levels of ideal, intermediate and poor cardiovascular health by employment characteristics in 2005–06 national health and nutrition examination survey

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Objectives Employed persons are considered healthier than the general population. Yet, between 5–18% of all coronary heart disease deaths can be attributed to occupational exposures, ranging from noise to job stress. Cardiovascular health (CVH) is based on seven modifiable characteristics (i.e. cigarette smoking, body mass index (BMI), physical activity, diet, blood pressure, and levels of total cholesterol and fasting glucose) used to categorise individuals as having poor, intermediate and ideal CVH. In this study, we compared levels of CVH among employed and unemployed participants in the 2005–2006 National Health and Nutrition Examination Survey (NHANES).

Method The study population included 935 cardiovascular disease-free participants age 20 and older (731 employed, 204 unemployed). Employment status and work characteristics were derived from self-report questionnaires. Poor, intermediate and ideal levels of CVH and its components were defined using American Heart Association criteria. Weighted means and percentages were calculated using SUDAAN 10.0; models were adjusted for age, sex and ethnicity.

Results Mean number of ideal CVH components was significantly higher for after shift work (OR=1.4), frequency of night shifts (OR=1.5 and OR=1.7 among women with 5 – 7 and ≥8 night duties/month, respectively) and longer duration of the night shift work (OR=2.1 for duration >25 yrs). The total physical activity was higher among rotating night shift nurses (242 vs. 203 METs/week), but OR of recreational inactivity was significantly increased among rotating night shift workers (OR=1.6). Mean BMI was significantly higher among postmenopausal women working night shifts when compared to day workers (BMI=28.9 vs. 27.6 kg/m²), with increased OR of obesity (OR=2.8). No significant associations were observed between night shift work and alcohol consumption.

Conclusions The results of our study indicate that rotating night shift work may be associated with poorer lifestyle, which may contribute to chronic diseases.
Objective

Childhood hearing impairment (CHI) is a major developmental disability, but data at the national level are limited, especially those on the trends over time. We conducted a study to assess the time trend of CHI prevalence in Taiwan and explore its associated factors.

Method

The Taiwan government certifies disabled residents for providing various services and maintains a registry of certified cases. We analysed the registry data on cases under 17 years old from 2000 to 2011 to estimate the prevalence of CHI and assess the trend over time.

Results

Each year, registered cases ranged from 3427 to 4075. The prevalence increased from 2000 to 2006, and then decreased till 2011. In general, the prevalence increased over the years in the age groups < 3 years, 3–5 years, and 6–11 years (p < 0.05), but decreased in the age group 12–14 years (p < 0.05). The largest increase was observed in the age group < 3 years, particularly after the promotion of screening by the government in 2003. The decrease after 2006 was mainly attributable to decreases in the age groups 12–14 and 15–17 years, and similar decreases had been observed in countries with rubella vaccination programs.

Conclusions

In Taiwan, the prevalence and proportion of CHI in the age group < 3 years had increased from 2000 to 2006 after the implementation of hearing screening programs. The overall prevalence decreased from 2006 to 2011, which might be attributable to the improvements in medical care and the nationwide rubella vaccination program.

Objective

Epidemiological studies have shown that musculoskeletal symptoms are frequent occupational injury and disability among nurses in developing countries. Preventive measures were not able to reduce musculoskeletal disorders significantly in nursing profession. This study was performed to provide a comprehensive assessment of the association among risk factors in developing musculoskeletal symptoms.

Method

A structural equation model was applied to describe and analyse complex causal relationships from sets of occupational variables involved in musculoskeletal symptoms. A questionnaire was applied to nurses at hospitals affiliated to Semnan Medical Sciences University to collect data on personal and occupational factors and musculoskeletal symptoms. An ergonomic rapid entire body assessment measured work posture risks.

Results

Physical work demand and mental pressure increased the risk of musculoskeletal disorders significantly. Musculoskeletal symptoms increased in nurses who worked for extended hours and experienced frequent unstable work posture. Structural equation model showed that musculoskeletal symptoms were associated directly and indirectly by physical and mental job variables, employment status, age and lifestyle.

Conclusions

Covariance structural analysis is useful to describe and understand both the direct and indirect effects of variables with complex relationship between risk factors on the prediction of musculoskeletal symptoms.