

IWH Research Alert
July 16, 2021

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***Gignac MAM, Shahidi FV, Jetha A, Kristman V, Bowring J, Cameron JI, et al. Impacts of the COVID-19 pandemic on health, financial worries, and perceived organizational support among people living with disabilities in Canada. *Disability and Health Journal*. 2021; [epub ahead of print].**

<https://doi.org/10.1016/j.dhjo.2021.101161> [open access]

Abstract: BACKGROUND: Individuals with physical or mental health disabilities may be particularly vulnerable to the impact of COVID-19 on their health and employment. OBJECTIVES: We examined COVID-19-related concerns for health, finances, and organizational support among workers with no disability, a physical, mental health, or both physical and mental health disability, and factors associated with COVID-19 perceptions. METHODS: An online, cross-sectional survey was administered to a sample of Canadians in the first wave of the COVID-19 pandemic. Questions asked about COVID-19 perceptions, demographics (gender, age, education), work context (e.g., sector, contract work) and employment conditions (e.g., job stress, control, accommodation needs). Descriptive, multivariable, and nested regression analyses examined factors associated with COVID-19 perceptions. RESULTS: A total of 3066 participants completed the survey. Workers with both a physical and mental



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health disability reported significantly greater health and financial concerns and less organizational support than those with no disability. Workers with a physical disability reported more health concerns and those with a mental health disability reported more financial concerns and less organizational support. Respondents with disabilities also reported significant differences in employment conditions (e.g., more contract work, stress, unmet accommodation needs) than those with no disability. Employment conditions were consistently significant predictors of COVID-19 perceptions and attenuated the significance of disability type in analyses.

CONCLUSIONS: Concerns about the impact of COVID-19 on one's health, finances, and organizational support reflected existing disability inequities in employment conditions and highlight the importance of creating more inclusive employment opportunities for people living with physical and mental health disabilities

***Sears JM, Edmonds AT, MacEachen E, and Fulton-Kehoe D. Workplace improvements to support safe and sustained return to work: suggestions from a survey of workers with permanent impairments. American Journal of Industrial Medicine. 2021; [epub ahead of print].**

<https://doi.org/10.1002/ajim.23274>

Abstract: BACKGROUND: Roughly 10% of occupational injuries result in permanent impairment. After initial return to work (RTW), many workers with permanent impairments face RTW interruption due to reinjury, unstable health, disability, and layoff. This study used open-ended survey data to: (1) explore workplace factors identified by workers as important levers for change, some of which may previously have been unrecognized; and (2) summarize workers' suggestions for workplace improvements to promote sustained RTW and prevent reinjury. METHODS: This study included data from workers' compensation claims and telephone surveys of 582 Washington State workers who had RTW after a work-related injury involving permanent impairment. The survey was conducted in 2019, about a year after claim closure. We used qualitative content analysis methods to inductively code open-ended survey responses.

RESULTS: The most frequent themes were: safety precautions/safer workplace (18.1%), adequate staffing/appropriate task distribution (16.2%), and safety climate (14.1%). Other frequent themes included



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ergonomics, rest breaks, job strain, predictability and flexibility in work scheduling practices, employer response to injury, social support, communication, and respect. Many workers reported that they were not listened to, or that their input was not sought or valued. Workers often linked communication deficiencies to preventable deficiencies in safety practices, safety climate, and RTW practices, and also to lack of respect or distrust. In counterpoint, nearly one-third of respondents reported that no change was needed to their workplace.

CONCLUSIONS: Policies and interventions targeting worker-suggested workplace improvements may promote safe and sustained RTW, which is essential for worker health and economic stability

***Yuen K, Green R, Bingham K, Ruttan L, Lee-Kim V, Tartaglia MC, Anderson M, Zandy M, Choi MY, Fritzler MJ, Wither JE, Beaton DE, et al. Metrics and definitions used in the assessment of cognitive impairment in systemic lupus erythematosus: a systematic review. *Seminars in Arthritis and Rheumatism*. 2021; 51(4):819-830.**

