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**April 26, 2019**

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**\*Quinn MM, Seixas NS, and Smith PM. The power of a photograph to capture many truths in occupational health. *Annals of Work Exposures and Health*. 2019; 63(2):131-132. <https://doi.org/10.1093/annweh/wxy109>**

**Bazazan A, Dianat I, Mombeini Z, Aynehchi A, and Asghari Jafarabadi M. Fatigue as a mediator of the relationship between quality of life and mental health problems in hospital nurses. *Accident Analysis and Prevention*. 2019; 126:31-36. <https://doi.org/10.1016/j.aap.2018.01.042>**

Abstract: The aims of this study were to investigate the relationships among quality of life (QoL), mental health problems and fatigue among hospital nurses, and to test whether fatigue and its multiple dimensions would mediate the effect of QoL on mental health problems. Data were collected using questionnaires (including the World Health Organization Quality of Life-BREF [WHOQOL-BREF], General Health Questionnaire [GHQ-12] and Multidimensional Fatigue Inventory [MFI-20] for evaluation of QoL, mental health problems and fatigue, respectively) from 990 Iranian hospital nurses, and analysed by generalized structural equation modelling (GSEM). The results indicated that QoL, mental health problems and fatigue were interrelated, and supported the direct and indirect (through

fatigue) effects of QoL on mental health problems. All domains of the WHOQOL-BREF, and particularly physical (sleep problems), psychological (negative feelings) and environmental health (leisure activities) domains, were strongly related to the mental health status of the studied nurses. Fatigue and its multiple dimensions partially mediated the relationship between QoL and mental health problems. The results highlighted the importance of physical, psychological and environmental aspects of QoL and suggested the need for potential interventions to improve fatigue (particularly physical fatigue along with mental fatigue) and consequently mental health status of this working population. The findings have possible implications for nurses' health and patient safety outcomes

**Dupont F, Leger PM, Begon M, Lecot F, Senecal S, Labonte-Lemoyne E, et al. Health and productivity at work: which active workstation for which benefits: a systematic review. Occupational and Environmental Medicine. 2019; 76(5):281-294. <https://doi.org/10.1136/oemed-2018-105397>**

Abstract: In order to reduce sedentary behaviour at work, research has examined the effectiveness of active workstations. However, despite their relevance in replacing conventional desks, the comparison between types of active workstations and their respective benefits remains unclear. The purpose of this review article is thus to compare the benefits between standing, treadmill and cycling workstations. Search criteria explored Embase, PubMed and Web of Science databases. The review included studies concerning adults using at least two types of active workstations, evaluating biomechanical, physiological work performance and/or psychobiological outcomes. Twelve original articles were included. Treadmill workstations induced greater movement/activity and greater muscular activity in the upper limbs compared with standing workstations. Treadmill and cycling workstations resulted in elevated heart rate, decreased ambulatory blood pressure and increased energy expenditure during the workday compared with standing workstations. Treadmill workstations reduced fine motor skill function (ie, typing, mouse pointing and combined keyboard/mouse tasks) compared with cycling and standing workstations. Cycling workstations resulted in improved simple processing task speeds compared with standing and treadmill workstations. Treadmill and

cycling workstations increased arousal and decreased boredom compared with standing workstations. The benefits associated with each type of active workstation (eg, standing, treadmill, cycling) may not be equivalent. Overall, cycling and treadmill workstations appear to provide greater short-term physiological changes than standing workstations that could potentially lead to better health. Cycling, treadmill and standing workstations appear to show short-term productivity benefits; however, treadmill workstations can reduce the performance of computer tasks

**Fernandez-Esquer ME, Gallardo KR, and Diamond PM. Predicting the influence of situational and immigration stress on Latino day laborers' workplace injuries: an exploratory structural equation model. Journal of Immigrant and Minority Health. 2019; 21(2):364-371.**

