a psychotic depressive episode, and four because of comorbid psychiatric disorders. Healthy control candidates, who volunteered for the study from the hospital cleaning staff and their relatives, were evaluated, and two were excluded for having psychiatric disorders, and one was excluded for having multiple sclerosis. The hospital ethics commission approved the study.

All subjects that met the study criteria were administered the Childhood Trauma Questionnaire (CTQ), and their socio-demographic data were recorded in their respective forms.

Instruments

Sociodemographic Data Form: This form was designed to capture data about age, education level, gender, medical history, family history, and the number and type of suicide attempts (both for the patient and family).

Structured Clinical Interview for DSM-IV: It is a diagnostic scale developed by First et al. (1997), and validated for Turkish by Özkürkçügil et al. (1999).

Childhood Trauma Questionnaire: It was developed by Bernstein et al. (1994) in order to survey childhood trauma prior to age 18. It involves forty questions, structured in the form of a five-point Likert scale. Higher scores indicate the rate of childhood trauma. It consists of three subscales: emotional abuse and neglect, physical abuse, and sexual abuse. It was validated for Turkish by Aslan and Alparslan (1999).

Statistical Analysis

The data was analyzed using SPSS (Statistical Package for Social Sciences) v.15.0. The gender distribution in groups was evaluated via the chi-square test. Age, education level, and scale scores were compared via one-way analysis of variance (ANOVA). Post hoc Tukey test was used to determine the differing group. Two-way ANOVA was used to analyze the relationship among CTQ scores and gender, marital status, social security, employment, suicide attempt history, within groups and between groups. Pearson correlation analysis was employed to evaluate the relationship between CTQ scores and age, education level, number of depressive episodes, and number of suicide attempts. All statistical analyses were based on a statistical significance level of $p < 0.05$.

RESULTS

Of the patients with suicide attempt history 18 (60%) were female and 12 (40%) were male. Similarly, of the patients *without* suicide attempt history, 17 (56.7%) were female,

Table 1. Comparison of demographic factors among patients with/without suicide attempt history versus healthy controls

	suicide (count=30)	no suicide (count=30)	control (count=30)	statistics
gender	18f/12m	17f/13m	18f/12m	$\chi^2=0.09$, $p=0.96$
age (mean $\pm$ sd)	34.3 ± 8.5	35.2 ± 8.5	34.2 ± 8.4	$F=0.08$, $p=0.93$
education years (mean $\pm$ sd)	7.8 ± 2.3	7.9 ± 2.2	8.2 ± 2.5	$F=1.90$, $p=0.16$

(f: female, m: male)

and 13 (43.3%) were male. Control group had the exact same gender distribution as the patients with suicide history. Patients with suicide history had a mean age of 34.3 ± 8.5 , and education of 7.8 ± 2.3 years. Patients *without* suicide history had a mean age of 35.2 ± 8.5 , and education of 7.9 ± 2.2 years. Control group had a mean age of 34.2 ± 8.4 , and education of 8.2 ± 2.5 years. The distribution of age, gender, and education level are presented in Table 1. There were no statistically significant differences between the three groups with respect to age, education, or gender.

Of the patients with suicide attempt history, 13 (43.3%) were married and 17 (56.7%) were not married (i.e., never married, divorced, or widow). Of the patients *without* suicide attempt history, 24 (80.0%) were married and 6 (20.0%) were not married. As for the healthy controls, 19 (63.3%) were married and 11 (36.7%) were not married. Percentage of married patients with suicide attempt history was significantly lower than those patients *without* suicide history ($\chi^2=8.53$, $p=0.03$). Of the patients with suicide attempt history, 21 (70.0%) were employed and 9 (30.0%) were unemployed. Of the patients *without* suicide attempt history, 25 (83.3%) were employed and 5 (16.7%) were unemployed. As for the healthy controls, 24 (80.0%) were employed and 6 (20.0%) were unemployed. There was no statistically significant difference between the three groups with respect to employment status ($\chi^2=1.67$, $p=0.43$). The number of depressive episodes were 1.4 ± 0.6 , versus 1.5 ± 0.8 for patients with suicide

history, and those without suicide history, respectively, with no statistically significant difference ($t=0.82$, $p=0.42$).