<https://doi.org/10.1016/j.semarthrit.2021.05.018>

Abstract: **OBJECTIVE:** To review: 1) degree of conformity to the American College of Rheumatology neuropsychological battery (ACR-NB) among studies that used a NB, 2) review definitions of cognitive impairment (CI) from studies that used a NB, and 3) characterize measurement tools used to assess CI in systemic lupus erythematosus (SLE). **METHODS:** The literature search was conducted in Ovid Medline, Embase, and PsycINFO for articles on CI in adult SLE patients. We reviewed studies that used a NB and compared their tests to the ACR-NB to assess the degree of conformity. Definitions of CI from studies that used a NB were reviewed when sufficient information was available. We reviewed and categorized CI measurement tools into four broad categories: NB, screening, incomplete/mixed batteries, and computerized batteries. **RESULTS:** Of 8727 references, 118 were selected for detailed review and 97 were included in the final analysis. Of 43 studies that used a NB, none of the studies used the ACR-NB exactly as published. Many studies supplemented with other tests. Overall, there was inconsistent use of ACR-NB tests. Definitions for CI varied, with cut-offs ranging from 1 to 3 standard deviations below normative values on domains/tests varying in type and number. The most frequently



used measurement tool for assessing CI in SLE was a NB. Use of screening tests and computerized batteries have also increased over the last decade. CONCLUSION: The assessment and definition of CI in SLE remains heterogeneous. A consensus meeting to address existing inconsistencies should be considered to harmonize the field of CI in SLE

Bal MI, Roelofs PPDM, Hilberink SR, van Meeteren J, Stam HJ, Roebroek ME, et al. Entering the labor market: increased employment rates of young adults with chronic physical conditions after a vocational rehabilitation program. Disability and Rehabilitation. 2021; 43(14):1965-1972.

<https://doi.org/10.1080/09638288.2019.1687764>

Abstract: Purpose: Employment of young adults with chronic physical conditions entering the labor market after finishing post-secondary education remains behind compared to typically developing peers. The aim of this study is to evaluate changes in their paid employment levels after following a vocational rehabilitation intervention ('At Work'). Materials and methods: Participants aged between 16 and 27 years (n = 90) were recruited via rehabilitation physicians and a jobcoach agency and participated in a vocational rehabilitation program. Cochran's Q and McNemar tests served to test the development of intervention participants' paid employment over time. Chi-square tests were used to compare intervention participants' paid employment level with national reference data selected on age and having a self-reported chronic physical condition. Results: Paid employment level of the intervention cohort significantly increased from 10.0% at baseline to 42.4% at 2-years follow-up (p < 0.001). At 2-years follow-up, their employment rates approached the employment rates of national reference data (42.4% versus 52.9%, p = 0.17). Conclusion: Starting from a disadvantaged position, the paid employment rate of the intervention cohort substantially increased over time, approaching the employment rate of reference data. 'At Work' seems to be appropriate for supporting this specific group who face obstacles to enter the labor market, to find competitive employment. IMPLICATIONS FOR REHABILITATION' At Work' is a vocational rehabilitation intervention for young adults with chronic physical conditions who experience problems with finding and maintaining competitive employment after finishing post-secondary



education. The 'At Work' intervention entails a combination of group sessions and individual coaching sessions based on the supported employment methodology. Paid employment rates of the intervention cohort substantially increased on the short- and long term, and approached employment rates of reference data of persons with chronic physical conditions. The 'At Work' intervention seems appropriate to support young adults with chronic physical conditions who experience barriers for work participation, to enter the labor market and find competitive and sustainable employment.

Carey MG, Regehr C, Wagner SL, White M, Alden LE, Buys N, et al. The prevalence of PTSD, major depression and anxiety symptoms among high-risk public transportation workers. International Archives of Occupational & Environmental Health. 2021; 94(5):867-875.

