

■ Editorial

Shift Work and Health Problems

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Shift work is a reasonably common form of employment and recently, the number of shift workers has increased rapidly. A Korean working condition survey reported that the proportion of employees involved in shift work increased from 7.2% in 2006 to 10.9% in 2010.^{1,2)}

Many diseases and health problems such as sleep disorders, cardiovascular diseases, reproductive issues, depressive mood, and increased mortality have been reported to be linked to shift work.³⁾

Several studies on shift work problems have been published in the Korean Journal of Family Medicine.⁴⁻⁶⁾ Most of the subjects in those studies were hospital employees, and the number of the participants was relatively small.

On the topic of shift work, two studies about health behaviors and the prevalence of metabolic syndrome in Korean shift workers were reported.^{7,8)} Both studies analyzed the Korean National Health and Nutritional Examination Survey (KNHANES) data, which provides national representative samples.

In a cross-sectional study of the Korean adult population, Bae et al.⁷⁾ found that shift work was associated with negative health behaviors, such as smoking, alcohol consumption, and inadequate sleep, although the degree of association differed based on the participants' sex and age.

In another cross-sectional study by Yu et al.,⁸⁾ an association between shift work and metabolic syndrome was demonstrated in young adults using data from the 2011–2012 KNHANES database. This study included 3,317 individuals ranging from 20 to 40 years of age. The prevalence of metabolic syndrome was 14.3% and 7.1% among male and female shift workers, respectively. After adjusting for confounding factors, shift work was associated with metabolic syndrome in female workers (odds ratio, 2.53; 95% confidence interval, 1.12 to 5.70). Few studies have evaluated the association between shift work and metabolic syndrome in younger adults, especially using data from the KNHANES database. This study is the first to evalu-

ate the relationship between shift work and metabolic syndrome in young workers.

Interestingly, only female shift workers tended to have more unfavorable health problems and higher prevalence of metabolic syndrome than female day workers in the two studies considered here. They found that only the female shift workers aged ≥ 50 years were more likely to be current smokers, and partake in high-risk drinking.⁷⁾ Because the smoking rate and the high-risk drinking rate were higher in all male worker age groups and in the younger age group for female workers, the influence of shift work on smoking and alcohol consumption in this particular group of women was weaker than expected. They also observed a higher proportion of those affected by inadequate sleep in the shift workers of both sexes, and the association between shift work and inadequate sleep was especially evident in men aged 20 to 39 years and in women aged ≥ 50 years.

Shift work was associated with metabolic syndrome in female workers but not in male workers.⁸⁾ The authors explained this discrepancy by a high prevalence of menstrual irregularity and high obesity rates in shift workers. A prospective study reported that menstrual cycle irregularity might be a risk factor for metabolic abnormalities that could predispose individuals to the development of cardiovascular disease.⁹⁾ Another cross-sectional survey reported that night shift work was associated with the development of obesity among night shift-working females.¹⁰⁾

However, as the KNHANES database does not include occupational qualitative data, they were not able to perform a detailed analysis of occupational qualitative data, such as the duration of shift work, intensity of work, and job categories. More prospective studies are needed to evaluate these potentially causal relationships.

Nonetheless, these studies imply the need to implement active strategies to reduce negative health behavior in shift workers to prevent adverse health outcomes.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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