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Prevalence and Predictors of Acute Stress Disorder and PTSD Following Road Traffic Accidents: Thought Control Strategies and Social Support

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The study examined the prevalence of acute stress disorder (ASD) and posttraumatic stress disorder (PTSD) following road traffic accidents (RTAs), and cross-sectional and prospective relationships with thought-control strategies and perceived social support and criticism from a key significant other. Four hundred and thirty-four consecutive admissions to accident and emergency clinics following an RTA were assessed within 4 weeks of the accident, and 265 reassessed within 6 months. Twenty-one percent met symptom criteria for ASD at initial assessment, and 23% met criteria for PTSD at 4 to 6 months post-accident. These results agree closely with other studies recruiting similar populations in a similar manner. Subjects classified as suffering ASD at initial assessment were 20 times (odds ratio = 20.04) more likely to be classified as suffering PTSD at follow-up. Of the ASD cases assessed at Time 1, 72% were PTSD cases at Time 2. Loss, individual differences in thought-control strategies, and perceived negative quality of social support independently predicted ASD at Time 1 and PTSD at Time 2 in cross-sectional analyses. Analysis of prospective predictors of PTSD at Time 2 indicated that ASD at Time 1, the use of worry to control thoughts at Time 1, a change in perceived social support from Time 1 to Time 2, and an interaction between perceived social support and the use of social control as a coping strategy at Time 1 significantly predicted subsequent PTSD. Those who rated highly on the use of social control and on perceived negative social support had greater probability of subsequently developing PTSD (odds ratio = 8.2). The results were mainly as predicted and conform to models of trauma in which persistent disorders are associated with inhibition of emotional processing.

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Much of the literature on posttraumatic stress disorder (PTSD) has been influenced by the consequences of the Vietnam War. However, on a day-to-day basis during the war years, more adult Americans lost their lives or limbs on their own roads than on the battlefields of South East Asia. Road traffic accidents (RTAs) are a major cause of morbidity and the main cause of death in people under 30 (Mayou, Bryant, & Duthie, 1993) and are probably the most persistently common source of traumatic stress in the modern western world (Norris, 1992). Estimates of the prevalence of PTSD following an RTA vary considerably, with figures of between 8% to 46% being cited (e.g., Blanchard, Hickling, Taylor, Loos, & Gerardi, 1994; Blanchard et al., 1995; Brom, Kleber, & Hofman, 1993; Bryant & Harvey, 1996; Ehlers, Mayou, & Bryant, 1998; Green, McFarlane, Hunter, & Griggs, 1993; Kuck, Swinson, & Kirby, 1985; Mayou et al., 1993; Taylor & Koch, 1995). These differences are most probably due to methodological variations mainly relating to sampling, recruitment, and timing of assessment. Higher rates, which most probably results from a sampling bias and suggests elevated estimates of general prevalence, are reported in those who attend for medical complications or who answer advertisements. Prospective studies of consecutive attenders at accident and emergency clinics suggest that approximately 23% to 25% suffer PTSD over the first 3 to 6 months, and between 11% and 17% over the 12 months subsequent to the RTA (Ehlers et al.; Harvey & Bryant, 1998; Mayou et al.). Further, between 18% and 42% of RTA survivors display acute stress disorder (ASD; Bryant & Harvey, 1995, 1996; Mayou et al.), which is strongly associated with the development of subsequent PTSD (Harvey & Bryant).

Various models have been advanced to explain PTSD that involve information processing (e.g., Horowitz, 1974) and fear networks (Chemtob, Roitblat, Hamada, Carlson, & Twentyman, 1988; Creamer, Burgess, & Pattison, 1992; Foa & Kozak, 1986). Foa and Kozak suggested that PTSD symptoms result from failures of "emotional processing" (cf. Rachman, 1980) in which avoidance and fear of symptoms prevent habituation and the incorporation of information about decreasing arousal in the fear network. However, the network level of representing processing is problematic. For instance, it cannot explain the fact that individuals are able to think about emotional topics without becoming emotional, and it neglects the role of higher level cognitive processes (other than avoidance) in processing (Wells, 2000).

Alternative cognitive architectures for representing processing in emotional disorder, such as the multi-level approach of the Self-Regulatory Executive Function (S-REF) model (Wells & Matthews, 1994, 1996), suggest that abnormal posttrauma reactions can result from maladaption at least at two levels or from their interaction. The model has three interacting levels: a store of self-knowledge in long-term memory, on-line processing responsible for appraisal and execution of coping, and low-level stimulus-driven processing that functions reflexively. Although maladaption can result from low-level processing, such as the development of strong S-R associations, flexibility of