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**\*Furlan AD, Harbin S, Vieira FF, Irvin E, Severin CN, Nowrouzi-Kia B, Tiong M, et al. Primary care physicians' learning needs in returning ill or injured workers to work. A scoping review. *Journal of Occupational Rehabilitation*. 2022; [epub ahead of print].**

<https://doi.org/10.1007/s10926-022-10043-w>

**Abstract:** Primary care physicians are uniquely positioned to assist ill and injured workers to stay-at-work or to return-to-work. Purpose The purpose of this scoping review is to identify primary care physicians' learning needs in returning ill or injured workers to work and to identify gaps to guide future research. Methods We used established methodologies developed by Arksey and O'Malley, Cochrane and adapted by the Systematic Review Program at the Institute for Work & Health. We used Distiller SR©, an online systematic review software to screen for relevance and perform data extraction. We followed the PRISMA for Scoping Reviews checklist for reporting. Results We screened 2106 titles and abstracts, 375 full-text papers for relevance and included 44 studies for qualitative synthesis. The first learning need was related to administrative tasks. These included (1) appropriate record-keeping, (2) time management to review occupational information, (3) communication skills to provide clear, sufficient and relevant factual information, (4) coordination of services between different stakeholders, and (5) collaboration within teams and between different professions. The second learning need was related to attitudes and beliefs and included intrinsic biases, self-confidence, role clarity and culture of blaming the patient. The third learning need was related to specific knowledge and included work capacity assessments and needs for sick leave, environmental exposures, disclosure of information, prognosis of certain

conditions and care to certain groups such as adolescents and pregnant workers. The fourth learning need was related to awareness of services and tools. Conclusions There are many opportunities to improve medical education for physicians in training or in continuing medical education to improve care for workers with an illness or injury that affect their work

**\*Robson LS, Irvin E, Padkapayeva K, Begum M, and Zukowski M. A rapid review of systematic reviews on the effectiveness of synchronous online learning in an occupational context. American Journal of Industrial Medicine. 2022; [epub ahead of print].**

<https://doi.org/10.1002/ajim.23365>

Abstract: BACKGROUND: This study examined the effectiveness of synchronous online learning (SOL) for occupational purposes relative to face-to-face (F2F) learning. METHODS: Seven bibliographic databases were searched, and publications meeting the inclusion criteria were sought. Title and abstract screening, article screening, methodological quality assessment, and data extraction were carried out by two independent reviewers. RESULTS: Three systematic reviews meeting the inclusion criteria were consistent in providing evidence that there was generally no difference between SOL and F2F learning in their effects on knowledge or skills. CONCLUSIONS: Based on the sparse evidence base examined in this review, we conclude that SOL and traditional F2F learning for occupational or career preparation purposes are similarly effective for learners at the undergraduate level or higher. Much caution should be taken with this assumption when delivering content of a more hands-on nature and when adult learners have less educational preparation, since research is lacking in these areas

**Barnes LA, Eng A, Corbin M, Denison HJ, 't MA, Haslett S, et al. Ischaemic heart disease and occupational exposures: a longitudinal linkage study in the general and Māori populations of New Zealand. Annals of Work Exposures and Health. 2022; 66(4):433-446.**

<https://doi.org/10.1093/annweh/wxab087> [open access]

Abstract: OBJECTIVES: This study assessed associations between occupational exposures and ischaemic heart disease (IHD) for males and females in the general and Māori populations (indigenous people of New Zealand). METHODS: Two surveys of the general adult [New Zealand Workforce Survey (NZWS); 2004-2006; n = 3003] and Māori population (Māori NZWS; 2009-2010; n = 2107), with information on occupational exposures, were linked with administrative health data and followed-up until December 2018. Cox proportional hazards regression (adjusted for age, deprivation, and smoking) was used to assess associations between organizational factors, stress, and dust, chemical and physical exposures, and IHD. RESULTS: Dust [hazard ratio (HR) 1.6, 95%CI 1.1-2.4], smoke or fumes (HR 1.5, 1.0-2.3), and oils and solvents (HR 1.5, 1.0-2.3) were associated with IHD in NZWS males. A high frequency of awkward or tiring hand positions was associated with IHD in both males and females of the NZWS (HRs 1.8, 1.1-2.8 and 2.4, 1.1-5.0, respectively). Repetitive tasks and working at very high speed were associated with IHD among NZWS females (HRs 3.4, 1.1-10.4 and 2.6, 1.2-5.5, respectively). Māori NZWS females working with vibrating tools and those exposed to a