<https://doi.org/10.1007/s10903-018-0752-3>

Abstract: Latino day laborers are a socially and economically marginalized immigrant population with a high risk of occupational injury. These workers confront multiple social, psychological, and environmental hardships that increase their risk for adverse health outcomes. How these stressors interact and influence work-related injuries in this population remains unclear. We conducted an exploratory study with 327 Latino day laborers who completed a community survey. We developed a structural equation model, using cross-sectional data to explore the relationships among socioeconomic status, situational and immigration stress, depression, work risk exposure, and occupational injury. The model revealed a statistically significant mediated effect from situational stress to injury through work risk exposure as well as a significant mediated effect from immigration stress through depression to injury. These initial findings suggest that situational and immigration-related stress have a detrimental impact on Latino day laborers' mental health and workplace safety and, ultimately, increase their risk of occupational injury

**Herman PM, Hurwitz EL, Shekelle PG, Whitley MD, and Coulter ID. Clinical scenarios for which spinal mobilization and manipulation are considered by an expert panel to be inappropriate (and appropriate) for patients with chronic low**

**back pain. Medical Care. 2019; 57(5):391-398.**

<https://doi.org/10.1097/MLR.0000000000001108>

Abstract: BACKGROUND: Spinal mobilization and manipulation are 2 therapies found to be generally safe and effective for chronic low back pain (CLBP). However, the question remains whether they are appropriate for all CLBP patients. RESEARCH DESIGN: An expert panel used a well-validated approach, including an evidence synthesis and clinical acumen, to develop and then rate the appropriateness of the use of spinal mobilization and manipulation across an exhaustive list of clinical scenarios which could present for CLBP. Decision tree analysis (DTA) was used to identify the key patient characteristics that affected the ratings. RESULTS: Nine hundred clinical scenarios were defined and then rated by a 9-member expert panel as to the appropriateness of spinal mobilization and manipulation. Across clinical scenarios more were rated appropriate than inappropriate. However, the number patients presenting with each scenario is not yet known. Nevertheless, DTA indicates that all clinical scenarios that included major neurological findings, and some others involving imaging findings of central herniated nucleus pulposus, spinal stenosis, or free fragments, were rated as inappropriate for both spinal mobilization and manipulation. DTA also identified the absence of these imaging findings and no previous laminectomy as the most important patient characteristics in predicting ratings of appropriate. CONCLUSIONS: A well-validated expert panel-based approach was used to develop and then rate the appropriateness of the use of spinal mobilization and manipulation across the clinical scenarios which could present for CLBP. Information on the clinical scenarios for which these therapies are inappropriate should be added to clinical guidelines for CLBP

**Jakobsson M, Gutke A, Mokkink LB, Smeets R, and Lundberg M. Level of evidence for reliability, validity, and responsiveness of physical capacity tasks designed to assess functioning in patients with low back pain: a systematic review using the COSMIN standards. Physical Therapy. 2019; 99(4):457-477.**

<https://doi.org/10.1093/ptj/pzy159>

Abstract: Background: Physical capacity tasks (ie, observer-administered outcome measures that comprise a standardized activity) are useful for assessing functioning in patients with low back

pain. Purpose: The purpose of this study was to systematically review the level of evidence for the reliability, validity, and responsiveness of physical capacity tasks. Data Sources: MEDLINE, CINAHL, PsycINFO, Scopus, the Cochrane Library, and relevant reference lists were used as data sources. Study Selection: Two authors independently selected articles addressing the reliability, validity, and responsiveness of physical capacity tasks, and a third author resolved discrepancies. Data Extraction and Quality Assessment: One author performed data extraction, and a second author independently checked the data extraction for accuracy. Two authors independently assessed the methodological quality with the Consensus-Based Standards for the Selection of Health Measurement Instruments (COSMIN) 4-point checklist, and a third author resolved discrepancies. Data Synthesis and Analysis: Data synthesis was performed by all authors to determine the level of evidence per measurement property per physical capacity task. The 5-repetition sit-to-stand, 5-minute walk, 50-ft ( approximately 15.3-m) walk, Progressive Isoinertial Lifting Evaluation, and Timed "Up & Go" tasks displayed moderate to strong evidence for positive ratings of both reliability and construct validity. The 1-minute stair-climbing, 5-repetition sit-to-stand, shuttle walking, and Timed "Up & Go" tasks showed limited evidence for positive ratings of responsiveness. Limitations: The COSMIN 4-point checklist was originally developed for patient-reported outcome measures and not physical capacity tasks. Conclusions: The 5-repetition sit-to-stand, 50-ft walk, 5-minute walk, Progressive Isoinertial Lifting Evaluation, Timed "Up & Go," and 1-minute stair-climbing tasks are promising tests for the measurement of functioning in patients with chronic low back pain. However, more research on the measurement error and responsiveness of these tasks is needed to be able to fully recommend them as outcome measures in research and clinical practice

