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Journal articles marked with an asterisk indicate an IWH scientist or adjunct scientist is included in the list of authors.

Bakhuys Roozeboom MC, Wiezer NM, Schelvis RMC, Niks IMW, and Boot CRL. Effects of a participatory work stress prevention approach for employees in primary education: results of a quasi-experimental study. *Scandinavian Journal of Work, Environment & Health*. 2024; 50(3):187-196.

<https://doi.org/10.5271/sjweh.4141> [open access]

Abstract: OBJECTIVE: Work stress is a serious problem for employees in primary education. This study evaluates the effects of a work stress prevention approach on emotional exhaustion and work stress determinants (job crafting behavior, quantitative and emotional demands, leadership, support, autonomy, team culture and feelings of competence), and the impact of implementation success (management commitment, employee involvement, communication during implementation) on these outcomes. METHODS: A quasi-experimental study was conducted with an intervention group (4 schools, N=102 employees) and a control group (26 schools, N=656 employees) using questionnaires at baseline (T0), one-year (T1) and two-year (T2) follow-up. Multilevel mixed model analyses were performed to test effects of condition and implementation success on changes in emotional exhaustion and work stress determinants between T0 and T2 in the intervention and control group. RESULTS: No effect were found for emotional exhaustion. Improvement of quality of leadership between T0 and T2 was significantly larger in the intervention compared to the control group. Additionally, implementation success was associated with a decrease in unnecessary demands and an increase in quality of leadership, team culture and job crafting behavior. CONCLUSIONS: This study shows no direct effect of the approach on emotional exhaustion, but it does show beneficial effects on quality of leadership. Additionally, results suggest that, when successfully implemented, the approach also has beneficial effects on other work stress determinants (ie, job crafting behavior,

unnecessary demands and team culture). Results indicate that - if implemented successfully - the organizational-level intervention has the potential to improve the psychosocial work context

Conway PM, Burr H, Kersten N, and Rose U. Work ability and work nonparticipation: a prospective study of 2426 participants in Germany. *Journal of Occupational & Environmental Medicine*. 2024; 66(4):273-279.

<https://doi.org/10.1097/JOM.0000000000003032>

Abstract: OBJECTIVE: The aim of the study is to examine the association between work ability and work nonparticipation, including long-term sickness absence (LTSA), unemployment (UE), and disability pension/early retirement (ER). METHODS: We conducted a questionnaire-based 5-year follow-up study on a representative sample of the German working population (n = 2426). We used a two-part model to examine the association of continuous Work Ability Index (WAI) scores with the probability of events of work nonparticipation and the duration thereof. RESULTS: Higher WAI scores were protective against total work nonparticipation (an index combining the three indicators), LTSA, ER and UE, the latter among males only. Higher WAI scores were protective also against duration of total work nonparticipation and LTSA, but not against duration of UE and ER among males and duration of UE among females. CONCLUSIONS: Higher WAI scores have a protective role against work nonparticipation

Duncan M, Bansal D, and Cooke E. Help-seeking intentions of UK construction workers: a cross-sectional study. *Occupational Medicine*. 2024; 74(2):172-177.

<https://doi.org/10.1093/occmed/kqae007> [open access]

Abstract: Background: In response to the high rates of poor mental health in the construction industry, numerous workplace interventions have been designed to address the known and suspected risk factors to employee mental health and well-being. A key challenge of these strategies is low engagement in support services. Aims: The goals of this research were to investigate the help-seeking intentions of employees in the construction industry, explore levels of mental well-being in this population and provide insight into employee engagement with mental health support strategies. Methods: Employees from two UK construction companies completed an online cross-sectional questionnaire (n = 119), designed to measure help-seeking intentions, levels of mental well-being and worker attitudes towards workplace mental health support strategies. Results: One-third of the sample reported experiencing an episode of mental health difficulties in the past 6 months. Employees reported a greater preference for seeking support from informal versus formal help sources. Participants were most likely to seek help from a partner and least likely to seek help from a Mental Health First Aider/ Champion. The study also showed some association between help-seeking intention and age of employees. Conclusions: Given the poor levels of mental well-being in this population, it is essential that adequate workplace support is provided. Whilst formal help sources are important for this population, our study highlights the potential benefits of informal help sources to support employees. Future interventions may therefore wish to consider developing tailored, informal workplace support networks and programmes.

