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Psychological consequences of experiencing trauma among people injured in road accidents

INTRODUCTION

In recent years the subject of post-traumatic experience meets the growing interest in a social and scientific sphere. The issue is being considered by representatives of many fields of science, including medicine, psychology, sociology, pedagogy and philosophy. There is also an increasing public awareness of the psychological effects of trauma. One of the main reasons for this phenomena is an increasing in recent years wave of various types of traumatic experience. This article attempts to describe the psychological effects of experiencing trauma among people injured in road accidents. According to the data from the Polish Headquarters in 2013, 35847 traffic accidents were reported, in which 3357 people were killed, 44069 people were injured². Scandinavian studies Aska Elklita shows that 15,9% of teenagers mention traffic accidents as one of the most traumatic events.

The aggravating situation related to a traffic accident may cause extensive and long-lasting consequences in a psychological sphere. The spectrum of traumatic and post-traumatic disorders ranges from the effects of a single earth-shattering event to more complex consequences of long-standing repeated abuse and stress. A descriptions of the types of reactions to a traumatic event is not easy because of the complexity of somatic, cognitive, emotional symptoms as well as behaviours being the manifestation of an individual way of dealing with the traumatic situation.

At the outset, it should be mentioned that reactions to traumatic events depend on many factors. Among them are:

- Event type - that is, the extent to which there is a risk of integrity and inviolability of the individual, what the significance of the lost values was and what kind of an event it was;
- Individual characteristics- the extent to which the individual is susceptible to stress, whether they are sensitive, what their mental state during crisis was, what their age is, what immune resources they have, biological deficits, social and psychological;
- Characteristics of the environment after the injury and during the return to the balance- that is, above all, the extent to which an individual can count on support and help from the external environment [2, p.29].

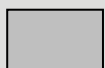
Trauma occurs when taking an action is impossible, there is no chance to resist or escape and the system of self- defense under stress is disorganized. A person who suffered trauma may experience such intense emotions that they cannot remember the exact course of event of which they were part [18, p.78]. The range of human reaction to a traumatic event is extremely diverse. The consequences of experiencing extreme stress can be divided into: a simple response to stress, acute reaction to stress, acute stress disorder, post-traumatic stress disorder, personality disorder after experiencing an extreme situation [8, p.56].

NORMAL REACTION TO STRESS

Normal reaction to stress is manifested by a short-term presence of intrusive memories of the event, numbness, denial, a sense of unreality and agitation in patients who have suffered a single traumatic event. It is clear that each person reacts differently to stress. One of the most popular

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² Road accidents in Poland in 2013. The report. Police Headquarters



reactions to stress are sweaty palms and known to most people, stomach discomfort. Our body behaves as during the disease, and that is not helpful at all- on the contrary, it increases anxiety and discomfort. It is hard to control acute stress, and there may occur even worse symptoms, such as breathing difficulty, fainting, panic attacks, some people under stress cry or cause conflicts [6, p.76]. The occurrence of these problems are related to the emergence of negative stress, that is distress which has adverse effects, it causes the failure because the body paralyzed by stress is not able to favourably cope with the situation, and in the future there may occur problems with, e.g. loss of self-confidence in subsequent similar events or deterioration of the reaction to similar stress.

ACUTE STRESS REACTION

Symptoms of acute stress reaction occur within an hour after the appearance of the traumatic event. Symptoms of acute stress show immediately after the impact of transient mental or physical stressor of incredible power and with the passage of time they are reduced (It appears within an hour, decrease during the next 8 hours and lasts no longer than two days). Acute stress reaction may involve common symptoms of generalized anxiety disorder and, as a result, 'the autonomic nervous system excitation, disorder of the chest and abdomen, symptoms of tension' [11, p.45]. Acute stress reaction may result in the withdrawal of a certain expected social interaction. We can then observe: immobility, lack of contact with the environment, narrowing of attention, confusion, anger, verbal aggression, despair, pointless and maladjusted activity, narrowing the field of consciousness and attention or exaggerated mourning after the loss. These reactions hinder the functioning of the information processing and coding.

Given the intensity of the symptoms, we can distinguish mild, moderate or severe reaction to stress. 'Acute stress reaction by ICD (acute stress reaction) has its counterpart in the DSM-IV classification under the name of acute stress disorder' [9, p.87].

