

FOR REFERENCE

The Effect of Exposure Severity on the Relationship between Dissociation
and Posttraumatic Stress Disorder

NOT TO BE TAKEN FROM THIS ROOM

Thesis submitted to the
Institute of Social Sciences
in partial satisfaction of the requirements for the degree of

Master of Arts
in
Psychology

by

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ACKNOWLEDGEMENTS

In the completion of this study, many people supported and helped me. I owe them special thanks.

First of all, I would like to thank Prof. Dr Falih Köksal, my thesis advisor, for guiding me in my research and for encouraging with his infinite positive energy. I also owe special thanks to Yrd. Doç. Dr. Ali Tekcan for his valuable ideas and constructive comments on my research. I thank him for his support throughout the year.

I would like to express my gratefulness to a very special person for me, Yrd. Doç Dr. Sami Gülgöz. He was not just a guide in my works, but also a father and a friend for me. He continuously encouraged and motivated me to work. Without his support and help, I think this research would not be accomplished.

There are many beloved people who helped me during my literature review and the data collection processes. First of all, my beloved cousin, Aslı Tunç, from USA, provided me all the articles that are not available in Turkey. I thank her for helping me from that far. Although she was very busy with her doctoral thesis, she searched and sent those articles as soon as possible.

In my data collection, dear İbrahim and Sedef Betil helped me find my participants from the earthquake region. I am grateful for their support. I would like to thank also Dr. Tamer Aker and Ebru Şalcıoğlu for their kindness, warmth and their help during my data collection in Küçük Çekmece and İzmit.

I also owe special thanks to my dear friend Esin Uzun Sabol for helping me in the statistical analyses and to her beloved husband for his patience during the long nights of analysis at their home.

Throughout the year, very special people supported me morally with their warmth and patience. First of all, I would like to thank my beloved father, Kayhan Akduman, who gave me his love, faith and understanding. He encouraged me to work and, as always in my life, he was with me, unconditionally. I am very grateful to my sister, Sumru Alptoğan and to her beloved husband, Burç Alptoğan who live in Ankara. They, with supernatural efforts, were always with me during the whole year.

There is also another very special person that I am grateful to: Ali Başol. He supported and tolerated me continuously with his love, warmth, understanding and especially with his patience during the year. Throughout the tiresome year, my family was my source of encouragement, motivation and positive energy.

Finally, I would like to dedicate my work to the memory of my adored mother, Fügen Akduman. I know that she would be very proud of me. Knowing that, was my greatest motivation in achieving to this end.

ABSTRACT

The Effect of Exposure Severity on the Relationship between Dissociation and Posttraumatic Stress Disorder

by

Irem Akduman

The aim of the present study is to explore the effect of the exposure severity on the relationship between dissociative tendency and PTSD. It was predicted that, when the dissociative tendencies of an individual is high, his/her PTSD symptom severity will also be high, regardless of his/her severity of exposure. The sample for the study was drawn from 1999 Izmit Earthquake survivors. The scales used were Dissociative Experiences Scale and Posttraumatic Stress Diagnostic Scale. In addition to these questionnaires, a severity of exposure scale was developed. The hypothesis was not confirmed by the findings. The results showed that, contrary to what was predicted, when the dissociation level is high, exposure severity played an important role in the symptom severity level of the participants. Accordingly, it was concluded that, there is a relationship between dissociative tendencies and PTSD, however, when studied together, the impact of the severity of exposure on the development of posttraumatic stress disorder is stronger than the dissociative tendencies'.

KISA ÖZET

Travmaya Mağruz Kalma Şiddetinin, Disosiyasyon ve Travma Sonrası Stres Bozukluğu İlişkisindeki Etkisi

İrem Akduman

Bu araştırmada travmaya mağruz kalma şiddetinin, disosiyasyon ve travma sonrası stres bozukluğu ilişkisindeki etkisi incelenmiştir. Yapılan çalışmada, yüksek disosiyasyon eğilimli kişilerin, yaşadıkları travmanın şiddeti ne olursa olsun, yüksek travma sonrası stres bozukluğu belirtileri gösterecekleri öngörülmüştür. Örneklem grubu, 1999 İzmit depreminin bayan mağdurlarından oluşturulmuştur. Araştırmada kullanılan ölçekler, Disosiyatif Yaşantılar Ölçeği ve Travma Sonrası Stres Bozukluğu Tanı ölçeğidir. Bu ölçeklere ek olarak Travmanın Şiddeti Ölçeği geliştirilmiştir. Çalışmanın sonucunda, beklenilenin aksine, disosiyatif eğilim ne olursa olsun, yaşanan travmanın şiddeti, kişilerin travma sonrası stres bozukluğu belirtilerini etkilediği bulunmuştur. Bu bulguların sonucunda, travmanın şiddetinin, disosiyasyon ve Travma Sonrası Stres Bozukluğu ilişkisinde önemli bir rolü olduğu görülmüştür. Disosiyasyon ve Travma Sonrası Stres Bozukluğu arasında bir ilişki vardır, fakat bu ilişkiye travmanın şiddeti eklendiğinde, travma şiddetinin Travma Sonrası Stres Bozukluğu üzerindeki etkisinin, disosiyatif eğilimin etkisinden daha fazla oluşu gözlenilmiştir.

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<INTRODUCTION

Trauma is considered to be a part of our lives. Events such as accidents, assaults, natural disasters or terrorism occur almost universally. Individuals' reactions across cultures to these kinds of experiences are determined largely by how they subjectively interpret these events.

Even though there are individual differences, typical reactions to trauma include arousal (anxiety reactions), numbing, avoiding and reexperiencing (APA, 1994). These categories, although they are separate, have a lot of shared features. They are symptoms of posttraumatic stress disorder (APA, 1994).

Symptoms of the Posttraumatic Stress Disorder

A person who undergoes a trauma shows 'anxiety reactions' that were not present before. Symptoms like these (e.g. hyperarousal, hypervigilance, exaggerated startle response, irritability, outburst of anger, difficulty in concentration...etc.) occur especially when exposed to a triggering situation, which makes the individual relive the traumatic event and the affective component that s/he attached to that event. Triggering the traumatic event is not very difficult because anything can easily provoke the symptoms that were explained above. For example a smell, a sound, a touch or encountering anything that reminds the trauma makes the individual reexperience the event and produce anxiety symptoms.

Another PTSD symptom is 'avoiding' the stimuli associated with the traumatic experience (APA, 1994). The individual tries to escape from the

situations, activities and people that remind him/her the unpleasant experience because being exposed to these makes him/her relive the happening. Avoidance is also used to keep the distressing thoughts and feelings away from the victim. This is mostly done intentionally. Herman (1997) gives a good example for this situation. She states that the survivors of a collapsed building avoid passing under bridges. In addition to that, a partial amnesia of the terrifying event is also encountered as a way of avoidance (APA, 1994). However, this time the process is not under the individual's control, it is unconscious. For instance, a sexually abused woman says about her own experience of forgetting the traumatic experience:

“Until about a year ago I had no awareness that any of it had happened. I had completely removed it from any form of consciousness. Until that point I had not come near to having a relationship even as close as a best friend. Two years ago I began seeing the college psychiatrist (generalized dissatisfaction with the way I was leading my life). A year later I came perilously near being close to somebody and was greeted with a rush of memories – flashes of scenes, disconnected and disconcerting.” (Freyd, 1997)

As in this example, the person does not remember anything about the abuse that she had gone through until she began psychotherapy. The partial trauma examples that are about sexual abuse are found to be very debatable by many of the researchers. Schooler (1994; cited in Freyd, 1997) argued that these kinds of memories were produced by the individual with the help of “a persuasive individual in a position of authority” and that the therapist implants these memories in their patients' minds. That is, he suggested that some of the traumatic abuse memories are the combination of the recovered memories and fabricated memories

(Freyd, 1997). On the other hand, some other researchers such as Loftus and Ketcham (1994; cited in Freyd, 1997), and Goleman (1985; cited in Freyd, 1997) argued a different opinion on this subject. They suggested a motivation for repression of these kinds of overwhelming traumatic experiences. They stated that the repression of the memory decreases the pain that it would cause. It is a defense mechanism that the mind uses to protect the individual from this burden. It simply removes some of the experiences and its affective components from the consciousness (Freyd, 1997). Maybe some of the memories of trauma are really implanted, however it should be noted that the discussions on this topic were done about the memories of sexual abuse experiences. In other kinds of traumatic experiences partial amnesia may occur as well. For example, Sargent and Slater (1941; cited in Brende, 1987) reported that amnesic symptoms were frequently encountered in World War II combat veterans. According to their findings, the severity of amnesic symptoms is positively correlated with the severity of combat exposure. Their results showed that long periods of fighting actively in a combat produced a 35% incidence of amnesic syndromes. The relatively short-term combat resulted in a 13% incidence. Sargent and Slater (1941; cited in Brende, 1987) found out that, not being involving in the combat actively but having some duties at the posterior part of the fight reduced the incidence of amnesia to 6%.

The third symptom of PTSD is 'reexperiencing' the traumatic event (APA, 1994). This may happen in different ways. First of all, the memories of the event intrusively come to the individual's mind. The second is having

distressing dreams and the third is having dissociated states. Throughout these dissociative states, the person behaves as if s/he is really living the previous event at that moment. All of these make the person relive the horrifying experience. Another way of reexperiencing the trauma happens when the person is exposed to an event or a situation which shows similarity to or symbolizes the past experience (APA, 1994). A Vietnam War veteran, Jim O'Brian explained his reexperiencing very clearly in Herman's book:

"I remember the white bone of an arm. I remember the pieces of skin and something wet and yellow that must've been the intestines. The gore was horrible, and stays with me. But what wakes me up twenty years later is Dave Jensen singing 'Lemon Tree' as we threw down the parts." (Herman, 1997)

Triggering events play a very critical role in the 'reexperiencing symptom' as they do in the other symptoms. In this situation, the individual feels an intense psychological distress and/or s/he shows some physiological reactions such as tremors, restlessness, muscle tension and palpitations (Classen et al., 1993). In addition to these symptomatic responses, feelings of rage, hopelessness, guilt (mostly about surviving or not being able to save the others) and shame are some of the emotions attached to the experienced event's memory (Classen et al., 1993). The person, after going through such a terrifying experience, may feel as being deeply hurt. Feelings of ineffectiveness, hostility, thinking of being under a continuous threat... are some other common psychological reactions, which follow the problems that occur after trauma. The person who has such a bad frame of mind would have some problems in their relationships with others, which in turn would precipitate their social withdrawal. Some changes in their personality features may occur with changes in their beliefs that are deteriorated after the event

(APA, 1994).

