

# Involuntary Admission and Posttraumatic Stress Disorder Symptoms in Schizophrenia Patients

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**In a sample of 105 community-care patients suffering from schizophrenia, the relationship between reports of involuntary admission in the past, current posttraumatic stress disorder (PTSD) symptoms, and other aspects of psychopathology was examined. PTSD symptoms were obtained on the PTSD interview, and psychopathology was rated on the Brief Psychiatric Rating Scale (BPRS) and on the Present State Examination (PSE). Fifty-seven percent of the patients reported they had experienced involuntary admissions in the**

**past. The degree of PTSD symptoms was high—51% fulfilled the criteria for a PTSD diagnosis. PTSD symptoms were not correlated with reports of involuntary admissions. They were, however, significantly correlated with the BPRS subscale anxiety/depression, and with PSE subscores for specific and nonspecific neurotic syndromes. Because of an overlap of symptom scores, a diagnosis of PTSD according to DSM criteria appears to be very difficult in schizophrenia patients. Copyright © 1998 by W.B. Saunders Company**

**P**OSTTRAUMATIC STRESS DISORDER (PTSD), as defined in DSM-III,<sup>1</sup> DSM-III-R,<sup>2</sup> and DSM-IV,<sup>3</sup> has been found to occur following different traumatic experiences, including natural catastrophes, accidents, combat stress, political persecution, and torture.<sup>4-9</sup> Some authors suggested that suffering from schizophrenia may be associated with traumatic events that subsequently lead to symptoms of PTSD. Traumatic experiences in schizophrenia may be caused by symptoms of the psychotic illness, by treatment measures, or by a combination of both.<sup>10-12</sup> In a case report, Shaner and Eth<sup>13</sup> pointed to the potentially traumatic nature of terrifying delusions and hallucinations during the acute stage of schizophrenia. Stampfer<sup>14</sup> proposed a theory that negative symptoms of schizophrenia may be “manifestations of a traumatic stress disorder that is fundamentally similar in terms of the clinical phenomena and pathophysiological disturbance to chronic PTSD.” Williams-Keeler et al.<sup>15</sup> also noted a similarity between the experience of schizophrenia and that of PTSD as a result of combat stress, and outlined implications for psychosocial treatment of psychotic patients.

In spite of these theoretical suggestions, little systematic empirical research on the relationship of schizophrenia and PTSD symptoms has been published so far. McGorry et al.<sup>16</sup> examined 24 schizophrenia patients and assessed the level of PTSD 4

months and 11 months after discharge from acute hospital treatment. A total of 46% and 35% of the patients, respectively, reported symptoms that fulfilled the diagnostic criteria of PTSD. A PTSD diagnosis and the level of PTSD symptoms were correlated with self-rated depressive symptoms, but not with negative symptoms or the mode of admission, i.e., voluntary versus involuntary. Regarding the intrusion symptoms, some patients described their recollection of treatment events in nightmares, such as forced sedation or seclusion.

This study is based on the assumption that involuntary admission may fulfill the A criterion of PTSD as defined in DSM. It can include forced medication, seclusion, and other compulsory treatment measures. According to the definition in DSM-III-R it is “outside the range of usual human experience and would be markedly distressing to almost anyone.” According to the DSM-IV definition of the A criterion, involuntary admission may involve a threat to the physical integrity of the self, and cause an “intense fear, helplessness or horror” in the patient.<sup>17</sup>

In a sample of community-care patients suffering from schizophrenia, we investigated (1) how many, and which, patients reported experience of involuntary admission in the past, (2) the level of PTSD symptoms and the frequency of PTSD diagnoses in the whole sample, (3) the association between the experience of involuntary admissions in the past and current PTSD symptoms, and (4) the correlation between PTSD symptoms and other aspects of psychopathology.

## METHOD

The study was performed in a community-care system serving an inner district of Berlin, Germany. The system is run

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by the Department of Social Psychiatry at the Freie Universität Berlin; its features have been described in more detail elsewhere.<sup>18</sup> All patients who met the diagnostic criteria for schizophrenia according to DSM-III-R, and who were treated in the care system within a period of 1 year, were asked to participate in the study. All patients gave informed consent before inclusion in the study.