Enogieru I, Blewitt-Golsch AL, Hart LJ, LeGrand S, Whetten K, Ostbye T, et al. Prevalence and correlates of workplace violence: descriptive results from the National Transgender Discrimination Survey. *Occupational & Environmental Medicine*. 2024; 81(4):178-183.

<https://doi.org/10.1136/oemed-2023-109197>

Abstract: OBJECTIVE: To describe the lifetime prevalence of workplace harassment, physical violence and sexual assault against transgender and non-binary workers targeted due to their gender identity and to identify correlates of this workplace violence. METHODS: This descriptive cross-sectional study used data from 4597 transgender or non-binary respondents from the 2008-2009 National Transgender Discrimination Survey. Respondents reported if they had ever experienced harassment, physical violence or sexual assault at work specifically because of their gender identity. We estimated the prevalence of each type of violence stratified by gender identity, race/ethnicity, age, educational attainment, history of working in the street economy (eg, sex industry, drug sales) and if people at work knew their gender identity. RESULTS: Workplace violence was prevalent, with 50% of transgender and non-binary workers having ever experienced harassment, 7% physical violence and 6% sexual assault at work because of their gender identity. Harassment was common among all of these workers, but physical violence and sexual assault were more than twice as common among transfeminine and non-binary workers assigned male at birth, workers of colour, workers with low educational attainment and those who had ever worked in the street economy. CONCLUSIONS: Transgender and non-binary workers commonly face violence at work because of their gender identity. Workplace violence prevention programmes should incorporate ways to prevent gender identity-based violence and facilitate channels for workers to report the occurrence of discrimination and violence

Fannin A, Hooley C, and Nelson EJ. Greater emotional and psychological well-being are associated with reduced employee self-report illness-related absenteeism: a multi-industry, cross-sectional study conducted during COVID-19 pandemic. *Journal of Occupational & Environmental Medicine*. 2024; 66(4):310-315.

<https://doi.org/10.1097/JOM.0000000000003042>

Abstract: OBJECTIVE: The purpose of this study is to determine the relationship that emotional, psychological, and social well-being has with self-reported illness-related absenteeism. METHODS: This study examines the relationship between three dimensions of well-being (emotional, psychological, and social) and self-report illness-related absenteeism among 133 workers spanning multiple industries across 16 different companies. This secondary, cross-sectional data were analyzed using multiple linear regression. RESULTS: As hypothesized, emotional well-being and psychological well-being were found to be negatively associated with absenteeism, with emotional well-being being the stronger predictor. Contrary to our hypothesis, we found that social well-being was not associated with absenteeism among workers. CONCLUSIONS: Employee emotional well-being and psychological well-being are associated with self-reported illness-related absenteeism. Future work should explore causal relationships between these constructs

Gedor M, Bourgkard E, Dziurla M, Ribet C, Goldberg M, Grzebyk M, et al. Relationship between night work and health-related quality of life: an analysis based on profiles and cumulative duration of exposure to night work among French workers in the CONSTANCES cohort. *International Archives of Occupational & Environmental Health*. 2024; 97(4):377-386.