The fourth symptom is 'numbing'. This is defined as "diminished responsiveness to the external world" (APA, 1994). After the trauma, the individual feels detached from his/her environment. S/he does not enjoy the activities that s/he used to have pleasure, s/he does not expect anything from future. His/her capacity to feel sentiments is decreased. That is, s/he can not feel emotions, especially the ones that are related to intimacy and sexuality. For example, in 1976, 26 schoolchildren and their bus driver were kidnapped near Chowchilla, California, by three gunmen and they were imprisoned in an underground cell. The captives escaped unharmed however the psychological effects were long lasting. One of these captives, a 12-year-old kidnap survivor, stated that he thought that he would die in very young age. He explained that he did not think he would be able to marry. Another survivor similarly stated that she thought she would die early because someone would shoot her (Hodgkinson and Stewart, 1991). Same issue is valid for the adults also. A victim who experienced various armed burglaries explained his numbness experience as: "It's like I'm on drugs. I feel disconnected, as if there is a veil between me and everyone else" (Hodgkinson and Stewart, 1991). Numbing is a kind of defense, which makes victim allowsthe victim to stay distant to his/her overwhelming feelings. In short term, this may be useful. However, as Hodgkinson and Stewart (1991) stated numbing "... may persist and leave the survivor emotionally 'living dead'".

If these mentioned symptoms continue for more than one month and if they impair the normal functioning of the individual, then the diagnosis of Post Traumatic Stress Disorder is considered (APA, 1994).

Dissociation

Historical information

Throughout the history, people attempted to understand what is happening to those people who actually have dissociative disorders. In some cultures, religious meanings are attached to the symptoms (e.g. possession by devil) (Şar and Yargıç, 1997).

A considerable amount of literature about dissociation and the relationship between dissociative symptoms and trauma has accumulated. The first person that studied dissociation systematically is considered to be Pierre Janet (1889; cited in van der Kolk, McFarlane, and Weisaeth, 1996). Although some of his contemporaries also worked on this topic, he was the first person to use the word "dissociation". He argued that dissociation is a genetic insufficiency in the individuals' psychological functioning which he called "la misère psychologique" (psychological insufficiency) (Janet, 1889; cited in Bremner, Marmar, 1998). According to his explanation, there is a kind of mental energy in "normal" individuals, which makes them able to unify all mental processes such as sensation, memory, cognition and affect. When these operations are unified, they enter under the control of the self. Dissociation occurs when the quantity of this energy is insufficient. This deficiency disables the personal self to unify these mental operations appropriately. Accordingly, during a very traumatic experience, the person

with lower mental energy would not be able to combine the memory of this experience and the emotions associated to it and dissociation would occur. Van der Kolk and van der Hart (1989) have explained Janet's clarification of dissociation in their article as "Awareness of emotions, thoughts, actions and sensations related to any particular experience is united in a single consciousness and is under voluntary control... Frightening or novel experiences may not fit into existent cognitive schemas; memories of these experiences then may be split off from conscious awareness and voluntary control, and fragments of unintegrated events may later show up as pathological automatism" (van der Kolk, van der Hart, 1989).

According to Janet (1889; cited in van der Kolk and van der Hart, 1989), dissociation is very critical in coping with the traumatic experience. Thus, it serves as a defense mechanism in protecting the person from the trauma (van der Hart and Horst, 1989; cited in Putnam, 1989). When dissociation occurs, new domains of consciousness of memories of the traumatic experiences are formed and they are called "subconscious fixed ideas" which organize all parts of the experience while not letting them into conscious awareness (van der Kolk, van der Hart, 1989). Janet considered the maladaptive function of this defense when it is used for a long time. In the long run, because of the blanks in the memories of the past experiences and because of the subconscious fixed ideas' influences on the current functioning (by flashbacks, dreams... etc.), the dissociation causes a discontinuity in the life of the individual. The mechanism, which is out of the individual's control, becomes pathological and disturbing.

Approximately a decade later than Janet's studies, the notion of dissociation appeared in Freud's studies on hysteria, although he did not call it "dissociation". He called it "the defense hysteria" and explained as: "it occurs when the ego (as he called the personal consciousness) actively represses memories of the traumatic event to protect itself from experiencing the painful affects associated to them" (Breuer and Freud, 1893-1895/1955; cited in Bremner, Marmar, 1998). In time, the importance given to this issue decreased dramatically.

Recent information

After the end of the World War II, a new rise in the studies on dissociation began. The traumatic experiences of the soldiers and their reactions to those experiences received attention and brought up again the discussions about the relationship between trauma and dissociation. Before these new studies, dissociation was considered to be a part of some other mental disorders (e.g. Conversion, hysteria...etc.). In the DSM I, the dissociation was separated from conversion (Kaya, 1996). It was considered to be the amnesic part of the hysteria while conversion was thought to be its sensorial part. Then, in DSM II, these two clusters were combined and called hysterical neurosis (Kaya, 1996). More recently, dissociation was defined in DSM III-R as "a disturbance or alteration in the normally integrative functions of identity, memory or consciousness" (APA, 1987). This definition is very similar to that of Janet. He was also defending that it was the separation of one component of the memory or consciousness from the other. In the last edition of DSM (DSM IV) dissociation was defined as the disturbance in the

integrity of memory, consciousness, identity and the perception of the environment (APA, 1994).

Van der Kolk followed Janet's studies carefully and in a sense continued from his path. He defined dissociation as "a way of organizing information" (van der Kolk, 1996). He explained it as the separation of the different components of a traumatic experience, which normally come together to form the sense of self of the individual (van der Kolk, 1996). It serves as a function of protection for the individual. It prevents the person from feeling the overwhelming and intensive impacts of the trauma by not letting the experience of it come into consciousness. Kilstrom (1990; cited in Gershuny and Thayer, 1999) argued that in doing so, the person denies his introspective access to some memories. Van der Kolk, like Janet, emphasized the disadvantage of long-term usage of dissociation as a defense mechanism. He and some other researchers suggested that dissociation arrests the individual from experiencing the trauma entirely, which in turn makes the person maintain the post traumatic stress disorder (van der Kolk, 1996; van der Kolk, van der Hart and Marmar, 1996; Foa and Heart- Ikeda, 1996).

Spiegel was a researcher who had similar opinions about dissociation with Janet's. He also argued that dissociation was a kind of defense. The person detaches his/her experiences from the feelings that s/he attached to these experiences. This process serves as a function of a defense mechanism that puts a distance between the traumatic experience and the individual, protecting the person from current overwhelming emotional threat. He suggested that dissociation is a psychological flight, when physically the

individual is unable to escape (Spiegel, 1988; cited in Allen, 1993; Herman, 1997). In a sense, the person escapes cognitively and emotionally by changing his consciousness because physical flight is impossible (Herman, 1997). According to Spiegel, the individual, when dissociated, "is separating mental processes and contents that are normally integrated. S/he is unable to think about two or more contents in connection with one another, perhaps instead alternating among contradictory experiences" (Spiegel, 1988; cited in Allen, 1993). This happens because of the divided or parallel access to awareness (Spiegel, 1990; cited in Gershuny and Thayer, 1999). Spiegel explained this as "loss of control over one's own state of mind" (Spiegel, 1988; cited in Allen, 1993).

Marmar et al. (1996) and Steinberg (1995; cited in Gershuny and Thayer, 1999) described this concept as "fragmentation of the consciousness". Some other researchers (Cardena, 1994; cited in Gershuny and Thayer, 1999; Classen et al, 1993) described the concept of dissociation similarly in their studies.

Foa and Heart-Ikeda (1996) defined dissociation in a slightly different way, from a different perspective. They explained this phenomenon as the avoidance of thoughts or emotions of the person about the traumatic event.

Continuity versus Discontinuity

During the new efforts to explain the concept of dissociation, another problematic issue emerged "the continuity versus discontinuity of the awareness". Janet argued that there was a discontinuity and the dissociation was not encountered in "normal" individuals. Some other researchers (Waller

et al., 1996) also agree with him and argue that Janet's model of dissociation explains the pathological dissociative symptoms better. In their studies, they found out that "there are two types of individuals: persons who experience chronic dissociative states and persons who do not" (Waller et al., 1996). Accordingly, people who have chronic dissociative states are considered to have the pathological dissociation, the other ones are thought to have non-pathological dissociations.

On the other hand, generally, the opposite view is considered to be more accurate by many researchers. Prince (1905/1978; cited in Waller et al., 1996) argued that dissociation is a continuous variable and it occurs in a spectrum ranging from lower forms to more pathological forms. According to the researchers that support this opinion, every individual has a degree of dissociative tendency (Waller et al., 1996; Tutkun, 1998). The highly pathological forms of dissociation involve the DSM IV's "dissociative disorders" criterion. It is separated into five distinct disorders (APA, 1997):

- 1- *dissociative amnesia*: described as the inability to recall some personal experiences and memories.
- 2- *dissociative fugue*: the individual with this disorder travels away from his home and is unable to remember his past life.
- 3- *dissociative identity disorder*. The individual has two or more separate identities in him/herself.
- 4- *depersonalization disorder*. Individual experiences detachment from him/herself. S/he feels as if s/he lives in a dream. Out of body experience (watching one's own self and body from outside, like an observer) is very common.

- 5- *dissociative disorder not otherwise specified*: This category includes all other dissociative symptoms which do not meet the criteria described above.

The milder forms of dissociation includes (Waller et al., 1996):

- *Absorption* (losing connection with the environment as a result of being too much involved in an activity),
- *Derealization/Depersonalization* (sense of being out of body and watching oneself doing something from outside of the body),
- *Amnesia for dissociative states* (having no memory about the activities or behaviors done, experience of finding oneself doing something that one has no idea about the beginning).

Because most of the researchers agreed on this view of continuity, the measurement tools were developed in order to measure the degrees of dissociation in different individuals. The most widely used screening tool in research is "Dissociative Experiences Scale" (Bernstein and Putnam, 1986). In the studies done with this instrument, three factors that were explained above came out (Waller et al., 1996):

- 1- Absorption
- 2- Derealization/Depersonalization
- 3- Amnesia for dissociative states.

Relationship between dissociation, trauma and PTSD

The nature of the relationship between dissociation and PTSD has also been studied widely. It has been found that dissociative symptoms are

predictors of PTSD (Koopman et al., 1994). In their research on firestorm disaster victims, Koopman, Classen and Spiegel investigated the predictors of post traumatic stress symptoms in the Oakland/Berkeley firestorm survivors. They screened the dissociative experiences both right after the traumatic event and seven months later. They also examined their relationship of these experiences with the Posttraumatic Stress Disorder Symptoms. Their research results showed clearly that the dissociative symptoms reported immediately after the traumatic experience were positively correlated with PTSD even seven months after the event occurred ($r=0.53$, $p<0.001$). According to their findings, Koopman, Classen and Spiegel concluded that dissociative symptoms predict post traumatic stress symptoms more strongly than the other variables examined (e.g. anxiety and loss of personal autonomy). In another study, Bremner and Brett (1997; cited in Gershuny and Thayer, 1999) found that the Vietnam War veterans with PTSD have higher levels of dissociation than those without. On the other hand, there are some researchers who support that the relationship between the dissociation and PTSD is the other way around. Carlier and her colleagues (1996) conducted a research with traumatized police officers in order to find out the direction of the relationship. At the end, they found out that PTSD in the 3rd month was significantly related to dissociative symptoms in the 12th month. However, dissociation at the 3rd month was not found to have a significant relationship with the PTSD in the 12th month. Having these results, the researchers concluded that PTSD is the predictor of the dissociation. The certainty of a relationship between PTSD and dissociation is agreed on by the researchers, however its nature is far from being

understood.