<https://doi.org/10.1007/s00420-020-01631-5>

Abstract: OBJECTIVE: Public transportation workers are exposed to higher levels of stress related to accidents, injuries, and person-under-train events when compared to other workers. This systematic review integrates the existing literature on mental health among high-risk public transportation workers to estimate the prevalence of post-traumatic stress disorder (PTSD), major depressive and anxiety symptoms following critical incidents while on duty. METHODS: This systematic review is part of a larger systematic review which examines mental health and work outcomes of individuals working in professions at high risk of critical incident exposure, i.e., high-risk professions. Articles were included if they measured the prevalence of PTSD, Major Depressive Disorder (MDD) and Anxiety Disorder (AD) in a transportation population following exposure to a major incident, for example, a person-under-a-train. RESULTS: Among the ten articles, all reported prevalence of PTSD which ranged from 0.73 to 29.9%. Four articles reported prevalence of depression among transportation workers exposed to a critical incident and prevalence outcomes ranged from 0.05 to 16.3%. Only two reported prevalence of anxiety from 1.3 to 13.9%. CONCLUSIONS: This literature reports that transportation workers are prone to involvement in traumatic accidents leading to higher rates of PTSD compared to the general population. Strategies to reduce transportation accidents and to



provide transportation workers follow-up mental health support is needed for this vulnerable population

Chicas R, Xiuhtecutli N, Elon L, Scammell MK, Steenland K, Hertzberg V, et al. Cooling interventions among agricultural workers: a pilot study. Workplace Health & Safety. 2021; 69(7):315-322.

<https://doi.org/10.1177/2165079920976524>

Abstract: Background: Adverse health effects among agricultural workers due to chronic heat exposure have been characterized in the literature as not only due to high ambient temperatures but also due to intensive manual labor in hot and humid conditions. The aim of this study was to use biomonitring equipment to examine the effectiveness of selected cooling devices at preventing agricultural workers from exceeding the core body temperature threshold of 38.0°C (Tc38) and attenuating heat-related illness symptoms.

Methods: A convenience sample of 84 agricultural workers in Florida was randomized to one of four groups: (a) no intervention, clothing as usual; (b) cooling bandana; (c) cooling vest; and (d) both the cooling bandana and cooling vest. Biomonitring equipment worn by the participants included core body temperature monitor and an accelerometer to capture physical activity. **Findings:** A total of 78 agricultural workers completed one intervention workday trial.

Compared with the control group, the bandana group had lower odds of exceeding Tc38 (odds ratio [OR] = 0.7, 90% confidence interval [CI] = [0.2, 3.2]) and the vest group had higher odds of exceeding Tc38 (OR = 1.8, 90% CI = [0.4, 7.9]). The simultaneous use of cooling vest and bandana showed an effect little different from the control group (OR = 1.3, 90% CI = [0.3, 5.6]). **Conclusion/application to practice:** This is the first field-based study to examine cooling intervention among agricultural workers in the United States using biomonitring equipment. This study found that using a bandana while working in a hot agricultural environment has the potential to be protective against exceeding the recommended Tc38 threshold.

Gaber TAK, Ashish A, and Unsworth A. Persistent post-covid symptoms in healthcare workers. Occupational Medicine. 2021; 71(3):144-146.

<https://doi.org/10.1093/occmed/kqab043> [open access]



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Abstract: **BACKGROUND:** Recent reports suggest a higher incidence of COVID-19 infections among healthcare workers (HCW). However, information about the long-term complications affecting this population is lacking. **AIMS:** Investigation of long-term impact of COVID-19 in HCW. **METHODS:** Seropositivity for SARS-CoV-2 antibodies was evaluated for the majority of HCW in an English teaching hospital 2 months following the peak of COVID-19 first wave. A questionnaire investigating the long-term complications was sent through global e-mail to HCW 4 months following the peak of the wave enquiring about the persistent health issues still affecting them at that point. **RESULTS:** Out of 3759 subjects tested for SARS-CoV-2 antibodies, 932 were positive (24%). Forty-five per cent of 138 HCW responding to the questionnaire reported persistent symptoms with 32% struggling to cope 3-4 months following the peak of the wave. Moderate-to-severe fatigue stood out as the most disabling symptom (39%) but mild-to-moderate shortness of breath, anxiety and sleep disturbance were almost universal in the subjects still struggling with symptoms. Only 16% consulted their general practitioner (GP) about their symptoms with only 2% taking sick leave after recovering from the acute illness. **CONCLUSIONS:** Our data suggest that about a third of HCW who responded to the survey were still struggling to cope with the symptoms of what is now known as long covid several months after the acute COVID-19 infections. The overwhelming majority of this group seem to be reluctant to neither seek medical advice nor take sick leave

