

**IWH Research Alert**  
**May 21, 2021**

**Missed an issue? Catch up on previous *Research Alerts* available on the IWH website <https://www.iwh.on.ca/journal-articles/research-alerts>**

*Research Alert* is a service provided to you by the Institute for Work & Health (IWH) to help you keep abreast of recent literature in the areas of occupational health and safety, epidemiology, public health and others within the IWH mandate. Please note that these articles have not been reviewed by Institute scientists to assess the quality of the studies. *Research Alerts* should not be considered an endorsement of the findings. Readers are cautioned not to act on the results of single studies, but rather to seek bodies of evidence. It should also be noted that the Institute for Work & Health cannot provide full-text of articles listed in *Research Alerts* to individuals outside of the organization, as this violates copyright legislation.

**\*Lau J, Mazzotta P, Fazelzad R, Ryan S, Tedesco A, Smith AJ, Sud A, Furlan AD, et al. Assessment tools for problematic opioid use in palliative care: a scoping review. *Palliative Medicine*. 2021; [epub ahead of print].**

<https://doi.org/10.1177/02692163211015567>

Abstract: Background: Screening for problematic opioid use is increasingly recommended in patients receiving palliative care. Aim: To identify tools used to assess for the presence or risk of problematic opioid use in palliative care. Design: Scoping review. Data sources: Bibliographic databases (inception to January 31, 2020), reference lists, and grey literature were searched to find primary studies reporting on adults receiving palliative care and prescription opioids to manage symptoms from advanced cancer, neurodegenerative diseases, or end-stage organ diseases; and included tools to assess for problematic opioid use. There were no restrictions based on study design, location, or language. Results: We identified 42 observational studies (total 14,431 participants) published between 2009 and 2020 that used questionnaires (n = 32) and urine drug tests (n = 21) to assess for problematic opioid use in palliative care, primarily in US (n = 38) and outpatient palliative care



**Institute  
for Work &  
Health**

Research Excellence  
Safe Work  
Healthy Workers

settings (n = 36). The questionnaires were Cut down, Annoyed, Guilty, and Eye-opener (CAGE, n = 8), CAGE-Adapted to Include Drugs (CAGE-AID, n = 6), Opioid Risk Tool (n = 9), Screener and Opioid Assessment for Patients with Pain (SOAPP; n = 3), SOAPP-Revised (n = 2), and SOAPP-Short Form (n = 5). Only two studies' primary objectives were to evaluate a questionnaire's psychometric properties in patients receiving palliative care. There was wide variation in how urine drug tests were incorporated into palliative care; frequency of abnormal urine drug test results ranged from 8.6% to 70%. Conclusion: Given the dearth of studies using tools developed or validated specifically for patients receiving palliative care, further research is needed to inform clinical practice and policy regarding problematic opioid use in palliative care.

**\*Mofidi A, Tompa E, Song C, Tenkate T, Arrandale V, Jardine J, et al. Economic evaluation of interventions to reduce solar ultraviolet radiation (UVR) exposure among construction workers. Journal of Occupational and Environmental Hygiene. 2021; [epub ahead of print].**

<https://doi.org/10.1080/15459624.2021.1910278>

Abstract: Solar ultraviolet radiation is one of the most common occupational carcinogens in Canada and is responsible for approximately 5,556 non-melanoma skin cancers per year. A large part of these cases are preventable by reducing solar ultraviolet radiation exposure. In this study, investigators estimated the potential economic impacts of different solar ultraviolet radiation reduction interventions among construction workers, as they are one of the largest at-risk occupational groups. Investigators performed an economic evaluation from a societal perspective, by comparing incremental costs in relation to incremental benefits achieved by two interventions-use of personal protective equipment by all exposed individuals and use of shade structure wherever and whenever feasible. Interventions costs were estimated for 2020-2050, and benefits with a 10-year delay, i.e., for the period 2030-2060. Economic evaluation estimates were reported by intervention costs, total costs of non-melanoma skin cancers cases averted, incremental cost per avert case, return on investment, and the break-even point. Various sensitivity analyses were undertaken with key parameters. Our findings indicate that if the rising trend of incidence continues,



