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***Edmonds AT, Sears JM, O'Connor A, and Peckham T. The role of nonstandard and precarious jobs in the well-being of disabled workers during workforce reintegration. American Journal of Industrial Medicine. 2021; [epub ahead of print]. https://doi.org/10.1002/ajim.23254**

Abstract: BACKGROUND: Nonstandard employment arrangements are becoming increasingly common and could provide needed flexibility for workers living with disabilities. However, these arrangements may indicate precarious employment, that is, employment characterized by instability, powerlessness, and limited worker rights and benefits. Little is known about the role of nonstandard and precarious jobs in the well-being of disabled persons during workforce reintegration after permanent impairment from work-related injuries or illnesses. METHODS: We used linked survey and administrative data for a sample of 442 Washington State workers who recently returned to work and received a workers' compensation permanent partial disability award after permanent impairment from a work-related injury. Multivariable logistic regression models were used to examine associations between

nonstandard employment and outcomes related to worker well-being and sustained employment. We also examined associations between a multidimensional measure of precarious employment and these outcomes. Secondarily, qualitative content analysis methods were used to code worker suggestions on how workplaces could support sustained return to work (RTW). RESULTS: Workers in: (1) nonstandard jobs (compared with full-time, permanent jobs), and (2) precarious jobs (compared with less precarious jobs) had higher adjusted odds of low expectations for sustained RTW. Additionally, workers in precarious jobs had higher odds of reporting fair or poor health and unmet need for disability accommodation. Workers in nonstandard and precarious jobs frequently reported wanting safer and adequately staffed workplaces to ensure safety and maintain sustained employment. CONCLUSIONS: Ensuring safe, secure employment for disabled workers could play an important role in their well-being and sustained RTW

***Maxwell J, Friedland J, Kirsh B, and Beaton D. The value filter: a novel framework for psychosocial adjustment to traumatic upper extremity amputation. Journal of Occupational Rehabilitation. 2021; [epub ahead of print].**
https://doi.org/10.1007/s10926-021-09976-5
Abstract: Purpose Upper extremity traumatic amputation due to work injury is a devastating injury with poor outcomes. As it does not appear to follow existing theories of psychosocial adjustment to injuries and illness, we sought to understand this problem by asking those who have sustained the injury, how they try to adjust. Methods Qualitative methods were used to interview 11 participants within 3 years of their accident. Questions included "Tell me about the impact of the amputation on your life". Data were systematically gathered and analyzed using a grounded theory (constructivist) approach which led to a preliminary model of adjustment. Results The Value of the Hand, and the Value of Working and Doing, emerged as central phenomena and created a Value Filter through which our participants' new experiences were interpreted. Two interacting themes, Instability of the Core Identity, and Efforts to Stabilize the Self, describe the effects of the process which either interfered with or promoted the formation of new values that, in turn, could lead to adjustment. Conclusions The preliminary model helps

explain psychosocial adjustment for individuals with a traumatic upper extremity amputation due to work injury. The model may also be useful with other acquired injuries where the lost body part was deemed highly valuable for the individual's sense of self

***Yu H, Cote P, Wong JJ, Shearer HM, Mior S, Cancelliere C, Randhawa K, Ameis A, Carroll LJ, Nordin M, Varatharajan S, Sutton D, Southerst D, Jacobs C, Stupar M, Taylor-Vaisey A, Gross DP, Brison RJ, Paulden M, Ammendolia C, et al. Noninvasive management of soft tissue disorders of the shoulder: a clinical practice guideline from the Ontario Protocol for Traffic Injury Management (OPTIMa) collaboration. European Journal of Pain. 2021; [epub ahead of print]. https://doi.org/10.1002/ejp.1788**