Gharib S, Martin B, and Neitzel RL. Pilot assessment of occupational safety and health of workers in an aircraft maintenance facility. Safety Science. 2021; 141:105299. <https://doi.org/10.1016/j.ssci.2021.105299>

Gutenbrunner C, Briest J, Egen C, Sturm C, Schiller J, Kahl KG, et al. "Fit for work and life": an innovative concept to improve health and work ability of employees, integrating prevention, therapy and rehabilitation. Journal of Rehabilitation Medicine. 2021; 53(5):jrm00199. <https://doi.org/10.2340/16501977-2822> [open access]

Abstract: Objectives: To set up a comprehensive health programme for employees, with needs-based allocation to preventive and



rehabilitative measures; and to evaluate the effects of the programme on work ability and sick leave. Design: Prospective single-group observational study. Methods: Employees of a university hospital were invited to participate in needs-based interventions of preventive or rehabilitative character. Allocation followed screening questionnaires, anamnesis and clinical examination. The selection of a preventive or rehabilitative measure appropriate to the needs of the patient followed screening questionnaires, anamnesis and clinical examination. Preventive offers can include back training courses, water gymnastics or stress management exercises. Rehabilitative measures can include 3-6 weeks in- or outpatient rehabilitation or one week intensive outpatient rehabilitation. The main outcome parameters were work ability and sick leave duration. Results: At this time of the project included 1,547 participants, who applied voluntarily to enter the programme. The mean age of participants was 44.3 years (standard deviation (SD) 10.3 years), and 72.0% were female. Needs-based allocation to a prevention (n=1,218) or a rehabilitation group (n=329) was effective, and enabled formation of 2 groups with different needs. Overall, more than half of the employees participating in the programme reported sick leave within the last 3 months. Participants in the preventive measures group reported significantly lower duration of sick leave than those in the rehabilitation group. Employees in the rehabilitation group had significantly lower work ability (Work Ability Index (WAI) 30.4 vs 36.6), but higher effects at 6-month follow-up (WAI 33.4 (standardized effect size (SES) 0.51) vs 37.9 (SES 0.17)). In the prevention group mean sick leave reduced significantly from 1.9 to 1.3 weeks ($p < 0.001$) during the previous 3-month period, whereas in the rehabilitation group it reduced from 2.7 to 1.5 ($p < 0.001$) weeks. Conclusion: Implementation of the comprehensive health programme was successful, using the multimodal infrastructure of a university hospital. Allocation to suitable interventions in occupational health programmes following screening, anamnesis and clinical examination is an appropriate way to meet participants' needs. The programme resulted in improved work ability and less sick leave.

Hogg B, Medina JC, Gardoki-Souto I, Serbanescu I, Moreno-Alcazar A, Cerga-Pashoja A, et al. Workplace interventions to reduce depression and anxiety in small and medium-sized



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enterprises: a systematic review. Journal of Affective Disorders. 2021; 290:378-386.

<https://doi.org/10.1016/j.jad.2021.04.071> [open access]

Abstract: BACKGROUND: Depression and anxiety are the most prevalent mental health difficulties in the workplace, costing the global economy \$1 trillion each year. Evidence indicates that symptoms may be reduced by interventions in the workplace. This paper is the first to systematically review psychosocial interventions for depression, anxiety, and suicidal ideation and behaviours in small- to medium-size enterprises (SMEs). METHODS: A systematic search following PRISMA guidelines, registered in PROSPERO (CRD42020156275), was conducted for psychosocial interventions targeting depression, anxiety, and suicidal ideation/behaviour in SMEs. The PubMed, PsycINFO, Scopus, and two specific occupational health databases were searched, as well as four databases for grey literature, without time limit until 2nd December 2019. RESULTS: In total, 1283 records were identified, 70 were retained for full-text screening, and seven met the inclusion criteria: three randomised controlled trials (RCTs), three before and after designs and one non-randomised trial, comprising 5111 participants. Study quality was low to moderate according to the Quality Assessment Tool for Quantitative Studies. Five studies showed a reduction in depression and anxiety symptoms using techniques based on cognitive behavioural therapy (CBT), two reported no significant change. LIMITATIONS: Low number and high heterogeneity of interventions and outcomes, high attrition and lack of rigorous RCTs. CONCLUSIONS: Preliminary evidence indicates CBT-based interventions can be effective in targeting symptoms of depression and anxiety in SME employees. There may be unique challenges to implementing programmes in SMEs. Further research is needed in this important area