cases will be double in 2060, whereas by using personal protective equipment or shade structure, with the best-case scenario of full ultraviolet radiation removal, would result in 6,034 and 2,945 cases averted over 30 years, respectively. This translates into a total of \$38.0 and \$20.5 million of averted costs (all monetary values represented in 2017 Canadian dollars). Under this scenario investigators expect that by 2060, for every dollar invested in personal protective equipment and shade structures, \$0.49 and \$0.35 will be returned, respectively. Findings also suggested that under a conservative scenario, prevention of non-melanoma skin cancer cases by personal protective equipment and shade structures resulted in \$5,812 and \$7,355 incremental costs, respectively, over the 30-year period. This study provides important insights for decision makers about the potential impacts of solar ultraviolet radiation reduction interventions in the construction sector and other sectors with substantial outdoor work. Our estimates also can raise awareness of the importance of solar ultraviolet radiation reduction interventions

**\*Shahidi FV and Parnia A. Unemployment insurance and mortality among the long-term unemployed: a population-based matched cohort study. American Journal of Epidemiology. 2021; [epub ahead of print].**

<https://doi.org/10.1093/aje/kwab144>

Abstract: Unemployment insurance is hypothesized to play an important role in mitigating the adverse health consequences of job loss. In this prospective cohort study, we examined whether receiving unemployment benefits is associated with lower mortality among the long-term unemployed. Census records from the 2006 Canadian Census Health and Environment Cohort (n=2,105,595) were linked to mortality data from 2006 to 2016. Flexible parametric survival analysis and propensity score matching were used to model time-varying relationships between long-term unemployment (20 weeks or more), unemployment benefit reciprocity, and all-cause mortality. Mortality was consistently lower among unemployed individuals who reported receiving unemployment benefits relative to matched nonrecipients. For example, mortality at 2 years of follow-up was 18% lower (95% confidence interval (CI): 9%, 26%) among men receiving benefits and 30% lower (95% CI: 18%, 40%) among women receiving



Institute  
for Work &  
Health

Research Excellence  
Safe Work  
Healthy Workers

benefits. After 10 years of follow-up, unemployment benefit reciprocity was associated with 890 (95% CI: 560, 1,230) fewer deaths per 100,000 men and 1,070 (95% CI: 810, 1,320) fewer deaths per 100,000 women. Our findings indicate that receiving unemployment benefits is associated with lower mortality among the long-term unemployed. Expanding access to unemployment insurance may improve population health and reduce health inequalities associated with job loss

**Almhdawi KA, Alrabbaie H, Kanaan SF, Alahmar MR, Oteir AO, Mansour ZM, et al. The prevalence of upper quadrants work-related musculoskeletal disorders and their predictors among registered nurses. *Work*. 2021; 68(4):1035-1047.**

<https://doi.org/10.3233/WOR-213434>

**Abstract:** **BACKGROUND:** Work-related musculoskeletal disorders (WMSDs) represent a significant health challenge facing nurses. However, very few studies investigated the prevalence of WMSDs among nurses and their predictors comprehensively using a valid and reliable set of standardized outcome measures. **OBJECTIVE:** This study aimed to investigate the prevalence WMSDs of upper quadrants and their predictors among registered nurses in Jordanian hospitals. **METHODS:** A cross-sectional study recruited 597 registered nurses from different hospitals in Jordan. A self-administered survey distributed in targeted hospitals wards. Outcome measures included Nordic Musculoskeletal Questionnaire (NMQ), Depression Anxiety Stress Scale (DASS), Pittsburgh Sleep Quality Index (PSQI), International Physical Activity Questionnaire (IPAQ), sociodemographic data, and manual handling and work habits. Prevalence of musculoskeletal complaints was reported using descriptive analysis. Logistic regression analyses were used to identify predictors of WMSDs at each upper quadrant body site. **RESULTS:** Twelve-month WMSDs prevalence was the highest at the neck (61.1%), followed by the upper back (47.2%), shoulders (46.7%), wrist and hands (27.3%), and finally at the elbow (13.9%). Being a female, poor sleep quality, high physical activity level, poor ergonomics, increased workload, and mental stress were significant predictors of increased upper quadrant WMSDs among nurses. **CONCLUSIONS:** Upper quadrant WMSDs among nurses in Jordan are highly prevalent. Identified significant predictors of these WMSDs



should be given full consideration by clinicians and health policymakers. Future studies are needed to reveal the progressive nature of upper quadrant WMSDs and strategies to modify their risk factors

