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APPLICATION OF THE PTSD SYMPTOMS SCALE (PSS) FOR IRANIAN PTSD PATIENTS

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ABSTRACT

Background: This study investigated the applicability of the Post-traumatic Stress Disorder Symptom Scale (PSS) in a group of adolescents who had been directly involved in a disaster in Tehran.

Method: Participants were 20 adolescents who had survived a boat sinking in Tehran's city park in 2002. The assessment measures used were the Post-traumatic Stress Disorder Symptom Scale (PSS) and clinical interview based on DSM-IV.

Results: Seventeen participants (85%) were diagnosed with PTSD using PSS and seventeen (90%) were diagnosed with PTSD by psychiatric interview.

Conclusion: The PSS appears to be an effective and efficient method of screening for PTSD.

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Keywords: PTSD, Scale, disaster, PSS.

INTRODUCTION

Since 1980, when post-traumatic stress disorder (PTSD) was officially recognized as a unique diagnostic entity and included in the Diagnostic and Statistical Manual III,[1] a large body of research has been done in the assessment of this disorder. Now, in 2005, to further diagnostic certainty, patients suspected of manifesting post-traumatic stress disorder may be administered various psychological assessments, including structured clinical interviews, questionnaires, and psychophysiological procedures.[2,3,4,5] Traditional batteries of tests can provide information overlooked or missed during the structured interview and mental status examination. Of course, use of multiple instruments provides converging evidence that increases confidence in diagnostic decision making and treatment planning.[6]

The assessment of trauma victims can be enhanced greatly through the use of standardized instruments and methods such as questionnaires. There are several questionnaires in this field that have been developed and psychometrically evaluated: such as the Impact of Event Scale (IES;7), Minnesota Multiphasic Personality Inventory (MMPI), Symptom Check List-90 (SCL-90) and MMPI-2.[10] These types of measures of post-traumatic stress disorder are easy to administer and score, and they are useful to screen for the presence of post-traumatic stress disorder. In this section, related literature will be reviewed and some questionnaires explained.

The post-traumatic stress disorder symptom scale, self-report version (PSS-SR) contains 17 items that diagnose post-traumatic stress disorder according to the diagnostic and statistical manual of mental disorders III Revised (and DSM-IV) criteria. These items also assess the severity of post-traumatic stress disorder symptoms.[11] Foa et al., (1993) examined the psychometric properties of the two versions of the post-traumatic stress disorder symptom scale: 1) an interview version of the post-traumatic stress disorder symptom scale, and 2) a self-report version. These two versions of the post-traumatic stress disorder symptom scale were

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administered to a sample of 118 recent rape and non-sexual assault victims. The results showed that both versions of the post-traumatic stress disorder symptom scale have satisfactory internal consistency, good concurrent validity, and high test-retest reliability.[11] PSS has been translated to the Persian language by the first author who is graduated from the Institute of Psychiatry, London, and speaks English as a second language and Persian as first language. And then compared the Persian form to the original form by one of his colleagues. After that this was translated back to English form by the other colleague. Two forms were compared and satisfied both of them. The final form was given to 5 schoolgirls to be completed.

In a research by Stieglitz, Frommberger, Foa and Berger[12] the psychometric properties of the PTSD symptom scale (PSS) were evaluated in a clinical sample of severely injured in-patients after a traffic accident (n= 123). The results indicate that the PSS has satisfactory reliability and validity (internal and external).

The validity of the Impact of Events Scale (IES) and the posttraumatic stress disorder (PTSD) symptom scale, self-report version (PSS-SR) was examined among crime victims.[13] Both instruments performed well as screeners for PTSD. For the IES, sensitivity ranged between .93 and 1.00; for the PSS-SR, sensitivity ranged between .80 and .90. Specificity for the IES ranged between .78 and .84 and for the PSS-SR ranged between .84 and .88. The authors conclude that either of these short self-report instruments or their individual items are suitable as screeners for PTSD, specifically in settings where mental health professionals are unavailable.[13]

In a study by Coffey, Dansky, Falsetti, Saladin and Brady (1998) the psychometric properties of a modified version of the PTSD Symptom Scale Self-Report (PSS-SR) were examined in a group of treatment-seeking substance use disorder (SUD) patients (N = 118). The modified version of the PSS-SR demonstrated good internal consistency and reliability and was correlated with other self-report measures of trauma-related symptomatology. Comparisons between a structured PTSD diagnostic interview and the modified PSS-SR indicated that 89% of the PTSD positive patients were correctly classified by the modified PSS-SR.[14]

The purpose of the current study was to investigate the applicability of the post-traumatic stress disorder symptom scale (PSS) in a group of adolescents who had been directly involved in a disaster in Tehran. It was predicted that the post-traumatic stress disorder symptom scale (PSS) could be applicable for Iranian PTSD patients.

METHODS

Subjects

The participants were 20 adolescents who had survived a boat sinking in Tehran's city park, May 4th, 2002. They were a part of a group of 57 schoolgirls from Taha secondary school in Tehran. This group ask their teacher to let them set sail on a boat after an educational tour of the Post museum which is not far from city park. The weather was windy and then it started raining. A boat sank while carrying 15 schoolchildren and sank with its crew, the schoolchildren, and a boatman still on board. The boat sank very quickly while the others were witness. Six schoolgirls and one boatman died in this disaster.