**Kazi A, Haslam C, Duncan M, Clemes S, and Twumasi R.**  
**Sedentary behaviour and health at work: an investigation of industrial sector, job role, gender and geographical differences.**  
**Ergonomics. 2019; 62(1):21-30.**

<https://doi.org/10.1080/00140139.2018.1489981>

Abstract: This article presents baseline data from 1120 employees

across 10 worksites enrolled in a workplace physical activity intervention. The study provides new data on physical activity, sedentary behaviour, and health and highlights gender, geographical, job type and industrial sector differences. Sitting at work accounted for more than 60% of participants' total daily sitting time on work days. Weekly and monthly hours worked, body mass index (BMI) and waist circumference were significantly higher for workers in the private sector compared to the public sector. Employees in sales and customer services had significantly higher BMI scores and significantly lower scores for workability index (WAI), job satisfaction, organisational commitment and job motivation, compared to other groups. This study provides further evidence that work is a major contributor to sedentary behaviour and supports the pressing need for interventions particularly targeting private sector industries and sales and customer service sectors. Practitioner Summary: Work accounts for more than 60% of the daily sitting time. Private sector employees had higher BMIs than those in the public sector and employees in sales and customer services had higher BMIs and poorer health compared to other occupations, suggesting that these groups should be targeted in workplace interventions

**Lewkowski K, Heyworth JS, Li IW, Williams W, McCausland K, Gray C, et al. Exposure to noise and ototoxic chemicals in the Australian workforce. Occupational and Environmental Medicine. 2019; 76(5):341-348.**

<https://doi.org/10.1136/oemed-2018-105471>

Abstract: OBJECTIVE: To determine the current prevalence of exposure to workplace noise and ototoxic chemicals, including co-exposures. METHOD: A cross-sectional telephone survey of nearly 5000 Australian workers was conducted using the web-based application, OccIDEAS. Participants were asked about workplace tasks they performed and predefined algorithms automatically assessed worker's likelihood of exposure to 10 known ototoxic chemicals as well as estimated their full shift noise exposure level (LAeq,8h) of their most recent working day. Results were extrapolated to represent the Australian working population using a raked weighting technique. RESULTS: In the Australian workforce, 19.5% of men and 2.8% of women exceeded the recommended full shift noise limit of 85 dBA during their last working day. Men were



more likely to be exposed to noise if they were younger, had trade qualifications and did not live in a major city. Men were more likely exposed to workplace ototoxic chemicals (57.3%) than women (25.3%). Over 80% of workers who exceeded the full shift noise limit were also exposed to at least one ototoxic chemical in their workplace. **CONCLUSION:** The results demonstrate that exposures to hazardous noise and ototoxic chemicals are widespread in Australian workplaces and co-exposure is common. Occupational exposure occurs predominantly for men and could explain some of the discrepancies in hearing loss prevalence between genders

**MacLean CL and Read JD. An illusion of objectivity in workplace investigation: the cause analysis chart and consistency, accuracy, and bias in judgments. Journal of Safety Research. 2019; 68:139-148.**

<https://doi.org/10.1016/j.jsr.2018.12.008>

**Abstract:** **INTRODUCTION:** Investigation tools used in occupational health and safety events need to support evidence-based judgments, especially when employed within biasing contexts, yet these tools are rarely empirically vetted. A common workplace investigation tool, dubbed for this study the "Cause Analysis (CA) Chart," is a checklist on which investigators select substandard actions and conditions that apparently contributed to a workplace event. This research tests whether the CA Chart supports quality investigative judgments.