**Bernfort L, Persson J, Linderöth C, and Ekberg K. Supervisor ratings of productivity loss associated with presenteeism and sick leave due to musculoskeletal disorders and common mental disorders in Sweden. *Work*. 2021; 68(4):1091-1100.**

<https://doi.org/10.3233/WOR-213439>

Abstract: **BACKGROUND:** Health problems due to musculoskeletal disorders (MSD) and common mental disorders (CMD) result in costs due to lost productivity. **OBJECTIVE:** This study aimed to increase knowledge of employers' productivity loss due to employees' presenteeism and sickness absence. **METHODS:** A web questionnaire was sent to employers of workers who were sick-listed for more than 30 days due to MSD or CMD, response rate: 50%, n=198. Presenteeism and the impact on productivity before and after sick leave, and the performance of work tasks by replacement workers during sick leave, were measured using supervisors' ratings. **RESULTS:** The average loss of productivity per sick-leave case amounted to almost 10 weeks, 53% of productivity loss was attributable to presenteeism and 47% to lower productivity by replacement workers. Employees with a CMD diagnosis had significantly higher presenteeism-related productivity loss than those with MSD. **CONCLUSIONS:** Employers experienced substantial productivity loss associated with employees' presenteeism and sick leave. Whether the supervisory rating of presenteeism is preferable to employee self-rating needs to be studied further. The long duration of presenteeism is counter-productive to resource-efficient organisations and indicates the need for improved supervisory skills to identify workers with poor health, both before and after sick leave

**Channak S, Klinsophon T, and Janwantanakul P. The effects of chair intervention on low back pain, discomfort, and trunk muscle activation in office workers: a systematic review. *International Journal of Occupational Safety & Ergonomics*. 2021; [epub ahead of print].**

<https://doi.org/10.1080/10803548.2021.1928379>



Institute  
for Work &  
Health

Research Excellence  
Safe Work  
Healthy Workers

**Abstract:** Introduction. The chair is one standard piece of workstation equipment in an office. Previous studies showed that a suitable chair may reduce musculoskeletal symptoms. Purpose. This review investigated the effect of chair intervention on low back pain, discomfort, and trunk muscle activation among office workers. Methods. Five electronic databases from 1980 to May 2020 were searched for relevant randomized and non-randomized controlled trials. The methodological quality of the included studies was assessed using the 13-item Cochrane risk of bias tool. Quality of evidence was assessed and rated according to GRADE guidelines. Results. Two randomized controlled trials, ten repeated-measures studies, and two prospective cohort studies were included in this review. Nine studies were rated as high-quality studies. The results indicated very low to low-quality evidence for the conflicting of chair intervention on pain and discomfort reduction as well as trunk muscle activation among office workers. When stratified by chair type, the level of evidence for health benefits derived from any type of chair was still very low to low quality. Conclusion. Unless supplementary high-quality studies provide different evidence, chair interventions are not recommended to reduce low back pain or discomfort as well as activate trunk muscles

**Cox-Ganser JM and Henneberger PK. Occupations by proximity and indoor/outdoor work: relevance to COVID-19 in all workers and Black/Hispanic workers. American Journal of Preventive Medicine. 2021; 60(5):621-628.**

<https://doi.org/10.1016/j.amepre.2020.12.016> [open access]

**Abstract:** INTRODUCTION: This paper describes the occupations in the U.S. that involve close contact with others and whether the work is outdoors or indoors (risk factors for COVID-19), including the distribution of Black and Hispanic workers over these occupations. METHODS: U.S. data released from 2014 to 2019 on employment, proximity to others at work, outdoor or indoor work, and Black and Hispanic worker percentages for occupations were used. Occupations were assigned to 6 categories defined as a low, medium, or high physical closeness (proximity) at work and outdoor or indoor work. A total of 3 of the 6 categories represent a higher risk for exposure to SARS-CoV-2: medium-proximity indoor, high-proximity outdoor, and high-proximity indoor exposure. RESULTS: A



