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Occupational Herniated Intervertebral Disc (HIVD) in Taiwan-Physical, Occupational and Genetic Interaction

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Background: Herniated intervertebral disc (HIVD) is listed as an occupational disease in Taiwan's workers' compensation system. Known occupational risk factors include heavy lifting, whole body vibration, awkward posture and heavy physical activities. Nevertheless, the contribution of personal factors, e.g. genetic factor, is considered as an important role of causing HIVD in recent studies.

Purpose: We recruited highly weight-lifting exposed fruit wholesaling workers to determine the roles of genetic susceptibility in especially highly exposed workers.

Study Design: For a higher exposed population, total of 112 workers working for more than 2 years in the fruit market were invited in this cross-sectional study. Every participant was assessed with questionnaire, MRI and BMD assessment, blood testing and genomic analysis, photographs taken of simulated working posture and lumbar load estimation.

Result: We found that cumulative lift load was associated with risk of HIVD. Among those highly exposed to lifting, i.e., $\log_{10}(\text{lift load}) > 6.5$, COL9A2 carrying a Trp allele was a susceptibility factor for women to have HIVD. In male fruit workers, such susceptibility factor was not witnessed. It could be due to high lifting load resulting in undifferentiated damage to the intervertebral discs among male fruit workers.

Conclusion: COL9A2 with any Trp allele seemed to interact with lift load and played susceptibility factor among workers exposed to weight-lifting.

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A Study on the Relationship among Work Characteristics, Working Pressure and Health-Related Quality of Life (SF-36 Scale) of Psychiatric Nurses- The Influence on Hospital Moderating Effects

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Objective: The purpose of this study is to investigate the relationship among job characteristic, working pressure (effort-reward imbalance model (ERI)) and health-related quality of life (SF-36) in psychiatric nurses. Furthermore, it also examines the cross level influence between group and individual level.

Methods: Hierarchical Linear Modeling analysis hospital variables for the hypotheses in a sample of 852 psychiatric nurses and 39 general and psychiatric hospitals.

Results: The results showed that subjects' ERI and over-commitment (OVC) showed significant negative

correlation with health-related quality of life variables. And subjects' general health (GH) in psychiatric hospital was significantly superior to subjects in the psychiatric department in general hospital. And, subjects' mental health (MH) in public hospital is also significantly superior to subjects in non-public hospitals. Moreover, in the interaction of HLM, only hospital categories have moderating effects. It means that different hospital categories (psychiatric hospitals and psychiatric department in general hospitals) moderate the relationship between ERI and health-related quality of life variables.

Conclusions: When psychiatric nurses suffer from the problems of ERI and OVC in working environment, their health condition tends to get worse. However, the GH of subjects who work in psychiatric hospitals is better than those who work in the psychiatric department in general hospitals. Moreover, the MH of subjects working in public hospitals is also better than those who work in non-public hospitals. Furthermore, the negative influences between ERI and health-related quality of life was stronger when psychiatric nurses who work in psychiatric department in general hospitals.

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Exploring the Relationship among Demographic Factors, Job Factors, Job Perception, Other Job Opportunities and Turnover Intention of Nursing Staffs

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Objectives: To explore: 1. attitudes of nursing staffs toward job perception and turnover intention; 2. the relationship among demographic factors, job factors, job perception, other job opportunities and turnover intention.

Methods: Nursing staffs of regional, district hospitals and clinics were enrolled in the survey, in which 1,767 self-administered questionnaires had been collected, with a response rate of 64.84%. The data was analyzed by structural equation modeling, with confirmatory factor analysis and path analysis to explore the relationship among above factors.

Results: 1. Nursing staffs have a lower level of job perception and a higher level of turnover intention. 2. Job perception is a significant and negative predictor of turnover intention (coefficient β : -0.328); Other job opportunities is a significant and positive predictor of turnover intention (coefficient β : 0.310). Among all demographic and job factors, nursing staffs with a higher education level, with a formal job, and with a daytime work (instead of a night-shift work) grossly have a lower level of turnover intention. Nursing staffs who are rookies in the nursing profession have a higher level of turnover intention.

Conclusions: The mechanism for turnover intention of nursing staffs is multi-factorial and also multi-level.