Although the relationship between dissociation and trauma is obvious, what makes them connected so powerfully is not so well understood. Herman (1997) thought “the common denominator of psychological trauma is a feeling of intense fear, helplessness, loss of control and threat of annihilation”. In addition to that, Gershuny and Thayer (1999) theorized that the arousal which leads to dissociation may be explained by intense fears, especially the fear of death has a great contribution to that issue. Other researchers provided data to support this claim. They (Blanchard et al, 1995; cited in Gershuny and Thayer, 1999; Griffin et al, 1997; cited in Gershuny and Thayer, 1999; Rothbaum, Foa et al, 1992; cited in Gershuny and Thayer, 1999) found out that “perceived lack of controllability is a predictor of the development of PTSD and death salience during and after the trauma relates to dissociation and PTSD” (Gershuny and Thayer, 1999).

The role of exposure severity in dissociation and PTSD

All these studies emphasize the importance of the intense fear of death associated with the traumatic experience in the development of PTSD and dissociation. In addition, the role that the severity of exposure plays in the development of these two disorders is very critical and is not clear enough. In a research, Shore et al. (1986) while studying the psychiatric reactions of the disaster survivors found out that there was a pattern of a “dose-response” in the victim’s reactions. That is, the severity of the psychiatric reactions increases when the “dose” of the exposure augments. They studied three different groups of people: the highly exposed, the lowly

exposed and the control group. They defined the highly exposed people as having lost at least \$5,000 in their property and a family member or a very close relative. The control group was chosen from another city. In their results, Shore, Tatum and Vollmer found that there was a significant difference in the psychiatric reactions of the three different groups. The psychiatric responses that they looked for were depression, generalized anxiety and posttraumatic stress disorder. From these findings the authors concluded that the individuals who are exposed more severely to the traumatic phenomena constitute the "at-risk population" for the psychiatric disorders.

Goenjian and his colleagues (1994) studied the impact of the severity of the trauma and PTSD with 1988 Armenia earthquake survivors. They compared the reactions of the survivors of the three cities at increasing distances from the earthquake epicenter in order to examine the relation of the degree of exposure and the severity of posttraumatic reaction. The findings revealed that survivors who live in cities closer to the epicenter had significantly higher scores and had much greater rates of chronic severe posttraumatic stress. In another study, Sounders and Giolas (1991; cited in Bremner and Marmar, 1998) while studying with psychologically disturbed adolescents found some similar results. Their results were supporting the significant positive correlation between the severity of victims' past traumatic experience and high levels of current dissociative experiences (Bremner and Marmar, 1998). In a different research, Kirby et al (1993; cited in Bremner and Marmar, 1998) worked with abuse victims selected from a private psychiatric hospital. In this research, the relationship between the

dissociative symptoms and different criteria of abuse experience was investigated. Similar to those other studies that examined the relationship among the level of exposure, PTSD and dissociative symptoms, Kirby and his colleagues found out that when the severity of the abuse increased, the victims' traumatization increased too. Furthermore, dissociation levels of these people augmented.

Various researchers defined "the level of exposure" in different ways and each one studied it in his own way. Another example to this phenomenon is encountered in Bremner and Marmar's study (1998). They examined the same issue in a slightly different way. They examined both physical and sexual abuse victims. The researchers found out that participants who experienced both types of abuses simultaneously scored higher in the Dissociative Experiences Scale than the ones who experienced a single type. In their study, the authors defined the high exposure as being exposed to multiple traumatic experiences simultaneously.

All these studies explored the relationship between dissociation and severity of exposure, PTSD and exposure. On the other hand, there is no literature available, which unifies these studies and which investigates the role that the exposure severity plays in the relationship between the dissociative tendencies and PTSD. The lack of research on this subject was one of the most important motives behind this present study.

The Aim of the Study:

The İzmit earthquake, which was named as “the disaster of the century”, affected a very large number of people in Turkey. Everybody felt a great terror, they lost their sense of life security. They were confronted very harshly with the reality of death and losing control over their lives. As a consequence of the trauma experienced, many people had symptoms of psychiatric illnesses. The severity of the symptoms showed diversity in different individuals. What made this difference? Why some people had greater number of symptoms than the others? And why some people do not have any of these symptoms although they experienced the earthquake more severely? These questions were the starting point of this research. The literature reviewed about disasters and the psychological illnesses showed that, there is a close relationship among the traumatic experiences, posttraumatic stress disorder and dissociation. However, research done on this topic did not clarify enough the role of the “severity of the traumatic experience” factor in this relationship. In this research, we aimed to study this factor and its influence on the relationship between PTSD and dissociative tendencies.

Hypotheses

In the light of all the research conducted on this topic, it is hypothesized in this study that:

- 1- The individuals with PTSD diagnosis will have higher dissociative tendencies.
- 2- The individuals who experienced the earthquake more severely will have more dissociative experiences.
- 3- The individuals who were more severely exposed to the trauma will have more severe PTSD symptoms.
- 4- When the dissociative tendencies of the participants are high, their PTSD symptom severity will be high regardless of their severity of exposure.

METHOD

Participants

The participants of this research were selected from the survivors of İzmit earthquake that occurred in August 17, 1999. Four different groups from Yalova, İzmit, Sarıyer and Küçük Çekmece were selected. These groups were distinguished in order to examine the difference that the level of exposure would cause. The exposure severity degrees of those places are shown in Figure 1.

When the severity of the earthquake in those different regions are compared it is found that the most severe exposure was experienced in İzmit and Yalova. These places were shown in red symbolizing a destructive earthquake. The regions shown with the same color have experienced the earthquake in the same level of severity. Accordingly, Yalova and İzmit have had the same level of exposure. The participants from Küçük Çekmece did not feel the earthquake as strongly as (shown as dark yellow in the Figure 1) the first two groups, however their experience was more severe than the group included from Sarıyer.

The participants selected from İzmit and Yalova were picked from tent cities and prefabricated housing neighborhoods. There was a difficulty in accessing to the survivors, therefore the participants were chosen by haphazard sampling method. The first group was selected from İzmit. This city was the epicenter of the earthquake. The data were collected from women who live in İzmit and who experienced the disaster in this city. The reason why the women were chosen for the research is because the data

collection had to be done during the daytime and this group was the most easily accessible cluster of people. The battery was given to 88 women but 11 questionnaires had to be eliminated (6 of them rejected to fill out the battery, 5 of them gave their questionnaires to their husbands). In total, 77 batteries from İzmit were gathered.

The second group of earthquake survivors was selected from Yalova. The same procedure of selection was used. The total number of questionnaires distributed was 22 and all of them were received without any data loss.

The other participants of this research were selected from Sarıyer and Küçük Çekmece; two different regions of Istanbul. The individuals living in this city experienced the earthquake also. However the severity and the magnitude of the shock was significantly lower than the one experienced in the regions near to the epicenter. The two different regions from Istanbul were selected because they experienced the disaster in two different levels. The participants who live in Küçük Çekmece felt it more severely and their loss was much more than the ones in Sarıyer (Figure 1).

Two different neighborhoods were selected from Sarıyer. The women who accepted to participate in the study were given the battery. The procedure was the same as the procedure with the earthquake survivors. The rationale of the research was explained, the battery was clarified, their questions were answered and they were left alone for 45 minutes to fill out the form. Women in this region were highly hesitant in participating in such an activity because they were afraid of having trouble with their husbands. As a consequence of that, the rejections were very high in this group. The total

number of houses chosen from these neighborhoods was 55 however the data collected from that region was 38.

In the last group (Küçük Çekmece), data gathering was quite different from the other groups. The batteries were given to five nurses in the public health center of the region selected. The nurses were instructed about the administration and the battery. The forms were administered to the women who came to the health center for any reason. The total number of data collected from this region was 43.

Instruments

In the current study a battery was prepared. It included a dissociative tendency scale and a posttraumatic stress disorder scale. A questionnaire to measure the severity of exposure was added to these scales. Some questions about the influence of the media on the subjective experience of the trauma and the demographical information were organized together with the other scales.

Dissociative Experiences Scale (Turkish version) (Yargic, Tutkun and Sar, 1995):

In order to screen the dissociative tendencies the Turkish version (Yargic, Tutkun, and Sar, 1995) of “dissociative experiences scale” (DES) which was originally developed and standardized by Bernstein and Putnam (1986) has been utilized. This scale is constituted of 28 self-administered questions. The administration takes approximately 10-15 minutes. Some of the items were adopted from other dissociation measures, some others were

created by some clinical interview tools used, especially from Multiple Personality Disorder interviews (Waller, Putnam, and Carlson, 1996).

Dissociative Experiences Scale measures dissociation as a continuous construct. That is, every individual may experience dissociation in different levels beginning from non-pathological dissociation to more severe ones, the pathological dissociation. The individuals' scores range from 0 to 100. Higher scores indicate higher dissociative tendencies or more pathological dissociation experiences.

The items were concentrated on three topics: 1- Amnesia, 2- Derealization/depersonalization and 3- Absorption (Waller, Putnam, and Carlson, 1996).

Two different types of items assess the amnesia factor. The first one is about the individual's experiences of no memory on some of his/her complex behaviors (e.g. items 6 and 8, in appendix A).

The second type is about the individual's experience of finding oneself engaged in an activity that s/he does not know how s/he became involved in (e.g. items 1 and 3, in appendix A).

Another factor measured by Dissociative Experiences Scale is "depersonalization/derealization". That is, the individual's experience of feeling detached from his/her body and him/herself. The person, who experiences this, feels like living in a movie or in a dream (DSM IV, 1994) (e.g. items 12 and 28, in appendix A).

The third factor assessed by DES is the experience of absorption. That is, "the narrowing of attention and a disposition for having episodes of single total attention that fully engage one's representational resources"

(Bremner, Marmar, 1998). In this situation, the individual is so involved in an activity that s/he is detached from his/her surrounding (e.g. items 17 and 18, in appendix A).

