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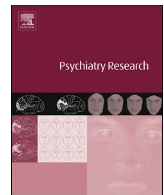

Relationship between childhood trauma and suicide probability in obsessive-compulsive disorder

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ABSTRACT

The aim of this study is to assess the relationship between childhood trauma with the probability of suicide in obsessive compulsive disorders. Sixty-seven patients who were diagnosed with OCD were included in the study out of the patients who were admitted to Malatya Training and Research Hospital psychiatry outpatient clinic. The research data were collected using Yale Brawn Obsessive Compulsive Scale (YBOCS), Beck Depression (BDS) and Beck Anxiety Scales (BAS), Childhood Trauma Questionnaire-28 (CTQ-28), and Suicide Probability Scale (SPS). CTQ was detected as ≥ 35 in 36 of 67 patients who were included in the study. Aggression (p = 0.003), sexual (p = 0.007) and religious (p = 0.023) obsessions and ritualistic (p = 0.000) compulsions were significantly higher in the group with CTQ ≥ 35. Mild correlation was detected between the SPS score and the scores of CTQ. Correlation remained even when the effect of BAS and BDS scores were excluded. At the end of our study, childhood traumas were found to be associated with obsessive symptoms. In the group with childhood trauma, increased suicide probability was detected independently from depression and anxiety.

1. Introduction

In general, child neglect and abuse can be defined as suffering of the child from all kinds of physical, mental, sexual or social aspects and his/her health and safety getting into danger as a result of the actions taken or procrastinated by the people who are responsible for the care, health and protection of child and other adult persons, especially the parents. It is not necessary for the neglect or abuse to be perceived by the child nor is it necessary for the adult to commit it consciously (Turla, 2002).

Physical abuse is being exposed to brute force before 18 years of age by someone who is at least 5 years older or a family member who is 2 years older than him/herself. The person should not perceive this as a domestic conflict like sibling rivalry. Friendship conflicts that do not involve physical contact are not included in that definition (Brown and Anderson, 1991).

Sexual abuse is defined as being exposed to sexual exploitation, at any level from caressing to sexual intercourse, before 18 years of age by a person who is at least 5 years older or a family member who is 2 years older than him/herself (Brown and Anderson, 1991).

Emotional abuse is the exposure of children or adolescents to verbal threats, ridicule, or humiliating comments to the extent that it would threaten their emotional or mental health (Walker et al., 1988).

Neglect is the situation in which the physical care such as nutrition, safety, education, medical treatment of a child is not taken or his/her emotional needs such as love, support, interest, emotionality, decency, attachment are not met (Walker et al., 1988). The most important point that distinguishes between exploitation and neglect is the fact that exploitation is active and neglect is a passive phenomenon.

It is known that living traumatic events during childhood, when the individual is vulnerable and needs to be protected, may be associated with neurobiological changes and is associated with an increased risk of developing psychiatric disorders in adulthood (Mathews et al., 2008). A positive relationship has been detected between the presence of many psychiatric disorders such as dissociative disorders, anxiety disorder, post-traumatic stress disorder, borderline personality disorder, somatization disorder, antisocial personality disorder, alcohol and substance dependence, depression, conversion disorder, inattentive personality disorder, psychotic disorders and trauma story in childhood (Kivilcim, 2015).

In addition to these disorders, it was shown in some studies that obsessive-compulsive disorder (OCD) which is characterized by ego-dystonic, disturbing, repetitive, anxiety-provoking thoughts (obsessions) that disrupt the social and occupational functioning of the person and repetitive behaviors or mental actions that are performed to reduce the anxiety (compulsions) may be associated with trauma in childhood (Lochner et al., 2002; Carpenter and Chung, 2011). Also, psychological

