Archives of Psychiatry and Psychotherapy
Volume 3, Issue 2, June 2001
pages 41–50

Anxiety, depression and nightmares in PTSD

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The relations between the occurrence of nightmares and the aggravation of symptoms of anxiety and depression in PTSD have been presented in the paper.

Key words: nightmares, anxiety, depression, PTSD

1. Introduction

In 1989, having as the basis experiments and research results of the population of former prisoners of concentration camps [1], research on a new group of patients, people persecuted and imprisoned for political reasons in Poland in 1944-1956 has been conducted. The research has been done in the Department of Social Pathology at the Chair of Psychiatry of the Jagiellonian University. In previous reports, the occurrence of psychical disorders in persecution victims was detected in a considerable number of patients who, in 71% of cases, suffered from PTSD [2].

2. Hypothesis and aim of the research

It has been noticed that the symptom, regarded as most typical for PTSD, that is nightmares occurs only in 80% of the patients with recognised PTSD. The analysis of complaints about sleep disorders in patients enabled us to formulate the hypothesis on bigger aggravation of depression symptoms among people who did not remember their nightmares. People who would remember such nightmares would be characterised by bigger aggravation of anxiety. To verify this hypothesis, which was the aim of the research, a definition of anxiety levels, depression as well as frequency of nightmares occurrence was necessary.

3. Definition of posttraumatic nightmares

In order to conduct the research methodologically, a clear definition of the notion of nightmares had to be provided. The defining course was based on the diagnostic criteria of DSM-IV [3] and it stated that a nightmare, which was a symptom of PTSD,

was a recurring and distressing dream connected with the trauma. This excluded an influence on the results of research of nightmares, which were, for example, a sign of other disorders, which did not occur as a reaction to a trauma.

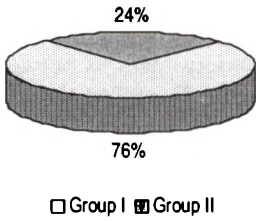
Dreaming which reflected the trauma exactly was considered to be conformable to the thesis stated. However, considering the fact that in a group of patients the traumatic situation lasted for a very long time (usually several years), a dream connected with the trauma was the one about any situation that happened in the time of the trauma, for example: imprisonment for political reasons from the moment of arresting till the moment of release. For different people, these situations were different: time of investigation, imprisonment or forced labour, or an accident in a mine. It was agreed that negative emotional reactions had to be connected with a dream with previously stated content. Usually, these emotions caused the patient to wake up suddenly with the feeling of fear or anxiety, stimulation of the autonomous nervous system, a strong feeling of suffering and an anxiety about re-experiencing the trauma. Recurrent dreams with similar content as well as the ones evoking similar reactions were considered typical. That is why, nightmares with symbolic content or other dreams evoking anxiety were not regarded as symptoms of PTSD. Analogous features of post-traumatic dreams had already been observed in 1920s while describing, the so-called, war neurosis [4]. The existence or non-existence of the already defined nightmares became a criterion to divide the group of patients into two sub-groups.

4. Group description

The patients comprised a group of people who were persecuted for political reasons in Poland in 1944-1956. It was agreed that the basic trauma which was the reason for later disorders happened in the above mentioned period of time. Some people started their conspiracy activity which was directed against the invaders during the World War II and continued it later on; others started their activity in 1950s, usually in underground self-educational organisations. However, for all of them, the strongest traumatic event which was connected with the threat to life, health or imprisonment was the arrest by the security organs, psychical trauma and physical injuries experienced during these actions.

The results from 90 patients with recognised PTSD were subjected to analytical examination. Average age of the patients during the examination was 68 years (from 62 to 84 years). A considerable majority among the patients constituted males: about 94% that is 85 patients. Females constituted 5% of the patients; there were only 5 of them. This situation seems clear if you consider the character of their activity, usually armed, which was the reason for the persecution. 25 patients had primary education, which constituted 28%, 44 patients had secondary education, which was 49%, and 21 people had higher education, which constituted 23%.

In 76% of patients (68 people) recurrent nightmares with the content directly connected with the trauma (group 1) were recognised and in 24% of patients (22 people) this symptom did not appear (group 2). These results are shown in picture 1.