Abstract: Objectives: Objective of this study is to develop an evidence-based guideline for the noninvasive management of soft tissue disorders of the shoulder (shoulder pain), excluding major pathology. Methods: This guideline is based on high-quality evidence from seven systematic reviews. Multidisciplinary experts considered the evidence of effectiveness, safety, cost-effectiveness, societal and ethical values, and patient experiences when formulating recommendations. Target audience is clinicians; target population is adults with shoulder pain. Results: When managing patients with shoulder pain, clinicians should (a) rule out major structural or other pathologies as the cause of shoulder pain and reassure patients about the benign and self-limited nature of most soft tissue shoulder pain; (b) develop a care plan in partnership with the patient; (c) for shoulder pain of any duration, consider low-level laser therapy; multimodal care (heat/cold, joint mobilization, and range of motion exercise); cervicothoracic spine manipulation and mobilization for shoulder pain when associated pain or restricted movement of the cervicothoracic spine; or thoracic spine manipulation; (d) for shoulder pain >3-month duration, consider stretching and/or strengthening exercises; laser acupuncture; or general physician care (information, advice, and pharmacological pain management if necessary); (e) for shoulder pain with calcific tendinitis on imaging, consider shock-wave therapy; (f) for shoulder pain of any duration, do not offer ultrasound; taping; interferential current therapy; diacutaneous fibrolysis; soft tissue massage; or cervicothoracic spine manipulation and

mobilization as an adjunct to exercise (i.e., range of motion, strengthening and stretching exercise) for pain between the neck and the elbow at rest or during movement of the arm; (g) for shoulder pain >3-month duration, do not offer shock-wave therapy; and (h) should reassess the patient's status at each visit for worsening of symptoms or new physical, mental, or psychological symptoms, or satisfactory recovery. Conclusions: Our evidence-based guideline provides recommendations for non-invasive management of shoulder pain. The impact of the guideline in clinical practice requires further evaluation. Significance: Shoulder pain of any duration can be effectively treated with laser therapy, multimodal care (i.e., heat/cold, joint mobilization, range of motion exercise), or cervicothoracic manipulation and mobilization. Shoulder pain (>3 months) can be effectively treated with exercises, laser acupuncture, or general physician care (information, advice, and pharmacological pain management if necessary).

Anwer S, Li H, Antwi-Afari MF, and Wong AYL. Associations between physical or psychosocial risk factors and work-related musculoskeletal disorders in construction workers based on literature in the last 20 years: a systematic review. International Journal of Industrial Ergonomics. 2021; 83:103113.
https://doi.org/10.1016/j.ergon.2021.103113

Arnold TJ, Arcury TA, Quandt SA, Mora DC, and Daniel SS. Structural vulnerability and occupational injury among Latin child farmworkers in North Carolina. New Solutions. 2021; [epub ahead of print].
https://doi.org/10.1177/10482911211017556
Abstract: Children as young as ten-years-old can legally work as hired farm labor in the United States. In North Carolina, many hired children are part of the Latinx farmworker community. Agriculture is a hazardous industry, and child workers experience high rates of injury, illness, and mortality. As part of a community-based participatory research study, we draw from thirty in-depth interviews with Latinx child farmworkers aged ten to seventeen to describe their experiences of personal and observed workplace injury and close calls. Nearly all child workers had experienced or observed some form of injury, with several reporting close calls that could have

resulted in severe injury or fatality. Overall, children reported a reactive approach to injury prevention and normalized pain as part of the job. Highlighting Latinx child farmworkers' structural "vulnerability, this analysis contextualizes understanding of workplace injury among this largely hidden population. We offer policy recommendations to protect and support these vulnerable workers

Bovenzi M and Schust M. A prospective cohort study of low-back outcomes and alternative measures of cumulative external and internal vibration load on the lumbar spine of professional drivers. Scandinavian Journal of Work, Environment & Health. 2021; 47(4):277-286.
https://doi.org/10.5271/sjweh.3947 [open access]
Abstract: OBJECTIVE: The aim of this study was to compare the performance of alternative measures of cumulative lifetime vibration dose to predict the occurrence of low-back pain (LBP) outcomes in a cohort of 537 professional drivers investigated at baseline and over a two-year follow up period. METHODS: The exposure data obtained in the EU VIBRISKS project were used to calculate alternative measures of either acceleration- (external) or force- (internal) based lifetime vibration doses. Vibration was measured in representative samples of machines and vehicles used by the drivers. Internal lumbar forces were calculated by means of anatomy-, posture-, and anthropometry-based finite element models. The relations of LBP outcomes to alternative measures of lifetime vibration doses were assessed by the generalized estimating equations method. RESULTS: Metrics of cumulative vibration exposure constructed with either acceleration- or force-based methods were significantly associated with the occurrence of LBP outcomes. A measure of model fitting suggested that force-based doses were better predictors of LBP outcomes than acceleration-based doses. Models with force root-mean-square doses provided a better fit to LBP outcomes than those with force-peak doses. CONCLUSIONS: Measures of internal lumbar forces were better predictors of LBP outcomes than measures of external vibration acceleration although the exposure metrics constructed with the acceleration-based method have the advantage of greater simplicity compared to the force-based method. The differences between the models with force-based doses suggest that the cumulative health effects on the lumbar spine might depend on

the integrated resulting total force over the entire exposure time rather than primarily on the force peaks

