

IWH Research Alert
October 16, 2020

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***Pinsker EB, Sale JEM, Gignac MAM, Daniels TR, and Beaton DE. "I don't have to think about watching the ground": a qualitative study exploring the concept of vigilance as an important outcome for ankle reconstruction. *Arthritis Care and Research*. 2020; 72(10):1367-1373.**

<https://doi.org/10.1002/acr.24039>

Abstract: OBJECTIVE: To understand patients' experiences of ankle reconstruction for treatment of end-stage ankle osteoarthritis. METHODS: Individuals were recruited from a cohort of individuals who had undergone total ankle replacement or ankle fusion. English-speaking individuals who had surgery at least 1 year prior were invited to participate. Semistructured, face-to-face interviews relying on a phenomenological approach were conducted in a private hospital clinic room. RESULTS: A total of 25 adults (12 women, 13 men), ages 25-82 years, were interviewed for 1-2 hours. Participants commonly described a state of having to keep careful watch for potential environmental challenges. Vigilance was related to ongoing symptoms (i.e., pain, stiffness) and concerns regarding balance, stability, and potential damage to the fused ankle or implant. Vigilance was described along a continuum, with higher levels



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associated with stress and mental exhaustion. Vigilance affected participants' perception of their surgical outcome, with high vigilance levels linked to negative perceptions of outcome. The degree to which individuals perceived the need for vigilance was influenced by environmental factors like uneven ground or crowds. Contrary to descriptions of vigilance in the coping literature, vigilance related to ankle reconstruction constituted a situational, rather than dispositional, response. **CONCLUSION:** Vigilance and its associated burden are not captured by current instruments. The mental load and worry associated with vigilance was important to patients, distinct from related pain or functional status. Thus, reducing high levels of vigilance appears to be an appropriate target for patient-centered treatment outcomes. A thorough battery of outcome measures for ankle reconstruction should consider this domain

***Sears JM and Rundell SD. Development and testing of compatible diagnosis code lists for the Functional Comorbidity Index: International Classification of Diseases, Ninth Revision, Clinical Modification and International Classification of Diseases, 10th Revision, Clinical Modification. Medical Care. 2020; [epub ahead of print].**

<https://doi.org/10.1097/MLR.0000000000001420>

Abstract: **BACKGROUND:** The Functional Comorbidity Index (FCI) was developed for community-based adult populations, with function as the outcome. The original FCI was a survey tool, but several International Classification of Diseases (ICD) code lists-for calculating the FCI using administrative data-have been published. However, compatible International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and ICD-10-CM versions have not been available. **OBJECTIVE:** We developed ICD-9-CM and ICD-10-CM diagnosis code lists to optimize FCI concordance across ICD lexicons. **RESEARCH DESIGN:** We assessed concordance and frequency distributions across ICD lexicons for the FCI and individual comorbidities. We used length of stay and discharge disposition to assess continuity of FCI criterion validity across lexicons.

SUBJECTS: State Inpatient Databases from Arizona, Colorado, Michigan, New Jersey, New York, Utah, and Washington State (calendar year 2015) were obtained from the Healthcare Cost and Utilization Project. State Inpatient Databases contained ICD-9-CM



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diagnoses for the first 3 calendar quarters of 2015 and ICD-10-CM diagnoses for the fourth quarter of 2015. Inpatients under 18 years old were excluded. MEASURES: Length of stay and discharge disposition outcomes were assessed in separate regression models. Covariates included age, sex, state, ICD lexicon, and FCI/lexicon interaction. RESULTS: The FCI demonstrated stability across lexicons, despite small discrepancies in prevalence for individual comorbidities. Under ICD-9-CM, each additional comorbidity was associated with an 8.9% increase in mean length of stay and an 18.5% decrease in the odds of a routine discharge, compared with an 8.4% increase and 17.4% decrease, respectively, under ICD-10-CM. CONCLUSION: This study provides compatible ICD-9-CM and ICD-10-CM diagnosis code lists for the FCI

Bogges B and Pompeii L. Uninvestigated fatal workplace injuries in the United States. American Journal of Industrial Medicine. 2020; 63(11):1029-1037.