Kek B, Stewart WA, and Adisesh A. Creating a return to work Medical Readers' Theatre. Occupational Medicine. 2021; 71(3):136-143.

<https://doi.org/10.1093/occmed/kqab037>

Abstract: BACKGROUND: Previous work on sickness absence has shown that conversations about return to work can be challenging. The perception of competing interests and multiple stakeholders in



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the return to work process may also complicate and erode trust, further impacting health and well-being. AIMS: This study aims to explore the themes arising from the experiences of physicians and patients on the impact of health and return to work. The goal was to use these results to develop a Medical Readers' Theatre workshop focusing on negotiating challenging return to work scenarios to serve as an educational support for stakeholders. METHODS: Semi-structured interviews were conducted with 19 physicians and 15 patients from the Canadian Maritime Provinces on their experiences in return to work following an injury or illness. Interviews were recorded, transcribed and thematically analysed. Using the emergent themes, an educational workshop in the modality of Readers' Theatre was developed. RESULTS: The findings confirm there are multiple stakeholders involved in the return to work process and the factors influencing successful return are not always medically related. Six recurring themes were identified for the patient group and five for the physicians', allowing the development of storylines and four return to work scenarios. The scenarios have been used in teaching sessions. CONCLUSIONS: The themes reinforced that challenges in return to work are not always medical in nature. This Readers' Theatre adopts perspectives of patients, physicians and other stakeholders whilst focusing on return to work with the goal of providing engagement in reflective and purposeful discussion

Lange T, Schwarzer G, Datzmann T, and Binder H. Machine learning for identifying relevant publications in updates of systematic reviews of diagnostic test studies. Research Synthesis Methods. 2021; 12(4):506-515.

<https://doi.org/10.1002/jrsm.1486>

Abstract: Updating systematic reviews is often a time-consuming process that involves a lot of human effort and is therefore not conducted as often as it should be. The aim of our research project was to explore the potential of machine learning methods to reduce human workload. Furthermore, we evaluated the performance of deep learning methods in comparison to more established machine learning methods. We used three available reviews of diagnostic test studies as the data set. In order to identify relevant publications, we used typical text pre-processing methods. The reference standard for the evaluation was the human-consensus based on binary



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classification (inclusion, exclusion). For the evaluation of the models, various scenarios were generated using a grid of combinations of data preprocessing steps. Moreover, we evaluated each machine learning approach with an approach-specific predefined grid of tuning parameters using the Brier score metric. The best performance was obtained with an ensemble method for two of the reviews, and by a deep learning approach for the other review. Yet, the final performance of approaches strongly depends on data preparation. Overall, machine learning methods provided reasonable classification. It seems possible to reduce human workload in updating systematic reviews by using machine learning methods. Yet, as the influence of data preprocessing on the final performance seems to be at least as important as choosing the specific machine learning approach, users should not blindly expect a good performance by solely using approaches from a popular class, such as deep learning

McLennan V and Ludvik D. Early vocational rehabilitation after serious injury or illness: a systematic review. Rehabilitation Counseling Bulletin. 2021; 64(4):235-243.

<https://doi.org/10.1177/0034355220962218>

de Oliveira Neto GC, Tucci HNP, Godinho Filho M, Lucato WC, and Correia JMF. Performance evaluation of occupational health and safety in relation to the COVID-19 fighting practices established by WHO: survey in multinational industries. Safety Science. 2021; 141:105331.