Institute  
for Work &  
Health

Research Excellence  
Safe Work  
Healthy Workers

high proportion of U.S. workers may be at higher risk for exposure to SARS-CoV-2 because their occupations involve either high proximity to others indoors and outdoors (25.2%, 36.5 million workers) or medium-proximity indoors (48%, 69.6 million workers). There is a differential distribution of proximity and outdoor/indoor work by occupation, which disproportionately affects Black and Hispanic workers in some occupations. CONCLUSIONS: Implementation of COVID-19 preventive measures in work settings should be based on occupation-specific risk factors, including the extent of proximity to others and whether the work is conducted outdoors or indoors. It is important that communication messages are tailored to the languages and preferred media of the workforce

**DeBono NL, Warden H, Logar-Henderson C, Shakik S, Dakouo M, MacLeod J, et al. Incidence of mesothelioma and asbestosis by occupation in a diverse workforce. American Journal of Industrial Medicine. 2021; 64(6):476-487.**

<https://doi.org/10.1002/ajim.23245>

Abstract: OBJECTIVE: We sought to characterize detailed patterns of mesothelioma and asbestosis incidence in the workforce as part of an occupational disease surveillance program in Ontario, Canada.

METHODS: The Occupational Disease Surveillance System (ODSS) cohort was established using workers' compensation claims data and includes 2.18 million workers employed from 1983 to 2014. Workers were followed for mesothelioma and asbestosis diagnoses in Ontario Cancer Registry, physician, hospital, and ambulatory care records through 2016. Trends in incidence rates were estimated over the study period. Cox proportional hazard models were used to estimate adjusted hazard ratios (HRs) and 95% confidence intervals (CIs).

RESULTS: A total of 854 mesothelioma and 737 asbestosis cases were diagnosed during follow-up. Compared with all other workers in the ODSS, those employed in construction trades occupations had the greatest adjusted incidence rate of both mesothelioma (223 cases; HR, 2.38; 95% CI: 2.03-2.78) and asbestosis (261 cases; HR, 3.64; 95% CI: 3.11-4.25). Rates were particularly elevated for insulators, pipefitters and plumbers, and carpenters. Workers in welding and flame cutting, boiler making, and mechanic and machinery repair occupations, as well as those in industrial chemical and primary metal manufacturing industries, had strongly elevated



Institute  
for Work &  
Health

Research Excellence  
Safe Work  
Healthy Workers

rates of both diseases. Rates were greater than anticipated for workers in electrical utility occupations and education and related services. **CONCLUSIONS:** Results substantiate the risk of mesothelioma and asbestosis in occupation and industry groups in the Ontario workforce with known or suspected asbestos exposure. Sustained efforts to prevent the occurrence of additional cases of disease in high-risk groups are warranted

**Galanis P, Fragkou D, and Katsoulas TA. Risk factors for stress among police officers: a systematic literature review. Work. 2021; 68(4):1255-1272.**

<https://doi.org/10.3233/WOR-213455>

Abstract: **BACKGROUND:** Stress is common among police personnel leading to several negative consequences. **OBJECTIVE:** We performed a systematic literature review to identify risk factors for stress among police officers. **METHODS:** We searched PubMed and Scopus electronic databases through to July 2018 and we conducted this review according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. The Newcastle-Ottawa scale was used for studies quality assessment. **RESULTS:** After selection, 29 cross-sectional studies met the inclusion criteria and included in the review. The average quality of studies was low since no study was rated as having low risk of bias, three studies (10.3%) as moderate risk and 26 studies (89.7%) were rated as having high risk of bias. Stress risk factors were summarized in the following categories: demographic characteristics; job characteristics; lifestyle factors; negative coping strategies and negative personality traits. **CONCLUSIONS:** Identification of stress risk factors is the first step to create and adopt the appropriate interventions to decrease stress among police personnel. The early identification of police officers at higher risk and the appropriate screening for mental health disorders is crucial to prevent disease and promote quality of life

**Harell A and Lieberman E. How information about race-based health disparities affects policy preferences: evidence from a survey experiment about the COVID-19 pandemic in the United States. Social Science & Medicine. 2021; 277:113884.**

<https://doi.org/10.1016/j.socscimed.2021.113884> [open access]