In this research, the Turkish adaptation of DES was used. It was translated and adopted by, Yargıç, Tutkun and Şar (1995). Its test-retest reliability coefficient was 0.78 ($p < 0.001$, $N=32$) (Yargıç, Tutkun, and Şar, 1995). This version of the scale is found to differentiate successfully a group of people with dissociative disorders from the two other groups that it was compared with: a group of people with other psychiatric disorders and a normal group (without any psychiatric disorder). Its scores were correlated with the scores of another dissociation scale (DIS-Q) ($r=0.90$). (Aydemir and Köroğlu, 2000). In order to measure the internal consistency, Cronbach alpha was computed and it was found to be 0.91 (Yargıç, Tutkun, and Şar, 1995)

Posttraumatic Stress Diagnostic Scale (Foa, 1995):

Turkish translation of the Posttraumatic Stress Diagnostic Scale (PDS) developed by Edna Foa (1995) was used (Appendix B). By utilizing this scale, Posttraumatic Stress Disorder symptoms of the participants and the severity of these symptoms were screened. Similar to DES, PDS is a self-administered scale. It is composed of 49 items.

The items of PDS were prepared according to the six diagnostic criteria of posttraumatic stress disorder in DSM IV (Appendix D). First two parts of the scale consist of questions asked about the criterion A. That is, it examines if the individual is exposed to a traumatic event in his/her life. There is a list of traumatic events, which might be experienced or witnessed.

The participants are asked to mark “yes” or “no” according to their experiences. There are also some additional questions about the traumatic events that were marked as “yes” in the first part. For example it was asked how long ago the traumatic event happened, was the individual physically injured and during this traumatic event did the individual feel helpless (Foa, 1995).

In the third part, the criteria B, C, D and E are examined (Appendix C). The items 1-5 check the criterion B, the “reexperiencing” symptom of PTSD. The items through 6-12 examine the criterion C which is about the “avoidance” symptoms of PTSD. The questions 13-17 explore the “arousal” symptom indicated in the criterion D of DSM IV (appendix C).

The next criterion, “duration of the symptoms” is assessed by simply asking how long these problems took place. The next part of the scale is prepared to measure the impact of the problems on the daily functioning. In this part, some areas of life are listed and the participants are asked to mark if these areas of their lives were affected by the problems that they rated in the questionnaire. The whole PDS questionnaire takes approximately 15-20 minutes to administer. The scores range from 0 to 51. Higher scores signify higher number of symptoms and high severity. In the original scale the cut-offs for the severity ratings were:

< 10	mild
11 - 20	moderate
21 - 35	moderate to severe
≥ 36	severe

and the same rating categories were used for the Turkish translation of the scale.

The Turkish adaptation of this scale was not completed when it was used in this study. Therefore, its reliability analysis was carried out after the data were gathered.

Severity of Exposure:

In order to develop items for measuring the severity of exposure to the earthquake, a list of 14 different traumatic experiences about the earthquake was prepared. In order to find the appropriate ranking of the severity levels, the list was given to 25 university students to put in an order the traumatic events according to their severity. They listed these 14 experiences from the least painful to the worst. The rankings made by the university students were gathered (the dimension formed by this rankings is shown in Appendix D) and quantified. First of all, these items were transformed into questions and a questionnaire was formed. The items of this questionnaire began from the worst situation (loss of a family member) and ends with the relatively mild one (property loss) (Appendix E). Then, an item coefficient for each experience was derived. For example, the item number 3 was "the death of his/her child". 19 out of 25 considered it as the most traumatic situation and ranked it as the 14th. The other 6 ranked it as 13th. The item coefficient for this experienced was

$$(19*14) + (6*13) = 344.$$

The participants were given the questionnaire prepared. The scale measured how many traumatic experiences they lived. Then, these experiences were multiplied with their item coefficients and were added together. The number derived from this operation is the participants'

exposure level score. The minimum score was 0 and the maximum score was 2016.

Impact of Media:

In addition to the questionnaire's own items, four questions were added in order to ask the impact of media on the survivors (Appendix F). This was very important because, after the earthquake, many live shows broadcasted and shocking pictures were published in the newspapers. All these factors were thought to have a negative impact on the individuals.

Demographic Information:

All of the scales were put together and an additional page was added for the demographic information (age, marital status, education level, socioeconomic status) (Appendix G). The distribution of the demographical variables in different groups used in the study was summarized in Table 1.

TABLE 1
THE DEMOGRAPHIC CHARACTERISTICS OF THE
PARTICIPANTS

	YALOVA	İZMİT	SARIYER	KÜÇÜK ÇEKMECE
AGES				
range	23-53	18-52	17-56	20-60
mean	34	46	39	47
MARITAL STATUS				
Married	17	70	36	38
Divorced	4	4	1	2
Other	1	3	1	3
EDUCATION				
Middle school or less	10	54	26	18
Middle school graduate	2	9	7	3
Highschool graduate	9	12	4	20
University graduate	1	0	1	1
Not specified	0	2	0	1
TOTAL	22	77	38	43

Procedure

The data collection began from the earthquake survivors. Some of them were living in the tent cities, others were living in the prefabricated houses. The battery was distributed to the chosen women in the tents (or the prefabricated houses). First of all, they were given information about the aim of the research. After having their consent, they were informed about how to fill out the battery. Their questions were answered and they were left alone for 45 minutes to complete the scales. The ones who could not finish within

the 45 minutes were given additional time. For illiterate participants, the batteries were administered verbally by the researcher. After collecting the data from the earthquake survivors, the data were collected from the two groups of participants from Istanbul: Sarıyer and Küçük Çekmece. In this region, also, the women who accepted to participate in the study were given the battery. The procedure in Sarıyer was the same as the procedure with the earthquake survivors.

In Küçük Çekmece, the batteries were given to five nurses in the public health center of the region selected. The nurses, who were instructed about the administration and the battery, managed to collect the data from this area. After two weeks, when all forms were filled out, they were taken back.

RESULTS

Descriptive Analyses Results

The descriptive statistics for the variables used in the study (Dissociative experiences scores, exposure scores, impact of the earthquake, PTSD symptom severity and PTSD number of symptoms) were presented in Table 2.

Table 2

Descriptive Statistics

	<i>N</i>	<i>Mean</i>	<i>St. Dev.</i>
Dissociative Experiences Scale			
Yalova	21	616,57	520,53
Izmit	74	672,00	566,96
Sarıyer	37	611,14	513,89
K. Çekmece	43	376,35	326,99
Average	175	579,83	510,55
Exposure			
Yalova	17	980,35	546,56
Izmit	57	796,60	376,40
Sarıyer	37	131,11	192,30
K. Çekmece	40	47,30	118,14
Average	151	455,73	493,03
Influence of the Earthquake			
Yalova	22	3,27	0,77
Izmit	77	3,45	0,79
Sarıyer	37	2,57	1,26
K. Çekmece	43	2,49	0,94
Average	179	3,02	1,03
PTSD Symptom Severity			
Yalova	15	26,60	9,25
Izmit	53	30,13	11,07
Sarıyer	27	16,70	8,82
K. Çekmece	31	17,90	13,38
Average	126	23,83	12,69
PTSD Number of Symptoms			
Yalova	15	13,13	3,16
Izmit	53	13,13	3,77
Sarıyer	27	9,56	3,24
K. Çekmece	31	9,58	5,16
Average	126	11,49	4,33

The four groups of participants (Yalova, Izmit, Sarıyer and Küçük Çekmece) were recoded as two groups: “participants from the earthquake region” and “participants from Istanbul”.

The Reliability Analysis of Posttraumatic Stress Diagnostic Scale

The reliability analysis for the posttraumatic stress diagnostic scale was carried out. The results revealed a high reliability with a Cronbach alpha .95.

ANOVA Analyses Results

When the Dissociative Experiences Scale (DES) scores of the participants from the earthquake region were compared with the participants from Istanbul, a significant difference was found ($F(1,174)=5,21, p<,05$). The DES scores of the individuals from the earthquake region were significantly higher than the ones' from Istanbul. This difference was still significant when it was analyzed for the four regions separately ($F(3,174)=3,28, p<,05$). However, the post hoc result showed that the difference observed only Izmit and Küçük Çekmece. The DES scores of the participants from Izmit were found to be significantly higher than the ones' from Küçük Çekmece (mean difference 295,6, $p<,05$). Contrary to what was expected, DES scores from Sarıyer were higher than the ones' from Küçük Çekmece (mean (Sarıyer)=611,1; mean (Küçük Çekmece)=376,3) ($F(3,174)=3,28, p<,05$).

A total exposure score was computed for each participant. The ANOVA analysis for two groups (earthquake region and Istanbul) and exposure scores revealed a significant exposure effect ($F(1,150)=209,22,$

$p < .01$). Then, the same analysis was carried out with 4 groups (Izmit, Yalova, Sarıyer and Küçük Çekmece) and exposure scores. A significant exposure effect was found, also ($F(3,150)=73,5, p < .01$). The post hoc analysis showed that, as expected, the significant differences between these regions were due to the differences between the earthquake regions versus Istanbul regions ($p < .01$).

In order to evaluate the effects of dissociative tendencies on PTSD symptom severity, the data were divided into two categories: low DES scores (lower than the mean) and high DES scores (higher than the mean). Then, ANOVA analysis was carried out. The results showed that when DES scores were low, the PTSD symptom severities of the participants were affected by the severity of their exposure. That is, in the group with low DES scores, the ones who have high exposure levels, have high PTSD symptom severities ($F(1,44)=5,86, p < .05$). Among the low DES category, the mean score of PTSD symptom severity for the earthquake region (mean=26) was significantly higher than the ones' in Istanbul (mean=15) ($F(1,78)=23,71, p < .01$). The same analysis was carried out with four groups and the result was still significant ($F(3,44)=3,08, p < .05$). The Tukey test showed that this significance was due to the mean difference between the PTSD symptom severities of Izmit and Sarıyer (mean difference= 12,38 , $p < .01$), and Izmit and Küçük Çekmece (mean difference= 12,43 , $p < .01$). Additionally, similar analyses were carried out for the high DES score group. Contrary to what was expected for this group, an impact of exposure severity on the PTSD symptom severity was found ($F(1,44)=5,86, p < .05$). That is, when severely exposed to the trauma, the individuals with high DES scores have high PTSD

symptom severity. Accordingly, when their exposure levels were low, their symptom severities were found to be low, despite their high dissociative tendencies. Tukey test showed that the significance of the difference between the PTSD symptom severity means of Izmit and Sarıyer (mean difference=12,24, $p<,05$) explained the significance between the means of earthquake region and Istanbul.

The relationship among the demographic variables (age, education, number of years s/he lives there and number of people living in the house) and DES was computed. As a result, no significant relationship was found. The income variable was recode as 4 groups: 400 million or above, 400-200 million, 200-100 million and 100 million and less. ANOVA analysis result with DES scores was not significant ($F(3,145)=1,68$, $p=,17$).

Correlational Analyses Results

Table 3 shows the frequency and percent of PTSD. The correlational analysis of PTSD and DES scores yielded a significant and positive correlation ($r=,259$; $p<,01$). Two different scores were also derived from the participants' PDS scores: symptom severity (PTSD ss) and number of symptoms (PTSD ns).