Coole C, Nouri F, Narayanasamy M, Baker P, and Drummond A. Total hip and knee replacement and return to work: clinicians' perspectives. Disability and Rehabilitation. 2021; 43(9):1247-1254.
https://doi.org/10.1080/09638288.2019.1654000
Abstract: PURPOSE: An ageing workforce means that our understanding of return to work following total hip and knee replacement is of increasing importance. The purpose of this qualitative study was to explore the views and experiences of clinicians in treating working patients undergoing total hip or knee replacement. MATERIALS AND METHODS: We conducted semi-structured interviews in primary and secondary National Health Service care using framework methodology. A total of 40 interviews were conducted. Participants included 12 hospital-based Allied Health Professionals and nurses, 12 orthopedic surgeons, and 16 General Practitioners. Data were analyzed thematically. RESULTS: A key theme concerned participants' perceptions and experiences around the process and practice of listing working patients for total hip or knee replacement. Four sub-themes were identified; the perceived likelihood of listing employed patients for surgery, expectations and outcomes of surgery, the impact of work issues, and referral procedures and waiting lists. CONCLUSIONS: Decisions around listing working patients for total hip and knee replacement are complex and difficult. Clinicians need to consistently consider patients' work issues, and to be supported in this by appropriate commissioning and service delivery decisions. Further research is indicated to better understand the work-related expectations and anticipated outcomes of both patients and clinicians, and the optimum timing of surgery to maintain and improve patients' work performance. Implications for rehabilitation Clinicians need to consistently consider patients' work issues, and current evidence, in their consultations and decisions regarding total hip and knee replacement. Clinical practice should reflect the growing proportion of working patients undergoing total hip and knee replacement, and routinely measure work outcomes. Changes are required at

commissioning and service levels to support clinicians in changing their practice with this patient population

Dement JM, Cloeren M, Ringen K, Quinn P, Chen A, Cranford K, et al. COPD risk among older construction workers: updated analyses 2020. American Journal of Industrial Medicine. 2021; 64(6):462-475.
https://doi.org/10.1002/ajim.23244
Abstract: Background: A 2010 study of construction workers participating in medical screening programs at the Department of Energy (DOE) nuclear facilities demonstrated increased chronic obstructive pulmonary disease (COPD) risk. The current study of a larger worker cohort allowed for a more nuanced analysis of COPD risk, including for employment beginning after the mid-1990s. Methods: Study participants included 17,941 workers with demographic and smoking data and spirometry with a minimum of three recorded expiratory efforts and reproducibility of forced vital capacity (FVC) and forced expiratory volume in 1 s (FEV1) of 0.2 L or less. COPD was defined as a FEV1 /FVC ratio below the lower limit of normal using established prediction equations without use of bronchodilation. Stratified analyses explored COPD prevalence by demographic variables and trade. Logistic regression analyses assessed risks by trade and time periods of trade and DOE site work, controlling for age, gender, race/ethnicity, body mass index, and smoking. Results: Overall COPD prevalence was 13.4% and 67.4% of cases were classified as moderate to severe. Compared to nonconstruction workers, construction trade workers were at significantly increased risk of all COPD (OR = 1.34, 95% CI = 1.29-1.79) and even more so for severe COPD (OR = 1.61, 95% CI = 1.32-1.96). The highest risk trades were cement masons/bricklayers (OR = 2.36; 95% CI = 1.71-3.26) and roofers (OR = 2.22; 95% CI = 1.48-3.32). Risk among workers employed after 1995 was elevated but not statistically significant. Conclusions: Construction workers are at increased COPD risk. Results support the prevention of both smoking and occupational exposures to reduce these risks. While the number of participants employed after 1995 was small, patterns of risk were consistent with findings in the overall cohort.