Picture1
Occurrence of nightmares in patients (in percenages)
Group I – people who experienced recurrent nightmares directly connected with the trauma
Group II – people who did not experience recurrent nightmares connected with the trauma

5. Research method

All patients reported unaided to the Department of Social Pathology at the Chair of Psychiatry of the Jagiellonian University Collegium Medicum. Before, they had undergone verifications issued by organisations empowered to provide the combatants with state certificates; they also had certifications from courts which confirmed their imprisonment for political reasons in connection with their activity for the independence of the Polish State and considering the verdicts issued in those times invalid. During psychiatric examination, a special questionnaire, which was filled by patients, was used. The questionnaire makes it possible to recognize PTSD,according to DSM-IV, as well as quantity measurement figure of its aggravation and also putting the data about sleep disorders which are PTSD symptom: for example, nightmares and accompanying dreams if they were previously recognized [5]. The information given by the patients was the basis for the examination. Despite the fact that this method and discrepancies in trauma description as well as experiences connected with it, which were sometimes related by patients themselves, have been put in doubt [6], the interview together with observation conclusions constitutes the basis source of information about the patients. From the patients, a group of people with recognised PTSD was selected. In order to estimate the level of anxiety and depression the following were used: State Trait Anxiety Inventory (STAI XI and X2) by C.D. Spielberg, R. I. Gorsuch and R.E.Lushene [7] and Hamilton's Depression Scale [8]. These methods were chosen because of their credibility and exactness confirmed in publications [9,10] as well as feasibility in usage and the possibility to compile comparative results. State Inventory and Anxiety Features make it possible to asses the level of anxiety in its two dimensions: as a temporary state (STAI XI) in that case, it was the situation in the time of examination and stress connected with it, as well as a permanent personality feature (STAI X2). The inventory is filled by the patient by choosing one of four answers to 40 questions, which describe the aggravation of the symptom. The results are added according to a special key. In Hamilton's Depression Scale 24 symptoms typical for depression disorders, such as: low mood, sleeping disorders and wakefulness drive disorders, etc. were mentioned. Aggravation of every symptom is estimated by a clinician on a multi-point scale, which is different for different symptoms. While working on the results, points are added directly. In order to analyse the variability of the results obtained in the questionnaires, descriptive statistics was used.

6. Results of Sate Trait Anxiety Inventory

Comparison of the state and anxiety features between both groups as well as in each group individually was conducted. For STAI X1 (anxiety state) arithmetic means are similar: 54,7 for group I and 53,4 for group II (Table 1, Picture 2). No statistically valid differences were observed (t=0.45; p>0,1). One could observe that in group II the minimum value is notably higher than in group I: it is, accordingly, 46 and 27 points. Results of STAI X1 (anxiety state) in patients in group I are 54,7 and can be compared with the results of STAI X2 (anxiety trait) which are 55,3 (t=0,601; p>0.1). Results of STAI X1 in group II are 53,5 and are statistically lower than results of STAI X2 which are 57,5 (t=2,511; p>0.05) (Table 2, picture 2)

Table 1

Arithmetic means of results of State Trait Anxiety Inventory (STAI) in groups under examination

	Group I		Group II		Value of test *t*
	$\bar{x} \pm s$	min - max	$\bar{x} \pm s$	min - max	
STAI X1	54,7 ± 11,8	27 - 78	53,5 ± 10,5	27 - 69	0,45
STAI X2	55,3 ± 9,0	33 - 77	57,5 ± 7,9	46 - 73	1,04

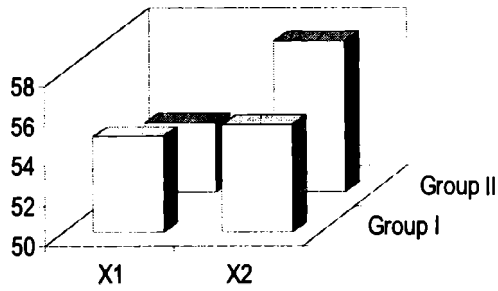
Table 2

Comparison of the results of anxiety state and trait feature in groups I and II

Group	STAI X1 $\bar{x} \pm s$	STAI X2 $\bar{x} \pm s$	Value of test *t*
I	54,7±11,8	55,3±9,0	0,601
II	53,5±10,5	57,5±7,9	2,511*

* Level of substantiality p<0,05;

Picture 2
Arithmetic means of results of State Trait Anxiety Inventory in groups under examination



7. Hamilton's depression scale results

In 24-point Hamilton's Scale, arithmetic mean for group I is 10,6 and it is lower than in group II where it is 17,8 (Table 3, Picture 3); the difference is statistically valid (t=4.96, p>0,001). The patients were divided into groups of people who were not

diagnosed with depression (to 13 points), with slight depression (from 14 to 19 points), medium depression (from 22 to 24 points) and deep depression (more than 24 points) (Table 4, picture 4). Considerably more frequent occurrence of deep depression was noted in group II (x^2=28,21; p>0,001). It is worth mentioning that in group I 80% and in group II 15,8% of people did not have depression.