<https://doi.org/10.1002/ajim.23177>

Abstract: BACKGROUND: Approximately 5000 people are killed by an injury at work every year, but the U.S. Occupational Safety and Health Administration (OSHA) only investigates 25%-35% of these deaths. The aim of this study was to identify industry, geographic, and worker demographic disparities in the proportion of fatal workplace injuries that are investigated by OSHA. METHODS: This cross-sectional analysis drew from 2 years of public data (2014-2015) from the Census of Fatal Occupational Injuries and investigation data from OSHA. Differences by worker age and sex, geographic region, industry, and State Plan- versus Federal Plan-state were examined. RESULTS: Nationally, OSHA investigated about one in four (27.5%) of the 9657 fatal workplace injuries that occurred. Higher odds of uninvestigated fatalities were observed for female workers compared to male workers (odds ratio, 2.35; 95% confidence interval, 1.89, 2.93), for workers over age 65 compared to those aged 18-24 (3.05; 2.44, 3.82), for worker deaths occurring in State Plan states compared to Federal Plan states (1.64; 1.49, 1.79), among other differences. CONCLUSIONS: Although some of the disparities could be explained by OSHA jurisdiction restrictions, other areas of potential reform were identified, such as investigating a greater number of workplace violence deaths and increasing focus in



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industries with a low proportion of investigations but a high number of fatalities, such as transportation and warehousing. Consideration should be given to adapt policies, expand OSHA jurisdiction, and to increase OSHA resources for conducting both fatality investigations and proactive investigations that can identify and abate hazards before a worker is injured

Boman T, Kjellberg A, Danermark B, and Boman E. The need for support and adaptation in the workplace among persons with different types of disabilities and reduced work ability. Scandinavian Journal of Disability Research. 2020; 22(1):253-264.

<https://doi.org/10.16993/sjdr.672> [open access]

Abstract: This study aimed to examine support and adaptation needed by persons with four different types of disabilities, either at their workplace or in order to enter the labour market. A secondary analysis was conducted, based on the regular labour market survey (AKU), and an additional survey which included questions specifically posed to persons with disabilities. All participants had either partly or very reduced work ability. There was more need for adaptation than for support, independently of work ability and current employment status. Around 60% of respondents with a psychological disability reported a need for adapted work pace and working time, both at their workplace and in order to enter the labour market. Adapted work tasks were an important factor, especially for persons who were not currently working; around half of the non-employed participants said this adaptation could make it possible for them to work, regardless of type of disability.

Chicas R, Xiuhtecutli N, Dickman NE, Scammell ML, Steenland K, Hertzberg VS, et al. Cooling intervention studies among outdoor occupational groups: a review of the literature. American Journal of Industrial Medicine. 2020; 63(11):988-1007.

<https://doi.org/10.1002/ajim.23175>

Abstract: Background: The purpose of this systematic review is to examine cooling intervention research in outdoor occupations, evaluate the effectiveness of such interventions, and offer recommendations for future studies. This review focuses on outdoor occupational studies conducted at worksites or simulated



occupational tasks in climatic chambers. Methods: This systematic review was performed in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines. PubMed, Embase, and Web of Science were searched to identify original research on intervention studies published in peer-reviewed journals that aimed at reducing heat stress or heat-related illness from January 2000 to August 2020. Results: A systematic search yielded a total of 1042 articles, of which 21 met the inclusion criteria. Occupations with cooling intervention studies included agriculture (n = 5), construction (n = 5), industrial workers (n = 4), and firefighters (n = 7). The studies focused on multiple types of cooling interventions cooling gear (vest, bandanas, cooling shirts, or head-cooling gel pack), enhanced heat dissipation clothing, forearm or lower body immersion in cold water, water dousing, ingestion of a crushed ice slush drink, electrolyte liquid hydration, and modified Occupational Safety and Health Administration recommendations of drinking water and resting in the shade. Conclusion: Current evidence indicates that using multiple cooling gears along with rest cycles may be the most effective method to reduce heat-related illness. Occupational heat-related illnesses and death may be mitigated by targeted cooling intervention and workplace controls among workers of vulnerable occupational groups and industries.

Clay-Williams R, Taylor N, Ting HP, Arnold G, Winata T, and Braithwaite J. Do quality management systems influence clinical safety culture and leadership? A study in 32 Australian hospitals. International Journal for Quality in Health Care. 2020; 32(Supplement 1):60-66.