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traumas in childhood may not only cause the emergence of obsessive-compulsive symptoms but also may influence them so that they progress, increase in intensity and/or frequency, and change in terms of content (Demirci, 2016). In the study by Murphy et al. (1988) in a non-clinical sample, they reported that more obsessive-compulsive symptoms were reported in adult women who were exposed to sexual assault during their childhood. In a study conducted on a non-clinical sample in our country, it was reported that there were significant relationships between childhood traumatic experiences, more pronouncedly with emotional traumas, and obsessive-compulsive symptoms (Demirci, 2016). In another study performed on 120 patients who were diagnosed with OCD in our country, it was determined that there was a positive correlation between childhood trauma and obsessive-compulsive symptoms. In the same study, trauma scores in treatment-resistant OCD patients were reported to be higher than those of the other OCD patients (Semiz et al., 2014).

There are also studies examining the relationship between childhood trauma and suicide. In a study on 55,299 people in 21 countries, it was determined that child abuse increased the risks of suicide thought and suicide attempt, and that sexual and physical abuse had the strongest effect on suicidal behavior. Significant correlations were found between childhood traumas and suicidal thoughts and behaviors in the diseases such as depressive disorder (Dias de Mattos Souza et al., 2016) schizophrenia (Hassan et al., 2016), substance abuse (Marshall et al., 2013), bulimia nervosa (Smith et al., 2016). Contrary to popular belief, suicide rates in OCD are increasing in recent years. Dell'Osso et al. (2017) found that the rate of lifelong suicide attempts in OCD was 14.6%. Therefore, it is important to determine the situations that will cause suicide tendency in OCD. In this study, it was aimed to evaluate the relationship between childhood trauma and sociodemographic and clinical features of patients with OCD and secondarily to determine the association of childhood trauma with the probability of suicide in OCD.

2. Method

Sixty-seven patients who met the study criteria out of the patients who were admitted to the Psychiatric Clinic of Malatya Training and Research Hospital between August 2016 and February 2017 and who were diagnosed with OCD according to the DSM-5 criteria and were under follow-up and treatment were included in the study. The research project was approved by the Malatya Clinical Practice Ethics Board and the written informed consents were obtained from the participants. Of the followed up OCD patients, the patients in the age range of 18–65 years who were literate, who were a volunteer to participate in the study were included in the study while the patients with mental retardation, neurological or systemic disease that would affect cognitive function were not included.

2.1. Assessment tools

2.1.1. Sociodemographic data form

It is the question form developed by the researchers to be used in this study to determine the sociodemographic characteristics of the participants.

2.1.2. Yale-Brown Obsessive-Compulsive Scale: Y-BOCS

The Turkish validity and reliability studies of the scale, which was originally developed by Goodman et al. (1989), was conducted in 1993 by Karamustafalioglu et al. (1993) It is a scale which was developed to measure the type and severity of obsessive-compulsive symptoms and it was assessed by the interviewer. It consists of a total of 19 items, but the first 10 items are used to determine the total score. The Y-BOCS total score is the sum of these first 10 items. The first five items indicate us the score of obsessions and the second five items indicates the score of compulsions.

2.1.3. Childhood Trauma Questionnaire (CTQ-28)

It is a five-point Likert-type self-report scale which was developed by Bernstein et al. (1994). The scale which includes 5 subscales namely, emotional abuse, physical abuse, sexual abuse, emotional neglect and physical neglect are scored from 1 to 5. In the adaptation, validity and reliability studies of the 28-question form of the scale, it was offered as following; for sexual and physical abuse > 5 points, for physical neglect and emotional abuse > 7 points, for emotional neglect > 12 points and as the cut-off score of the total score > 35 points (Sar et al., 2012).

2.1.4. Beck Depression Scale (BDS)

It is a four-point Likert-type self-reporting scale that was developed by Beck (1961) and includes 21 self-assessment sentences. The items are scored from 0 to 3 and the total score ranges between 0 and 63. The validity and reliability studies in our country were carried out by Hisli (1989) and the cut-off score the scale which was adapted to Turkish was determined as 17.