<https://doi.org/10.1007/s00420-024-02053-3>

Abstract: Objective: The aim of this study is to estimate the association between night work and health-related quality of life (HRQoL) among French workers. The association between cumulative duration of night work and HRQoL was also investigated. Methods: Three career-long night work exposure groups were defined at inclusion in the CONSTANCES cohort: permanent night workers, rotating night workers and former night workers. Day workers with no experience of night work were the reference group. HRQoL was assessed using the Short Form Health Survey (SF-12), in particular the physical component summary (PCS) and mental component summary (MCS) scores, with a higher score indicating better HRQoL. Several linear regression models were built to test the association between night work exposure and HRQoL. The relationship between cumulative duration of night work and HRQoL scores was analyzed using generalised additive models. Results: The sample consisted of 10,372 participants. Former night workers had a significantly lower PCS score than day workers (β [95% CI]: - 1.09 [- 1.73; - 0.45], $p = 0.001$), whereas permanent night workers had a significantly higher MCS score (β [95% CI]: 1.19 [0.009; 2.36], $p = 0.048$). A significant decrease in PCS score from 5 to 20 years of cumulative night work was observed among former night workers. Conclusions: Former night workers had poorer physical HRQoL in contrast to permanent and rotating night workers who had similar or even better HRQoL than day workers, suggesting the well-known healthy worker survivor effect. Consequently, both current and former night workers require regular and specific follow-up focused on the physical components of their health.

Hansson E, Jakobsson K, Glaser J, Wesseling C, Chavarria D, Lucas RAI, et al. Impact of heat and a rest-shade-hydration intervention program on productivity of piece-paid industrial agricultural workers at risk of chronic kidney disease of nontraditional origin. *Annals of Work Exposures and Health*. 2024; 68(4):366-375.

<https://doi.org/10.1093/annweh/wxae007> [open access]

Abstract: Objectives: Assess the impact of environmental heat and a rest-shade-hydration (RSH) intervention against heat stress on productivity of piece-paid Mesoamerican sugarcane cutters. These workers are at a high risk of chronic kidney disease of non-traditional origin (CKDnt), from the severe heat stress they experience due to heavy work under hot conditions. RSH interventions in these populations improve kidney health outcomes, but their impact on productivity has yet to be examined. Methods: We accessed routine productivity data from seed (SC, $N = 749$) and burned (BCC, $N = 535$) sugarcane cutters observed over five harvest seasons with increasing RSH intervention at a large Nicaraguan sugarcane mill. Hourly field-site wet-bulb globe temperature (WBGT) was recorded by mill staff and summarized as a daily mean. Mixed linear regression was used to model daily productivity, adjusting for age (18-29, 30-44, and >45 years), sex, WBGT (<28, 28-29, 29-30, 30-31, and >31 °C) on the same and preceding day, harvest season (2017-18 to 2021-22), month, and acclimatization status (<1, 1-2, and >2 weeks). Results: There was an inverse dose-response relationship between SC productivity and WBGT on the same and preceding days, decreasing by approximately 3%/°C WBGT. Productivity increased during the study period, i.e. coinciding with RSH scale-up, by approximately 19% in SC and 9% in BCC. Conclusion: Agricultural worker productivity was

expected lower on hotter days, strengthening the interest in all stakeholders to mitigate increasing global temperatures and their impact. Despite decreasing the total time allocated for work each day, an RSH intervention appears to result in increased productivity and no apparent loss in productivity.

Hatcher S, Sinyor M, Edgar NE, Schaffer A, MacLean SE, Carleton RN, et al. A comparison of suicides in public safety personnel with suicides in the general population in Ontario, 2014 to 2018. *Crisis*. 2024; [epub ahead of print].

