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Dr. Chang has been engaged in study and clinical service to reduce occupational injury for decades. He operates the first work-hardening center in Taiwan and serves as the department chair in occupational therapy, college of medicine, National Cheng Kung University. Under long-time experience he noticed the big discrepancy between genders in care workers and their demand for job training and assistive devices. Therefore, he joined an interdisciplinary team to develop a multi-mode lifting device with the perspective of gendered innovation and conducted the integrated research to provide evidence-based recommendations for preventing occupational injury in the long-term care worker. His studies are also expected to enhance job motivation and improve manpower shortage of long-term care worker in Taiwan.

Dr. Chang received his BS degree in rehabilitation medicine from National Taiwan University in 1986, then MA in Occupational Therapy from University of Southern California in 1993, and Ph.D. in Biomedical Engineering from National Cheng Kung University in 2008. He has been both a university teacher and occupational therapist in National Chen Kung University and the affiliated hospital. Because of his excellent performance in both academic work and clinical service, he was award the National Outstanding Occupational Therapist in 2015 by the Occupational Therapists Union in Republic of China.

Application training of gendered innovation assistance device: To reduce occupational injury risks of care workers through a multi-mode lifting device

Owing to extension of average life expectancy, long-term care demands increase greatly over the world. Most care workers are female in Taiwan and many countries because of its work characteristics. However, high physical loading and frail muscular system of the female workers tend to cause their occupational injury very often. Handling patients in transfer tasks is one of the tough tasks of care workers and also a major risk factor of occupational injury with back pain. Various devices thus were developed to assist transfer tasks. Besides, the "No Lift Policy" emphasizing on decreasing dangerous lifting job by training for injury prevention and functional consideration of both care workers and clients as well as environment condition to apply appropriate assisting device and transfer forms. Our project aims to promote the policy to train the female care workers from work injury and to correctly adopt a "Multi-Mode Lifting Device" in transfer job. This two-year project will develop a training program of operating lifting device and conduct a pilot study in the first year. According to feedbacks from participants in pilot study, the training program will be modified. In the second year, a comparison trial with more participants will be executed. The participants will receive assessments before and after the practical application in their work. The effectiveness of application the policy and Multi-Mode Lifting Device will be investigated. We expect both the training program and the devices could reduce the occupation injury risk and create a friendly workplace for care workers. Ultimately, the device can eliminate the weakness of the female workers and improve their service qualities for the clients.

Key words : lifting device, care workers, occupational injury