**METHOD:** Professional and undergraduate participants engaged in a simulated industrial investigation exercise after receiving a file with information indicating that either a worker had an unsafe history, equipment had an unsafe history, or neither had a history of unsafe behavior (control). Participants then navigated an evidence database and used either the CA Chart or an open-ended form to make judgments about event cause. **RESULTS:** The use of the CA Chart negatively affected participants' information seeking and judgments. Participants using the CA Chart were less accurate in identifying the causes of the incident and were biased to report that the worker was more causal for the event. Professionals who used the CA Chart explored fewer pieces of evidence than those in the open-ended condition. Moreover, neither the open-ended form nor the structured CA Chart mitigated the biasing effects of historical information about safety on participants' judgments. **CONCLUSION:** Use of the CA

Chart resulted in judgments about event cause that were less accurate and also biased towards worker responsibility. The CA Chart was not an effective debiasing tool. Practical application: Our results have implications for occupational health and safety given the popular nature of checklist tools like the CA Chart in workplace investigation. This study contributes to the literature stating that we need to be scientific in the development of investigative tools and methods

**Moller AC, Jager AJ, Williams GC, and Kao AC. US physicians' work motivation and their occupational health: a national survey of practicing physicians. Medical Care. 2019; 57(5):334-340.**

<https://doi.org/10.1097/MLR.0000000000001101>

Abstract: **BACKGROUND:** Poor occupational health among physicians poses a serious risk both to physicians themselves and the patients under their care. Prior research has found that occupational health among nonphysicians is associated with both degree and type of work motivation. **OBJECTIVE:** The main purpose of this article was to assess the association between physician work motivation and their occupational health. **RESEARCH DESIGN:** This study was a national survey of practicing physicians. A split-sample method was used to validate a measure of work motivation adapted for physicians. **SUBJECTS:** In total, 3589 physicians were selected from the American Medical Association Physician Masterfile among whom 2247 physicians completed a survey (response rate of 62.6%). **MEASURES:** Eight-item measure adapted from the Work Extrinsic and Intrinsic Motivation Scale. Grounded in self-determination theory, this measure includes 2 superordinate subscales of autonomous and controlled work motivation (characterized by feeling free and volitional versus pressured or compelled, respectively). Indicators of physicians' occupational health included single-item measures of general health, burnout, job satisfaction, intention to leave their practice, and intention to leave medicine, and a 2-item measure of depression risk. **RESULTS:** Confirmatory factor analyses found that an 8-item, 2 superordinate (4 subordinate subscale) measure had good factor structure [ $\chi^2(14, n=500)=35.62, P<0.001$ ;  $\chi^2(14, n=1747)=108.85, P<0.001$ ]. Autonomous work motivation was found to be positively related to all 6 indicators of physicians' occupational health. Controlled work motivation was negatively related to 3 of 6



occupational health indicators. **CONCLUSIONS:** Physicians who are more autonomously motivated at work reported having better occupational health. Fostering a health care work environment that supports autonomous motivation may benefit the well-being of physicians and their patients

**Nowrouzi-Kia B, Baig A, Li A, Casole J, and Chai E. Occupational injury trends in the Canadian workforce: an examination of the Canadian community health survey. International Journal of Critical Illness and Injury Science. 2019; 9(1):29-35.**

[https://doi.org/10.4103/IJCIIS.IJCIIS\\_43\\_18](https://doi.org/10.4103/IJCIIS.IJCIIS_43_18) [open access]

**Abstract:** Background: Previous studies suggest that various factors including the type of occupation, employment status, and level of education have significant associations with the rates of occupational injuries. The aim of this study was to assess the impact of demographics, such as age and gender, and various occupational factors on the rate of occupational injuries for a 14-year period from 2001 to 2014 and to study the differences in trends over time.

