I33 Post-Traumatic Stress Disorder — Protective and Risk Factors: A Study of 18 Survivors of a Plane Crash

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After attending this presentation, attendees will have a better understanding of how an individual's characteristics may constitute vulnerability or protective factors related to the development of psychopathological symptoms of Post-Traumatic Stress Disorder (PTSD).

This presentation will impact the forensic science community by adding data regarding PTSD risk factors.

Objective: Many retrospective studies on the risk factors for developing post-traumatic stress disorder have been published in the literature, however their results are equivocal. The mechanism by which only some subjects who are exposed to an intense traumatic event develop PTSD is still not completely clear (Shear, 2002). The study presented here proposes to identify predictive risk factors related to developing PTSD through data gathered from the survivors of an air disaster in which 16 people died and 23 were wounded.

Method: The investigations were conducted six months following the traumatic event by a team that consisted of four psychiatrists specialized in clinical and forensic psychiatry, two forensic psychologists, and two medical legal doctors.

In order to increase diagnostic accuracy and to avert any attempts at feigning harm (Hall, 2007), two expert psychiatrists, randomly chosen from among the four examiners, jointly conducted psychiatric observations of each of the survivors using the *Clinician-Administered PTSD Scale-Diagnostic Version* (*CAPS*-DX) to diagnose post-traumatic stress disorder. Each examiner calculated individual scores and the average weighted scores of each of them were used in the final legal medical diagnoses. Other diagnostic instruments used include the Zung Self-Rated Anxiety Scale (SAS); Zung Self-Rating Depression Scale (SDS); and the Profile of Mood States (POMS) by McNair, Lorr, and Droppleman.[1] With the goal of obtaining an evaluation of personality structure, the Rorschach projective test, using the Exner scoring system, was used. The subjects also underwent careful anamnestic and clinical examinations to ascertain any prior personal or family psychiatric histories, as well as to evaluate personality structure and cognitive capacity. Particular attention was paid to the behavior of each subject in the periods preceding and following the crash. The investigators compared personal declarations given during interviews with those of the other survivors, and recorded emotional/affective reactions. The subjects' physical injuries were also evaluated by medical legal doctors using the *Patient Health Questionnaire 15-Item Somatic Symptom Severity Scale (PHQ-15)* (Kroenke, 2002)**.** This 15-item self- administered diagnostic instrument was used to measure the severity of problems that arose from the injuries. It consists of seven questions related to regional pain, and eight questions related to general physical discomfort. For each symptom, the subjects' responses were recorded as follows: 0 ("not bothered at all"); 1 ("bothered a little"); or, 2 ("bothered a lot").

Results: Six-months following the traumatic event, only four of the survivors (22.2%) showed no psychopathological symptomatology. Fourteen survivors (77.8%) exhibited emotional/affective symptoms related to the event. Seven (38.9% of the entire sample) presented with all of the symptoms of PTSD; two had co-morbid depressive disorder; and seven presented with subsyndromal psychopathological symptoms for PTSD, which mostly involved increased *arousal* (i.e., hypervigilance, exaggerated startle reaction, and difficulty sleeping).

In addition to the severity of the traumatic event itself, other risk factors identified that correlated to the development of PTSD were the loss of a relative, the manifestation of depressive symptoms, and the severity of physical injuries sustained. Conversely, low levels of hostility and high levels of *self-efficacy* represented protective factors against developing PTSD.

Conclusions: The results demonstrate that, in a similar traumatic event, individual characteristics may constitute risk factors for the development of symptoms of PTSD. Conversely, maintaining cognitive, emotional, and physical efficiency while actively coping with the traumatic event (*self-efficacy*) is shown to be a protective factor. **Reference:**

[1]. McNair, D., Lorr, M., Droppleman, L.F. (1991) *POMS, Profile of Mood States*, Italian adaptation by M. Farnè, A. Sebellico, D. Gnugnoli, A. Corallo, Organizzazioni Speciali, Florence, Italy

Air Disaster, Posttraumatic Stress Disorder (PTSD), PTSD Risk Factors