<https://doi.org/10.1027/0227-5910/a000953>

Abstract: Background: There is conflicting evidence on the suicide rates of different public safety personnel (PSP). There have been few studies that compare suicides in PSP with the general population and none that have used a detailed comparison of coroner records. Aims: The current study estimates suicide rates among different PSP and compares PSP suicides with the general population. Method: We identified coroner records of PSP suicides from January 2014 to December 2018 and compared each one to two matched general population controls. Results: We identified 36 PSP suicides and 72 general population controls. Police had a higher suicide rate than other PSP groups. PSP were more likely to die by firearm, be separated/divorced or married, die in a motor vehicle, have problems at work, and have a PTSD diagnosis. PSP were less likely to die by jumping. Limitations: The study may have not identified all PSP suicides. Apart from the cause of death, data in coroner records are not systematically collected, so information may be incomplete. Conclusion: PSP suicides appear different than the general population. Death records need to have an occupation identifier to enable monitoring of trends in occupational groups, such as PSP

Jin Z, Gambatese JA, and Nnaji C. Musculoskeletal disorder risk assessment in modern ready-made concrete formwork construction. *Journal of Construction Engineering and Management*. 2024; 150(6):05024005.

<https://doi.org/10.1061/JCEMD4.COENG-14532>

Marciniak-Nuqui Z, Cabling ML, and Romanelli RJ. Culture of presenteeism: emergent perspectives from an NHS-workforce convenience sample. *Occupational Medicine*. 2024; 74(2):167-171.

<https://doi.org/10.1093/occmed/kqae006>

Abstract: BACKGROUND: The United Kingdom's National Health Service (NHS) has been under strain for more than a decade, which has been exacerbated by the 2019 coronavirus disease (COVID-19) pandemic. According to NHS staff, this is felt especially during the winter (also called 'winter pressure'), when both absenteeism and presenteeism rates are high in the healthcare workforce. AIMS: To understand the culture of presenteeism amongst NHS staff, focusing specifically on how presenteeism both persisted and changed during the COVID-19 pandemic and during periods of annual winter pressure. METHODS: Data for this study were derived from 20 in-depth interviews conducted with NHS staff, drawn from a convenience sample of primary- and secondary-care services. Interviews were guided by a semi-structured interview protocol. RESULTS: This study contributes to an understanding of presenteeism by describing the ways in which the practice both changed and, in some ways, stayed the same during COVID-19 self-isolation regulations, with remote work arrangements enabling some healthcare workers to continue working even when unwell. Despite this, isolation guidelines threw into stark relief NHS workers' deeply held beliefs about duty, service, and commitment to the wider healthcare system, while exposing their experiences and perceptions of profound systemic challenges and a lack of wider support to carry out their work. CONCLUSIONS: The

emergent findings from this study suggest that the culture of presenteeism is linked to wider NHS staff's identification with the institutional goals of the NHS, resulting in their motivation to continue working, even if remotely; yet, the consequences are not fully understood

Pagard S, Mathiassen SE, Brulin E, Rudolfsson T, and Hallman DM. Effects of a participative workplace intervention on work strategies and expectations of availability among office-based employees with flexible work arrangements. IIE Transactions on Occupational Ergonomics and Human Factors. 2023; 11(3-4):109-122.

<https://doi.org/10.1080/24725838.2024.2329109>

Abstract: Occupational Applications Work strategies changed following a participatory workplace intervention among office-based employees with flexible work arrangements (FWA). Also, the intervention likely led to clearer rules and routines for FWA within the work group. As FWA increases, especially after the COVID-19 pandemic, it will be important to revise work strategies for both the individual and the work group. The results of this study are relevant in the context of interventions that can support organizations and employees in adopting work strategies promoting good working conditions and health in FWA

Petitta L, Probst TM, Ghezzi V, Bettac EL, Lavaysse LM, and Barbaranelli C. Job insecurity and work-family interface as predictors of mental and physical health: the moderating role of family-work stereotype threat. Journal of Occupational and Organizational Psychology. 2024; 97(2):452-478.