2.1.5. Suicide Probability Scale (SPS)

It is a four-point Likert-type self-assessment scale with 36 items and it was developed by Cull and Gill (1990). Adaptation to Turkish, validity and reliability studies were carried out by Atli et al. (2009). The aim of the scale is to assess suicide risk in adolescents and adults. It includes four subscales namely hopelessness, suicidal ideation, negative self-evaluation and hostility. A different score sum is obtained for each subscale while the sum of all the scores gives the score of general suicide probability. The higher scores obtained from the scale indicate a higher probability of suicide.

2.1.6. Beck anxiety scale (BAS)

It measures the frequency of anxiety symptoms that are experienced by the individual. It is a Likert-type self-assessment scale consisting of 21 items and scored in the range of 0–3. The higher total score indicates the higher anxiety level that is experienced by the person. It was developed by Beck et al. (1988) and its validity and reliability studies were conducted by Ulusoy (1993) in our country.

2.1.7. The methods of measurement, assessment and statistical analysis

The analysis of the data obtained from the patient groups was performed using the "SPSS for Windows 22" statistical package program. The data obtained by counting were expressed as a percentage and the data obtained by measurement were expressed as the arithmetic mean standard deviation. Chi-square test was used to compare categorical data, the independent T-test from the parametric tests was used to compare numerical variables of groups and the relations between parametric numerical variables were examined by Pearson correlation test. In all analyses, the significance level was accepted as 0.95 ($0 < 0.05$).

3. Results

Out of 67 OCD patients which were included in the study, 31 (46.3%) had CTQ < 35 and 36 (53.7%) patients had CTQ ≥35 according to CTQ total scores. There was no statistically significant difference between two groups in terms of age, gender, duration of education, age at onset of the disease, BDS, BAS scores. The suicide attempt history ($p = 0.017$) and the YBOCS Score ($p = 0.034$) were significantly higher in the group with CTQ ≥35 compared to the group with CTQ < 35 (Table 1).

Two groups were compared in terms of obsessive-compulsive symptoms. Aggression ($p = 0.003$), sexual ($p = 0.007$) and religious ($p = 0.023$) obsessions (Table 2) and ritualistic ($p = 0.000$) compulsions (Table 3) were significantly higher in the group with CTQ ≥35 (Table 3). Two groups were also compared in terms of suicide probability total scores and its subscales' scores. Scores of suicide probability scale ($p = 0.000$) and the subscales of hopelessness ($p = 0.000$),

Table 1
Sociodemographic and clinical characteristics according to the CTQ < 35 and CTQ ≥35 groups.

	CTQ < 35 (*n*:31)	CTQ ≥35 (*n*:36)	*p*
Gender (F/M)	15/16	20/16	0.558
Age	28.51 ± 9.33	31.63 ± 8.82	0.164
Years of Education	12.51 ± 2.70	10.02 ± 4.04	0.005
Age of disorder onset	23.19 ± 7.42	23.86 ± 6.21	0.690
Previous Suicide attempt	0/31	6/30	0.017
YBOCS	20.87 ± 13.64	28.02 ± 13.41	0.034
BDS	13.67 ± 9.14	16.13 ± 8.12	0.247
BAS	15.77 ± 11.75	21.00 ± 13.80	0.103
SPS total	67.87 ± 12.48	82.94 ± 14.79	0.000
Hopelessness	23.06 6.75	31.91 6.52	0.000
Hostility	11.70 3.45	14.66 4.67	0.005
Suicide ideation	10.35 3.00	13.55 5.02	0.003
Negative self-evaluation	22.54 4.08	22.86 6.26	0.813

Table 2
Distribution of obsessions according to the CTQ < 35 and CTQ ≥35 groups.