high frequency of loud noise were more likely to experience IHD (HRs 2.3, 1.1-4.8 and 2.1, 1.0-4.4, respectively). Exposure to multiple dust and chemical factors was associated with IHD in the NZWS males, as was exposure to multiple physical factors in males and females of the NZWS. CONCLUSIONS: Exposures associated with an elevated IHD risk included dust, smoke or fumes, oils and solvents, awkward grip or hand movements, carrying out repetitive tasks, working at very high speed, loud noise, and working with tools that vibrate. Results were not consistently observed for males and females and between the general and Māori populations

**Bohman T, Holm LW, Lekander M, Hallqvist J, and Skillgate E. Influence of work ability and smoking on the prognosis of long-duration activity-limiting neck/back pain: a cohort study of a Swedish working population. *BMJ Open*. 2022; 12(4):e054512.**

<https://doi.org/10.1136/bmjopen-2021-054512> [open access]

**Abstract:** Objectives: Long-duration activity-limiting neck/back pain is common, but the knowledge of what work and lifestyle factors that influence the prognosis is sparse. The objective was therefore to evaluate if two factors, good self-perceived work ability and no daily smoking, are associated with a favourable prognosis of long-duration activity-limiting neck/back pain in a working population, and if these exposures have a synergistic prognostic effect. Design: A prospective cohort study based on three subsamples from the Stockholm Public Health Cohort. Settings: A working population in Stockholm County, Sweden. Participants: Individuals, 18-61 years old, reporting long-duration activity-limiting neck/back pain the previous 6 months at baseline in 2010 (n=5177). Measures: The exposures were: self-perceived work ability (categorised into good, moderate and poor) and daily smoking (no/yes). The outcome in 2014 was 'absence of long-duration activity-limiting neck/back pain' the previous 6 months representing a favourable prognosis of reported problems at baseline in 2010. Risk ratios (RRs) and risk differences (RDs) with 95% CI was estimated by general linear regressions, and the synergistic effect was estimated by the synergy index (SI) with 95% CI. Results: Participants with moderate or good work ability, respectively, had an adjusted RR for a favourable prognosis of 1.37 (95% CI 1.11 to 1.69), and 1.80 (1.49 to 2.17) in comparison with participants with poor work ability. The corresponding adjusted RD were 0.07 (0.02 to 0.11) and 0.17 (0.12 to 0.22). Participants not smoking on daily basis had an adjusted RR of 1.21 (1.02 to 1.42), and an adjusted RD of 0.05 (0.01 to 0.10) for a favourable outcome compared with daily smokers. The adjusted SI was 0.92 (0.60 to 1.43). Conclusion: For participants with long-duration activity-limiting neck/back pain, moderate or good self-perceived work ability and not being a daily smoker were associated with a favourable prognosis but having both exposures seemed to have no synergistic prognostic effect.

**Cantonnet ML, Aldasoro JC, and Oyarbide IR. Well-Being through workplace health promotion interventions by European enterprises. *Safety Science*. 2022; 151:105736.**

<https://doi.org/10.1016/j.ssci.2022.105736> [open access]

Abstract: Well-being and in particular the differences that may exist in the adopted workplace interventions by European enterprises have not yet been addressed in depth by the literature. The objective of this article is to make a comparison between European enterprises in relation to workplace health promotion interventions (WHPI). Five WHPI have been studied: Healthy nutrition interventions, sports activities after working hours, back exercises at work, prevention of addictions and procedures to return to work after a long-term sickness. An exploratory and descriptive study was carried out. The sample was extracted from the ESENER-3 datasets (EU-OSHA, 2019). In total, 45,420 establishments were interviewed. Results show that, differences between countries in terms of the intensity and type of WHPI can be found. Factors that could help explain this heterogeneity could be, on the one hand, the sociocultural context of each country and on the other hand, work environment