<https://doi.org/10.1111/joop.12478> [open access]

Abstract: While a growing body of literature links the stressor of job insecurity (JI) with poor employee well-being and increased work-to-family conflict (WFC), the current study specifically tests WFC as an explanatory mechanism of the relationships between affective JI (i.e., emotional reactions to the perceived threat to one's job) and poor health outcomes (i.e., mental and physical health). Moreover, this study uniquely examines how family-work stereotype threat (FWST; i.e., fears of confirming negative stereotypes about workers with family obligations) may exacerbate the relationship between perceived threats to one's job and employee reports of WFC. Using a cross-country design, data from 707 employees in the United States (two-wave) and 763 employees nested within 100 organizations in Italy (multilevel, cross-sectional) largely supported the hypothesized mediation model. Specifically, WFC explains the association of JI with individual mental and physical health in both countries. Moreover, FWST exacerbates the direct relation of JI with WFC in the United States, but not in Italy. These findings suggest that the fear of losing one's job may prompt employee experiences of WFC and subsequent poorer physical and mental health; additionally, in the United States, this effect is even stronger among employees who reported higher levels of FWST. We interpret these heterogeneous findings in the light of nation-related factors in managing increasingly insecure employment markets, especially after the COVID-19 pandemic. Theoretical and practical implications are discussed for improving both health and work-life boundary management of post-pandemic workers.

Suur-Uski J, Fagerlund P, Granroth-Wilding H, Salonsalmi A, Rahkonen O, and Lallukka T. Dual trajectories of short-term and long-term sickness absence and their social- and health-related determinants among women in the public sector. *European Journal of Public Health*. 2024; 34(2):322-328.

<https://doi.org/10.1093/eurpub/ckae023> [open access]

Abstract: Background: Short- and long-term sickness absence (SA) vary in their determinants. We examined short- and long-term SA contemporaneously as two interconnected phenomena to characterize their temporal development, and to identify employees with increasing SA at an early stage. Methods: We extracted 46- to 55-year-old employed women from the Helsinki Health Study occupational cohort during 2000-17 (N = 3206) and examined the development of short- (1-14 days) and long-term (>14 days) SA using group-based dual trajectory modelling. In addition, we investigated the associations of social-, work- and health-related factors with trajectory group membership. Results: For short-term SA, we selected a three-group solution: 'no short-term SA' (50%), 'low frequency short-term SA' (40%), and 'high frequency short-term SA' (10%) (7 spells/year). For long-term SA, we also selected three trajectory groups: 'no long-term SA' (65%), 'low long-term SA' (27%), and 'high long-term SA' (8%). No SA in the short-term SA model, indicated a high probability of no SA in the long-term model and vice versa. The developmental pattern was far less certain if participant was assigned to a trajectory of high SA in either one of the models (short- or long-term SA model). Low occupational class and poor health behaviours were associated with the trajectory groups with more SA. Conclusion: SA does not increase with age among most employees. If either SA rate was high, the developmental patterns were heterogenous. Employers' attention to health behaviours might aid in reducing both short- and long-term SA.

Thern E, Elling DL, Badarin K, Hernando Rodriguez JC, and Bodin T. Precarious employment in young adulthood and later alcohol-related morbidity: a register-based cohort study. *Occupational & Environmental Medicine*. 2024; 81(4):201-208.

<https://doi.org/10.1136/oemed-2023-109315> [open access]

Abstract: Objectives: The prevalence of precarious employment is increasing, particularly among young adults where less is known about the long-term health consequences. The present study aims to test if being precariously employed in young adulthood is associated with an increased risk of alcohol-related morbidity later in life. Methods: A register-based cohort study was conducted in Sweden. The Swedish Work, Illness, and Labor-market Participation (SWIP) cohort was used to identify individuals who were aged 27 years between 2000 and 2003 (n=339 403). Information on labour market position (precarious employment, long-term unemployment, substandard employment and standard employment relations) was collected for young people 3 years after graduation from school using nationwide registers. Details about alcohol-related morbidity during a 28-year follow-up period were collected from the National Hospital Discharge Register. Data on sex, age, country of birth, education and previous poor health were also obtained from the registers. Results: Young adults in precarious employment had an increased risk of alcohol-related morbidity compared with individuals of the same age in standard employment (HR 1.43, 95% CI 1.32 to 1.55), after adjusting for several important covariates. A stronger association was found among young men who were precariously employed compared with young women. Conclusion: This nationwide register-based

study conducted in Sweden with a long-term follow-up suggests that being precariously employed in young adulthood is associated with an increased risk of alcohol-related morbidity later in life.