Table 3

Frequency and Percent of Respondents with PTSD

	N	Frequency	Percent
YALOVA	22	13,00	59,09
IZMIT	77	41,00	53,25
SARIYER	38	15,00	39,47
K. ÇEKMECE	43	16,00	37,21

The variable PTSD was separated into three subcategories according to the three symptom types that the scale measures: reexperiencing, arousal and avoidance. The relationship of these subcategories with other variables were also investigated. The correlation analysis of DES with these three symptoms revealed that there is significant and positive correlations (Table 4).

The correlation between exposure and DES scores was significant (Table 4). However, this correlation was very low ($r=,172$, $p<,05$). A significant and positive correlation was obtained when exposure and PTSD were analyzed ($r=,23$, $p<,05$). Similar coefficients were observed when exposure was correlated with PTSD subcategories (Table 4).

CORRELATION TABLE

	EXPOSURE	AROUSAL # OF SYMPTOM	REEXPER. # OF SYMPTOM	AVOID. # OF SYMPTOM	PTSD SYMPTOM SEVERITY	PTSD # OF SYMPTOM	REEXPER. SYMPTOM SEVERITY	AVOID. SYMPTOM SEVERITY	AROUSAL SYMPTOM SEVERITY	PTSD
AROUSAL # OF SYMPTOMS	0,240*									
REEXPER. # OF SYMPTOMS	0,274**	0,581**								
AVOID. # OF SYMPTOMS	0,213*	0,603**	0,551**							
PTSD SYMPTOM SEVERITY	0,355**	0,715**	0,710**	0,763**						
PTSD # OF SYMPTOMS	0,302**	0,836**	0,798**	0,896**	0,862**					
REEXPER. SYMPTOM SEVERITY	0,321**	0,534**	0,802**	0,499**	0,864**	0,691**				
AVOID. SYMPTOM SEVERITY	0,235*	0,543**	0,531**	0,891**	0,890**	0,818**	0,637**			
AROUSAL SYMPTOM SEVERITY	0,317**	0,817**	0,570**	0,548**	0,868**	0,736**	0,686**	0,629**		
PTSD	0,234*	0,593**	0,527**	0,791**	0,672**	0,777**	0,476**	0,721**	0,530**	
DES	0,171*	0,221*	0,221*	0,198*	0,331**	0,254**	0,322**	0,247**	0,312**	0,259**

** Correlation is significant at the 0,01 level (2-tailed)

* Correlation is significant at the 0,05 level (2-tailed)

An item that examined the subjective effect of the earthquake was added to the questionnaire. It measured the subjective level of exposure to the earthquake (DEPET). When its relationship with exposure and DES were investigated, the correlation analysis revealed that DEPET scores were significantly and positively correlated with the exposure score ($r=,126, p<,01$). However, its correlation with DES was not significant ($p=,09$). Additionally, significant relationships were found between DEPET and PTSD subcategories (Table 5).

Table 5

Correlation Tables of PTSD Subsection and the Impact of the Earthquake

	IMPACT OF EARTHQUAKE	AROUSAL # OF SYMPTOMS	REEXPERIENCING # OF SYMPTOMS
AROUSAL # OF SYMPTOMS	0,355		
REEXPERIENCING # OF SYMPTOMS	0,357	0,582	
AVOIDANCE # OF SYMPTOMS	0,333	0,603	0,551

Discriminant Function Analysis Result

Discriminant function analysis was conducted using location of participants, DES and exposure in order to predict PTSD symptom severity. The location of participants and DES were found to be significant in discriminating (for both of them, $p<,01$). The prediction of PTSD symptom severity was found to be 67,7% accurate.

DISCUSSION

The aim of the present study was to investigate the relationship between the dissociative tendencies and posttraumatic stress disorder. In addition to that, the role of the severity of exposure in this relationship was explored. The relationship between the dissociative tendencies and the severity of exposure was examined also.

First, it was hypothesized that the individuals with PTSD diagnosis will have higher dissociative tendencies. The results of the study were supporting this prediction. A significant and positive correlation between the dissociative experiences scale scores and posttraumatic stress diagnostic scale scores of the participants were found.

Secondly, it was hypothesized that the individuals who were severely exposed to the earthquake will have higher dissociative experiences. The results verified the prediction partially. That is, the Dissociative Experiences Scale scores of the participants from the earthquake region were the highest among the research population. Then, the participants from Yalova followed Izmit's scores. However, contrary to what was expected, the participants from Küçük Çekmece have less dissociative experiences scale scores than the ones' from Sarıyer.

The third hypothesis, which states that the posttraumatic stress disorder symptom severity will increase with the exposure severity, was confirmed by parallel findings in the study. The PTSD symptom severity of the participants from the earthquake region was significantly higher than the ones' from Istanbul.

The last hypothesis of this study was about the role of the severity of exposure in the relationship between the dissociative tendencies and posttraumatic stress disorder. It was predicted that when the dissociative tendencies of the participants are high, their severity of exposure would not affect their PTSD symptom severity. However, if they have lower level of dissociative tendencies, their exposure will have an impact on the participants' PTSD symptom severity. This hypothesis was not confirmed by the findings of the research.

In the study, a dissociative experiences score was computed. This score was expected to be higher in the participants living in the earthquake region than the ones living in Istanbul. This prediction was made because, as reviewed above, under such a traumatic condition, the people who experience more fear would have higher dissociation. The result of other research studies results confirms this expectation, too. Starting with Pierre Janet, the research studies on dissociation showed that dissociation is a way of coping with the traumatic experiences, which cause an extensive psychological pain to the victim. In parallel to the outcomes of the studies done before (e.g. van der Hart and Horst, 1989; Bremner and Marmar, 1998; Foa and Heart-Ikeda, 1996), the results of the present study indicated a significant difference between the levels of dissociation experiences of the participant in the earthquake region and Istanbul. The levels were significantly higher in the earthquake region. However, a more detailed analysis revealed rather contradictory outcome. Although the participants from Küçük Çekmece experienced the disaster more severely, their dissociation scores came out lower than the participants from Sarıyer. This

unexpected outcome could not be stemmed out of a measurement error in finding the exposure levels, because they came out to be in concordance with the earthquake severity map in Figure 1. The problem may be caused by the selection of the sample. The living standards of the participants from Küçük Çekmece are higher than the ones from Sarıyer. The participants selected from Sarıyer were mostly from very low socioeconomic status. These women were already living very traumatic lives before the earthquake. Most of them were (and still are) beaten by their husbands; they are always under the threat of losing their houses (because they built them without the proper permissions). The participants from Küçük Çekmece were from a higher socioeconomic level. They live in better houses and in better conditions than the other group. As it was reviewed in the introduction, the accumulation of the traumatic events in peoples' lives may cause higher dissociation. That is, when the individual experiences multiple and severe trauma, s/he shows higher levels of dissociation (Carlson, Rosser-Hogan, 1991). These conditions might be a cause of the high dissociative experience scores in Sarıyer. This explains also the significant relationship between the dissociative experience scores and the income level of the Istanbul participants. The analysis shows that, just for Istanbul participants, when the income level increases, the dissociative experience scores decreases.

The present study also confirmed the consensus about the relationship between the dissociative symptoms and PTSD (Brende, 1987; Bremner et al, 1992; Koopman et. al. 1994; Marmar et al, 1996, Eriksson and Lundin, 1996). That is, if the individuals' dissociative tendencies are high, so are their PTSD symptom severities. However, since it is not in the scope of

this research, the nature of this relationship was not clarified. The outcome did not change, when the analysis was repeated with the subcategories of the posttraumatic stress disorder. These subcategories were the disease's symptoms: arousal, reexperiencing and avoidance. The relationship between the participants' dissociative experience scores and the PTSD symptoms was significant. There were not significant differences among the strengths of the correlations. That is, dissociative experience scores were approximately equally correlated with the three symptoms of the posttraumatic stress disorder.

Goenjian and his colleagues (1994), in their research, found that there is a relationship between the degree of exposure to the traumatic experience and the severity of the PTSD symptoms. As expected, the findings of the present study demonstrated the same association. This relationship was confirmed in two ways. First, the correlation between the exposure level scores and posttraumatic stress disorder score were analyzed. Then, the same correlational analysis was carried out with the subjective exposure levels of the participants. In addition to these positive outcomes, the results did not change when repeated with PTSD's subcategories. The earthquake survivors, who were exposed more severely, showed higher PTSD symptom severity. This indicates a relationship between the severity of exposure and PTSD severity. Goenjian and his colleagues conceptualized the "severity of exposure" slightly differently than the current study. They chose their participants from three different cities at increasing distances from the epicenter of the earthquake. In the present research this aspect of the exposure was controlled. In addition to that, two different aspects were added

to better conceptualize it: the loss of a loved one (family member or friend) and property. At the end, although the meaning of the concept was narrowed, as expected, the same result was achieved.

The relationship between the severity of exposure and PTSD did not get the attention it deserves. That is why there are not many studies on this subject. The results of a few studies done on this issue yielded similar findings to that of Goenjian and his colleagues' (1994): when the severity of exposure increases, the severity of PTSD symptoms of the participants increases too (Carlson and Rosser-Hogan, 1991; Nolen-Hoeksema and Morrow, 1991; Marmar et. al, 1996).

It is established that there is an association between posttraumatic stress disorder and exposure. Also, a relationship was found between the dissociative tendencies and posttraumatic stress disorder. Does this mean that a correlation between dissociative tendencies and severity of exposure? If the individual is exposed to a traumatic situation and developed PTSD, does this mean that s/he would have high dissociative tendencies? In the current study, a correlational relationship between the severity of exposure and dissociative experiences was found. That is, as predicted, the individuals who were more severely exposed to the earthquake had higher dissociative experiences scale scores. Result confirmed the findings of Carlson and Rosser-Hogan (1991). They studied with Cambodian refugees and concluded that there is a relationship between the amount of the trauma and the dissociation.

For the investigation of relationship among these three variables, a separate hypothesis was derived (the fourth hypothesis). It was predicted

that the participants' PTSD symptom severity would be affected by their exposure severity if they have high dissociative tendencies. The ones with lower dissociative tendencies were expected to have the disorder only when they were severely exposed to the trauma. When the individual undergoes in a traumatic situation, if s/he has high dissociative tendencies, s/he will use dissociation as a regular defense. This view was proposed by Pierre Janet (1909a, cited in van der Kolk et al, 1996). He suggested that, even though the dissociation becomes malfunctioned and maladaptive, the individual continues to use it as a way to cope with the overwhelming traumatic situation. This defense remains and the person uses it automatically in subsequent stresses. Van der Kolk agreed with Janet and explained the process as:

“People who have earlier learned to use this mode of coping with threat seem to be particularly vulnerable to using it again during acute stress...In the long run, people may adapt to the combination of dissociation and other ways of coping with the trauma by developing a wide spectrum of mental disorder.” (van der Kolk et al, 1996).