Sociodemographic data, patients' history, and details from previous psychiatric treatments were obtained in a standardized interview. Patients were asked in detail about involuntary admissions and negative, as well as positive, treatment experiences in the past.

Psychopathology was observer-rated on the Brief Psychiatric Rating Scale (BPRS)<sup>19</sup> and on the Present State Examination (PSE).<sup>20</sup> PTSD symptoms were assessed by the PTSD Interview.<sup>21</sup> In this interview, the severity or frequency of each PTSD symptom, as defined in DSM-III-R, is rated on a scale from 1 (no or never) to 7 (extremely or always). For diagnosing PTSD, each symptom rating was dichotomized using 4 (somewhat or commonly) as a cut-off point. A symptom was regarded as existent if the score was  $\geq 4$ ; the diagnosis was then made according to DSM-III-R criteria. The traumatic event was either an involuntary admission, or in case patients did not report any involuntary admission, other negative aspects of treatment that the patients had experienced in the past according to the standardized interview. The interviewer was not involved in the patients' treatment.

## RESULTS

### *Characteristics of the Sample*

One hundred forty patients fulfilled the inclusion criteria. Of these, 35 either did not agree to participate in this study or could not be interviewed because their psychopathology was too severe. Sociodemographic data, the mean duration since first hospital admission, and the number of previous hospitalizations of those 35 patients and the remaining 105 patients that were examined are shown in Table 1.

Patients in the study group had, on average, a better school education than drop-outs, but other differences failed to reach statistical significance. The mean BPRS total score in the 105 studied patients was 32.0 ( $\pm 8.6$ ). The mean PSE total score (36 syndrome scores aggregated) was 22.2 ( $\pm 14.1$ ).

### *Involuntary Admission*

Experience of one or more involuntary admissions in the past was reported by 60 patients. The time elapsed since the last involuntary admission ranged from 1 to 159 months ( $41.4 \pm 40.7$  months). These 60 patients, and the other 45 patients who did not report any involuntary admissions, showed no statistically significant difference in sociodemographic data (age, gender, education, professional

**Table 1. Sociodemographic and Clinical Characteristics of Patients Participating in the Study and of Patient Drop-outs**

Variables	Study Group	Drop-out Group	$t/\chi^2$	df	P
	(n = 105)	(n = 35)			
	Mean $\pm$ SD or %	Mean $\pm$ SD or %			
Gender					
Female	44.8%	37.1%			
Male	55.2%	62.9%	.62	1	NS
Age (yr)	38.6 $\pm$ 9.4	39.1 $\pm$ 11.5	.28	138	NS
Living situation					
Alone	56.2%	51.4%			
With partner	21.9%	22.9%			
With parents/family	21.9%	25.7%	.29	2	NS
School education					
Primary school not completed	13.3%	28.6%			
Primary school completed	24.8%	42.9%			
Secondary school completed	29.5%	20.0%			
Higher education	32.4%	8.6%	13.0	3	<.01
Professional qualification					
No occupational qualification	40.0%	48.6%			
Apprenticeship completed	55.2%	45.7%			
University degree	4.8%	5.7%	1.0	2	NS
Job situation					
Employed	23.8%	31.4%			
Unemployed	76.2%	68.6%	.80	1	NS
Duration since first hospitalization (yr)	10.7 $\pm$ 7.4	10.2 $\pm$ 7.1	.33	138	NS
No. of previous hospitalizations	5.7 $\pm$ 5.3	4.5 $\pm$ 3.6	1.2	138	NS

Abbreviation: NS, nonsignificant.

qualification, living situation, occupational status), clinical variables (frequency of previous hospitalizations, duration since first admission, dosage of current neuroleptic medication), or degree of psychopathological symptoms (BPRS total score and subscales, PSE total score and subscores).