Di Donato M, Iles R, Buchbinder R, Xia T, and Collie A. Prevalence, predictors and wage replacement duration associated with diagnostic imaging in Australian workers with accepted claims for low back pain: a retrospective cohort study. Journal of Occupational Rehabilitation. 2021; [epub ahead of print].
https://doi.org/10.1007/s10926-021-09981-8
Abstract: Objectives To determine in Australian workers with an accepted workers' compensation claim for low back pain (LBP) (1) the prevalence of diagnostic imaging of the spine and factors associated with its use, and (2) the association between spinal diagnostic imaging events and wage replacement duration. Methods Workers with accepted workers' compensation claims for LBP longer than 2 weeks were grouped by whether workers' compensation funded no, single, or multiple diagnostic spinal imaging in the 2 years since reported LBP onset. Ordinal logistic regression was used to define the demographic, occupational and social factors associated with each group. Time-to-event analysis was used to determine the association between spinal imaging and wage replacement duration. Results In the sample of 30,530 workers, 9267 (30.4%) received single spinal imaging and 6202 (20.3%) received multiple spinal imaging. Male workers and workers from the state of Victoria had significantly higher odds of multiple imaging. Socioeconomically advantaged workers and workers from remote Australia had significantly lower odds of multiple imaging. Magnetic Resonance Imaging was the most common imaging modality. Workers with single spinal imaging (median duration 17.0 weeks; HR 2.0, 95% CI 1.9, 2.1) and multiple spinal imaging (median duration 49.0 weeks; HR 4.0, 95% CI 3.9, 4.1) had significantly longer wage replacement duration than those with no imaging (median duration 6.1 weeks). Conclusions Over half of Australian workers with an accepted workers' compensation claim for LBP longer than 2 weeks received diagnostic spinal imaging. Receipt of diagnostic imaging, particularly multiple imaging, was associated with longer wage replacement duration.

Gerding T, Syck M, Daniel D, Naylor J, Kotowski SE, Gillespie GL, et al. An assessment of ergonomic issues in the home offices of university employees sent home due to the COVID-19

pandemic. Work. 2021; 68(4):981-992.
https://doi.org/10.3233/WOR-205294
Abstract: BACKGROUND: As millions of workers have shifted to telework, special accommodations for workers with respect to ergonomics may be required to ensure the workforce remains healthy. METHODS: A survey about home office ergonomics and discomfort was sent to faculty, staff, and administrators by email and was completed by 843 individuals. RESULTS: Over 40%of the participants reported moderate to severe discomfort (severe low/middle back pain, moderate discomfort in eyes/neck/head, and discomfort in the upper back/shoulders). Laptops (always and often) were widely used (85%) with most using the laptop monitor (55%) of all respondents. Further, less than 45%of the seating conditions were reported as having adjustable arm rests. CONCLUSION: As teleworking in makeshift offices becomes more common, the risk of significant discomfort and potentially more serious musculoskeletal disorders may result from poor static postures. Companies may need to accommodate workers by allowing them to take home office chairs, external monitors, keyboards, and mice as laptops are insufficient, ergonomically

Hanson B, Steele Cooper S, Tegarden T, Tipton L, Freeman AM, Davis KG, et al. The impact of emergency responder musculoskeletal injuries in the State of Ohio. Work. 2021; 68(4):1001-1008.
https://doi.org/10.3233/WOR-205065
Abstract: BACKGROUND: Emergency personnel operate in environments that put them at higher risk of injury to the musculoskeletal system. These injuries result in lost workdays, medical costs, and decreased productivity, all which impact emergency response systems. OBJECTIVE: This study serves to assess the causes, costs, and disability of common work-related musculoskeletal injuries within the police, emergency medical service (EMS) workers, and firefighters of Ohio based on data from the OBWC (Ohio Bureau of Workers' Compensation). METHODS: Our dataset included all OBWC injury claims involving a shoulder, low back, or knee from 2010 through 2014. Police and Firefighter leaders were analyzed separately from those not in a leadership role, and workers with combined Firefighter/EMS roles were analyzed

separately from "pure" Firefighters and EMS personnel. Data were organized through univariate analysis of variance with post-hoc Tukey tests and analyzed based on the job of the individual and whether the individual was in a leadership role. RESULTS: Police Officers had the highest number of total injuries in the dataset, followed by Firefighters and Firefighters/EMS workers. Police Officers and Firefighters injured their back and knees more often than their shoulders, while EMS workers injured their backs and shoulders more often than their knees. CONCLUSIONS: The mechanisms through which injuries occur are also dependent on the job. Police officers experienced a higher percentage of motor vehicle related back problems, while firefighters had a higher percentage of injuries from overexertion. Musculoskeletal injury claims in these emergency personnel resulted in opioid prescriptions approximately 10%of the time