Thompson HM, Govindarajulu U, Doucette J, and Nabeel I. Short-acting opioid prescriptions and Workers' Compensation using the National Ambulatory Medical Care Survey. *American Journal of Industrial Medicine*. 2024; 67(5):474-482.

<https://doi.org/10.1002/ajim.23581>

Abstract: Background: Short-acting opioids have been utilized for pain management with little known about their use in patients on Workers' Compensation (WC) insurance. Our goal was to investigate this association in the ambulatory care setting. Methods: Using the National Ambulatory Medical Care Survey, visits from patients aged 18-64 during the years 2010 until 2018 were evaluated (excluding 2017 due to data availability). Demographic and co-morbidity data from each visit was obtained along with the visit year. The first short-acting opioid medication prescribed in the database was considered. Survey-weighted frequencies were evaluated. Logistic regression estimated the crude and adjusted odds ratios (OR) with 95% confidence intervals for the use of short-acting opioid prescription. Results: There were 155,947 included visits with 62.5% for female patients. Most patients were White with 11.7% identifying as Black, and 6% identifying as another race. Over 13% of the sample was of Hispanic descent. WC was the identified insurance type in 1.6% of the sample population. Of these patients, 25.6% were prescribed a short-acting opioid, compared with 10.1% of those with another identified insurance. On multivariable regression, Black patients had increased odds of being prescribed a short-acting opioid compared to white patients (OR: 1.22, 95% CI: 1.11-1.34). Those on WC had 1.7-fold higher odds of being prescribed short-acting opioids (95% CI: 1.46-2.06). Conclusion: Certain patient characteristics, including having WC insurance, increased the odds of a short-acting opioid prescription. Further work is needed to identify prescribing patterns in specific high-risk occupational groups, as well as to elicit potential associated health outcomes.

Wagner SL, White N, White M, Fyfe T, Matthews LR, Randall C, et al. Work outcomes in public safety personnel after potentially traumatic events: a systematic review. *American Journal of Industrial Medicine*. 2024; 67(5):387-441.

<https://doi.org/10.1002/ajim.23577>

Abstract: Background: It is well documented that public safety personnel are exposed to potentially traumatic events (PTEs) at elevated frequency and demonstrate higher prevalence of trauma-related symptoms compared to the general population. Lesser studied to date are the organizational consequences of workplace PTE exposure and associated mental health outcomes such as acute/posttraumatic stress disorder (ASD/PTSD), depression, and anxiety. Methods: The present review synthesizes international literature on work outcomes in public safety personnel (PSP) to explore whether and how PTE and trauma-related symptoms relate to workplace outcomes. A total of N = 55 eligible articles examining PTE or trauma-related symptoms in relation to work outcomes were systematically reviewed using best-evidence narrative synthesis. Results: Three primary work outcomes emerged across the literature: absenteeism, productivity/performance, and costs to organization. Across n = 21 studies of absenteeism, there was strong evidence that PTE or trauma-related symptoms are associated with increased sickness absence. N = 27 studies on productivity/performance demonstrated overall strong evidence of negative impacts in the workplace. N = 7 studies on cost to organizations demonstrated weak evidence that PTE exposure or

trauma-related mental health outcomes are associated with increased cost to organization.
Conclusions: Based on available evidence, the experience of workplace PTE or trauma-related symptoms is associated with negative impact on PSP occupational functioning, though important potential confounds (e.g., organizational strain and individual risk factors) remain to be more extensively investigated.

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