**Fox KE, Johnson ST, Berkman LF, Sianoja M, Soh Y, Kubzansky LD, et al. Organisational- and group-level workplace interventions and their effect on multiple domains of worker well-being: a systematic review. *Work and Stress*. 2022; 36(1):30-59.**

<https://doi.org/10.1080/02678373.2021.1969476>

**He J, Hollander AC, and Rahman S. Association between migration status and subsequent labour market marginalisation among individuals with posttraumatic stress disorder: a Swedish nationwide register-based cohort study. *Social Psychiatry and Psychiatric Epidemiology*. 2022; 57(5):1073-1083.**

<https://doi.org/10.1007/s00127-022-02263-5> [open access]

Abstract: PURPOSE: The high prevalence of posttraumatic stress disorder (PTSD) among migrants in Europe is widely reported. Our research aimed to investigate the association between migration status and subsequent labour market marginalisation (LMM) events, i.e., long-term unemployment (LTU), long-term sickness absence (LTSA), and disability pension (DP) among individuals with PTSD, and to elucidate how the sociodemographic factors and the pre-existing health conditions influence such association. METHODS: We established a cohort of 36,714 individuals born between 1960 and 1995, living in Sweden during 2004-2009, aged 19 years or above, with PTSD diagnosis during 2006-2009. Migration status, categorized as refugees, non-refugees, second-generation migrants, and Swedish-born with Swedish-born parents (reference group) was considered as exposure and LMM events as outcome. The cohort was followed from 01-Jan-2010 until LMM, death, or end of follow-up (31-Dec-2016). Hazard ratios (HRs) with 95% confidence intervals (CIs) were estimated by Cox regression with a seven-year follow-up. RESULTS: Refugees (HR 2.07, 95% CI 1.86-2.30), and non-refugees (HR 1.96, 95% CI 1.85-2.07) had almost doubled relative risk of long-term unemployment, compared with the Swedish-born. The hazards of long-term sickness absence

were similar across the groups. Refugees (HR 1.49, 95% CI 1.24-1.77), and non-refugees (HR 1.42, 95% CI 1.30-1.56) also had elevated relative risk of disability pension, whereas second-generation migrants had moderately increased relative risks for all three labour market marginalisation events compared with the Swedish-born. CONCLUSION: Among the individuals with PTSD, being a migrant increases the risk of LMM, refugees being the foremost among migrants. Further research may benefit from including more recent migrant population, pre-migration information and measuring PTSD clinical severity

**Hergenroeder A, Quinn TD, Perdomo SJ, Kline CE, and Gibbs BB. Effect of a 6-month sedentary behavior reduction intervention on well-being and workplace health in desk workers with low back pain. *Work*. 2022; 71(4):1145-1155.**

<https://doi.org/10.3233/WOR-205178>

Abstract: Background: Research suggests reducing sedentary behavior improves low back pain; however, the impact on presenteeism, health, productivity, and sleep in desk workers with chronic low back pain is not known. Objective: Evaluate the effect of a sedentary behavior intervention on multiple dimensions of workplace health. Methods: 24 participants with chronic low back pain and desk jobs were randomized to either a sedentary behavior reduction intervention group or control. Outcomes included a modified Global Physical Activity Questionnaire (GPAQ), the Stanford Presenteeism Scale (SPS), Profile of Mood States (POMS), Health and Work Questionnaire (HWQ), SF-36 Health Survey (SF-36), and Pittsburgh Sleep Quality Index (PSQI). Six-month changes in outcomes were compared across intervention groups using ANCOVA regression, adjusting for baseline values. Cohen's d effect sizes were calculated for outcomes to explain the magnitude of group differences. Results: The intervention group reported 1.5 hours/day less sitting time ( $p < 0.001$ ) compared to controls at 6 months. SF-36 subscales of energy/fatigue, social functioning, and pain improved, and sleep disturbance was reduced among intervention participants. Productivity, concentration, and presenteeism were unchanged. Conclusions: A sedentary behavior reduction intervention may improve well-being and workplace health without impacting productivity and concentration in desk workers with chronic low back pain.