<https://doi.org/10.1093/intqhc/mzz107>

Abstract: OBJECTIVE: This study aimed to explore the associations between the organization-level quality arrangements, improvement and implementation and department-level safety culture and leadership measures across 32 large Australian hospitals. DESIGN: Quantitative observational study, using linear and multi-level modelling to identify relationships between quality management systems and clinician safety culture and leadership. SETTING: Thirty-two large Australian public hospitals. PARTICIPANTS: Quality audit at organization level, senior quality manager at each participating hospital, 1382 clinicians (doctors, nurses and allied health



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professionals). MAIN OUTCOME MEASURES: Associations between organization-level quality measures and department-level clinician measures of teamwork climate, safety climate and leadership for acute myocardial infarction (AMI), hip fracture and stroke treatment conditions. RESULTS: We received 1332 valid responses from participants. The quality management systems index (QMSI, a questionnaire-based measure of the hospitals' quality management structures) was 'positively' associated with all three department-level scales in the stroke department, with safety culture and leadership in the emergency department, but with none of the three scales in the AMI and hip fracture departments. The quality management compliance index (QMCI, an external audit-based measure of the quality improvement activities) was 'negatively' associated with teamwork climate and safety climate in AMI departments, after controlling for QMSI, but not in other departments. There was no association between QMCI and leadership in any department, after controlling for QMSI, and there was no association between the clinical quality implementation index (CQII, an external audit-based measure of the level of implementation of quality activities) and any of the three department-level scales in any of the four departments, after controlling for both QMSI and QMCI. CONCLUSIONS: The influence of organization-level quality management systems on clinician safety culture and leadership varied depending on the hospital department, suggesting that whilst there was some consistency on patient safety attitudes and behaviours throughout the organizations, there were also other factors at play

Fontana M, McCauley L, Fitzgerald M, Eckert GJ, Yanca E, and Eber R. Impact of COVID-19 on life experiences of essential workers attending a dental testing facility. JDR Clinical and Translational Research. 2020; [epub ahead of print].

<https://doi.org/10.1177/2380084420962399> [open access]

Abstract: OBJECTIVES: 1) To compare the impact of COVID-19 on the life experiences of essential workers attending a COVID-19 antibody testing clinic at a dental school. 2) To compare responses of dental, non-dental health care, and non-health care essential workers. 3) To assess acceptability/satisfaction of testing done in a dental setting. METHOD: A total of 984 participants completed a self-administered online questionnaire. RESULTS: Over 90% were



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healthy (i.e., not in a high-risk health-related group for COVID-19), did not have COVID-19 symptoms within 30 d, and always/frequently engaged in preventive measures. Fifty-eight percent thought that they had a 0% to 25% chance of having immunity/antibodies to COVID-19. Non-dental health care workers thought that their chance was significantly higher ($P < 0.05$) than others. Over 70% were sometimes, frequently, or always worried about their friends and loved ones getting COVID-19 and of resulting financial problems. Dental workers were significantly less afraid than non-dental health care and non-health care providers. For all groups, more than half of the respondents stated that the pandemic had a negative (somewhat worse or worse) impact on daily life (59%), interactions with others (65%), stress levels (66%), and enjoyment of life (56%). There were significant differences among all 3 groups regarding the percentage of individuals with a negative impact on job security (dental, 47%; non-dental health care, 34%; non-health care, 31%). However, more than half of the respondents stated that the pandemic had a positive impact (same, somewhat better, or much better) on caring about one another, self-care, and exercise. Knowing the results of an antibody test would decrease the level of stress and anxiety in 67% of respondents. Over 80% found a COVID-19 test received in a dental setting acceptable, were "definitely" satisfied, and would "definitely" recommend it to a friend, family, or coworker. CONCLUSIONS: These findings support that dental workers are as vulnerable as other essential workers to threats and psychological impacts of COVID-19. They also support the acceptability and satisfaction of testing for a pandemic done in a dental setting. KNOWLEDGE TRANSFER STATEMENT: The results of this study highlight the impact that pandemics such as COVID-19 can have on life experiences of essential workers, including dentists. It also highlights a role that dentistry can play within the broader health care system, during and beyond the current pandemic, to help with surveillance efforts of community health. Testing may also help alleviate stress and anxiety associated with these pandemics

Haddaway NR, Akl EA, Page MJ, Welch VA, Keenan C, and Lotfi T. Open synthesis and the coronavirus pandemic in 2020. Journal of Clinical Epidemiology. 2020; 126(184-191. <https://doi.org/10.1016/j.jclinepi.2020.06.032> [open access]



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Abstract: Open Science principles are vital for ensuring reproducibility, trust, and legacy.