CTQ score distributions for the three groups were evaluated via one-way analysis of variance (ANOVA) And post hoc Tukey test was used. Patients with suicide history scored significantly higher than healthy controls in all three subscales of CTQ, that is for emotional abuse and neglect, physical abuse, and sexual abuse subscales ($p<0.001$, $p<0.001$, $p=0.021$, respectively). Similarly, patients with suicide history scored significantly higher than patients *without* suicide history in these subscales of CTQ ($p<0.001$, $p<0.001$, $p=0.048$, respectively). There was no statistically significant difference between patients without suicide history and healthy controls in any of these three CTQ subscales. CTQ scores and their comparison for all three groups are summarized in in Table 2. The impact of gender, marital status, social security, employment, and familial suicide history factors on CTQ scores were analyzed using two-way ANOVA. None of these factors had a significant impact on CTQ scores within groups and between groups (for all $p>0.05$). The association of age, education level, and depressive episode count to the CTQ scale was examined for each group separately, using Pearson correlation analysis. None of the variables had a significant correlation to CTQ scores (for all $p>0.05$, $r<0.20$). On the other hand, number of suicide attempts had a significant correlation to the emotional abuse and neglect subscale, as well as physical abuse subscale of CTQ ($p\leq 0.001$, $r=0.68$, and $p=0.04$, $r=0.37$, respectively).

Table 2. Comparison of CTQ scores among patients with/without suicide attempt history versus healthy controls

	suicide mean $\pm$ sd	no suicide mean $\pm$ sd	control mean $\pm$ sd	ANOVA	Tukey	
CTQ emotional abuse	52.2 ± 14.1	37.8 ± 10.1	32.3 ± 5.6	$F=28.7$ $p<0.001$	suicide vs control suicide vs no suicide no suicide vs control	$p<0.001^{**}$ $p<0.001^{**}$ $p=0.115$
CTQ physical abuse	42.6 ± 12.0	28.0 ± 6.2	26.4 ± 4.7	$F=35.4$ $p<0.001$	suicide vs control suicide vs no suicide no suicide vs control	$p<0.001^{**}$ $p<0.001^{**}$ $p=0.734$
CTQ sexual abuse	7.5 ± 4.9	5.7 ± 1.8	5.4 ± 1.2	$F=4.4$ $p=0.015$	suicide vs control suicide vs no suicide no suicide vs control	$p=0.021^{*}$ $p=0.048^{*}$ $p=0.924$

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

DISCUSSION

Childhood trauma is known to cause various life-long behavior patterns, most notably, avoidance, denial, impulsiveness, destructiveness (Burgess et al. 1995), substance abuse (Medrano et al. 1999), and suicide (Santa Mina ve Gallop 1998).

Prior studies on the association between suicidal behavior and childhood trauma focused on prison populations (Mandelli et al. 2011, Godet-Mardirossian et al. 2011, Marzano et al. 2011) or substance abusers (Tamar-Gurol et al. 2008, Roy 2009, Roy 2004) with the conclusion that childhood trauma increases suicide risk in those groups. On the other hand, Üçok and Bıkmaz (2007) reported that schizophrenia patients with history of childhood trauma are more inclined to suicide attempts.

Epidemiological data confirms that depression significantly increases suicide risk (Reddy 2010). Social studies have also uncovered the association between childhood trauma and suicidal behavior (Davidson et al. 1996). Thus, our study focused on the relatively less studied association of childhood trauma and suicide attempts in depression. In our study childhood trauma was seen significantly more often in patients with suicide attempts, compared to patients without suicide attempts, corroborating previous research. Sarchiapone et al. (2007) determined that among patients with unipolar depression, those with suicide attempts had a higher rate of emotional abuse and neglect during childhood, but no significant difference in physical or sexual childhood abuse compared with the ones without suicide attempts. Brodsky et al. (2001) reported that among patients diagnosed with major depression, those with physical or sexual abuse during childhood had a significantly higher rate of suicide attempts. On the other hand, Gladstone et al. (2004) investigated depressive female patients with sexual abuse history, and determined that those with childhood sexual abuse history had a higher rate of suicide attempts. Unfortunately, these studies lacked a control group, and no comparative analysis was possible with respect to a healthy control group. In contrast, our study found that patients with suicide attempts have higher rates of emotional neglect and abuse, physical abuse, and sexual abuse in comparison to patients without suicide history or healthy controls.

Another important finding of our study is that there is no significant difference between healthy controls and patients without suicidal behavior with respect to all three subcategories of abuse. This suggests that childhood trauma might have a stronger influence on suicide attempts than depression related factors. Thus, Sarchiapone et al. (2007) reports no difference in the severity of depression between patients with suicide history and those without it. Furthermore, their study listed emotional neglect, but not depression severity among significant predictors of suicide attempts. However,

note that suicide attempt is a complex behavior that involves many developmental, social, and biological factors. Risk factors for suicidal behavior can be categorized into two groups as proximal and distal (Moscicki et al. 1997). Proximal risk factors such as stress or acute psychiatric disorders are those that influence the patients in their current state, directly increasing suicide risk; distal factors, in contrast, do not directly cause suicidal behavior by themselves, but create inclination to suicidal behavior only when combined with current factors. Childhood trauma is generally considered a distal risk factor. Studies with larger samples and different designs are needed in order to determine whether distal factors such as childhood trauma has a larger impact on suicide attempts than proximal factors such as ongoing depressive episodes.