Abstract: In this article, we report on the results of an experimental



Institute  
for Work &  
Health

Research Excellence  
Safe Work  
Healthy Workers



study to estimate the effects of delivering information about racial disparities in COVID-19-related death rates. On the one hand, we find that such information led to increased perception of risk among those Black respondents who lacked prior knowledge; and to increased support for a more concerted public health response among those White respondents who expressed favorable views towards Blacks at baseline. On the other hand, for Whites with colder views towards Blacks, the informational treatment had the opposite effect: it led to decreased risk perception and to lower levels of support for an aggressive response. Our findings highlight that well-intentioned public health campaigns spotlighting disparities might have adverse side effects and those ought to be considered as part of a broader strategy. The study contributes to a larger scholarly literature on the challenges of making and implementing social policy in racially-divided societies

**Hon CY, Holness DL, Fairclough C, Tchernikov I, and Arrandale V. Exploratory study to determine if risk factors for occupational skin disease vary by type of food processing operation. Work. 2021; 68(4):1113-1119.**

<https://doi.org/10.3233/WOR-213441>

Abstract: BACKGROUND: Occupational skin disease (OSD) is a common health issue in the food processing sector. However, risk factors for OSD are suspected to differ according to the nature of the operation. OBJECTIVE: To ascertain if the risk factors for OSD vary depending on the type of food processing operation, namely meat processing vs. a commercial bakery. METHODS: Participants were asked to answer questions regarding workplace exposures and the current skin condition of their hands. Bivariate analyses were conducted to identify differences between the two participating operations. RESULTS: The meat processing workers were more likely to have wet work exposure, used hand sanitizer more often and changed their gloves more frequently. These findings from meat processing represented a statistically significant difference compared to the commercial bakery workers. Also, workers from meat processing reported more severe skin symptoms. CONCLUSIONS: Risk factors for OSD apparently differ between types of food processing operations. Differences in the nature of skin symptoms were also found between the two participating operations. It is



therefore suggested that future studies examining OSD within the food processing sector should evaluate this health effect based on the nature of operations rather than the sector as a whole

**Kettlewell J, Timmons S, Bridger K, Kendrick D, Kellezi B, Holmes J, et al. A study of mapping usual care and unmet need for vocational rehabilitation and psychological support following major trauma in five health districts in the UK. *Clinical Rehabilitation*. 2021; 35(5):750-764.**

<https://doi.org/10.1177/0269215520971777> [open access]

Abstract: Objective: To identify where and how trauma survivors' rehabilitation needs are met after trauma, to map rehabilitation across five UK major trauma networks, and to compare with recommended pathways. Design: Qualitative study (interviews, focus groups, workshops) using soft-systems methodology to map usual care across trauma networks and explore service gaps. Publicly available documents were consulted. CATWOE (Customers, Actors, Transformation, Worldview, Owners, Environment) was used as an analytic framework to explore the relationship between stakeholders in the pathway. Setting: Five major trauma networks across the UK. Subjects: 106 key rehabilitation stakeholders (service providers, trauma survivors) were recruited to interviews (n = 46), focus groups (n = 4 groups, 17 participants) and workshops (n = 5 workshops, 43 participants). Interventions: None. Results: Mapping of rehabilitation pathways identified several issues: (1) lack of vocational/psychological support particularly for musculoskeletal injuries; (2) inconsistent service provision in areas located further from major trauma centres; (3) lack of communication between acute and community care; (4) long waiting lists (up to 12 months) for community rehabilitation; (5) most well-established pathways were neurologically focused. Conclusions: The trauma rehabilitation pathway is complex and varies across the UK with few, if any patients following the recommended pathway. Services have developed piecemeal to address specific issues, but rarely meet the needs of individuals with multiple impairments post-trauma, with a lack of vocational rehabilitation and psychological support for this population.