**Methods:** The Canadian Community Health Survey data for 2001, 2003, 2005, 2007, and 2009-2014 was used to examine the impact of various occupational factors on workplace injuries in the Canadian population. Various inclusion criteria such as age, employment type, and status were applied to select the final sample. The logistic regression was performed using StataMP 11 to determine the association between the rate of occupational injuries and the factors being considered. **Results:** Rates of injuries occurring at the workplace are associated with various occupational health factors, including, the type of occupation, level of education, the number of injuries sustained, and the employment status. **Conclusion:** The findings may be used by researchers and practitioners to address the impact of occupational injuries in the workforce, and to identify and resolve the factors that result in a high rate of workplace injuries

**Park SK and Lee CK. Pre-injury job characteristics and return to work among injured workers in South Korea: differences by socio-demographic and injury-related characteristics. Disability and Rehabilitation. 2019; 41(6):691-698.**

<https://doi.org/10.1080/09638288.2017.1404149>

**Abstract:** **PURPOSE:** This study examined the effect of pre-injury job

characteristics on the odds of RTW outcomes for specific socio-demographic and injury-related characteristics among injured workers in South Korea. **METHODS:** This study employed first-wave data for 1993 participants from the Panel Study of Workers' Compensation Insurance. A two-step cluster analysis was conducted to profile pre-injury job characteristics, including monthly wages, length of service, company size, contract type, and working hours. For each subsample selected by the characteristics of the independent variables, multinomial logistic regression analyses were performed to predict the odds ratio for being unemployed or working in a new firm versus returning to the pre-injury job, depending on cluster membership. **RESULTS:** Two clusters were identified with pre-injury job characteristics. Workers in the unstable employment cluster were more likely than were workers in the stable employment cluster to be unemployed or work in a new firm rather than return to the pre-injury job; this held for all socio-demographic and injury-related characteristics. **CONCLUSIONS:** Our results showed a need to develop differential RTW strategies for injured workers in insecure jobs at the time of injury. Implications for rehabilitation Policymakers and rehabilitation practitioners need to take into account not only socio-demographic or injury-related characteristics but also working conditions at the time of injury when designing return-to-work programs for injured workers in South Korea. Injured employees in poor working conditions are relatively more vulnerable in the return-to-work process and deserve special attention and supports from the Korean government. The Korean government needs to review return-to-work policies for injured workers in unstable employment environment in the context of employment relationships rather than individual characteristics

**Rooshenas L, Paramasivan S, Jepson M, and Donovan JL. Intensive triangulation of qualitative research and quantitative data to improve recruitment to randomized trials: the QuinteT approach. Qualitative Health Research. 2019; 29(5):672-679.**

<https://doi.org/10.1177/1049732319828693>

Abstract: Randomized controlled trials (RCTs) can provide high quality evidence about the comparative effectiveness of health care interventions, but many RCTs struggle with or fail to complete recruitment. RCTs are built on the principles of the experimental

method, but their planning, conduct, and interpretation can depend on complex social, behavioral, and cultural factors that may be best understood through qualitative research. Most qualitative studies undertaken alongside RCTs involve interviews that produce data that are used in a supportive or supplicatory role, but there is potential for qualitative research to be more influential. In this article, we describe the research methods underpinning the "QuinteT" (Qualitative Research Integrated Within Trials) approach to understand and address RCT recruitment difficulties. The QuinteT Recruitment Intervention (QRI) brings together multiple qualitative strategies and quantitative data and uses triangulation to understand recruitment issues rapidly. These nuanced understandings are used to inform the implementation of collaborative actions to improve recruitment

**Schuh-Renner A, Canham-Chervak M, Grier TL, Hauschild VD, and Jones BH. Expanding the injury definition: evidence for the need to include musculoskeletal conditions. Public Health. 2019; 169:69-75.**

<https://doi.org/10.1016/j.puhe.2019.01.002>

**Abstract:** OBJECTIVES: The objectives of the study are to quantify the proportion of cumulative microtraumatic overuse injuries in a physically active population, evaluate their impact in terms of lost work time, and link them to precipitating activities to inform prevention initiatives. STUDY DESIGN: The study design is retrospective cohort study. METHODS: For a population of U.S. Army Soldiers, diagnoses from medical records (International Classification of Diseases [ICD]-9 800-999 and selected ICD-9 710-739) were matched with self-reported injury information. Common diagnoses, limited duty days, and activities and mechanisms associated with the injuries were summarized. RESULTS: Most self-reported injuries (65%) were classified by providers with diagnoses that described cumulative microtraumatic tissue damage, and these injuries led to a higher incidence of limited duty (85%) than acute traumatic injury diagnoses. Reported mechanisms and activities often indicated repetitive physical training-related onset. CONCLUSIONS: Because many diagnoses for cumulative microtraumatic musculoskeletal tissue damage are categorized as diseases to the musculoskeletal system in the International Classification of Diseases, they are often not included in definitions of injury. However, reported injury activities and