If this approach is considered to be true, it should be expected that people, who have high dissociative tendencies, would learn using dissociation as a defense mechanism for the traumatic stress. They will utilize it in every stressful situation that they encountered. Using this way of coping would end with a psychiatric disorder (Janet, 1909a, cited in van der Kolk et al, 1996). Therefore, these people would be expected to develop PTSD, regardless of their exposure severity levels. However, the findings of the present study did not confirm this idea.

Results showed that, when the dissociative tendencies are low, the exposure severity affected the individual's PTSD symptom severity. If s/he is highly exposed to the trauma, his/her symptoms of PTSD increased. Contrary to what was predicted, when the dissociation level is high, exposure severity played an important role in the symptom severity level of the participants. The ones, who experienced the earthquake more severely, had higher symptom severity. In the light of this study, it is possible to say that, the impact of the severity of exposure on the development of posttraumatic stress disorder is stronger than the dissociative tendencies'.

Nevertheless, since no literature is available on this subject, before conducting additional research on this issue, it might be too early to reach a definite conclusion. Additionally, because of the limited sample size, the results should be interpreted cautiously.

The Shortcomings of the Study and Suggestion for Further Research

Though carried out with correct methodology, the current study has some shortcomings. First of all, some problems in choosing the sample groups were encountered because of the difficulty in accessing the participants. The separate groups could not be matched perfectly and the sample size was limited. These problems may have had some effects on the outcomes of the study. Therefore, it is suggested that this study should be replicated with different populations and with different kinds of traumatic experiences.

The exploration of the relationship among PTSD, Dissociation and Severity of Exposure is very new and the findings are far from being

satisfactory. Additional studies with different samples will help to understand the nature of their relationship. Also, the cause and effect relation between the dissociation and posttraumatic stress disorder is not apparent. It had to be clarified by doing additional research on these issues.

Some changes in the measurement of the exposure severity would bring additional gains to the field. If the subjective and objective perception of the severity in exposure scores can be put together, a more reliable result would be reached.

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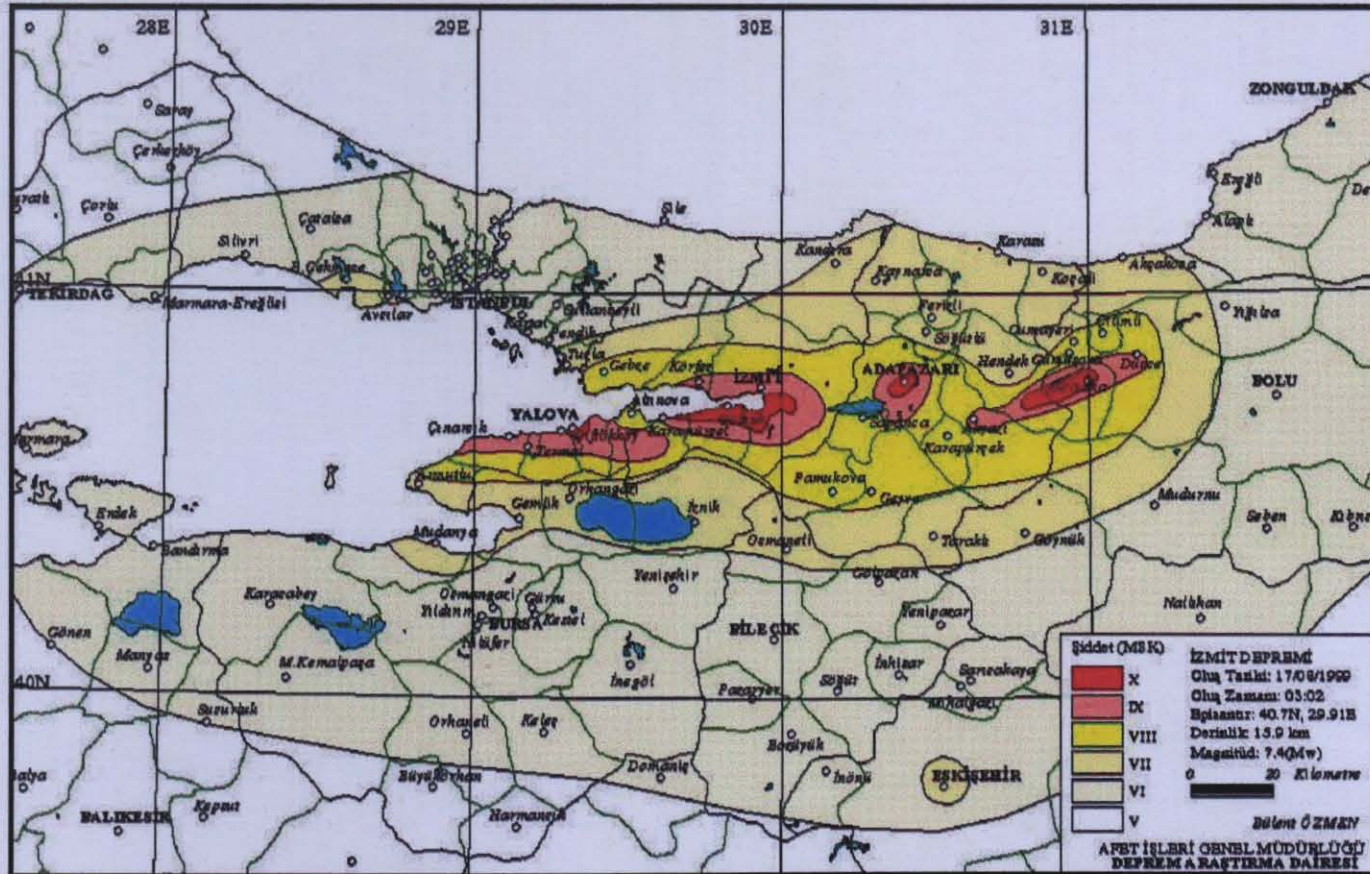
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FIGURES

FIGURE 1: THE MAP SHOWING THE REGIONS THAT THE EARTHQUAKE WAS EXPERIENCED IN THE SAME SEVERITY

LEVELS (Özmen, 2000)



APPENDICES

APPENDIX A: THE DISSOCIATIVE EXPERIENCES SCALE

Bu test günlük hayatınızda başınızdan geçmiş olabilecek yaşantıları konu alan 28 sorudan meydana gelmektedir. Sizde bu yaşantıların ne sıklıkta olduğunu anlamak istiyoruz. Yanıt verirken, alkol ya da ilaç etkisi altında meydana gelen yaşantıları değerlendirmeye katmayınız. Lütfen her soruda, anlatılan durumun sizdekine ne ölçüde uyduğunu 100 üzerinden değerlendiriniz ve uygun olan rakamı işaretleyiniz.

SORULAR

1. Bazı insanlar, yolculuk yaparken yol boyunca ya da yolun bir bölümünde neler olduğunu hatırlamadıklarını birden farkederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

2. Bazı insanlar zaman zaman, birisini dinlerken, söylenenlerin bir kısmını ya da tamamını duymamış olduklarını birden farkederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

3. Bazı insanlar kimi zaman, kendilerini nasıl geldiklerini bilmedikleri bir yerde bulurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

4. Bazı insanlar zaman zaman kendilerini, giydiklerini hatırlamadıkları elbiseler içinde bulurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

5. Bazı insanlar zaman zaman eşyaları arasında, satın aldıklarını hatırlamadıkları yeni şeyler bulurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

6. Bazı insanlar, zaman zaman, yanlarına gelerek başka bir isimle hitabeden ya da önceden tanıştıklarında ısrar eden, tanımadıkları kişilerle karşılaşılır. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

7. Bazı insanlar, zaman zaman, kendilerinin yanbaşında duruyor ya da kendilerini birşey yaparken seyrediyor ve sanki kendi kendilerine karşıdan bakıyormuş gibi bir his duyarlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

8. Bazı insanlara, arkadaşlarını ya da aile bireylerini, zaman zaman tanımadıklarının söylendiği olur. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

9. Bazı insanlar, yaşamlarındaki kimi önemli olayları (örneğin nikah ya da mezuniyet töreni) hiç hatırlamadıklarını farkederler. Yaşamınızdaki bazı önemli olayları hiç hatırlamama durumunun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

10. Bazı insanlar zaman zaman, yalan söylemediklerini bildikleri bir konuda, başkaları tarafından, yalan söylemiş olmakla suçlanırlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

11. Bazı insanlar kimi zaman, aynaya baktıklarında kendilerini tanıyamazlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

12. Bazı insanlar kimi zaman, diğer insanların, eşyaların ve çevrelerindeki dünyanın gerçek olmadığı hissini duyarlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

13. Bazı insanlar, kimi zaman vücutlarının kendilerine ait olmadığı hissini duyarlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

14. Bazı insanlar, zaman zaman geçmişteki bir olayı o kadar canlı hatırlarlar ki sanki o olayı yeniden yaşıyor gibi olurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

15. Bazı insanlar kimi zaman, olduğunu hatırladıkları şeylerin, gerçekte mi yoksa rüyada mı olduğundan emin olamazlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

16. Bazı insanlar zaman zaman, bildikleri bir yerde oldukları halde orayı yabancı bulur ve tanıyamazlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

17. Bazı insanlar, televizyon ya da film seyrederken, kimi zaman kendilerini öyküye o kadar kaptırırlar ki çevrelerinde olan bitenin farkına varamazlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

18. Bazı insanlar kimi zaman kendilerini, kafalarında kurdukları bir fantazi ya da hayale o kadar kaptırırlar ki, sanki bunlar gerçekten başlarından geçiyormuş gibi hissederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

19. Bazı insanlar, ağrı hissini duymamayı zaman zaman başarabildiklerini farkederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

20. Bazı insanlar kimi zaman, gözü dalmış olarak, hiç bir şey düşünmeden ve zamanın geçtiğini anlamaksızın oturduklarını farkederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

21. Bazı insanlar, yalnız olduklarında, zaman zaman sesli olarak kendi kendilerine konuştuklarını farkederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

22. Bazı insanlar kimi zaman iki ayrı durumda o kadar değişik davrandıklarını görürler ki, kendilerini neredeyse iki farklı insanmış gibi hissettikleri olur. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

23. Bazı insanlar, normalde güçlük çektikleri bir şeyi (örneğin spor türleri, iş, sosyal ortamlar vb.) belirli durumlarda son derece kolay ve akıcı biçimde yapabildiklerini farkederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

24. Bazı insanlar, zaman zaman, bir şeyi yaptıklarını mı yoksa yapmayı sadece akıllarından geçirmiş mi olduklarını (örneğin bir mektubu postaya attığını mı yoksa sadece atmayı düşündüğünü mü) hatırlayamazlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

25. Bazı insanlar kimi zaman, yaptıklarını hatırlamadıkları şeyleri yapmış olduklarını gösteren kanıtlar bulurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

26. Bazı insanlar, zaman zaman eşyaları arasında, kendilerinin yapmış olması gereken, fakat yaptıklarını hatırlamadıkları yazılar, çizimler ve notlar bulurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

27. Bazı insanlar, zaman zaman kafalarının içersinde, belli şeyleri yapmalarını isteyen ya da yaptıkları şeyler üzerine yorumda bulunan sesler duyarlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

28. Bazı insanlar, zaman zaman, dünyaya bir sis perdesi arkasından bakıyormuş gibi hissederler, öyle ki insanlar ve eşyalar çok uzakta ve belirsiz görünürler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

**APPENDIX B: POSTTRAUMATIC STRESS DISORDER DIAGNOSTIC
SCALE**

1. Bölüm

Birçok insan hayatının bir döneminde çok stresli ve travmatik bir olay yaşamış ya da böyle bir olaya şahit olmuştur. Aşağıda travmatik olayların bir listesi var. Lütfen, sizin yaşadığınız ya da şahit olduğunuz BÜTÜN olayları işaretleyin.