<https://doi.org/10.1016/j.ssci.2021.105331>

Palka G and Sen D. Occupational health management of work-related stress: guidelines versus practice. Occupational Medicine. 2021; 71(3):154-160.

<https://doi.org/10.1093/occmed/kqab046>

Abstract: BACKGROUND: Work-related stress, anxiety and depression (WRSAD) are common, overlapping mental health problems burdened with major medical, occupational, institutional and societal implications. Current occupational health (OH) management of WRSAD is based on clinical and managerial guidelines and individual risk assessment. AIMS: The study sought to identify



patterns of OH advice in WRSAD and the relationships between the OH advice, available evidence, experience and expertise of the OH doctors (OHDs). **METHODS:** A retrospective cross-sectional analysis of 101 first-time OH consultations for WRSAD by nine OHDs. **RESULTS:** The three most common OH interventions included follow-up OH consultations, adjusted duties and referrals for counselling. All OHDs preferred a light-touch approach but the less experienced and qualified OHDs were more proactive and prescriptive. **CONCLUSIONS:** In the absence of a specific occupational medical guideline for the management of WRSAD, the OH interventions may be guided by clinical guidelines, individual risk assessment, the client's circumstances or the experience, expertise and preferences of the OHDs. In the study group, OH interventions were under-utilized and not consistently applied. Our findings support the argument for OH guideline for WRSAD to improve the consistency and effectiveness of OH interventions. This is important given the scale of the problem and the recent increase in WRSAD during the COVID-19 pandemic

Proffitt R, Cason J, Little L, and Pickett KA. Stimulating research to advance evidence-based applications of telehealth in occupational therapy. OTJR. 2021; 41(3):153-162.

<https://doi.org/10.1177/15394492211011433>

Abstract: Occupational therapy focuses on therapeutic means to address participation in meaningful everyday tasks across the lifespan. No single setting is more conducive to this pursuit than individuals' authentic contexts. Occupational therapists are therefore uniquely suited to lead the charge toward stimulating research and advancing evidence-based application of telehealth. To this end, the American Occupational Therapy Foundation digitally convened their 2020 Planning Grant Collective to focus on the topic of Telehealth. Participants of the interdisciplinary collective collaboratively identified four themes: (1) Using technology to assess and intervene in the everyday context, (2) Partnerships with caregivers, (3) Telehealth delivery, and (4) Uniform data collection. Subgroups explored potential research and funding opportunities in their specialty area while also addressing the centralizing concepts of equity and diversity of telehealth delivery and COVID-19. Here, we provide a summary of



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the key concepts and recommendations from the 3 days of collaboration

Shao Y, Fang Y, Wang M, Chang CD, and Wang L. Making daily decisions to work from home or to work in the office: the impacts of daily work- and COVID-related stressors on next-day work location. Journal of Applied Psychology. 2021; 106(6):825-838.

<https://doi.org/10.1037/apl0000929>

Abstract: To protect workers' safety while gradually resuming on-site operations amid the COVID-19 pandemic, many organizations are offering employees the flexibility to decide their work location on a daily basis (i.e., whether to work from home or to work in the office on a particular day). However, little is known about what factors drive employees' daily decisions to work from home versus office during the pandemic. Taking a social ecological perspective, we conceptualize employees' daily choice of work location (home vs. office) as a way to cope with stressors they have encountered on the previous day, and conducted a daily diary study to examine how five categories of work-related and COVID-related stressors during the pandemic (identified through a pilot interview study) may jointly predict employees' next-day work location. We collected data over five workdays from 127 participants working in a Chinese IT company which allowed employees to choose their work location on a daily basis amid the pandemic. We found that experiencing more work-family boundary stressors and work coordination stressors on a certain day were associated with a greater likelihood of working in the office (vs. at home) on the next day, while experiencing more workload stressors prompted employees to work at home (vs. in the office) on the next day. Furthermore, we found that COVID-19 infection-related stressors moderated the effects of technology stressors and workload stressors on next-day work location. Our research findings offer implications for understanding the driving factors of daily work location choices during and beyond the pandemic. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

Shiri R, Hiilamo A, Rahkonen O, Robroek SJW, Pietilainen O, and Lallukka T. Predictors of working days lost due to sickness



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absence and disability pension. International Archives of Occupational & Environmental Health. 2021; 94(5):843-854.