ACUTE STRESS DISORDER

Acute stress disorder as another reaction, occurs most often after the acute stress lasting up to two days. This stress disorder lasts at least two days and no more than two weeks. These are temporary disorders that occurs when there is a risk of violating the integrity and inviolability of the person experiencing it. This also includes the person's reaction during the occurrence of the event, (fear, anxiety, lack of hope for a happy salvage or for getting out of the situation). Remembering and saving the occurring reaction during the occurrence of the stressor is a crucial element in the development of post-traumatic disorders [12, p.67].

The principal differences between acute stress reaction being classified by ICD-10 as a 'transient disorder of a significant intensity, which develops as a reaction to exceptional physical or mental stress in a person who did not manifest previously any mental disorder, and acute stress disorder (ASD, acute stress disorder) [2, p.34], according to DSM-IV is the experience of the latter in a life-threatening situation, and the reaction listed first reveals itself after experiencing severe emotional or physical stressor. What also differs them is that ICD-10 provides the reaction time of 48 hours- so it is temporary, whereas ASD from 2 days to 4 weeks and it is referred to as a precursor to post-traumatic stress disorder, which will be discussed later in this chapter [3, p.36].

Additional reactions to traumatic events during or after it, which constitute the specific nature of ASD is the presence of at least three dissociative symptoms which include: numbness, depersonalization, derealization, reduced consciousness and dissociative amnesia [7, p.55]. All of these symptoms are a defensive reaction of the brain to unwanted negative emotions and traumatic events. They may occur from the moment of trauma up to one month after the event. Numbness is perceived as a lack of unexpected emotional reactions or a distance. Depersonalization and derealization are mental disorders that may occur together or separately, they are characterized by the fact that they start to work under the influence of intense fear or shock. People experiencing these symptoms have the impression of being detached from their own bodies and looking at everything from the side without emotions and thoughts (depersonalization), there is also the feeling of unreality



as if what was happening beside was just a strange dream or the reality changed in a strange way (derealization) [4, p.89].

Reduced consciousness occurs in a person who is less aware of what happens when a traumatic event takes place- narrowing of awareness of what is happening around. In contrast, dissociative amnesia is characterized by the fact that, after its release, the person is unable to recall the critical moments of trauma. Dissociation is defined as 'reduction strategy of aversive emotional awareness and the control of cognitive processes, which distorts usually integrated functions of consciousness, memory, identity and perception of the environment' [3, p.45]. Often used by people facing this type of dissociation, this types of terms have the nature of metaphors ('I felt as if someone was running the film in a slow motion', 'I felt as if it did not concern me', 'I saw it all through the milky glass' etc.) [10, p.56].

Dissociative disorders are the reactions occurring during the working of defense mechanisms, they are kind of strategy to deal with bad thoughts which can have a devastating impact. 'This perspective assumes that people who were exposed to traumatic events can minimize the aversive emotional consequences of emotional trauma by narrowing the awareness of traumatic experience [10, p.56].

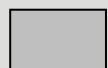
The criteria for the diagnosis of ASD in a person, except for already mentioned traumatic stressor experiences and dissociative symptoms, is also a re-experience of trauma in at least one of the following ways: 'recurrent images, thoughts, dreams, illusions, flashback episodes or a sense of living experience anew; or distress in the confrontation with the stimuli that evoke traumatic event' [5, p.87]. Another criterion is the 'avoidance' of the stimuli by an individual that evoke the memory of the sustained trauma. There also appears a strong agitation for at least two days after trauma occurrence manifested by, among others, sleeping disorders, excessive vigilance, anxiety, nervousness and problems with concentration.

Symptoms of ASD (acute stress reaction) are strongly connected with symptoms of PTSD (post-traumatic stress disorder), but they are varied by the time criterion, the latter begins- if the symptoms continue- a month after the onset of the stressor or trauma, in the case of PTSD there are no dissociative symptoms. They are also distinguished by the criterion of excitation, for PTSD at least two symptoms of excitation are required, and not a clear stimulation as in ASD [13, p.56]. Symptoms of acute stress disorder and then PTSD symptoms recede in more than half of the people without the intervention of specialists after about three months, if symptoms persist after this time they are the symptoms of chronic stress.