- 1) Büyük bir kaza, yangın ya da patlama (örneğin fabrika, çiftlik, araba, uçak ya da gemi kazası)
- 2) Doğal afet (örneğin büyük bir deprem, sel, fırtına, hortum)
- 3) Ailenizden birisinin ya da bir tanıdığınızın cinsel amaçlı *olmayan* saldırısı (örneğin fiziksel saldırı, ateşli silah ya da bıçakla yaralama, silahla tehdit edilme, ya da saldırıya uğrayıp soyulma)
- 4) Tanımadığınız birinin cinsel amaçlı *olmayan* saldırısı (örneğin fiziksel saldırı, ateşli silah ya da bıçakla yaralama, silahla tehdit edilme, ya da saldırıya uğrayıp soyulma)
- 5) Ailenizden birinin ya da tanıdığınız birisinin cinsel saldırısı (örneğin tecavüz ya da tecavüz girişimi)
- 6) Tanımadığınız birisinin cinsel saldırısı (örneğin tecavüz ya da tecavüz girişimi)
- 7) Askeri çatışma ya da savaş alanı
- 8) 18 yaşınızdan önce kendinizden en az 5 yaş büyük birisiyle cinsel temas (örneğin cinsel organlar ya da göğüsler)
- 9) Tutuktuluk (hapse girme, savaş esiri olma, rehin alınma)
- 10) İşkence
- 11) Hayati tehlike arz eden bir hastalık
- 12) Başka bir travmatik deneyim
- 13) eğer 12 numaralı soruyu işaretlediyseniz, lütfen travmatik olayı aşağıda belirtiniz.

----- -----

Eğer yukarıdaki maddelerden herhangi birini işaretlediyseniz devam edin. Aksi takdirde testi burada bitirin.

2. Bölüm

14) Eğer 1. Bölüm'de birden fazla travmatik olay işaretlediyseniz, aşağıdaki listeden bunların içinde size en çok sıkıntı verenin hangisi olduğunu işaretleyin.

- Kaza
- Afet
- Cinsel olmayan saldırı / tanıdığınız biri
- Cinsel olmayan saldırı / bir yabancı
- Cinsel saldırı / tanıdığınız biri
- Cinsel saldırı / bir yabancı
- Çatışma
- 18 yaşından önce en az 5 yaş büyük biriyle cinsel temas
- Tutuklutuk
- İşkence
- Hayati tehlike arz eden bir hastalık
- Diğer

Lütfen, aşağıdaki bölüme yukarıda işaretlemiş olduğunuz travmatik olayı kısaca açıklayın.

Aşağıda şimdi açıklamış olduğunuz travmatik olayla ilgili bazı sorular var.

15)bu olay ne kadar zaman önce gerçekleşti? (Lütfen seçeneklerden sadece bir tanesini işaretleyin)

- 1- 1 aydan az bir zaman önce
- 2- 1-3 ay önce
- 3- 3-6 ay önce
- 4- 6 ay – 3 yıl önce
- 5- 3-5 yıl önce
- 6- 5 yıldan fazla bir süre önce

Aşağıdaki soruları cevaplarken Evet için “E”yi Hayır için “H”yi daire içine alın.

Bu travmatik olay sırasında:

- | | | | |
|-----|---|---|--------------------------------------------------------------------|
| 16) | E | H | Fiziksel yaralanmanız oldu mu? |
| 17) | E | H | Sizden başka birisi fiziksel olarak yaralandı mı? |
| 18) | E | H | Hayatınızın tehlikede olduğunu düşündünüz mü? |
| 19) | E | H | Sizden başka birisinin hayatının tehlikede olduğunu düşündünüz mü? |
| 20) | E | H | Kendinizi çaresiz hissettiniz mi? |
| 21) | E | H | Çok büyük bir korku yaşadınız mı? |

Aşağıda insanların deprem gibi travmatik bir olayla karşı karşıya kaldıktan sonra yaşayabilecekleri problemlerin bir listesi var. Herbirini dikkatlice okuyun ve son bir ayı düşünün. İlk olarak GEÇEN AY bu problemin sizi NE SIKLIKTA rahatsız ettiğini en iyi tanımlayan cevabı (0-3) seçin.

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/ zamanın yarısı	haftada 5 kere/hemen her zaman

Daha sonra, bu 0-3 ölçeğini kullanarak geçtiğimiz ay her bir deneyimin NE KADAR rahatsız edici olduğunu belirtiniz.

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

1) Depremle ilgili üzücü düşünce ve görüntülerin elinizde olmadan aklınıza gelmesi:

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/ zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

2) Depremle ilişkili kötü rüyalar veya kabuslar görmeniz:

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/ zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

3) Deprem anını tekrar tekrar yaşamanız, deprem oluyormuş gibi davranmanız veya hissetmeniz:

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

4) Depremi hatırlatan birşeyle karşılaştığınızda, korku, kızgınlık, mutsuzluk veya suçluluk gibi duygular hissetmeniz:

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

5) Depremi hatırlatan birşeyle karşılaştığınızda, birdenbire ter içinde kalmak, çarpıntı, solunum sıkıntısı, uyuşma hissi gibi bedensel rahatsızlıklar yaşamanız:

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

6) Depremle ilgili hiçbir şey konuşmamaya, dinlememeye, düşünmemeye, hissetmemeye çaba sarfetmeniz:

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

7) Depremi hatırlatan faaliyetlerden, insanlardan veya yerlerden uzak durmaya çalışmanız:

Ne sıklıkta oluyor?

0 1 2 3
Hiçbir zaman veya haftada bir/ender haftada 2-4 kere/ haftada 5 kere/hemen
sadece bir kere olarak zamanın yarısı her zaman

Ne kadar rahatsız edici?

0 1 2 3
hiç rahatsız edici değil Çok rahatsız edici

8) Deprem sırasında ve depremi takiben yaşadıklarımızı hatırlamakta güçlük çekmeniz:

Ne sıklıkta oluyor?

0 1 2 3
Hiçbir zaman veya haftada bir/ender haftada 2-4 kere/ haftada 5 kere/hemen
sadece bir kere olarak zamanın yarısı her zaman

Ne kadar rahatsız edici?

0 1 2 3
hiç rahatsız edici değil Çok rahatsız edici

9) Önemli faaliyetlere ilginizin veya katılımınızın azalmış olması:

Ne sıklıkta oluyor?

0 1 2 3
Hiçbir zaman veya haftada bir/ender haftada 2-4 kere/ haftada 5 kere/hemen
sadece bir kere olarak zamanın yarısı her zaman

Ne kadar rahatsız edici?

0 1 2 3
hiç rahatsız edici değil Çok rahatsız edici

10) Kendinizi çevrenizdeki insanlardan uzak veya kopuk hissetmeniz:

Ne sıklıkta oluyor?

0 1 2 3
Hiçbir zaman veya haftada bir/ender haftada 2-4 kere/ haftada 5 kere/hemen
sadece bir kere olarak zamanın yarısı her zaman

Ne kadar rahatsız edici?

0 1 2 3
hiç rahatsız edici değil Çok rahatsız edici

11) Duyularınızı kaybetmiş gibi hissetmeniz: (örneğin ağlayamamak, sevinememek veya sevgi hissedememek)

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/ zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

12) Gelecekle ilgili plan veya ümitleriniz gerçekleşmeyecekmiş gibi hissetmeniz (örneğin başarılı bir meslek yaşamına, evliliğe, çocuklara veya uzun sağlıklı bir yaşama sahip olamayacakmışınız gibi)

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/ zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

13) Uykuya dalmakta güçlük çekmeniz veya dinlendirici bir uyku uyuyamamanız:

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/ zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

14) Çabuk sinirlenmeniz veya öfkenize hakim olamamanız:

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/ zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

15) Dikkatinizi yoğunlaştırmakta zorlanmanız: (örneğin konuşmaları veya televizyonda izlediklerinizi takip edememeniz, okuduklarınızı unutmanız...)

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/ zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

16) Her an tetikte olmanız: (örneğin etrafınızda kimlerin olduğunu, bulunduğunuz yerin sağlam olup olmadığını kontrol etmeniz...)

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/ zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

17) Kolayca ürkmeniz ve tedirginlik hissetmeniz:

Ne sıklıkta oluyor?

0	1	2	3
Hiçbir zaman veya sadece bir kere	haftada bir/ender olarak	haftada 2-4 kere/ zamanın yarısı	haftada 5 kere/hemen her zaman

Ne kadar rahatsız edici?

0	1	2	3
hiç rahatsız edici değil			Çok rahatsız edici

Yukarıda değerlendirdiğiniz problemler GEÇTİĞİMİZ AY hayatınızın aşağıda belirtilen alanlarından herhangi birini OLUMSUZ ETKİLEDİ ise belirtiniz. Evet için E'yi, Hayır için H'yi işaretleyiniz.

1-	İş	E	H
2-	Ev işleri ve sorumlulukları	E	H
3-	Arkadaş ilişkileri	E	H
4-	Eğlence ve boş zaman aktiviteleri	E	H
5-	Okul	E	H
6-	Aile ilişkileri	E	H
7-	Cinsel hayat	E	H
8-	Hayattan genel olarak tatmin olma	E	H

Şimdi yukarıda değerlendirdiğiniz problemler hayatınızı NE KADAR etkiledi, belirtiniz. GEÇEN AY durumunuzu en iyi tanımlayan seçeneği daire içine alın.