<https://doi.org/10.1007/s00420-020-01630-6> [open access]

Abstract: Objective: To identify social and health-related predictors of the number of days lost due to sickness absence (SA) and disability pension (DP) among initially 55-year-old public-sector workers.

Methods: The data from the Finnish Helsinki Health Study included participants aged 55 years at the baseline (in 2000-2002, N = 1630, 81% women), and were enriched with register-based information on SA and DP. The cumulative number of calendar days lost due to SA = 1 day or DP between ages 55 and 65 was calculated. Negative binomial regression model was used to identify the predictors of days lost. **Results:** The average calendar days lost was 316 days (about 220 working days) during a 10-year follow-up, and 44% were due to SA and 56% due to DP. Smoking [incidence rate ratio (IRR) = 1.19, 95% CI 1.01-1.40 for past and IRR = 1.30, CI 1.07-1.58 for current], binge drinking (IRR = 1.22, CI 1.02-1.46), lifting or pulling/pushing heavy loads (IRR = 1.35, CI 1.10-1.65), awkward working positions (IRR = 1.24, CI 1.01-1.53), long-standing illness limiting work or daily activities (IRR = 2.32, CI 1.93-2.79), common mental disorder (IRR = 1.52, CI 1.30-1.79), and multisite pain (IRR = 1.50, CI 1.23-1.84) increased the number of days lost, while high level of education (IRR = 0.66, CI 0.52-0.82) and moderate level of leisure-time physical activity (IRR = 0.80, CI 0.67-0.94) reduced the number of days lost.

Conclusions: Modifiable lifestyle risk factors, workload factors, common mental disorder, and multisite pain substantially increase the number of days lost. However, the findings of this study could be generalized to female workers in the public sector. Future research should also consider shorter SA spells in estimating working years lost and working life expectancy.

Taylor TK, Das R, Mueller KL, Pransky GS, Harber P, McLellan RK, et al. Safely returning America to work part II: industry-specific guidance. Journal of Occupational & Environmental Medicine. 2021; 63(6):e373-e391.

<https://doi.org/10.1097/JOM.0000000000002206> [open access]

Zare A, Choobineh A, Hassanipour S, and Malakoutikhah M. Investigation of psychosocial factors on upper limb



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musculoskeletal disorders and the prevalence of its musculoskeletal disorders among nurses: a systematic review and meta-analysis. International Archives of Occupational & Environmental Health. 2021; 94(5):1113-1136.

<https://doi.org/10.1007/s00420-021-01654-6>

Abstract: OBJECTIVE: Musculoskeletal disorders are one of the most important occupational problems especially among nurses. The aim of this study was to investigate the prevalence of musculoskeletal disorders in upper limbs and its associated psychosocial factors in the workplace. METHODS: A systematic review was conducted by searching the Medline/PubMed, EMBASE, Scopus, ISI/web of knowledge and Google Scholar databases. The authors classified studies into categories of psychological work stressors and musculoskeletal problems. The statistical analysis was performed using Stata software. RESULTS: We found 1742 articles in our initial search. After reviewing the titles, abstracts and full texts, 66 articles were finally analyzed. Psychosocial factors affecting the prevalence of upper limb musculoskeletal disorders among nurses were identified which included boring work, inadequate staffing, job demands, insufficient support, time pressure, decision latitude, job dissatisfaction, and job stress. There was a significant relationship between these factors and prevalence of musculoskeletal disorders in the wrists, shoulders, neck and shoulders, and wrists and hands. CONCLUSION: Collectively, the results of this study provide strong evidence of some psychosocial factors affecting the prevalence of upper limb musculoskeletal disorders among nurses. Thus, organizational interventions to minimize these stressors may be promising in reducing one risk factor for the development of nurses' musculoskeletal disorders. These interventions should not only consider the factors of physical ergonomics but also seek to improve the organizational aspects of the workplace

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