Our study had the advantage of a healthy control group, which made comparative analysis possible. Furthermore, unlike others, our study only included patients in full remission, so that our childhood trauma analysis was not unduly affected by ongoing depressive episodes. Limitation of our study is that the childhood trauma information was gathered through the patient using a scale, retrospectively.

Our results indicate that childhood traumatic experiences increases suicide risk in depressive patients, just as it increases suicide risk among substance abusers and schizophrenic patients. Thus childhood trauma might be among long-term risk factors for depressive patients. We can conclude that in daily clinical practice, inquiries of child trauma history in depressive patients might help assess suicide risk.

REFERENCES

- Afifi T, Enns M, Cox B et al. (2008) Population attributable fractions of psychiatric disorders and suicide ideation and attempts associated with adverse childhood experiences. *Am J Pub Health*, 98: 946–52.
- Aslan SH, Alparslan ZN (1999) Çocukluk Örselenme Yaşantıları Ölçeği'nin bir üniversite örnekleminde geçerlik, güvenirlik ve faktör yapısı. *Türk Psikiyatri Derg*, 10(4): 275-285
- Bernet CZ, Stein MB (1999) Relationship of childhood maltreatment to the onset and course of major depression in adulthood. *Depress Anxiety*, 9(4):169-74.
- Bernstein DP, Fink L, Handelsman L et al. (1994) Initial reliability and validity of a new retrospective measure of child abuse and neglect. *Am J Psychiatry*, 151(8):1132-6.
- Brodsky BS, Oquendo M, Ellis SP et al. (2001) The relationship of childhood abuse to impulsivity and suicidal behavior in adults with major depression. *Am J Psychiatry*, 158: 1871–7.
- Burgess AW, Hartman CR, Clements PT (1995) Biology of memory and childhood trauma. *J Psychosoc Nurs Ment Health Serv*, 33(3): 16-26.
- Davidson J, Hughes D, George L et al. (1996). The association of sexual assault and attempted suicide in the community. *Arch Gen Psychiatry*, 53: 550–5.
- Davis DA, Luecken LJ, Zautra AJ (2005) Are reports of childhood abuse related to the experience of chronic pain in adulthood? A meta-analytic review of the literature. *Clin J Pain*, 21:398-405.
- Dube SR, Anda RE, Felitti VJ et al. (2001) Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span: findings from the Adverse Childhood Experiences Study. *JAMA*, 286: 3089–96.