Table 3

Arithmetic means of results of Hamilton's Scale in groups under examination

Hamilton's Scale	Group I		Group II		Value of test *t*
	$\bar{x} \pm s$	min - max	$\bar{x} \pm s$	min - max	
	10,6 ± 5,3	2 - 30	17,8 ± 6,5	2 - 33	4,96***

Picture 3
Arithmetic means of results of State Trait Anxiety Inventory in groups under examination

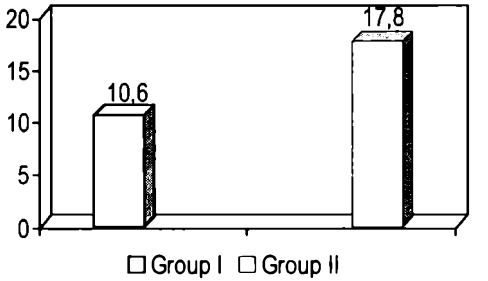
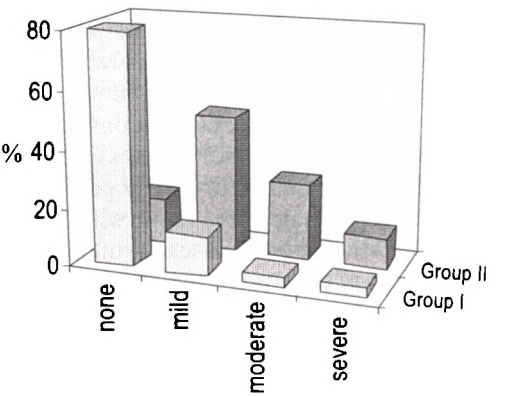


Table 4

Frequency of the occurrence of depression aggravation acc to Hamilton's Scale in groups under examination

	Group I		Group II		Total	
	n	%	n	%	n	%
none	52	80,0	3	15,8	55	65,5
mild	9	13,8	9	47,4	18	21,4
moderate	2	3,1	5	26,3	7	8,3
severe	2	3,1	2	10,5	4	4,8
Total	65	100,0	19	100,0	84	100,0

Picture 4
Frequency of the occurrence of depression aggravation acc to Hamilton's Scale in groups under examination



8. Conclusions and discussion

Results obtained in the research confirm the hypothesis stated. The criterion of the presence of remembered nightmares with the content directly connected with the trauma made it possible to divide the patients with recognised PTSD into two groups with varying symptoms profiles. The differences concerned:

1. the level of anxiety, which was bigger among the ones who remembered nightmares, and
2. aggravation of objective depression symptoms which was bigger among those who did not remember nightmares.

Analysing the above mentioned results, one should remember that PTSD, in DSM-IV understanding, is only a statistical representation of a wide problem, that is all psychical symptoms which appear as a response to the trauma. This analysis constitutes only theoretical construction, which comprises criterion and diagnostic symptoms. It attempts to comprise almost all symptoms of psychical disorders previously described as reactive. As a result, the analysis contains the following: anxiety and depression symptoms, dissociation symptoms; at the same time, however, the possibility to assess the consequences of diagnostic treatment, prognosis or therapy resulting from specific symptoms was lost. It leads to blurring the borders between the described reactions to the trauma, which are frequently distant. Regardless of dominating symptoms, the recognition of PTSD is always the same. PTSD has been placed in the chapter of anxiety disorders which, during its diagnostics, leads to underestimation of other disorders. One could deduct that it results in excessively frequent recognition of PTSD with, for instance, accompanying depression, which seems to be the only possibility to describe depression symptoms in people who underwent trauma. In DSM classification, the concept of disorders' aetiology and their specific treatment are omitted; the pressure is put on the description, which constitutes a certain pattern of symptoms. It is postulated, however, that the drawback of such a classification is the tendency to constant understanding the syndrome as if it actually represented a disease entity while they reflect only the state of knowledge characteristic for the time of its construction [11] which is mostly based on statistics. ICD-10 classification is constructed mostly on the basis of previous edition of DSM. PTSD is, however, placed in the chapter: 'the stress related disorders' and not in the chapter 'anxiety disorder'. Apart from this issue which puts more emphasis on etiology, clinical descriptions are incredibly comparable. As usual, in ICD-10 the clinicians were given more freedom in assesing the number of symptoms and their aggravation. It does not change the fact that examination/research results concern PTSD that is recognized according to one of the two classifications. Each of them has advantages as well as disadvantages that were widely published previously [5,12,13].

Attempts to describe cases which were based on not only statistical analysis but also on description of cases, trying to understand the patient, sympathising with him, and, most of all, overall understanding of disorders which comprise aetiology, symptom and treatment, were made in the research on KZ-syndrome [14,15]. The description based on case analysis and examining the contact with the patient presents, to a

lesser degree, leading symptoms, however, at the same time, it excludes fewer symptoms which do not belong to a particular recognition [16]. It allows to understand the symptoms, which occur after trauma as depression, anxiety and other disorders, especially with their reactive aetiology.

