Technostress Profiles, Predictors, and Differences in Acceptance of Transfer-Assistive Robot Among Older Healthcare Workers H. J. Yoon, J.W.Lee, N.H.Kim, S.W.Ban, H.R.Shin, Y.S.Kim.
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Purpose Rapid population aging threatens the sustainability of long-term care systems, particularly in South Korea, where the care workforce is among the oldest in OECD countries[1]. As the proportion of older care workers increases, supporting their employability and adaptation to new technologies has become critical. Transfer-assistive robots are a priority technology because they address the physically demanding task of patient transfers; however, technostress may hinder their adoption by increasing anxiety and resistance to technology. This study aims to identify technostress profiles among older care workers in Korea, examine their influencing factors, and assess differences in acceptance of transfer-assistive care robots. **Method** The study analyzed data from a 2023 survey of 336 care workers aged 50 years and older (mean age = 57.4 years), most of whom were female (92.6%). Participants primarily worked in long-term care facilities or hospitals and had an average of 14.9 years of professional experience. Latent profile analysis was conducted using five technostress dimensions: overload, invasion, complexity, privacy, and inclusion [2]. Multinomial logistic regression using the Three-Step procedure in Mplus (Version 8.10) examined whether age, gender, education, residential area, and monthly income predicted profile membership. Differences in acceptance of transfer-assistive robots across technostress profiles were examined using the Bolck–Croon–Hagenaars approach. **Results and Discussion** Four distinct technostress profiles were identified, as shown in Figure 1: low technostress (Profile 1, 19.0%), high complexity and inclusion (Profile 2, 7.7%), moderate technostress (Profile 3, 54.5%), and high technostress with low inclusion (Profile 4, 18.8%). Regarding predictors of profile membership, female healthcare workers were more likely to belong to the high complexity and inclusion group (Profile 2). Younger age and higher education were associated with membership in the low and moderate technostress groups (Profiles 1 and 3), while higher income increased the likelihood of belonging to the low technostress group (Profile 1). Differences in acceptance of transfer-assistive robots across technostress profiles revealed clear patterns. The low technostress group (Profile 1) consistently showed the most favorable outcomes, including the highest self-efficacy, perceived ease of use, perceived usefulness, and intention to use, as well as the lowest anxiety. In contrast, the high complexity and inclusion group (Profile 2) exhibited the least favorable pattern, characterized by the lowest self-efficacy, attitudes, perceived usefulness, and intention to use, alongside the highest anxiety. The moderate technostress and high technostress with low inclusion groups (Profiles 3 and 4) demonstrated intermediate and largely similar levels across most acceptance variables. Overall, these findings highlight the heterogeneity of technostress among older healthcare workers and indicate that technostress profiles are shaped by individual and socioeconomic factors, including gender, age, education, and income. Consistent with prior research [3], profiles characterized by high complexity and inclusion pressures were associated with poorer technology acceptance outcomes, suggesting that both technological difficulty and social–organizational stress represent critical barriers to adoption. Conversely, lower technostress—particularly reduced inclusion-related stress—was associated with greater self-efficacy and stronger intention to use transfer-assistive robots. These results underscore the importance of interventions that address technological complexity while fostering inclusive workplace environments to support successful robot adoption in long-term care settings.

References

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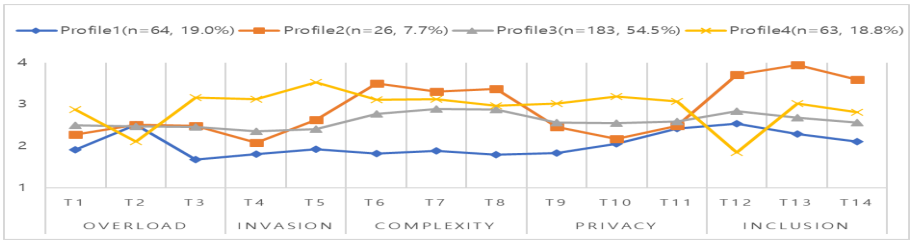

Figure 1. Latent profiles of technostress