NON-INTRICATE POST-TRAUMATIC STRESS DISORDER (PTSD)

Post-traumatic stress disorder slightly differently highlights the importance of the disorder, linking it to the persistence of symptoms indicating the state of chronic stress (post-traumatic stress disorder), or considering the most important nature of the stressor, which, when activated, disenables an individual to return to the state of balance (post-traumatic stress disorder) [17, p.76]. PTSD is a consequence of a deeper injury, time categories are determined by DSM-IV according to this classification, acute PTSD is diagnosed when symptoms persist for no longer than three months. The upper limit is not determined. It is also possible to have PTSD with delayed onset. It occurs when the symptoms appear at least 6 months after the trauma [16, p.52].

Clinical criteria talk about post-traumatic stress disorder as the disruption of normal functioning of the individual which is associated with severe suffering caused by re-experiencing the traumatic situation that took place at an earlier time and has been echoing till now. The difficulties relate to the normal functioning in many areas of daily life. PTSD diagnosis can be made only when the tested person is in contact with the stressor and who causes in him or her specific reactions. One should keep in mind that people who have suffered the symptoms of dissociation and the traumatic event itself was erased completely or partially from memory, dissociative amnesia is temporary, therefore one should not give up the PTSD diagnosis. Similarly, one should not easily give up the diagnosis in people who have suffered serious physical injuries (e.g. a person lost consciousness in a public place), because the



very awareness of experiencing such moment and information about the event can be of traumatic stressor severity [2, p.45].

The latest American classification of DSM-IV diseases defines post-traumatic disorder as 'experience, being a witness or encountering an event or events where there is a danger of death or serious injury, or a threat to physical integrity of one's own or others [12, p.89].

Diagnostic criteria for post-traumatic disorder, according to DSM-IV are as follows³:

A: An individual suffered a traumatic event in which the two conditions have been met:

1. An individual has experienced, has witnessed or encountered a situation in which someone died, suffered a serious injury, or there was a likelihood of loss of life, security breach and physical integrity of one's own or another person.
2. The response of an individual was associated with a strong fear, helplessness or horror. One should note that among children the symptoms may be associated with disorganization or agitation.

B: Trauma is experienced repeatedly and in at least one of the following way:

1. The event returning in memory. In the case of younger children, there may appear plays related to trauma in a lesser or greater degree.
2. Recurrent dreams, nightmares connected to trauma. Children may have nightmares not necessarily related to the topic of trauma.
3. The illusion of repeated trauma through hallucinations, the feeling of experiencing the situation all over again.
4. A strong stress reaction that appears after contact with the stimulus associated with the trauma.
5. The presence of physiological reactions to external or external trauma-related stimuli.

C: Persistent avoidance of impulses associated with the trauma, general mental numbness that did not exist before experiencing the trauma. The symptoms shall manifest themselves in at least three of the following ways:

1. Making efforts to avoid thoughts, feelings and conversations related to trauma.
2. Making efforts not to have contact with the places and people associated with trauma.
3. Inability to recall key circumstances of the injury.
4. The reduced willingness to do or to be present in important activities.
5. The sense of isolation and alienation.
6. Limiting the scope of positive emotions.
7. The pessimistic approach to life and the future.

D: Excessive permanent stimulation absent before the trauma, characterized by at least two symptoms listed below:

1. Sleeping difficulties.
2. Irritability or outbursts of anger.
3. Problems with concentration.
4. Excessive vigilance.
5. An exaggerated reflex indicative.

E: The duration of symptoms of indicators B, C and D continues for over a month.

F: Trauma causes clinically significant discomfort or general downturn in various spheres of life.

If post-traumatic stress symptoms occur after 6 months from the trauma, then we talk about acute PTSD reaction. This is the so-called delayed reaction, it is hard to recognize it because it is not diagnosed as good as the reaction that occurs in a short period after the experienced trauma. Some researchers refrain from the assignment of this reaction to the kind of post-traumatic stress, instead, they prefer to define it as a different reaction of anxiety undertow.

³ American Psychiatric Association, APA (1994). Diagnostics and statistical manual of mental disorders. Fourth edition. Text revision (DSM-IV-TR). Washington, s. 209- 211.



Children are also at risk of PTSD and it is to a greater degree due to the fragility of the psyche and the dependence on environment. They have a greater likelihood of trauma and disorders after such trauma. The time for disorders to disappear and for recovery depends on many internal and external factors. The average length of returning to the state comparable to the one prior to the traumatic event in adults takes 1-2 years. Of course some people and children will struggle with this disorder for life and never return to normal functioning before the trauma appeared. [16, .56].