**Hubbell Z, Howard S, Golden A, Stange B, Cragle D, Dally M, et al. Factors linked to participant attrition in a longitudinal occupational health surveillance program. *American Journal of Industrial Medicine*. 2022; 65(6):431-446.**

<https://doi.org/10.1002/ajim.23357>

Abstract: BACKGROUND: For occupational medical screening programs focused on long-term health surveillance, participant attrition is a significant barrier to success. We investigate demographic, medical history, and clinical data from National Supplemental Screening Program (NSSP) examinees for association with likelihood of return for a second exam (rescreening). METHODS: A total of 15,733 individuals completed at least one NSSP exam before December 31, 2016; of those, 4832 also completed a second exam on or before December 31, 2019. Stepwise logistic regression models were used to identify variables

associated with whether a participant was rescreened in the NSSP. RESULTS: Individuals were less likely to return for rescreening if they had a history of any cancer; cardiovascular problems; diabetes or kidney disease; or if they used insulin. Age at time of first exam and job site category significantly influenced likelihood of return. Workers categorized as "guests" were more likely to return. Participants were less likely to return if they had an abnormal urinalysis, abnormal pulmonary function, pneumoconiosis, aortic atherosclerosis, or hearing loss at their initial exam. Participants who received a chest X-ray at their initial screening were more likely to return. CONCLUSIONS: The presence of health problems is strongly linked to screening program attrition. Participants who are older at the time of their initial screening exam are less likely to return. The discovery of several strong demographic, medical, and job associations reveals the importance for medical screening programs to understand and address factors that influence participant retention and, consequently, the effectiveness of long-term health surveillance activities

**Klugman M, Patil S, Gany F, and Blinder V. Vulnerabilities in workplace features for essential workers with breast cancer: implications for the COVID-19 pandemic. *Work*. 2022; 71(4):815-823.**

<https://doi.org/10.3233/WOR-211095>

Abstract: Background: The coronavirus pandemic has highlighted the health and financial vulnerabilities of essential workers, especially among women. Objective: The purpose of this study is to understand the workplace environment of essential workers. Methods: We used data from a prospective cohort study of disparities in employment outcomes among women undergoing breast cancer treatment between 2010-2018 in New York City. We characterized participants as essential or non-essential based on self-reported occupation/industry and New York State executive orders issued during the pandemic. We compared job benefits and perceptions of workplace environment between groups. Results: There were 563 participants: 341 essential and 222 non-essential workers. Essential workers less frequently reported access to disability pay through work [n(%): 148 (58) versus 130 (73),  $p < 0.01$ ]. Essential workers in unions had greater availability of sick leave and disability pay than non-unionized essential workers (86% versus 53%,  $p < 0.01$ , and 76% versus 46%,  $p < 0.01$ , respectively). Health insurance differed by essential worker status ( $p < 0.01$ ): essential workers more frequently had public insurance (29% versus 18%). Surprisingly, in multivariable analyses controlling for age, race/ethnicity, income, education, chemotherapy receipt, and comfort with English, essential workers were less likely to say their employer had treated them unfairly ( $p < 0.01$ ). However, minorities were less likely to say their employer was accommodating ( $p = 0.03$ ) and more likely to say their employer had treated them unfairly ( $p < 0.01$ ) than Non-Latina Whites. Conclusions: We identified vulnerabilities in workplace protections, particularly among essential workers not in unions. Minority women more often had negative perceptions of their work environment, possibly reflecting employer bias.