All patients, including those who did not report involuntary admissions, did, however, report that they had experienced negative aspects of treatment in the past. These negative aspects included violence; noise; overcrowding and monotony on wards; unkind, rigid, and formal treatment; and lack of empathy and support in staff members. Patients with involuntary admissions reported more of these negative experiences than patients without involuntary admissions ( $9.7$  v  $4.1$ ,  $t = 6.64$ ,  $df = 103$ ,  $P < .001$ ).

### PTSD Symptoms

The total score for PTSD symptoms, as assessed in the interview, ranged from 17 to 108 ( $56.1 \pm 18.9$ ). By the symptom ratings, 54 patients received the diagnosis of PTSD. Patients with and without involuntary admissions in the past hardly differed in their total score of PTSD symptoms ( $56.6 \pm 19.2$  v  $55.4 \pm 18.6$ ) nor in the subscores (intrusion symptoms,  $8.1 \pm 5.2$  v  $7.6 \pm 5.1$ ; avoidance symptoms,  $16.8 \pm 8.8$  v  $16.0 \pm 8.8$ ; arousal symptoms,  $14.6 \pm 8.4$  v  $14.8 \pm 8.6$ ;  $t = 0.09$  to  $0.49$ ; each not significant [NS]). The frequency of PTSD diagnosis was also similar in both groups (patients with involuntary admission, 48%; patients without involuntary admission, 56%;  $\chi^2 = 0.54$ ,  $df = 1$ , NS).

Patients fulfilling the criteria for PTSD were more often unemployed than those not fulfilling the criteria (87% v 65%,  $\chi^2 = 7.21$ ,  $df = 1$ ,  $P < 0.01$ ). No sociodemographic data or psychiatric history variables showed any other statistically significant difference between the two groups.

Patients in this study had a similar level of C (avoidance) and D (increased arousal) symptoms as a sample of 34 patients suffering from enduring mental sequelae of torture in Iran.<sup>10</sup> Schizophrenia patients showed, however, a clearly lower degree of B (intrusion) symptoms ( $11.8 \pm 5.1$  v  $16.7 \pm 4.6$ ,  $t = 5.0$ ,  $P < .001$ ). In the PTSD interview, more than half of the patients showed symptoms fulfilling the B (intrusion), C (avoidance), and D (increased arousal) criteria of PTSD.

Table 2 summarizes the correlations between PTSD score and subscores, BPRS total score and subscales, and PSE total score and subscores.

The total score of PTSD symptoms is significantly correlated to both BPRS and PSE total scores. In BPRS subscales, anxiety/depression clearly show the highest correlation with PTSD symptoms. In PSE subscores, the highest correlations were found for specific and nonspecific neurotic syndromes. In general, PTSD subscales avoidance and arousal are slightly more closely associated with other aspects of psychopathology than the intrusion symptoms.

### DISCUSSION

More than half of the patients examined in this study reported experience of one or more involuntary admissions in the past. These reports are not objective data, and some studies have demonstrated

**Table 2. Correlations Between BPRS Scores (total score and subscales), PSE Scores (total score and subscores), and PTSD Symptoms (total score and subscores) (n = 105)**

PTSD	Total Score	Subscore: Intrusion	Subscore: Avoidance	Subscore: Arousal
BPRS total score	.33†	NS	.30†	.34‡
BPRS subscales				
Activation	NS	NS	NS	NS
Anxiety/depression	.48‡	.33†	.50‡	.33†
Anergia	NS	NS	.21*	.22*
Thought disturbance	NS	NS	NS	NS
Hostility/suspiciousness	.21*	NS	NS	NS
PSE total score	.57‡	.39‡	.44‡	.55‡
PSE subscores				
Delusion and hallucination	NS	NS	NS	.23*
Behavioral and speech syndromes	.27†	NS	NS	.36‡
Specific neurotic syndromes	.55‡	.39‡	.47‡	.48‡
Nonspecific neurotic syndromes	.66‡	.43‡	.60‡	.56‡

NOTE. Pearson's correlations, two-tailed.

\* $P < .05$ .

† $P < .01$ .