He C, Jia G, McCabe B, and Sun J. Relationship between leader-member exchange and construction worker safety behavior: the mediating role of communication competence. International Journal of Occupational Safety & Ergonomics. 2021; 27(2):371-383.
https://doi.org/10.1080/10803548.2019.1579484
Abstract: Purpose. Leader-member exchange (LMX) has widely been adopted to explore its influence on job performance. However, most previous studies considered LMX as a unidimensional construct and neglected the effects of its subdimensions, thereby reducing its practicality to improve work performance. This study empirically tested the relationship between subdimensions of LMX and safety behaviors, while incorporating communication competence as a mediator. Method. Data were collected from Chinese construction industry workers. The theoretical model was built and checked using the structural equation modeling technique. Results. The affect and contribution dimensions of LMX positively associated with safety behaviors, while the loyalty and professional respect dimensions had negative and no relations with safety behaviors respectively. These findings demonstrate that a multidimensional view on LMX should be taken while checking its effects on safety behaviors. The affect and professional respect dimensions of LMX had indirect effects on safety participation via communication competence, which illustrate the

mediating role of communication competence for construction safety. This study sheds lights on safety behavior research based on the theories of LMX. Enhancing the leadership and communication skills of safety staff and fostering a supportive safety atmosphere at sites are suggested to improve construction safety performance

Kang E. Differences in clinical indicators of diabetes, hypertension, and dyslipidemia among workers who worked long hours and shift work. Workplace Health & Safety. 2021; 69(6):268-276.
https://doi.org/10.1177/2165079920986160
Abstract: BACKGROUND: Many studies have reported an association between overwork, shift work, and chronic disease. However, there is little research on the influence of working hours and shift work and management of chronic diseases. The objective of this retrospective study was to examine the association between working hours, shift work type in workers with hypertension, diabetes, and dyslipidemia. METHODS: Among 18,513 hourly wageworkers from the Korea National Health and Nutrition Examination Survey, 4,313 with hypertension, diabetes, and hyperlipidemia were selected. An analysis of covariance with general linear modeling was used to estimate group differences in clinical indices of chronic diseases according to weekly working hours and types of shift work, both unadjusted and adjusted for gender, age, education, marital status, household income, and medication usage. FINDINGS: Clinical indicators were worse in workers with diabetes (differences in HbA1c = 0.15%; fasting blood glucose = 4.84 mg/dL), hypertension (differences in diastolic blood pressure = 1.2 mmHg), or dyslipidemia (differences in total cholesterol = 3.3 mg/dL) who worked for more than 40 hours/week compared with workers who worked less than 40 hours per week. Clinical indicators in workers with diabetes and hypertension were worse in shift workers, including evening and night shifts, relative to those who did not work shiftwork. CONCLUSIONS/APPLICATION TO PRACTICE: Working more than 40 hours per week and shift work were negatively associated with adverse clinical indicators among workers with chronic diseases. To improve the health of workers with chronic diseases, these findings suggest that adjustment of working hours and shift work may be warranted

Lee KE, Kim J, and Lee J. Comparison of the characteristics of work-related injuries between older workers and the workers of the conventional working-age in the Republic of Korea, 2010-2014. Injury Prevention. 2021; 27:227-231.
https://doi.org/10.1136/injuryprev-2020-043663 [open access]
Abstract: Objective: With population ageing, the number of older workers is increasing and the number of work-related injuries in older people is also increasing. Occupational patterns and work-related injury patterns vary with age. This study aimed to compare the incidence and characteristics of work-related injuries in older and younger workers in Korea. Methods: We conducted a retrospective review of the characteristics of workers hospitalised with work-related injuries from January 2010 to December 2014, using data from the National Hospital Discharge In-Depth Injury Survey in South Korea. The analysis was stratified by age into older (aged =65 years) and younger (aged 20-64 years) workers. Results: The hospitalisation rate in older workers was double that of younger workers (2014 IRR: 2.06, 95% CI 1.53 to 2.76). Compared with workers of conventional working-age, a higher proportion of injured older workers were female (33.1% vs 13.6%, p<0.001), injured due to falls (40.8% vs 28.5%) and injured while working on a farm (46.5% vs 6.3%, p<0.001). In older workers, work-related injuries were seasonal and peaked during summer, but there was little seasonality in injuries among younger workers. Conclusion: Older workers are more vulnerable to work-related injuries and have a different profile of work-related injuries from younger workers. Age-related differences in the injury profile need to be considered when developing workplace injury prevention policies and programmes, and the specific vulnerabilities of older workers need to be addressed.

