

Accident Risk Indices Of Malaysia's Firefighters Working In 12 And 24 Hours Shift Works

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Abstract

Work shift has been shown to correlate with accident rates. Understanding of such correlation is pertinent especially among emergency response personnel since the decisions that they make determines not only the outcome of their responses but also the risks of accidents to themselves. A questionnaire data derived study used together with a semi quantitative risk analysis method was adopted to estimate the levels of accident risks between firefighters working on two work shifts. Two hundred and forty eight Malaysia's Fire and Rescue Department firemen from 24 fire stations working on shifts were selected as respondents. The accident rate among firefighters in year 2006 was 52.8 %. Results showed that the Accident Risk Index (ARI) among firefighters working the 24 hours shift was higher (ARI = 3.14) compared with those in the 12 hours shift (ARI = 2.98). However, there were no significant difference in overall severity of the accidents between the two shifts ($p > 0.05$). The difference in risk levels was attributed to the difference in the likelihood of accident occurrence.

Keywords: Shift work, firefighters, Accident Risk Index, Malaysia.

Introduction

According to the International Labour Office, shift work is defined as 'A method of work organization under which groups or crews of workers succeed each other at the same workstations to perform the same operations, each crew working a certain schedule or shift so that the undertaking can operate longer than the stipulated weekly hours for any worker. Often the term is used when more than one work period is scheduled in a workdays or when most of the working hours fall outside the standard workday, such as

evening, night or weekend shift'. Shift work also has been defined as any work performed outside the hours of 7:00 to 18:00 (Monk & Folkard 1992). Many types of jobs in the service sector require round-the-clock staffing and /or coverage extending beyond the standard daytime hours. Fire fighters are a good example, they must be available 24 hours a day, in fact most career firefighters work in shift (Schirmer & Glazner 1983). Fire fighter provides the society with essential life-saving service. They are subjected to be effects of shift work, the physical and mental demands and the inherent dangers of their profession, all of which can contribute to accidents. There are general indications that shift work can be correlated with raised of accident rates (Harrington 1994,

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