- Etain B, Mathieu F, Henry C et al. (2010) Preferential association between childhood emotional abuse and bipolar disorder. *J Trauma Stres*, 23 (3): 376-83.
- First MB, Spitzer RL, Gibbon M et al. (1997) Structured Clinical Interview for DSM-IV Clinical Version (SCID-I/CV). American Psychiatric Press, Washington D.C.
- Gaudiano BA, Zimmerman M (2010) The relationship between childhood trauma history and the psychotic subtype of major depression. *Acta Psychiatr Scand*, 121: 462-70.
- Gladstone GL, Parker GB, Mitchell PB et al. (2004) Implications of childhood trauma for depressed women: an analysis of pathways from childhood sexual abuse to deliberate self-harm and revictimization. *Am J Psychiatry*, 161: 1417-25.
- Godet-Mardirossian H, Jehel L, Falissard B. (2011) Suicidality in male prisoners: influence of childhood adversity mediated by dimensions of personality. *J Forensic Sci*, 56(4):942-9.
- Haller DL, Miles DR (2004) Personality disturbances in drug-dependent women: relationship to childhood abuse. *Am J Drug Alcohol Abuse*, 30 (2): 269-86.
- Hovens JGFM, Wiersma JE, Giltay EJ et al. (2010) Childhood life events and childhood trauma in adult patients with depressive, anxiety and comorbid disorders vs. controls. *Acta Psychiatr Scand*, 122: 66-74.
- Kent A, Waller G, Dagnan D (1999) A greater role of emotional than physical or sexual abuse in predicting disordered eating attitudes: the role of mediating variables. *Int J Eat Disord*, 25: 159-67.
- Mandelli L, Carli V, Roy A et al. (2011) The influence of childhood trauma on the onset and repetition of suicidal behavior: an investigation in a high risk sample of male prisoners. *J Psychiatr Res*, 45:742-7.
- Marzano L, Hawton K, Rivlin A et al. (2011) Psychosocial influences on prisoner suicide: a case-control study of near-lethal self-harm in women prisoners. *Soc Sci Med*, 72:874-83
- McCutcheon VV, Sartor CE, Pommer NE et al. (2010) Age at trauma exposure and PTSD risk in young adult women. *J Trauma Stres*, 23: 811-4.
- McHolm AE, MacMillan HL, Jamieson E (2003) The relationship between childhood physical abuse and suicidality among depressed women: results from a community sample. *Am J Psychiatry*, 160: 933-8.
- Medrano MA, Zule WA, Hatch J et al. (1999) Prevalence of childhood trauma in a community sample of substance-abusing women. *Am J Drug Alcohol Abuse*, 25: 449-62.
- Molnar BE, Berkman LF, Buka SL (2001) Psychopathology, childhood sexual abuse and other childhood adversities: relative links to subsequent suicidal behaviour in the US. *Psychol Med*, 31:965-77.
- Moscicki EK (1997) Identification of suicide risk factors using epidemiologic studies. *Psychiatr Clin North Am*, 20:499-517.
- Moskvina V, Farmer A, Swainson V et al. (2007) Interrelationship of childhood trauma, neuroticism, and depressive phenotype. *Depress Anxiety*, 24:163-8.
- Örsel S, Karadağ H, Kahiloğulları AK et al. (2011) Psikiyatri hastalarında çocukluk çağı travmalarının sıklığı ve psikopatoloji ile ilişkisi. *Anadolu Psikiyatri Derg*, 12:130-6.
- Özkürkçügil A, Aydemir Ö, Yıldız M et al. (1999) DSM-IV Eksen I Bozuklukları İçin Yapılandırılmış Klinik Görüşmenin Türkçe'ye Uyarlanması ve Güvenilirlik Çalışması. *İlaç ve Tedavi Dergisi*, 12:233-6.
- Öztürk MO, Uluşahin A (2008) Ruh Sağlığı ve Bozuklukları. 11. Baskı, Ankara Nobel Tıp Kitabevleri Ltd. Şti., s. 496.
- Reddy MS (2010) Suicide incidence and epidemiology. *Indian J Psychol Med*, 32:77-82.
- Roy A (2004) Relationship of childhood trauma to age of first suicide attempt and number of attempts in substance dependent patients. *Acta Psychiatr Scand*, 109: 121-5.
- Roy A (2005) Reported childhood trauma and suicide attempts in schizophrenic patients. *Suicide Life Threat. Behav*, 35: 690-3.
- Roy A (2009) Characteristics of cocaine dependent patients who attempt suicide. *Arch Suicide Res*, 13:46-51.
- Santa Mina E, Gallop R. (1998) Childhood sexual and physical abuse and adult self-harm and suicidal behavior: A literature review. *Can J Psychiatry*, 43:793-800.
- Sarchiapone M, Carli V, Cuomo C et al. (2007) Childhood trauma and suicide attempts in patients with unipolar depression. *Depress Anxiety*, 24: 268-72.
- Simoncic E, Kastelan M, Peterlin S et al. (2010) Childhood and adulthood traumatic experiences in patients with psoriasis. *Journal of Dermatology*, 37: 793-800.
- Spitzer C, Barnow S, Gau K ve ark (2008) Childhood maltreatment in patients with somatization disorder. *Aust N Z J Psychiatry*, 42: 335-41.
- Tamar-Gürol D, Sar V, Karadağ F et al. (2008) Childhood emotional abuse, dissociation, and suicidality among patients with drug dependency in Turkey. *Psychiatry Clin Neurosci*, 62:540-7.
- Taner Y, Gökler B (2004) Çocuk istismarı ve ihmali: Psikiyatrik yönleri. *Hacettepe Tıp Derg*, 35: 82-6.
- Tanskanen A, Hintikka J, Honkalampi K et al. (2004) Impact of multiple traumatic experiences on the persistence of depressive symptoms—a population-based study. *Nord J Psychiatry*, 58:459-64.
- Thomas C, Hyppönen E, Power C (2008) Obesity and type 2 diabetes risk in midadult life: The role of childhood adversity. *Pediatrics*, 121:1240-9.
- Tietjen GE, Brandes JL, Peterlin BE (2010) Childhood maltreatment and migraine (Part I). Prevalence and adult revictimization: a multicenter headache clinic survey. *Headache*, 50: 20-31.
- Toker T, Tiryaki A, Özçürümez G et al. (2011) Madde kullananlarda çocukluk örselenme yaşantılarının, madde kullanma eğilimi, benlik saygısı ve başa çıkma tutumları ile ilişkisi. *Türk Psikiyatri Derg*, 22: 83-92.
- Üçok A, Bıkmaz S (2007) The effects of childhood trauma in patients with first-episode schizophrenia. *Acta Psychiatr Scand*, 116: 371-7.
- Walker CE, Bonner BL, Kaufman KL et al. (1988) The physically and sexually abused child. New York, Pergamon Press s.7-8
- Widom CS, DuMont K, Czaja SJ (2007) A prospective investigation of major depressive disorder and comorbidity in abused and neglected children grown up. *Arch Gen Psychiatry*, 64:49-56.