**Lee J and Lee B. Psychological workplace violence and health outcomes in South Korean nurses. *Workplace Health & Safety*. 2022; 70(5):228-234.**

<https://doi.org/10.1177/21650799211025997>

**Abstract:** BACKGROUND: Workplace violence (WPV) and its health consequences should continue to be investigated to foster a healthy and safe working environment, which may reduce nurse staff turnover and improve nurse staff shortages. This study aimed to address the gap in understanding WPV in non-western nurses by examining the relationship between psychological WPV experience, psychological well-being, subjective job stress, and presenteeism among South Korean nurses. METHODS: This cross-sectional study used data from the fifth Korean Working Conditions Survey (KWCS), and 477 nurses were analyzed. For the analysis, selected variables were extracted from the KWCS through a review of the existing literature. In the analysis, we included psychological WPV experiences, such as verbal abuse, unwanted sexual attention, threats, and/or humiliating behaviors over the past 1 month. We measured health outcomes including nurses' psychological well-being, subjective job stress, and presenteeism. FINDINGS: Psychological WPV within the previous month was experienced by 11.1% of the participants. Experience with verbal abuse, threats, or humiliating behaviors was associated with more job stress, higher presenteeism, and poor psychological well-being. CONCLUSION/APPLICATION TO PRACTICE: Study findings suggest that a comprehensive WPV prevention program accompanied by interventions aiming to reduce job stress and improve the well-being of nurses should be actively implemented. To prevent psychological WPV and improve the health of nurses, evidence-based efforts, such as establishment of WPV prevention procedures and education/training of workers at the national, organizational, and individual levels are needed

**Pomeranz JL, Silver D, Lieff SA, and Pagan JA. State paid sick leave and paid sick-leave preemption laws across 50 U.S. States, 2009-2020. *American Journal of Preventive Medicine*. 2022; 62(5):688-695.**

<https://doi.org/10.1016/j.amepre.2021.11.018>

**Abstract:** INTRODUCTION: Paid sick leave is associated with lower mortality risks and increased use of health services. Yet, the U.S. lacks a national law, and not all employers offer paid leave, especially to low-wage workers. States have enacted paid sick-leave laws or preemption laws that prohibit local governments from enacting paid sick-leave requirements. METHODS: In 2019 and 2021, state paid sick-leave laws and preemption laws in effect in 2009-2020 were retrieved from Lexis+, coded, and analyzed for coverage and other features. Data from the U.S. Bureau of Economic Analysis were used to estimate the jobs covered by state paid sick-leave laws in 2009-2019. RESULTS: In 2009, no state had a paid sick-leave law, and 1 state had preemption. By 2020, a total of 12 states had paid sick-leave laws, with a form of preemption (n=9) or no preemption (n=3), and 18 additional states solely preempted local laws without requiring coverage, creating a regulatory vacuum in those states. Although all state paid sick-leave laws covered private employers and required care for children and spouses, some laws exempted small or public employers or did not cover additional family

members. The percentage of U.S. jobs covered by state-required paid sick leave grew from 0% in 2009 to 27.6% in 2019. **CONCLUSIONS:** Variation in state paid sick-leave laws, preemption, and lack of employer provision of paid sick leave to low-wage workers creates substantial inequities nationally. The federal government should enact a national paid sick-leave law

**Shao Y, Hwang J, MacLehose RF, Alexander BH, Mandel JH, Raynor PC, et al. Reconstructing historical exposures to respirable dust and respirable silica in the taconite mining industry for 1955-2010. *Annals of Work Exposures and Health*. 2022; 66(4):459-471.**