**Lamsal R, Napit K, Rosen AB, and Wilson FA. Paid sick leave and healthcare utilization in adults: a systematic review and**



Institute  
for Work &  
Health

Research Excellence  
Safe Work  
Healthy Workers

**meta-analysis. American Journal of Preventive Medicine. 2021; 60(6):856-865.**

<https://doi.org/10.1016/j.amepre.2021.01.009>

**Abstract:** CONTEXT: The U.S. is the only industrialized country in the world with no national policy mandating paid sick leave for workers. This study systematically reviews and quantifies the impact of paid sick leave on the use of healthcare services among employed adults. EVIDENCE ACQUISITION: Articles published from January 2000 to February 2020 were located in MEDLINE/PubMed, SCOPUS, ScienceDirect, and Embase from March/April 2020. Key search terms included paid sick leave and health care utilization. Articles were assessed for methodologic quality, and qualitative and quantitative data were extracted. From the quantitative data, pooled OR, distribution, and heterogeneity statistics were calculated when possible. EVIDENCE SYNTHESIS: A total of 12 manuscripts met the criteria for systematic review, and 8 of them had statistics required for meta-analysis. Individuals with paid sick leave had 1.57 (95% CI=1.50, 1.63;  $p<0.001$ ) odds of having an influenza vaccination, 1.54 (95% CI=1.48, 1.60;  $p<0.001$ ) odds of having a mammogram, 1.33 (95% CI=1.25, 1.41;  $p<0.001$ ) odds of seeing a doctor, and 1.29 (95% CI=1.18, 1.39;  $p<0.001$ ) odds of getting a Pap test compared with individuals without paid sick leave. However, the  $I^2$  was relatively high with a significant  $p$ -value for most of the services, indicating potential heterogeneity. CONCLUSIONS: Paid sick leave is likely to be an effective way to increase the use of primary and preventive healthcare services in the U.S. Further studies should be carried out to track outcomes over a longer period and to compare the effect of the number of paid sick days in relation to healthcare utilization

**Li W, Yi G, Chen Z, Dai X, Wu J, Peng Y, et al. Is job strain associated with a higher risk of type 2 diabetes mellitus? A systematic review and meta-analysis of prospective cohort studies. Scandinavian Journal of Work, Environment & Health. 2021; 47(4):249-257.**

<https://doi.org/10.5271/sjweh.3938> [open access]

**Abstract:** OBJECTIVES: Epidemiological studies have explored the relationship between work-related stress and the risk of type 2 diabetes mellitus (T2DM), but it remains unclear on whether work-



Institute  
for Work &  
Health

Research Excellence  
Safe Work  
Healthy Workers

related stress could increase the risk of T2DM. We aimed to evaluate the association between job strain and the risk of T2DM. **METHODS:** We searched PubMed and Web of Science up to April 2019. Summary risk estimates were calculated by random-effect models. And the analysis was also conducted stratifying by gender, study location, smoking, drinking, body mass index, physical activity, family history of T2DM, education and T2DM ascertainment. Studies with binary job strain and quadrants based on the job strain model were analyzed separately. **RESULTS:** A total of nine studies with 210 939 participants free of T2DM were included in this analysis. High job strain (high job demands and low control) was associated with the overall risk of T2DM compared with no job strain (all other combinations) [relative risk (RR) 1.16, 95% confidence interval (CI) 1.03-1.31], and the association was more evident in women (RR 1.48, 95% CI 1.02-2.14). A statistically significant association was also observed when using high strain as a category (job strain quadrants) rather than binary variable (RR 1.62, 95% CI 1.04-2.55) in women but not men. **CONCLUSIONS:** Our study suggests that job strain is an important risk factor for T2DM, especially among women. Appropriate preventive interventions in populations with high job strain would contribute to a reduction in T2DM risk

**Dos Santos Junior GT, Araujo MHM, Araujo GDS, Dos Santos BEF, and da Costa Junior RR. Characterization of occupational accidents occurred at the Occupational Health Referral Center of the state of Amapa between 2007 and 2016. Revista Brasileira de Medicina do Trabalho. 2021; 19(1):35-42.**

<https://doi.org/10.47626/1679-4435-2020-526>

**Abstract:** **INTRODUCTION:** Occupational accidents involving biological material have consequences that range from physical damage to public expenses. The study of this topic may help evaluate conducts and form preventive measures. **OBJECTIVES:** To characterize the notifications of occupational accidents involving biological material that occurred between 2007 and 2016 in the state of Amapa, Brazil. **METHODS:** This is an observational, retrospective, and descriptive study with a data analysis that quantified occupational accidents with biological material reported between January 2007 and December 2016 and analyzed the most prevalent risk factors. **RESULTS:** Data were obtained from the Occupational Health