İ. İşim:

Depremin açtığı problemlerden dolayı işim olumsuz etkilendi

0	1	2	3	4	5	6	7	8	9	10
hiç		biraz			orta			oldukça		çok
etkilenmedi		etkilendi			derecede			etkilendi		etkilendi
					etkilendi					

S. Sosyal Hayatım/ Boş zaman aktivitelerim

(arkadaşlarla dışarı çıkma, komşu/akraba ziyaretleri, hobiler...)

Depremin açtığı problemlerden dolayı sosyal hayatım olumsuz etkilendi

0	1	2	3	4	5	6	7	8	9	10
hiç		biraz			orta			oldukça		çok
etkilenmedi		etkilendi			derecede			etkilendi		etkilendi
					etkilendi					

A. Aile hayatım/ Evdeki sorumluluklarım

(aile fertleri ile ilişkiler, faturaları yatırma, ev idaresi, alışveriş, temizlik...)

Depremin açtığı problemlerden dolayı sorumluluklarımı yerine getirmem olumsuz etkilendi

0	1	2	3	4	5	6	7	8	9	10
hiç		biraz			orta			oldukça		çok
etkilenmedi		etkilendi			derecede			etkilendi		etkilendi
					etkilendi					

Şimdi, LÜTFEN ŞU ANDA DEPREM İLE İLGİLİ NASIL HİSSETTİĞİNİZİ
DEĞERLENDİRİN:

Deprem ve sonrasındaki olayları düşündüğünüzde, ne kadar üzgün hissediyorsunuz?

0 10 20 30 40 50 60 70 80 90 100
Hiç Aşırı Derecede

Depremi ve sonuçlarını ne kadar kabul etmiş durumdasınız?

0 10 20 30 40 50 60 70 80 90 100
Tamamen Hiç

**APPENDIX C: DSM IV POSTTRAUMATIC STRESS DISORDER
DIAGNOSTIC CRITERIA**

DIAGNOSTIC CRITERIA FOR POSTTRAUMATIC STRESS DISORDER

A. The person has been exposed to a traumatic event in which both of the following were present:

(1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others.

(2) The person's response involved intense fear, helplessness, or horror.

Note: In children, this may be expressed instead by disorganized or agitated behavior.

B. The traumatic event is persistently reexperienced in one (or more) of the following ways:

(1) recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions.

Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.

(2) recurrent distressing dreams of the event

Note: In children there may be frightening dreams without recognizable content.

(3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or even intoxicated).

Note: In young children, trauma-specific reenactment may occur.

(4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.

(5) Physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:

(1) efforts to avoid thoughts, feelings, or conversations associated with the trauma.

(2) efforts to avoid activities, places, or people that arouse recollections of the trauma.

(3) inability to recall an important aspect of the trauma.

(4) markedly diminished interest or participation in significant activities.

(5) feeling of detachment or estrangement from others.

(6) restricted range of affect (e.g., unable to have loving feelings).

(7) sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span).

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:

(1) difficulty falling or staying asleep.

(2) irritability or outbursts of anger

(3) difficulty concentrating

(4) hypervigilance

(5) exaggerated startle response.

- E. Duration of the disturbance (symptoms in Criteria B,C, and D) is more than 1 month.
- F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than 3 months.

Chronic: if duration of symptoms is 3 months or more.

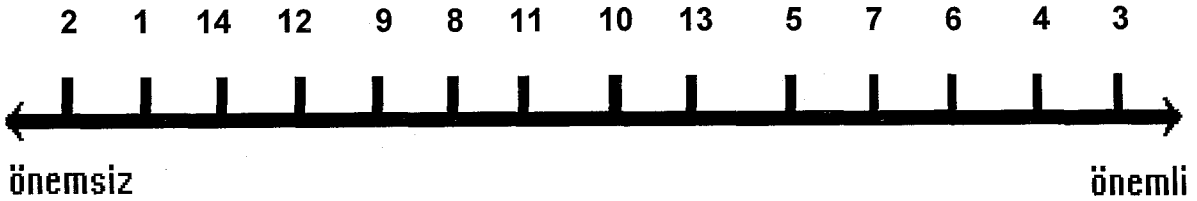
Specify if:

With delayed onset: if onset of symptoms is at least 6 months after the stressor.

APPENDIX D: THE SEVERITY OF THE EARTHQUAKE DIMENSION

**AŞAĞIDAKİ OLAYLARIN BİR İNSANIN ÜZERİNDEKİ
ETKİSİNİ EN ÖNEMLİDEN EN AZ ÖNEMLİYE KADAR
SIRALAYINIZ.**

1. Evin yıkılması
2. Evin hasarlı olması
3. Çocuğunu kaybetmiş olmak
4. Eşini kaybetmiş olmak
5. Kendisinin kalıcı yara almış olması
6. Çocuklarının kalıcı yara almış olması
7. Eşinin kalıcı yara almış olması
8. Başka bir aile bireyinin kalıcı yara almış olması
9. Kendisinin göçük altında kalmış olması
10. Çocuklarının göçük altında kalmış olması
11. Eşinin göçük altında kalmış olması
12. Başka bir aile bireyinin göçük altında kalmış olması
13. Yakın bir arkadaşı kaybetmiş olmak
14. Yakın bir arkadaşın göçük altında kalmış olması



APPENDIX E: QUESTIONS TO ASSESS THE SEVERITY OF THE
EARTHQUAKE

Depremde ailenizde can kaybınız oldu mu?

EVET

HAYIR

Cevabınız 'evet' ise: Kimi veya kimleri kaybettiniz?.....

.....
.....
.....
.....
.....
.....
.....
.....

Ailenizde kalıcı yaralanma geçiren fert(veya fertler) var mı?

EVET

HAYIR

Cevabınız 'evet' ise: Kimlerde kalıcı yaralanmalar oldu?.....

.....
.....
.....
.....
.....
.....
.....
.....

Ailenizden göçük altında kalan kimse oldu mu?

OLDU

OLMADI

Cevabınız 'oldu' ise:

KİM KALDI?

NE KADAR SÜRE KALDI?

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

Yakın arkadaş çevrenizdeki arkadaşlarınızdan kaybınız var mı?

0
yok

1
bir yakın arkadaş
kaybettim

2
birden fazla
yakın arkadaş
kaybettim

Göçük altında kalan arkadaşınız oldu mu?

0
olmadı

1
bir arkadaşım
göçük altında
kaldı

2
birden fazla
arkadaşım göçük
altında kaldı

Depremde eviniz ne kadar zarar gördü?

0
hasarsız

1
az hasarlı

2
orta hasarlı

3
çok hasarlı

4
yıkıldı

Deprem olduğu sırada neredeydiniz, ne yapıyordunuz?

.....

.....

.....

.....

.....

.....

Deprem olduğunu anladığınız anda ne yaptınız?

.....

.....

.....

.....

.....

.....

Depremin sizi ne kadar etkilediğini düşünüyorsunuz?

0
hiç
etkilemedi

1
az etkiledi

2
oldukça
etkiledi

3
çok etkiledi

4
aşırı
etkilendim

**APPENDIX F: FOUR QUESTIONS TO ASSESS THE IMPACT OF MEDIA
ON THE SURVIVORS**

Medyada çıkan haber ve görüntüler depremin sizdeki etkisini

0
azalttı

1
etkilemedi

2
arttırdı

Depremden sonraki 1 hafta içinde günde ortalama ne kadar televizyon izlediniz?

0
hiç
seyretmedim

1
1-2 saat
seyrettim

2
3-5 saat
seyrettim

3
6-8 saat
seyrettim

4
8 saatten
fazla
seyrettim

Depremden sonraki 1 hafta içinde ne sıklıkta gazetede çıkan haberleri takip ettiniz?

0
takip
etmedim

1
sadece 1 gün
takip ettim

2
2-3 gün
takip ettim

3
4-6 gün
takip ettim

4
hergün
takip ettim

Depremden sonraki 1 hafta içinde günde ortalama kaç gazete okudunuz?

0
okumadım

1
1-2
gazete

2
3-4
gazete

3
5-6
gazete

4
7 veya daha
fazla gazete

APPENDIX G: QUESTIONS ON DEMOGRAPHIC INFORMATION

Adınız Soyadınız:

Medeni durumunuz: Bekar Evli Dul Boşanmış

Yaşınız:

En son bitirdiğiniz sınıf:

- | | |
|---------------------------|-------------------------------|
| 0- hiç okumadım | 8- orta üçüncü sınıf |
| 1- ilkokul birinci sınıf | 9- lise birinci sınıf |
| 2- ilkokul ikinci sınıf | 10- lise ikinci sınıf |
| 3- ilkokul üçüncü sınıf | 11- lise üçüncü sınıf |
| 4- ilkokul dördüncü sınıf | 12- üniversite birinci sınıf |
| 5- ilkokul beşinci sınıf | 13- üniversite ikinci sınıf |
| 6- orta birinci sınıf | 14- üniversite üçüncü sınıf |
| 7- orta ikinci sınıf | 15- üniversite dördüncü sınıf |
| | 16- yüksek lisans |

Eşinizin en son bitirdiği sınıf:

- | | |
|---------------------------|-------------------------------|
| 0- hiç okumadım | 8- orta üçüncü sınıf |
| 1- ilkokul birinci sınıf | 9- lise birinci sınıf |
| 2- ilkokul ikinci sınıf | 10- lise ikinci sınıf |
| 3- ilkokul üçüncü sınıf | 11- lise üçüncü sınıf |
| 4- ilkokul dördüncü sınıf | 12- üniversite birinci sınıf |
| 5- ilkokul beşinci sınıf | 13- üniversite ikinci sınıf |
| 6- orta birinci sınıf | 14- üniversite üçüncü sınıf |
| 7- orta ikinci sınıf | 15- üniversite dördüncü sınıf |
| | 16- yüksek lisans |

Ne kadar zamandır bu şehirde yaşamaktasınız?.....

Daha önce nerede yaşıyordunuz?

Depremden önce yaşadığınız evinizde kaç oda vardı?

Depremden önce yaşadığınız evinizde kaç kişi yaşamaktaydı?.....

Depremden önce yaşadığınız evinizin aylık gideri neydi? (taksitler dahil).....

Depremden önce yaşadığınız evinize ayda ne kadar para giriyordu?.....

Depremden önce aşağıdakilerden hangilerine sahiptiriniz?

- | | |
|----------------------------------------------------|---------------------------------------------|
| <input type="checkbox"/> buzdolabı | <input type="checkbox"/> televizyon |
| <input type="checkbox"/> otomatik çamaşır makinesi | <input type="checkbox"/> elektrik süpürgesi |
| <input type="checkbox"/> termosifon | <input type="checkbox"/> kredi kartı |
| <input type="checkbox"/> bulaşık makinesi | <input type="checkbox"/> cep telefonu |
| <input type="checkbox"/> fırın | <input type="checkbox"/> bilgisayar |
| <input type="checkbox"/> müzik seti | <input type="checkbox"/> araba |
| <input type="checkbox"/> çamaşır kurutma makinesi | |