PTSD OCCURRING WITH OTHER DISORDERS

Coexistence of other disorders with PTSD is much more widespread and more often recognizable than uncomplicated post-traumatic disorder. Researchers indicate that people who came into contact with the trauma may develop additional associated disorders, such as: 'brief reactive psychosis, dissociative disorders, including dissociative identity disorder, dissociative fugue and dissociative amnesia, conversation disorder, depersonalization disorders, anxiety sleep disorder, somatization disorder, borderline personality disorder, antisocial personality disorder. The most popular are: anxiety disorders, depression, drug and alcohol abuse, aggressive or autoimmune behavior [4, p.220].

The study shows that, for example, in people involved in road accidents three-quarters of them were suffering from PTSD and have at least one other type of disorder. Still other studies were carried out on a group of firefighters who had to deal with natural disaster. They were examined repeatedly at certain intervals. It was shown then that among 147 people, 89 were struggling with trauma disorders of which only 16 people were affected by uncomplicated PTSD. This means that the occurrence of PTSD with other disorders is the rule [6, p.23].

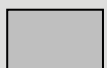
An aspect of the emergence of other disorders with the presence of PTSD is very important due to the complications arising from the difficulty of bringing the right diagnosis which plays a huge role in the further right and effective treatment, it was also found that the way to recovery is more complicated than in the case of uncomplicated PTSD. There were adopted two likely reasons for which there is coexistence of other disorders including PTSD. One of them is overlapping the symptoms in the criteria for recognition of particular diseases, due to the fact that some of the symptoms reproduce. The second reason is WTÓRNOŚĆ of other disorders in relation to PTSD, this means that at the beginning of the trauma there appear uncomplicated PTSD and then, as a result of time elapsing and struggling with the trauma there may appear, for example, depression, phobia or addiction that can temporarily constitute an escape from the problem [14, p.65].

POST-TRAUMATIC PERSONALITY

After months and years from the trauma one can classify the reaction such as permanent change of personality. Permanent personality change after a disaster or extreme situation is diagnosed when there have been significant changes in the functioning at different levels, which have become established. A stressor with a strong, intense or long-term strength can cause changes in the personality of the individual, that is a pattern of behaviour, interpersonal relations and ways of thinking and perceiving and relating to the environment as to oneself. Changed behavior of a person who suffered a traumatic experience should be confirmed by the environment of people who know her or him well. Permanent personality change is diagnosed when at least two of the following symptoms occur and they last at least three years:

- constantly hostile and distrustful attitude towards the world;
- social withdrawal or avoidance of contact with people other than immediate family;
- a permanent feeling of emptiness and helplessness, a problem;
- permanent sense of finding oneself on the brink or a threat;
- constant feeling of being different and emotional numbness [15, p.156].

Personality change causes pain and discomfort to the patient and his family and it complicates relationships with other people. This ailment often precedes post-traumatic stress disorder. The symptoms of the two can co-exist with each other, and permanent changes in personality may be the condition of disappearing PTSD- 'but in this case the permanent changes in personality are not



recognized, if additionally- for two years of PTSD- at least two years' period, during which the above criteria were satisfied did not appear.

Post- traumatic personality occurs among people who have been exposed to long periods of adverse effects of trauma, which may result in permanent profound changes in personality and in the way of functioning of the individual. Such people usually meet the criteria not only of PTSD but also:

- Borderline, that is 'borderline personality';
- Somatization;
- Multiple personality, or in a different way split personality;
- Behaviour disorders, for example aggression, impulsivity;
- Emotional disorders, for example depression, anger;
- Cognitive disorder, for example dissociation, amnesia [10, p.106].

Psychologist J. L Herman refers to post-traumatic personality as a complex post-traumatic stress disorder, as the cause of the disorder he provides 'the experience of being subjected to totalitarian control over a long period [7, p.223]. Herman acknowledges that it can occur in people involved in traffic accidents, acts of war, victims of sects, as well as adults and children who have experienced violence in the family or outside it, or have been sexually abused. He also points out that the long-term experience of violence has a much stronger impact than a one- time traumatic event related to, for example, a disaster of rape. Therefore, the effects of such experiences are more severe and often associated with the victim's identity.