Reference Center of the state of Amapa: 938 cases of occupational accidents with biological material were reported in the studied period. The main type of exposure was percutaneous (75.8%), the most common organic material was blood (68.4%), and the main causative agent was the hollow-bore needle (58.6%). Considering the reported cases, 80.8% of 745 individuals were vaccinated against hepatitis B and 2.4% of 252 individuals had positive anti-HIV. Regarding the clinical progression of the injured workers, in 91.9% of the cases these data were unknown or not recorded, and 47.4% of the patients who provided this information were discharged with no serological conversion. CONCLUSIONS: The main causes of occupational accidents were related to the use of sharps for intravenous drug administration and the inadequate disposal of this material, highlighting the need for stronger attention when performing these procedures. The high incidence of unknown/blank data hampered the correct serological follow-up of the patients and the epidemiological characterization of the accidents

**Shaw L, Nunns M, Briscoe S, Anderson R, and Thompson Coon J. A "Rapid Best-Fit" model for framework synthesis: using research objectives to structure analysis within a rapid review of qualitative evidence. Research Synthesis Methods. 2021; 12(3):368-383.**

<https://doi.org/10.1002/jrsm.1462>

Abstract: The short time frame associated with rapid reviews can be challenging for researchers conducting qualitative evidence synthesis. In these circumstances a Best-Fit Framework Synthesis, drawing upon existing theory and/or research, may be conducted to rapidly make sense of qualitative evidence. This article discusses a "Rapid Best-Fit" approach to conducting Framework Synthesis within an 6-week rapid systematic review of qualitative evidence. In the absence of a suitable theoretical model to inform the synthesis, we drew upon our research objectives to structure a framework, and to identify the studies which contained the most relevant data. Themes from these studies were used to revise the initial framework before inductive thematic synthesis finalized theme content. This "Rapid Best-Fit" approach yielded results aligned with the needs of the commissioners of the review and is a useful addition to qualitative



synthesis methods, allowing for the incorporation of diverse views and experiences into fast-paced decision making scenarios

**Son J and Lee S. Effects of work stress, sleep, and shift work on suicidal ideation among female workers in an electronics company. American Journal of Industrial Medicine. 2021; 64(6):519-527.**

<https://doi.org/10.1002/ajim.23243>

**Abstract:** Background: Suicide is the leading cause of death in young adults in Korea. Stress in the workplace affects the suicide rate; young female workers are particularly vulnerable to adverse work environments. We investigated the relationships of shift work, sleep, and work stress to suicidal ideation. Methods: This study used data from 508 female workers aged 22-40 years in an electronics company. Data on baseline characteristics, work patterns, sleep quality (using the Pittsburgh Sleep Quality Index), and work stress levels using the Korean Occupational Stress Scale (KOSS) were obtained from questionnaires. We examined associations between suicidal ideation and shift work, sleep quality, and KOSS scores. Results: Suicidal ideation was significantly higher among shift workers (odds ratio [OR], 2.38; 95% confidence interval [CI], 1.31-4.32), those with poor sleep (OR, 2.84; 95% CI, 1.68-4.84), and those with high work stress (OR, 3.30; 95% CI, 1.82-6.00). Both 3 × 12 h shift workers (OR, 2.98; 95% CI, 1.35-6.57) and 4 × 8 h shift workers (OR, 2.14; 95% CI, 1.03-4.45) had increased suicidal ideation. High work stress (OR, 11.55; 95% CI, 2.93-45.48) had stronger associations with suicidal ideation than poor sleep (OR, 3.86; 95% CI, 1.21-12.33) in shift workers. The combined effect of poor sleep and high KOSS on suicidal ideation was stronger in shift workers (OR, 13.39; 95% CI, 3.22-55.62) than day workers (OR, 4.31; 95% CI, 1.03-18.01). Conclusions: Shift workers are more vulnerable than day workers to the combination of work stress and poor sleep quality as well as to work stress alone.

\*IWH authored publications.



Institute  
for Work &  
Health

Research Excellence  
Safe Work  
Healthy Workers