The 20 participants had a minimum age of 13, maximum age of 15 years. Mean age of participants was 13.74 (standard deviation =.65).

Instruments

1- The post-traumatic stress disorder symptom scale:[11] The post-traumatic stress disorder symptom scale contains 17 items that diagnose post-traumatic stress disorder according to the diagnostic and statistical manual of mental disorders-III-revised (and DSM-IV) criteria. These items also assess the severity of post-traumatic stress disorder symptoms.[11] The questionnaire has three groups of items including: reexperiencing, avoidance, and increased arousal. Total PTSD severity for each symptom group can be calculated by summing the scores in each symptom cluster. Overall severity is the sum of the symptom group scores.

2- Psychiatric interview: Second assessment instrument used was a structured psychiatric interview based on DSM-IV criteria for PTSD. This interview was conducted by the second author, a professor of psychiatry. A copy of the DSM-IV criteria has been given to the psychiatrist for using when interviewing the participants.

Procedure

Children who experienced the city park disaster were traced by the investigator who is a clinical psychologist. They were traced via Roozbeh hospital, Tehran, where they have been seen after the disaster. Only 20 of them were found, because of lack of records. The investigator sent a letter of invitation to potential subjects and their parents asking them if they were willing to participate in a complete consent form, and, if they needed further information, to contact the investigator. Those individuals who were willing to participate in this study and completed the consent form, were then given a suitable time and place (Roozbeh hospital, Tehran) to be interviewed. 19 of them accepted and completed the consent form.

RESULTS

The results of the post-traumatic stress disorder symptom scale (PSS) and psychiatric interview are shown in Table I using DSM-IV criteria.

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Table I. Diagnoses of PTSD in participants using PSS and psychiatric interview.

Diagnosis	Using PSS	Psychiatric interview
PTSD	17 (85%)	18 (90%)
Not PTSD	3 (15%)	2 (10%)
Entire	20	20

Table I shows the frequency of schoolgirls diagnosed with PTSD using PSS and psychiatric interview. 17 of them (85%) using PSS and 18 (90%) by psychiatric interview were diagnosed with PTSD, 18 months after the disaster.

Reliability of PSS

Cronbach's Alpha: A Cronbach alpha of .88 is indicated for the 17 items used to calculate the symptom severity score. This indicated a high internal consistency.

Test-Retest Reliability: 10 to 22 days after the first administration of the PSS, it was readministered to the sample. 20 valid retests were collected, with an average interval between administrations of 14.1 days. The subjects were instructed to complete the PSS about the same traumatic incident as the first time. The test-retest reliability of PTSD diagnoses obtained from the PSS was assessed using Kappa. Kappa was 1 with 100% diagnostic agreement between the two administrations. This data provides good support for the internal consistency and stability of scores using the PSS.

Validity of PSS

Face Validity: The PSS answer sheet is clearly organised and has a professional appearance. The test items correspond to DSM-IV (American Psychiatric Association, 1994) diagnostic criteria for PTSD indicating high face validity.

Concurrent Validity: The PSS was examined by correlating the PTSD diagnoses with the psychiatric interviews. Correlation between the PSS and the psychiatric interviews was significant ($r = .79, p < .001$).

DISCUSSION

The PSS appears to be an effective and efficient method of screening for PTSD. However, when used as a clinical screening instrument it always needs to be used in conjunction with a complete and thorough diagnostic interview. The PSS is a self-report instrument, which does not incorporate any formal scales to detect faking and formal validity scales, therefore, it is susceptible to malingering.

Studies exploring the psychometric properties of the PSS point to some concerns, which could compromise its potential to be generalised to the wider population. Additional validation research utilising a larger and wider demographic sample needs to be conducted to ensure that the normative sample adequately represents all types of populations for which the test is going to be used.

Another potential problematic issue is the fact that there are no reversed questions on the PSS. This may lead to the tendency for over reporting symptoms which may result from a propensity to record a high number of 'Yes' answers. Reversal questions would also more likely compensate for malingerers.

The other useful result of the present research could be the prevalence of PTSD in the group of survivors. 85% of children were diagnosed with PTSD about 18 months after the disaster. We were not able to contact all children but even with the rest of them not being PTSD, 29.8% of all the children (17 of them) were diagnosed with PTSD in this research. This could be important. This indicates that the children needs help and mental health care. It seems they need more social support and treatment. A research group could be very helpful for following up their problems.

It seems that the prevalence of PTSD in this group is higher than the other survivors (Mirzamani & Bolton, 2003). It should be mentioned here that this group have not received any care, treatment and social support. This could be the cause of the higher prevalence of PTSD in the present study. In the present study we try to emphasize on the needs of adolescents after a disaster. Previous study indicated that aftermath care and social support could be helpful for recovery of PTSD.[15] The effects of the disaster in different countries may be similar, but the severity and quantity of aftermath disorders depends on aftermath care and support which could be different in different countries. The investigated adolescents have not received any care, treatment and social support until the time of interview (18 months after the disaster) while most of them needed help and treatment. Previous study indicated that aftermath care and social support could be helpful for recovery of PTSD.[15]

Much of the research done and attention given to disasters has been for the psychological problems of victims that follow the disaster. It is important to consider who is likely to be affected by a disaster and, consequently, what sort of recovery operation needs to be put in hand, and what services need to be offered or set up. It is not only those di-

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rectly involved in disasters who need support, but also their friends. They are victims in their own right.

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