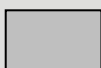
SUMMARY:

The consequences of extreme stress experience depends on many external factors surrounding an individual experiencing stress, as well as their mental resources, whether they were experienced by similar situations before or they witnessed a tragedy, or they are just aware of how to cope and where to seek help. 'The more important areas of life and the more areas of functioning the trauma involved, the more difficult it is later to isolate from the trauma memories and functioning after the trauma is more likely to be impaired.

Long-term consequences of experiencing traumatic events associated with the sensation of trauma of people injured in road accidents, take the form of complex disorders that increasingly grow and when reaching a certain criterion of time , they take a different, more serious variant of the disorder. The consequences are felt as much mentally as well as physically, and the lack of psychological support for victims of an extremity can affect the rest of their lives. This can result in a self-destructive behavior, substance abuse, depression and even death, which is why psychological therapy plays a key role in the issue. Cure of the patient is long and laborious. The previously known ways to help the victims of trauma do not guarantee a cure, they only provide relief to patients and help to go through the plight avoiding this way the aggravation of the condition. Studies show that the known method for treatment of post-traumatic stress disorder brings positive effects, however, it is necessary to carry out more research on the effectiveness and generalize the results.

Abstract:

This article attempts to describe the psychological effects of experiencing trauma among people injured in road accidents. The analyzes conducted by the World Health Organization predict that by 2020 road accidents will become the leading cause of premature death. The experience shows that in about one-fourth of those involved in a road accident there appear all sorts of difficulties. They appear immediately after the event, and those persisting for at least a month after the accident stop spontaneously among some of these people. Sometimes, however, for many months or even years after the accident, there may persist symptoms suggestive of post- traumatic disorder, such as anxiety or avoidance of situations reminiscent of the traumatic event (driving a car, crossing the road, etc.), discomfort, recurrent unwanted memories or dreams of the accident. The aggravating situation related to a traffic accident can cause extensive and long-lasting consequences in mental life. The spectrum of traumatic and post-traumatic disorders ranges from the effects of a single earth-shattering event to



more complex consequences of long-lasting, repeated abuse and stress. A description of the types of reactions to a traumatic event is not easy due to the complexity of somatic, cognitive, emotional symptoms, as well as behaviours being the manifestation of an individual way of dealing with traumatic situations.

Keywords: traffic accidents, psychological consequences, trauma.

Psychologiczne konsekwencje doznawania traumy u osób poszkodowanych w wypadkach drogowych

Streszczenie:

W niniejszym artykule podjęto próbę opisu psychologicznych skutków doznawania traumy u osób poszkodowanych w wypadkach drogowych. Analizy prowadzone przez Światową Organizację Zdrowia analizy przewidują, że do roku 2020 wypadki drogowe staną się najczęstszą przyczyną przedwczesnej śmierci. Doświadczenie pokazuje iż u około jednej czwartej osób, które uczestniczyły w wypadku drogowym występują różnego rodzaju trudności. Pojawiają się one bezpośrednio po zdarzeniu, a utrzymujące się przez co najmniej miesiąc po wypadku u części z tych osób mijają samoistnie. Czasami jednak przez wiele miesięcy, a nawet lat po wypadku mogą u trzymywać się objawy wskazujące na zaburzenie potraumatyczne takie jak lęk, czy unikanie sytuacji przypominających traumatyczne zdarzenie (jazda samochodem, przechodzenie przez jezdnie, itp.), poczucie dyskomfortu, nawracające niechciane wspomnienia czy sny o wypadku. Obciążająca sytuacja związana z wypadkiem drogowym może spowodować rozległe i trwałe następstwa w życiu psychicznym. Spektrum zaburzeń urazowych i pourazowych rozciąga się od skutków pojedynczego wstrząsającego wydarzenia do bardziej skomplikowanych konsekwencji długotrwałego, powtarzającego się nadużycia i stresu. Opis rodzajów reakcji na traumatyczne wydarzenie nie jest prosty z powodu złożoności objawów somatycznych, poznawczych, emocjonalnych oraz zachowań będących przejawem indywidualnego sposobu poradzenia sobie z traumatyczną sytuacją.

Słowa kluczowe: wypadki drogowe, psychologiczne konsekwencje, trauma.



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