Obsessions	CTQ < 35 (*n*:31)	CTQ ≥35 (*n*:36)	x^2	*p*
Contamination	23	20	2.517	0.113
Doubt	24	22	2.059	0.151
Aggression	4	17	9.117	0.003
Sexual	1	10	7.317	0.007
Religious	1	8	5.169	0.023
Symmetry	6	7	0.000	0.993
Others	6	3		0.169[a]

Table 3
Distribution of compulsions according to the CTQ < 35 and CTQ ≥35 groups.

Compulsions	CTQ < 35 (*n*:31)	CTQ ≥35 (*n*:36)	x^2	*p*
Cleaning	23	20	2.517	0.113
Controls	24	22	2.059	0.151
Ritualistic	4	21	14.697	0.000
Counting	10	9	0.432	0.511
Arrangement	5	7	0.125	0.724
Others	0	3		0.149[a]

suicide ($p = 0.003$) and hostility ($p = 0.005$) were significantly higher in the group with CTQ ≥ 35 (Table 1). Mild correlation was detected between SPS score and the scores of physical neglect (*r*:0.363), emotional neglect (*r*: 0.370), physical abuse (*r*:0.422) and YBOCS (*r*:0.4448) whereas moderate correlation was detected between the scores of CTQ total (*r*: 0.564), emotional abuse (*r*: 0.612), BAS (*r*: 0.537) and BDS (*r*: 0.637) (Table 4). Partial correlation was performed to assess the effect of childhood traumas on the probability of suicide independent of depression and anxiety scores. It was found that mild correlation between physical neglect (*r*: 0.345) and physical abuse (*r*: 0.319) and moderate correlation between CTQ total score (*r*: 0.513) and emotional abuse (*r*. 0.646) remained independently of BAS and BDS scores. The correlation with emotional neglect disappeared.

4. Discussion

The primary aim of our study is to examine the co-existence of childhood traumatic life events with OCD in adult OCD patients and the secondary aim is to assess the relationship between childhood traumas and suicide probability. The YBOCS scores were found to be higher in the group with childhood trauma score ≥35 according to a cut-off score of CTQ. Also, religious, sexual and aggressive obsessions and ritual compulsions were observed to be more common in this group. Correlations were detected between childhood traumas and suicidal probability scores. Even when the effect of depression and anxiety was controlled, the total score of childhood trauma was found to be in moderate correlation with emotional abuse and in mild correlation with physical neglect and physical abuse.

There are studies, which were conducted with clinical (Lochner et al., 2002; Hemmings et al., 2013) and non-clinical samples, reporting the significant relation between childhood traumas and OCD (Mathews et al., 2008, Demirci, 2016). The study by Carpenter and Cheung (2011) was performed on 82 OCD patients and the comparison group including 92 people. In line with the results of the study, it was determined that childhood traumas were not a directly related factor in OCD cases but an implicit relation was detected with childhood trauma depending on the attachment type and the occurrence of alexithymia. In this case, it was observed that the avoidant attachment status of the participants with childhood trauma could be associated with alexithymia and by this way, it was concluded that this situation could be associated with OCD.

In a study evaluating university students in our country, it was found that obsessive compulsive symptoms were associated with dissociative experiences rather than childhood traumas and that childhood traumas were more associated with rumination and impulse scores (Celikel and Besiroglu, 2008).

There are also studies in which no relation was detected between childhood traumas and OCD. For example; when we examined the findings of the study in which 34 OCD patients were included, it was observed that there was no statistically significant relationship between the childhood trauma of the patients with OCD diagnosis and the diagnosis of OCD (Ozer, 2015).

In our study, in accordance with numerous previous studies, emotional abuse being in the first place, a significant relationship was found between OCD and childhood traumas. Transformation of intrusive, unwanted thoughts, which developed as a consequence of traumatic experiences, into clinical obsessions seems to be possible according to the cognitive approach, which indicates that the development of clinically significant obsession can be derived from a mildly challenging thought (Celikel ve Besiroglu, 2008). In the studies of Dinn et al. (1999), it was laid emphasis on that traumatic experiences that are experienced during childhood may increase the frequency and intensity of obsessions and influence the content of the thought. Early

Table 4
Correlations between Suicide Probability Scale, Childhood Trauma Questionnaire.