<https://doi.org/10.1093/annweh/wxab099>

**Abstract:** The goal of this study was to reconstruct the historical respirable silica (RS) and respirable dust (RD) exposures of workers in the Minnesota taconite industry from 1955 to 2010 as part of several epidemiological studies for assessing the association between exposure to components of taconite dusts and the development of respiratory diseases. A job-exposure matrix (JEM) was developed that uses 9127 RS and 19 391 RD occupational hygiene historical measurements. Historical RS and RD data were extracted from several sources and were grouped into seven mines and then into eight departments [Concentrating, Crushing, Janitor, Mining, Office/control room, Pelletizing, Shop (mobile), and Shop (stationary)]. Within each department, we applied a two-level random-intercept regression model which assumes that the natural log of Y (RD or RS concentration) changes over time at a constant rate. Among all predicted RD and RS values, we found that larger RD values were located in the following departments: Crushing, Concentrating, Pelletizing, and Shop (mobile). Larger RS values were located only in either Crushing or Shop (mobile). The annual rates of change for historical RD and RS exposures were between -3.3 and 3.2%. The silica percentage in the dust varied by mine/department with the highest value of 29.3% in Mine F (Crushing) and the lowest value of 2.1% in Mine B (Pelletizing). The predicted historical RD and RS arithmetic mean exposures ranged between <0.075 and 3.14 mg m<sup>-3</sup>, and between <0.005 and 0.36 mg m<sup>-3</sup>, respectively. The result of this study is a JEM by mine, department, and year for RD and RS for epidemiological studies

**Shkempi A, Smith L, Roberts B, and Neitzel R. Fraction of acute work-related injuries attributable to hazardous occupational noise across the USA in 2019. *Occupational and Environmental Medicine*. 2022; 79(5):304-307.**

<https://doi.org/10.1136/oemed-2021-107906>

**Abstract:** Introduction: The contribution of hazardous noise—a ubiquitous exposure in workplaces—to occupational injury risk is often overlooked. In this ecological study, the fraction of US workplace acute injuries resulting in days away from work in 2019 attributable to hazardous occupational noise exposure was estimated. Methods: Using the NoiseJEM, a job exposure matrix of occupational noise, and 2019 Occupational Employment and Wage Statistics data, the proportion of workers experiencing hazardous occupational noise (=85 dBA) was estimated for every major US Standard Occupational Classification (SOC) group.



Population attributable fractions (PAFs) were calculated for each major SOC group using the relative risk (RR) taken from a published 2017 meta-analysis on this relationship. Results: About 20.3 million workers (13.8%) are exposed to hazardous levels of occupational noise. Nearly 3.4% of acute injuries resulting in days away from work in 2019 (95% CI 2.4% to 4.4%) were attributable to hazardous occupational noise, accounting for roughly 14 794 injuries (95% CI 10 367 to 18 994). The occupations with the highest and the lowest PAFs were production (11.9%) and office and administrative support (0.0%), respectively. Discussion: Hazardous noise exposure at work is an important and modifiable factor associated with a substantial acute occupational injury burden

**Sveinsdottir V, Johnsen TL, Fyhn T, Opsahl J, Tveito TH, Indahl A, et al. Development of the workplace inclusion questionnaire (WIQ). *Scandinavian Journal of Public Health*. 2022; 50(3):371-380.**

<https://doi.org/10.1177/1403494821990241> [open access]

**Abstract:** AIMS: To develop a questionnaire to examine attitudes among employees and managers to include people with various health problems into their work group, and to test the questionnaire in one relevant population within the labour market. **METHODS:** A questionnaire was developed through a process involving discussions in a scientific forum and pilot testing with group discussions. The final questionnaire, which was tested in a survey study of managers and employees in 33 Norwegian kindergartens (N=485), contained 10 short case stories followed by questions concerning workplace inclusion. The case stories described individuals with musculoskeletal and mental disorders, as well as individuals with potentially stigmatising behavioural history and lifestyle, and control cases. Risk ratios with 95% confidence intervals (CIs) were used to compare the case stories. Cases with high risk ratios had an increased risk of not being included compared to a control case. **RESULTS:** Attitudes for workplace inclusion varied between the different case stories. Cases portraying mental illness had the highest risk ratios, indicating that employees and managers are less likely to include people with mental illness than people with musculoskeletal illness. Furthermore, unspecific or chronic illness had higher risk ratios than specific and acute illness. The most important barriers also varied between case stories. **CONCLUSIONS:** The workplace inclusion questionnaire fulfills the need for a quantitative measure of attitudes to include individuals with various health problems into the workplace. Comparison of risk ratios showed clear differences between case stories, indicating that the workplace inclusion questionnaire is a valuable tool to measure the variance in workplace inclusion