Evidence synthesis is a vital means of summarizing research for decision-making.

Open Synthesis is the application of Open Science principles to evidence synthesis.

Open approaches to planning, conducting, and reporting synthesis have many benefits.

We call on the evidence synthesis community to embrace Open Synthesis.

Howard J and Osborne J. Cannabis and work: need for more research. American Journal of Industrial Medicine. 2020; 63(11):963-972.

<https://doi.org/10.1002/ajim.23170>

Abstract: Cannabis sativa is one of the oldest and most widely used plants in the world with a variety of industrial, medical, and nonmedical applications. Despite its long history, cannabis-derived products remain a source of controversy across the fields of medicine, law, and occupational safety and health. More favorable public attitudes about cannabis in the US have resulted in greater access to cannabis through legalization by states, leading to more consumption by workers. As more states adopt cannabis access laws, and as more workers choose to consume cannabis products, the implications for existing workplace policies, programs, and practices become more salient. Past workplace practices were grounded in a time when cannabis consumption was always viewed as problematic, considered a moral failing, and was universally illegal. Shifting cultural views and the changing legal status of cannabis indicate a need for research into the implications and challenges relating to cannabis and work. This commentary suggests research needs in the following areas: (a) data about industries and occupations where cannabis consumption among workers is most prevalent; (b) adverse health consequences of cannabis consumption among workers; (c) workplace supported recovery programs; (d) hazards to workers in the emerging cannabis industry; (e) relationship between cannabis consumption and occupational injuries; (f) ways to assess performance deficits and impairment from cannabis consumption; (g) consumption of synthetic cannabinoids to evade



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detection by drug testing; (h) cannabis consumption and its effect on occupational driving; and (i) ways to craft workplace policies and practices that take into consideration conflicting state and federal laws pertaining to cannabis

Mehri A, Letafatkar A, and Khosrokiani Z. Effects of corrective exercises on posture, pain, and muscle activation of patients with chronic neck pain exposed to anterior-posterior perturbation. Journal of Manipulative and Physiological Therapeutics. 2020; 43(4):311-324.

<https://doi.org/10.1016/j.jmpt.2018.11.032>

Abstract: Objectives: This study aimed to evaluate the effects of corrective exercises on posture, pain, and muscle activation of patients with chronic neck pain exposed to anterior-posterior perturbation. Methods: A total of 32 women (37.76 ± 3.83 years) with chronic, nonspecific neck pain were randomized into corrective exercise and control groups. The experimental group underwent a corrective exercise program for 8 weeks, 30 min/d, 3 days per week. The control group received active self-exercise instructions. Neck pain, forward head and protracted shoulder posture, and timing of superficial neck muscle activation were evaluated using the visual analog scale, photogrammetry, and electromyogram, respectively, before and then 48 hours after the 8-week program for both the experimental and control groups. All measurements at pretest and posttest were taken by a blinded assessor. Results: Significant alterations were observed in cervical angle ($P = .003$, effect size = 0.329), shoulder angle ($P = .008$, effect size = 0.457), neck pain and disability ($P = .009$, effect size = 0.645), movement control ($P = .038$, effect size = 0.353), activation onset of the upper trapezius ($P = .015$, effect size = 0.746), the sternocleidomastoid ($P = .018$, effect size = 0.879) and cervical erector spinae ($P = .031$, effect size = 0.765), and the root mean square of the upper trapezius ($P = .033$, effect size = 0.742), the sternocleidomastoid ($P = .041$, effect size = 0.587), and the cervical erector spinae ($P = .024$, effect size = 0.832) in the intervention group from pre- to posttest ($P < .05$). Conclusion: Positive and significant alterations have been observed in the forward head and protracted shoulder posture, the timing of superficial neck muscle activation, neck pain, and disability in female patients with



chronic neck pain exposed to anterior-posterior perturbation after performing an 8-week corrective exercise program.