‡ $P < .001$ .

that patients and psychiatric staff do not always agree as to whether an admission or treatment was administered involuntarily or voluntarily.<sup>22</sup> Some patients' statements on involuntary admission might not reflect the view of the staff involved or the actual legal status of the admission. Patients' reports of traumatic events might be influenced by avoidance and denial, and the time elapsed since the admission varied greatly. Furthermore, acuity of symptoms was not controlled, and potentially traumatic experiences independent from psychiatric treatment have not been investigated. Such problems and shortcomings should be taken into account when the data are interpreted.

The level of PTSD symptoms was surprisingly high in this sample and was similar to a sample of Vietnam War combat veterans whose symptoms were assessed by the same method.<sup>1</sup> In general, it was also similar to a group of patients suffering from enduring mental sequelae of torture in Iran,<sup>10</sup> although lower in intrusion symptoms, which may be regarded as the most specific group of PTSD symptoms. Using a rather conservative cut-off point of 4 for each symptom rating in the PTSD

interview, and assuming that the A criterion is also fulfilled (which is doubtful, at least in those patients who did not report involuntary admissions but just negative aspects of treatment), 51% of community-care schizophrenia patients in this study would acquire a PTSD diagnosis following the operationalized criteria in DSM-III-R.

The frequency of PTSD symptoms is not associated with reports of involuntary admissions. Our findings by no means exclude the possibility that single patients may have developed PTSD as a result of involuntary admission. A statistical association between involuntary admission and current PTSD symptoms, however, has not been found. Thus, involuntary admissions may not be regarded as causing the high level of PTSD symptoms in the sample.

PTSD symptom scores are significantly correlated with scores from other psychopathological ratings, in particular with the BPRS subscale anxiety/depression and with the specific and nonspecific neurotic syndromes as assessed in the PSE. To some extent, this overlap of symptoms scores is due to the fact that the same symptoms, e.g., depression or hyperarousal, are assessed on very similar items in the PTSD interview and in the BPRS or PSE, respectively. Thus, some symptoms that may be interpreted as an unspecific sign of a schizophrenic illness, may necessarily lead to higher scores on the PTSD symptoms. It should be noted, however, that the highest correlations of the PTSD symptom scores were not found for negative symptoms of schizophrenia as far as they are assessed on BPRS and PSE. This finding is in line with results from McGorry et al.<sup>17</sup> and does not support Stampfer's hypothesis that negative symptoms of schizophrenia are manifestations of a disorder that is similar to chronic PTSD. If there are similar psychological processes in the experience of schizophrenia and in

the development of PTSD occurring after traumatic events (such as combat stress), these processes may mainly explain unspecific symptoms of anxiety and depression in schizophrenia.

The results also suggest that the nature of the anxiety in schizophrenia patients is captured by all scales applied in this study, and negative symptoms are not correlated with anxiety as measured in this way.

In conclusion, our findings could be read to suggest that half of the patients in this study do suffer from PTSD, possibly because of traumatic experiences that were not elicited in our interview, and the PTSD symptoms in these patients subsequently influence the scores of BPRS and PSE. Given the prevalence of PTSD in other samples,<sup>23,24</sup> it seems unlikely that 51% of a sample of schizophrenia patients in community care do suffer from PTSD unless the concept of PTSD is specifically redefined for these patients. A useful diagnosis of PTSD, according to the operationalized criteria of DSM-III-R, seems hardly possible in schizophrenia patients because of the substantial overlap of symptom scores as assessed on established scales. This applies, in particular, when schizophrenia symptoms are dominated by anxiety, depression, and other unspecific symptoms. While our study focused on the potentially traumatic impact of involuntary admissions, further studies might explore the effect of the experience of acute or chronic psychotic symptoms. In any case, advanced concepts and methods are needed to examine how schizophrenia patients react to the potentially traumatic experience of coercive treatment measures and of terrifying symptoms, how their coping processes may be affected by cognitive and social impairments, and how the complex response to traumatic events leads to specific or unspecific patterns of symptoms.

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