

Psychometric properties of the Experience of Work and Life Circumstances Questionnaire and the Hopkins Symptom Checklist

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ABSTRACT

The aim of this research was to investigate the reliability and validity of the Experience of Work and Life Circumstances Questionnaire and the Hopkins Symptom Checklist when administered to a convenience sample of 241 firefighters from a metropolitan municipality. The results indicated that these two measuring instruments yielded acceptable internal consistency reliability coefficients for most of the subscales of the questionnaires.

Construct validity was investigated by means of exploratory factor analysis. It was concluded that these measuring instruments are fit to be used for diagnostic and developmental purposes, as well as during counselling to enhance the psychological well-being of firefighters and their families.

RESEARCH BACKGROUND

Firefighters are subjected to, and experience intense job stress due to the emergency services that they render to the public (Kaminsky, McCabe, Langlieb & Everly, 2007). Owing to their high level of exposure to traumatic incidents, firefighters can become secondary victims of trauma, exhibiting symptoms akin to direct victims (Rogers, 2007).

Job stress may be the result of certain job stressors, which may result in certain job stress symptoms and reactions amongst firefighters. Occupational health research has advanced beyond an exclusive focus on physical hazards in the workplace to broader conceptions of health that embrace psychosocial dimensions of work: "the social environment at work, organisational aspects of the job and certain operational aspects of the task performed" (Sauter, Murphy & Hurrell, 1990).

One of the challenges when conducting research on stress and stress reactions/symptoms of firefighters is to use reliable and valid instruments. Because very few specific instruments have been developed for this group, researchers routinely use generic stress questionnaires.

This research therefore focuses on establishing whether the Experience of Work and Life Circumstances Questionnaire (Van Zyl & Van der Walt, 1991) and the Hopkins Symptom Checklist (Derogatis, Lipman, Rickles, Uhlenhuth & Covi, 1974) is reliable and valid when used for a South African group of firefighters.

A theoretical model that is still being used extensively to measure the effects of job content on firefighters' health and well-being, is the job strain model developed by Robert Karasek (1979) and colleagues in Sweden some decades ago. The two-dimensional model locates the primary source of job stress within the task demands of the job itself.

Jobs that simultaneously present heavy psychological demands and restrict the firefighters' options for responding to those demands (for example, jobs high in demands and low in decision latitude, or "control") are seen as potentially stressful (Daniels, 1999).

Causes of job stress are depicted as job stressors. According to the literature, two major job stressors can be identified, namely (1) stressors arising outside the working situation and (2) stressors originating within the working situation (Castellano & Plionis, 2006; Ussery & Waters, 2006).

Job stressors

Stressors arising outside the working situation

• For firefighters an interface appears to exist between job stressors arising outside the working situation and family stress. Stressors arising outside the work situation are characterised by marital dysfunction and divorce, limited time with family, problems with children, and lifestyle factors such as the abuse of alcohol, excessive smoking and lack of exercise (Miller, 2007; Morash, Haarr & Kwak, 2006; Roberts & Levenson, 2001).

• Further issues include long shifts, which interfere with their sex lives, loss of friends (not firefighters), suicide of colleagues or family members, lower social status, anger and frustration at home or in the family, emotional, intellectual and physical exhaustion, wives being alone at night and not being available to help the family when needed (He, Zhao & Archbold, 2002; Shakespeare-Finch, Smith & Obst, 2002).

• A spill-over effect (job and family conflict) appears to exist between job stressors arising outside the working situation and job stressors originating within the working situation.

• Job stressors originating within the working situation are characterised by task characteristics, organisational functioning, physical working conditions and job equipment, social and career matters, and remuneration, fringe benefits and personnel policy.

• The Experience of Work and Life Circumstances Questionnaire on which we focus measures both theoretical dimensions, namely stressors arising outside the work situation and stressors originating within the work situation (Van Zyl & Van der Walt, 1991).

• This questionnaire may therefore be an appropriate method for evaluating the stress levels of firefighters. Apart from measuring the dimensions of stressors, researchers and counsellors often evaluate the symptomology of firefighters.

Job Stress Symptoms and Reactions

Job stress symptoms and reactions amongst firefighters are characterised by somatic symptoms, obsessive-compulsive behaviour, interpersonal sensitivity, depression and anxiety.

The Hopkins Symptom Checklist which we use in this research measures these theoretical dimensions and therefore appeared to be an appropriate method for assessing the psychological symptoms of firefighters

RESEARCH OBJECTIVE

In view of the models of job stressors and stress symptoms, combined with the unique working conditions of firefighters, the objective of this research was to assess the reliability and construct validity of the Experience of Work and Life Circumstances Questionnaire and the Hopkins Symptom Checklist for a population of firefighters.

RESEARCH DESIGN AND SAMPLE



Survey design



Quantitative measurement



**Convenience sample
N=241**

Key Sample Characteristics (N=241)

A convenience sample consisting of 241 firefighters were drawn from the population of firefighters attached to a Metropolitan Municipality.

• The firefighters were volunteers who were recruited from the different fire brigades to participate in the empirical investigation.

They consisted of single, married and divorced males and females from different population, language and age groups.

• The following ranks of firefighters were distinguished: Learner firefighter Gr 1 - 11, Junior firefighter, Senior firefighter; Leading firefighter, Station Officer and Divisional Officer.