mechanisms in this population provide evidence that cumulative microtraumatic injuries often arise from identifiable and preventable events. This finding confirms that these diagnoses should be classified as injuries in epidemiologic evaluations and surveillance to accurately represent injury burden

**Tucker S and Keefe A. 2019 Report on work fatality and injury rates in Canada. Regina, SK: University of Regina; 2019.**

**Vanttola P, Harma M, Viitasalo K, Hublin C, Virkkala J, Sallinen M, et al. Sleep and alertness in shift work disorder: findings of a field study. International Archives of Occupational & Environmental Health. 2019; 92(4):523-533.**

<https://doi.org/10.1007/s00420-018-1386-4> [open access]

**Abstract:** PURPOSE: Although shift work disorder (SWD) affects a major part of the shift working population, little is known about its manifestation in real life. This observational field study aimed to provide a detailed picture of sleep and alertness among shift workers with a questionnaire-based SWD, by comparing them to shift workers without SWD during work shifts and free time. METHODS: SWD was determined by a questionnaire. Questionnaires and 3-week field monitoring, including sleep diaries, actigraphy, the Karolinska Sleepiness Scale (KSS), EEG-based sleep recordings, and Psychomotor Vigilance Tasks (PVT), were used to study 22 SWD cases and 9 non-SWD workers. RESULTS: The SWD group had a shorter subjective total sleep time and greater sleep debt before morning shifts than the non-SWD group. Unlike the non-SWD group, the SWD group showed little compensatory sleep on days off. The SWD group had lower objective sleep efficiency and longer sleep latency on most days, and reported poorer relaxation at bedtime and sleep quality across all days than the non-SWD group. The SWD group's average KSS-sleepiness was higher than the non-SWD group's sleepiness at the beginning and end of morning shifts and at the end of night shifts. The SWD group also had more lapses in PVT at the beginning of night shifts than the non-SWD group. CONCLUSIONS: The results indicate that SWD is related to disturbed sleep and alertness in association with both morning and night shifts, and to less compensatory sleep on days off. SWD seems to particularly associate with the quality of sleep

**Varghese BM, Barnett AG, Hansen AL, Bi P, Nairn J, Rowett S, et al. Characterising the impact of heatwaves on work-related injuries and illnesses in three Australian cities using a standard heatwave definition: Excess Heat Factor (EHF). Journal of Exposure Analysis and Environmental Epidemiology. 2019; [Epub ahead of print].**

<https://doi.org/10.1038/s41370-019-0138-1>

**Abstract:** BACKGROUND AND AIMS: Heatwaves have potential health and safety implications for many workers, and heatwaves are predicted to increase in frequency and intensity with climate change. There is currently a lack of comparative evidence for the effects of heatwaves on workers' health and safety in different climates (sub-tropical and temperate). This study examined the relationship between heatwave severity (as defined by the Excess Heat Factor) and workers' compensation claims, to define impacts and identify workers at higher risk. **METHODS:** Workers' compensation claims data from Australian cities with temperate (Melbourne and Perth) and subtropical (Brisbane) climates for the years 2006-2016 were analysed in relation to heatwave severity categories (low and moderate/high severity) using time-stratified case-crossover models. **RESULTS:** Consistent impacts of heatwaves were observed in each city with either a protective or null effect during heatwaves of low-intensity while claims increased during moderate/high-severity heatwaves compared with non-heatwave days. The highest effect during moderate/high-severity heatwaves was in Brisbane (RR 1.45, 95% CI: 1.42-1.48). Vulnerable worker subgroups identified across the three cities included: males, workers aged under 34 years, apprentice/trainee workers, labour hire workers, those employed in medium and heavy strength occupations, and workers from outdoor and indoor industrial sectors. **CONCLUSION:** These findings show that work-related injuries and illnesses increase during moderate/high-severity heatwaves in both sub-tropical and temperate climates. Heatwave forecasts should signal the need for heightened heat awareness and preventive measures to minimise the risks to workers