**Yu Y, Lau MMC, and Lau JTF. Working from home and positive/negative experiences due to social distancing as interacting factors of depressive symptoms during the COVID-19 pandemic in a Chinese general population. *Social Psychiatry and Psychiatric Epidemiology*. 2022; 57(6):1235-1246.**

<https://doi.org/10.1007/s00127-021-02179-6> [open access]

**Abstract:** Purpose: This study investigated the associations between some factors related to working from home status (WFHS) and positive/negative experiences due to social distancing and their interactions effects on depressive symptoms during the COVID-19 pandemic. Methods: A random population-based telephone survey interviewed income-earning adults in the Hong Kong general population during April 21-28, 2020 (n = 200). Results: Mild to severe depression (according to PHQ-9) was reported by 12% of the participants. The prevalence of WFHS categories was 14% for 3-7 days and 13% for  $\geq 8$  days (past 2 weeks). The multivariable regression analysis showed that, social isolation ( $\beta = 0.36$ ;  $p < 0.001$ ), relaxation feeling in daily life ( $\beta = -0.22$ ;  $p = 0.002$ ), and WFHS  $\geq 8$  days ( $\beta = 0.15$ ;  $p = 0.027$ ), but not perceived huge inconvenience and improved family relationship, were associated with depressive symptoms. Statistically significant interaction effects were found. Some positive experiences buffered the potential harms of some negative experiences of social distancing on depressive symptoms; WFHS  $\geq 8$  days significantly moderated the risk/protective effects of social isolation, improved family relationship, and relaxation feeling on depressive symptoms. Conclusions: Social distancing is double-edged. Positive experiences should be maximized while negative experiences be minimized, as both were directly and interactively associated with depression. Intensive but not mild to moderate ( $< 80\%$ ) WFHS may impact depressive symptoms negatively via its direct association with depression; it also moderated the associations between positive/negative experiences due to social distancing and depression. Further research is required to discern the inter-relationships among WFHS, positive/negative experiences of social distancing, and depression to better cope with the stressful pandemic.

**Zack O, Melamed S, Silber H, Cinamon T, Levy D, and Moshe S. The effectiveness of case-management rehabilitation intervention in facilitating return to work and maintenance of employment after myocardial infarction: results of a randomized controlled trial. *Clinical Rehabilitation*. 2022; 36(6):753-766.**

<https://doi.org/10.1177/02692155221076826> [open access]

**Abstract:** Objective: To study the long-term effectiveness of case-management rehabilitation intervention on vocational reintegration of patients after myocardial infarction (MI). Design: Blinded simple randomization was used to construct an intervention and control groups that were followed up for two years. Subjects and setting: 151 patients, aged  $50.3 \pm 5.9$  years, who experienced uncomplicated MI and were enrolled in a cardiac rehabilitation program were recruited. Interventions: included an early referral to an occupational physician, tailoring an occupational rehabilitation program, based on individual patient needs,

coordination with relevant parties, psychosocial intervention, intensive follow-up sessions during a two-year follow-up. Main measures: Return to work within six months of hospitalization and maintenance of employment at one and two years of follow-up. Results: Return-to-work (RTW) rate in the intervention group was 89% and nearly all maintained employment at one year of follow-up (92%) and two years of follow-up (87%). Moreover, almost all of them returned to and maintained their previous jobs. The corresponding figures were: 98%, 94% and 98%, respectively. The figures for the RTW and employment maintenance for the control group were: 74%, 75%, and 72%, respectively. Only about 75%, in this group kept their previous job. The case-management intervention was associated with increased odds of maintaining employment at follow-up of one year (OR = 5.89, 95% CI 1.42-24.30) and two years (OR = 3.12, 95% CI 1.01-10.03). Conclusions: The extended case-management rehabilitation intervention had a substantial positive impact on both the RTW of MI patients and their maintenance of employment at one and two years of follow-up. Trial registration: This trial is registered at US National Institutes of Health #NCT04934735.

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