	SPS total		Hopelessness		Hostility		Suicide ideation		Negative self-evaluation	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
CTQ total	0.564	0.000	0.523	0.000	0.477	0.000	0.579	0.000	0.016	0.898
Physical neglect	0.363	0.003	0.378	0.002	0.215	0.081	0.273	0.025	0.108	0.382
Emotional neglect	0.370	0.002	0.379	0.002	0.314	0.010	0.466	0.000	−0.102	0.411
Physical abuse	0.422	0.000	0.381	0.001	0.385	0.001	0.493	0.000	−0.051	0.679
Emotional abuse	0.612	0.000	0.555	0.000	0.626	0.000	0.649	0.000	−0.078	0.531
Sexuel abusel	0.181	0.142	0.131	0.290	0.144	0.245	0.170	0.168	0.079	0.525
BAS	0.537	0.000	0.510	0.000	0.396	0.003	0.354	0.003	0.192	0.120
BDS	0.637	0.000	0.625	0.000	0.519	0.000	0.478	0.000	0.110	0.374
YBOCS	0.448	0.000	0.464	0.000	0.182	0.140	0.152	0.219	0.346	0.004

maladaptive schemas are common broad patterns that occur during the early stages of life, which include memory, emotion, cognition, and physical senses, and which can become complex and dysfunctional throughout the life of a person (Komurcu and Gor, 2016). It was suggested that on the basis of intrusive thoughts which were assessed maladaptively in OCD patients, there may be learned inappropriate assumptions and beliefs to cope with early traumatic experiences. Even if, at the beginning, it emerges as protective phenomenon against childhood traumatic experiences, it gains obsessive characteristic in time and turns into psychopathology (Briggs and Price, 2009). The differences between studies may be due to methodological differences among the tests which assess disease symptoms and measure childhood traumas or OCD symptom subtypes. Incorporating the variables, which could mediate between childhood traumas and OCD, into the researches can be useful for us to understand the complex processes.

When the relationship between obsessive-compulsive symptoms and childhood traumas was evaluated, in the study of Celikel and Besiroglu on non-clinical sample, it was reported that there was a statistically significant relation between the subscale of rumination and childhood sexual abuse (Celikel and Besiroğlu). In the study conducted recently on university students, the total score of CTQ was found to be positively correlated with the total score of Padua Inventory, the scores of rumination, impulsiveness and certainty subscales (Demirci, 2016). As a result of the study by Akpınar et al. (2013) including 80 OCD patients, emotional abuse and sexual abuse were found to show significantly higher association with the OCD with sexual obsessions. There are also studies in which a relationship between traumatic experiences of childhood and symptomatic types was not detected. When the results of a recent study were examined, it was observed that there was no statistically significant relation between childhood trauma of the patients with OCD diagnosis and OCD subtypes (Ozer, 2015). Since the sample included in this study was small, it is likely that no difference could be found between two groups.

Recently, Lee and Kwon (2003) suggested that obsessions can be divided into two groups as autogenous and reactive obsessions in the context of the cognitive theory. Autosomal obsessions are more repetitive, more disturbing obsessions that people may feel more discomfort to have them in themselves, they are needed to be spoken less often, and they require less warning to appear in mind. Aggression, religion and sexual-themed obsessions are in this group. Reactive obsessions are the obsessions that tend to be triggered by a higher number of external stimuli, they are considered less ridiculous, they need to be hidden less and they make the person feel less discomfort than others. The obsessions of getting dirty, suspicion, symmetry, punding are included in this group. In a study, it was considered to be interesting that autogenous obsessions were found to flare up more in the presence of stressors than reactive obsessions, and the presence of stressors was also investigated before the first diagnosis of the disease, but no significant result was obtained related to that.