Major ME, Clabault H, and Wild P. Interventions for the prevention of musculoskeletal disorders in a seasonal work context: a scoping review. Applied Ergonomics. 2021; 94:103417.
https://doi.org/10.1016/j.apergo.2021.103417
Abstract: Seasonal work is characterized by difficult working conditions further influenced by organizational, physical, and time constraints which expose seasonal workers to high risks of MSDs. Our aim was to provide an overview of the recommendations and

interventions carried out in a seasonal work context to prevent MSDs. To do this, we conducted a scoping review through a systematic electronic search of seven scientific databases and the websites of ergonomics and occupational health and safety organizations. After screening by independent reviewers according to specific criteria sets, we performed qualitative analyses on the 16 studies retained. Findings revealed six categories of transformation targets sought by the interventions/recommendations with the technical devices/physical work environment category being the most reported. We also found it was quite rare for studies to consider the seasonal work context in and of itself when developing and implementing interventions. Our review thus highlights the need to pay attention to intervention processes in order to better understand the influence of seasonality on the measures taken to prevent MSDs in working environments

Riddell MF and Callaghan JP. Ergonomics training coupled with new Sit-Stand workstation implementation influences usage. Ergonomics. 2021; 64(5):582-592.
https://doi.org/10.1080/00140139.2020.1859138
Abstract: Currently, there is no guidance on the training programme approach that should be provided to new sit-stand workstation users to optimally integrate workstation usage patterns into their working day. The objective of this research study was to determine if a training programme could influence long-term usage of sit-stand workstations. Thirty-five employees from the University of Waterloo volunteered to participate in this longitudinal study. Two different types of training programmes were delivered: (1) an example from industry and (2) based on current literature. There was an influence of training programme on the frequency of sit to stand transitions made each day. Those who received the additional training programme also reported sitting less, standing more and used their sit-stand workstations more consistently day-to-day than those who did not. Practitioner Summary: A longitudinal study was conducted to assess the impact of training programmes on sit-stand workstation usage. A training programme based on current literature resulted in more consistent sit-stand usage than an industry example

Schwartz A, Gerberich SG, Albin T, Kim H, Ryan AD, Church TR, et al. Janitors' mental workload, psychosocial factors, physical fitness, and injury: the SWEEP study. International Journal of Industrial Ergonomics. 2021; 83:103132.
https://doi.org/10.1016/j.ergon.2021.103132

Zandian H, Alipouri Sakha M, Nasiri E, and Zahirian Moghadam T. Nursing work intention, stress, and professionalism in response to the COVID-19 outbreak in Iran: a cross-sectional study. Work. 2021; 68(4):969-979.
https://doi.org/10.3233/WOR-205099
Abstract: Background: Professionalism, stress and demographic factors are the three key influences in nurses' intention to provide care. Objectives: This study examined the levels of work intention, stress and professionalism of nurses and determine the relationship between nursing work intention and factors in response to COVID-19. Methods: This cross-sectional study was conducted on 362 nurses from COVID-19-devoted hospitals in Iran. A self-administered electronic-based questionnaire was developed and used to determine levels of stress, professionalism, and nursing intention. Multiple regression analysis was carried out to analyze the correlation between nursing intention with respect to stress and professionalism. Results: The overall stress, professionalism, and nursing intention scores were 48.56, 21.46, and 17.83 respectively. There were significant differences in nursing intention scores between gender, marital status, and having training groups ($p < 0.05$). The regression analysis revealed that nursing intention had a significant relationship with older age ($p < 0.001$,S.E = 1.11,B = 17.02), higher income level ($p < 0.001$,S.E = 1.81,B = 6.98), having previous training ($p = 0.008$,S.E = 1.22,B = 3.27), higher stress level ($p < 0.001$,S.E = 2.37,B = -21.39), and high professionalism level ($p < 0.001$,S.E = 1.16,B = 11.99). Conclusion: Having an adequate staff requirement plan, planning appropriate training for nurses, and proactive psychological support are crucial to prevent burnout and continue to provide nursing services.

*IWH authored publications.