PTSD in DSM-IV was placed in the chapter on anxiety disorders. It is probably the consequence of overall understanding of psychical disorders and grouping them around basic psychopathological phenomena, such as, thinking, mood and anxiety [13]. Unfortunately, describing PTSD as an anxiety syndrome only, and not taking depression symptoms into consideration, forces the researchers to recognise PTSD together with depression. Describing the picture of the patient's pathology, one states correct theoretical diagnosis but it is knowingly regarded as artificial multiplication of recognition which is necessary to describe disorders which are some sort of compromise with the classification. In such a case, both disorders have a similar genesis; they mutually impair the functioning of the patient and require the assessment of prognosis. One could present the same clinical picture by making use of one recognition, if it comprised post-traumatic anxiety and depression symptoms in one.

Symptoms of depression and anxiety were observed in many patients. In group I, which remembered nightmares, the level of temporary anxiety was aggravated to a similar degree as the anxiety being a constant personality feature. While preparing the research, the results of high level of temporary and constant anxiety were expected to be high; the patients were people with recognised PTSD, and anxiety was its dominating symptom. The results, however, showed that there was a considerably valid statistical divergence in aggravation between the anxiety state and feature in group II. The state of temporary anxiety was lower than the one of anxiety feature. The same group was characterised by higher aggravation of depression and lack of nightmares.

Both groups differ notably in the level of objective depression symptoms, which are measured by Hamilton's Scale. The depression aggravation is higher in patients who do not remember nightmares, which directly reflect the trauma. The depression aggravation in patients who report nightmares is not only lower but in a considerable number of people, the symptoms present were not sufficient to detect depression at all. These differences show a different course of PTSD in both groups of patients. The clinical picture is different enough to have influence on the choice of psychotherapeutic methods and pharmacological treatment of patients with post-traumatic disorders. Considering the fact that depression symptoms did not appear before the traumatic experience, these differences also remind of the possibility to react with depression to trauma.

On the grounds of the research results, one can state that people, in whom one of the symptoms of PTSD are recurrent nightmares about the trauma, are characterised by the following symptoms:

- high level of general anxiety
- tendency to react with anxiety to new situations
- a similar level of temporary anxiety and anxiety as a constant personality feature
- a relatively low level of objective and clinical depression symptoms

People with recognised PTSD, who do not remember nightmares, are characterised by:

- high level of general anxiety
- higher level of anxiety as a constant personality feature than temporary anxiety
- high aggravation of objective depression symptoms

Hitherto existing understanding of PTSD as a homogenous unit results in a stable and uniform pattern of therapeutic procedure. It means directing the patients to psychotherapy as well as pharmacological treatment on the basis of the trauma and recognition of PTSD symptoms. Turning the attention to more accurate differentiation of symptoms, which happen in reaction to the trauma, would make it easier to direct the patient to more adequate therapeutic techniques and methods and to a better choice of pharmacotherapy adequate for manifested symptoms. Turning the attention to the symptom of nightmares concerning the trauma could speed up the diagnosis showing not only the very recognition of post-traumatic stress but also its course with strongly visible anxiety symptoms.

The research results are the reason for the discussion on the homogeneity of PTSD. Frequent co-occurrence of certain psychical disorders with PTSD suggests the occurrence of different sub-types/sub-divisions [17] or a different course of PTSD. Having only its dynamics as a basis, the following sub-types/sub-divisions of PTSD have been recognised: peracute type, chronic type and the one with delayed beginning. Publications indicating that there is a necessity to widen the diagnosis of PTSD with different symptoms have been occurring more and more frequently. Most frequently, the dissociation and depression symptoms are being mentioned, though somatic and even psychotic symptoms are also taken into consideration [18]. Dissociation symptoms, which are frequently observed as a result of sexual trauma, rapes and abuse, are characterised by, among others, complaints during over the average decreased physiological reactivity [19]. Nowadays, it is more and more frequent to build a hypothesis about the possibility to react with depression to trauma factor. It has been proved that PTSD and depression are independent consequences of the trauma, have similar prognosis, similarly impair the functioning of the patient and both recognition should be considered in diagnostics and therapy of post-traumatic disorders [20].

Symptoms of reactive disorders, especially the ones of PTSD, are not dependent on the type of trauma. PTSD, as it has been stated [21], may have a similar clinical picture in people saved from political persecutions [7,22,23], victims of crime, catastrophes and accidents. Similarly, the conclusions based on the results of the research may be widely used in all groups of patients suffering from PTSD and they may also start a discussion on the reaction to the trauma.

If one could interpret the results more freely, one might notice other manifestations of suffering after the trauma; it concerns not only anxiety and the feeling of avoiding but also sadness and withdrawal, low spirit and the lack of ability to feel joyful. The already existing classifications do not recognise reactive depression syndromes and one may ponder whether this fact would not be some sort of contradiction to people's suffering who, in specific situations, experienced the trauma.

The research results may contribute to discussions on the theory of PTSD as well as widen the therapeutic offer for trauma victims and they may be used to describe all groups of victims.

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