When the literature which found a relation between childhood traumatic experiences and OCD signs were examined, it was noted that there was a significant relationship with aggressive, religious and sexual obsessions, which are called autogenous obsessions. Our study supports the current literature. Although it has not been studied before, OCD may develop with autogenous obsessions as a result of childhood traumas. In the future studies with larger studies, the relationship between childhood trauma and obsessive type can be evaluated among two groups classified as an autogenous and reactive group.

A number of studies evaluating the relationship between childhood trauma and suicide have been conducted. As a result of the field trial study on 8580 participants, there was a significant relationship between sexual abuse and both suicide attempt story and suicide intention (Joiner et al., 2007). According to the study in our country conducted by Saracli et al. in the non-clinical sample with 897 participants, significant relation was detected between childhood emotional neglect and emotional abuse and suicidal ideation and suicide attempts (Saraclı et al., 2016). In a study conducted by Park et al. (2015) in which they assessed the relationship between the presence of childhood trauma and suicide and psychiatric illness in 6027 participants, childhood trauma and lifelong suicide attempt were found to be associated with suicide plan and intention. Also, in the presence of trauma story in childhood; a relation was found with significantly increased life-long suicide risk rate in the subjects with substance abuse, depressive disorder, and an eating disorder.

Two major biological consequences (responses) in response to childhood trauma are serotonergic system hypofunction and changes in hypothalamic-pituitary-adrenal axis function. Some of these findings also overlap with the characteristics of suicidal behavior. Emotional traumas may also play a role in Zhang's two-factor model of suicide theory. Childhood traumatic experiences increase suicidal risk through factor 1 strain theory and factor 2 interpersonal theory by negatively affecting both social relations and mental health (Zhang, 2016).

When the relevant literature was examined, in the studies which assessed suicide relationship with childhood traumas on the patients with depressive disorder (Pompili et al., 2014), bipolar disorder (Mert et al., 2015), schizophrenia (Hassan et al., 2016), posttraumatic stress disorder (Juang and Yang, 2014) it was found that childhood traumas increase the risk of suicide. In our study, a moderate correlation was found between CTQ total score and emotional abuse while mild correlation was found between suicide probability and physical neglect, physical abuse, independent of and BAS and BDS scores. To our knowledge, this is the first study to evaluate suicide relationship with childhood traumatic experiences in OCD patients. Increased risk of suicide in the presence of childhood trauma in OCD patients may be related to serotonin functions of the brain.

4.1. Limitations

One of the limitations in our study is that childhood trauma data are obtained from the scales filled by the patient. In addition, CTQ was shown to be highly reliable and validated by Bernstein (1994). In the literature, since the significant results were also obtained in the non-clinical sample group, it was accepted that the presence of a control group consisting of healthy volunteers was considered to be important in interpreting the results and could provide data richness and its absence was accepted as the limitation of this study. Another limitation was that genetic and family characteristics that may affect OCD development and suicide risk were not evaluated. The levels of depression and anxiety, which are known to be related to suicide, were measured and their associations with suicide were controlled, but not measuring impulsivity, which is independent of these data, is another limitation of our study.

4.2. Conclusion

In our study, an association was found between especially aggression, religious and sexual obsessions and, emotional abuse being in the first place, childhood traumas in the OCD patients. The probability of childhood trauma should come to mind in the presence of a patient with such dominant obsessive signs. As far as we know, our research is important because it is the first study to evaluate childhood trauma and suicide relationship in OCD patients, which was previously studied both on the non-clinical sample and various psychiatric disorders. Suicide, which was found to be more prevalent than estimated in recent years, in OCD patients was also assessed in our study. Suicide probability was found to be associated with childhood trauma, independently of depression and anxiety. Childhood trauma should especially be questioned in our patients who are followed up with the diagnosis of OCD, and these patients should be followed up more frequently by considering the possibility of increased suicide probability.

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