

The aftermath of an industrial disaster

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An explosion in a Danish supertanker under construction in 1994 caused the death of six workers and injured 15. Six months later 270 workers took part in this study, which analyses the relationships between objective stressors, the workers' own feelings and the reactions of their families after the explosion together with training, attitude to the workplace, general outlook, and received crisis help. Traumatization, coping style and crisis support was assessed via the Impact of Event Scale (IES), the Coping Styles Questionnaire (CSQ) and the Crisis Support Scale (CSS). Emotionally, workers and their families were strongly affected by the explosion. The IES-score was 17.6 and the invasion score 9.1. The degree of traumatization was higher in the group who had an 'audience position' than in the group who was directly hit by the explosion. Training in rescue work did not protect against adverse effects. Rescue work had a strong impact on the involved. Social support was a significant factor, that seems to buffer negative effects. High level of social integration, effective leadership in the situation, and professional crisis intervention characterised the disaster situation. All the same, 41 per cent of the workers reached the caseness criteria by Horowitz (IES ≥ 19).

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The psychological sequelae of accidents at work

In 1994 there were 47,716 registered work-related accidents in Denmark (Danmarks Statistik, 1995) (1). The industry with most accidents was the manufacture of fabricated metal products, machinery and equipment with 7,462 accidents, resulting in nine deaths, compared to 75 deaths for all branches of industry.

The social welfare expenditure in connection with work-related accidents in Denmark in 1994 was 2,237 million Danish kroner. Approximately 12 per cent of this amount was spent on public inspection of workplaces and the remaining 88 per cent on work injury insurance (Danmarks Statistik, 1996) (2). For about two decades many investigations within occupational medicine have been carried out in Denmark, pointing out the debilitating consequences of physical strenuous and monotonous work, but without considering the psychological effects. There have been no Danish studies of the psychological and social after-effects of work accidents, and the subject is not even mentioned in contemporary Danish textbooks of occupational psychology (Graversen, 1992 (3); Agervold & Kristensen, 1996 (4); Graversgård, 1995 (5)) with the exception of Graversgård who devotes one chapter to violence in the workplace.

From an international perspective a similar picture emerges. An illustration of this is found in the "International Handbook of Traumatic Stress Syndromes" by Wilson & Raphael (1993) (6), in which one chapter out of 84 is devoted to "Trauma in the Workplace" (Williams, 1993) (7). In this chapter there is no mention of any empirical research and the chapter deals with intervention and debriefing.

Studies of accidents and disasters in the workplace do exist, however. The Leopold & Dillon 1963 (8) study of a marine disaster, firemen fighting a bushfire (McFarlane, 1988) (9), and oil rig disaster (Holen, 1990) (10) are well-known examples within disaster psychology, but special conditions make it difficult to generalize the findings to ordinary workplaces. First of all, the workforce in the above-mentioned examples is dissolved after the disasters. Secondly, fire-fighters, policemen, military troops and rescue teams are in fact recruited to potentially dangerous work tasks.

Two minor studies based on clinical and forensic evidence have been published both using case examples. Pilowsky (1985) (11) calls attention to the fact that industrial accidents may often have been far more traumatic psychologically and emotionally than it appears at first sight. He coins the term 'crypto-trauma' to describe this hidden