**Weston G, Zilanawala A, Webb E, Carvalho LA, and McMunn A. Long work hours, weekend working and depressive symptoms in men and women: findings from a UK population-based study.**



**Journal of Epidemiology & Community Health. 2019; 73(5):465-474.**

<https://doi.org/10.1136/jech-2018-211309> [open access]

**Abstract:** **BACKGROUND:** Globalised and 24/7 business operations have fuelled demands for people to work long hours and weekends. Research on the mental health effects of these intensive temporal work patterns is sparse, contradictory or has not considered gender differences. Our objective was to examine the relationship between these work patterns and depressive symptoms in a large nationally representative sample of working men and women in the UK. **METHOD:** The current study analysed data from Understanding Society, the UK Household Longitudinal Study, of 11 215 men and 12 188 women in employment or self-employment at the time of the study. Ordinary least squares regression models, adjusted for potential confounders and psychosocial work factors, were used to estimate depressive symptoms across categories of work hours and weekend work patterns. **RESULTS:** Relative to a standard 35-40 hours/week, working 55 hours/week or more related to more depressive symptoms among women (ss=0.75, 95% CI 0.12 to 1.39), but not for men (ss=0.24, 95% CI -0.10 to 0.58). Compared with not working weekends, working most or all weekends related to more depressive symptoms for both men (ss=0.34, 95% CI 0.08 to 0.61) and women (ss=0.50, 95% CI 0.20 to 0.79); however, working some weekends only related to more depressive symptoms for men (ss=0.33, 95% CI 0.11 to 0.55), not women (ss=0.17, 95% CI -0.09 to 0.42). **CONCLUSION:** Increased depressive symptoms were independently linked to working extra-long hours for women, whereas increased depressive symptoms were associated with working weekends for both genders, suggesting these work patterns may contribute to worse mental health

**Yokota J, Fukutani N, Nin K, Yamanaka H, Yasuda M, Tashiro Y, et al. Association of low back pain with presenteeism in hospital nursing staff. Journal of Occupational Health. 2019; 61(3):219-226.**

<https://doi.org/10.1002/1348-9585.12030>

**Abstract:** **OBJECTIVES:** Chronic low back pain (LBP) is known to cause various disorders compared with acute LBP. However, there was no study evaluating presenteeism due to LBP divided into

subcategories by the duration of LBP. Therefore, this study aims to investigate the relationship between acute or chronic LBP and presenteeism in hospital nursing staff. **METHODS:** Overall, 1100 nurses filled in a questionnaire on basic attributes, LBP symptoms, depression symptoms, and work productivity. The subjects were divided into three groups based on the period of LBP and the compared work productivity. Work Limitation Questionnaire Japanese version (WLQ-J) was used for the assessment of work productivity. The effects of acute and chronic LBP on presenteeism were evaluated through multiple regression analysis models. **RESULTS:** In total, 765 subjects, without missing values, were included. The overall prevalence of LBP was 64.6% (acute LBP 47.5%, chronic LBP 17.1%). On multiple regression analysis, acute pain and presenteeism were not associated. Conversely, chronic LBP was associated with time management (adjusted beta = -2.3, 95% CI: -4.5 to -1.1), mental-interpersonal relationship (adjusted beta = -2.8, 95% CI: -5.1 to -0.6), and output (adjusted beta = -2.7, 95% CI: -5.4 to 0.0) after adjustment for sex and career years. When depression was included in the adjustment factors, chronic LBP and WLQ subscales were not associated. **CONCLUSIONS:** It became obvious that Chronic LBP in nurses was significantly related to time management, mental-interpersonal relationship, and output. The importance of preventing a decline in work productivity by taking precautions to prevent chronic LBP and depression was suggested

\*IWH authored publication.