Nguyen TL, Baker KS, Ioannou L, Hassani-Mahmooei B, Gibson SJ, Collie A, et al. Prognostic role of demographic, injury and claim factors in disabling pain and mental health conditions 12 months after compensable injury. International Journal of Environmental Research and Public Health. 2020; 17(19):E7320. <https://doi.org/10.3390/ijerph17197320> [open access]

Abstract: Identifying who might develop disabling pain or poor mental health after injury is a high priority so that healthcare providers can provide targeted preventive interventions. This retrospective cohort study aimed to identify predictors of disabling pain or probable mental health conditions at 12 months post-injury. Participants were recruited 12-months after admission to a major trauma service for a compensable transport or workplace injury (n = 157). Injury, compensation claim, health services and medication information were obtained from the Victorian Orthopaedic Trauma Outcome Registry, Victorian State Trauma Registry and Compensation Research Database. Participants completed questionnaires about pain, and mental health (anxiety, depression, posttraumatic stress disorder) at 12 months post-injury. One third had disabling pain, one third had at least one probable mental health condition and more than one in five had both disabling pain and a mental health condition at 12 months post-injury. Multivariable logistic regression found mental health treatment 3-6 months post-injury, persistent work disability and opioid use at 6-12 months predicted disabling pain at 12 months post-injury. The presence of opioid use at 3-6 months, work disability and psychotropic medications at 6-12 months predicted a mental health condition at 12 months post-injury. These factors could be used to identify at risk of developing disabling pain who could benefit from timely interventions to better manage both pain and mental health post-injury. Implications for healthcare and compensation system are discussed

Petrof O, Neyens T, Nuyts V, Nackaerts K, Nemery B, and Faes C. On the impact of residential history in the spatial analysis of diseases with a long latency period: a study of mesothelioma in Belgium. Statistics in Medicine. 2020; 39(26):3840-3866.



<https://doi.org/10.1002/sim.8697>

Abstract: Mesothelioma is a rare cancer caused by exposure to asbestos. Belgium has a known long history of asbestos production, resulting in one of the highest mesothelioma mortality rates worldwide. While the production of asbestos has stopped completely, the long latency period of mesothelioma, which can fluctuate between 20 and 40 years after exposure, causes incidences still to be frequent. Mesothelioma's long incubation time affects our assessment of its geographical distribution as well. Since patients' residential locations are likely to change a number of times throughout their lives, the location where the patients develop the disease is often far from the location where they were exposed to asbestos. Using the residential history of patients, we propose the use of a convolution multiple membership model (MMM), which includes both a spatial conditional autoregressive and an unstructured random effect. Pancreatic cancer patients are used as a control population, reflecting the population at risk for mesothelioma. Results show the impact of the residential mobility on the geographical risk estimation, as well as the importance of acknowledging the latency period of a disease. A simulation study was conducted to investigate the properties of the convolution MMM. The robustness of the results for the convolution MMM is assessed via a sensitivity analysis

Salonen L, Alexanderson K, Rugulies R, Framke E, Niemela M, and Farrants K. Combinations of job demands and job control and future trajectories of sickness absence and disability pension an 11-year follow-up of two million employees in Sweden. Journal of Occupational & Environmental Medicine. 2020; 62(10):795-802.

<https://doi.org/10.1097/JOM.0000000000001919>

Abstract: Objective: The aim of this study was to examine the association between combinations of job demands/control and future sickness absence (SA) and disability pension (DP) trajectories over 11 years. Methods: A population-based prospective cohort study of female (n = 1,079,631) and male (n = 1,107,999) employees in 2001. With group-based trajectory analysis, we modeled the trajectories of annual mean SA/DP days in 2002 to 2012. We predicted trajectory memberships for job demands/control using multinomial regression.



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Results: We found three SA/DP trajectories for women (low stable, medium stable, and high increasing) and two for men (low stable and high increasing). Low demands/low control in women [odds ratio (OR) 1.42; 95% confidence interval (95% CI) 1.38 to 1.45], and low demands and medium/high control in men (equal OR of 1.23; 95% CI 1.18 to 1.28) were strongly associated with high increasing trajectory. Conclusion: The associations between job demands/control varied between SA/DP trajectories and between sexes.

Schulte PA, Streit JMK, Sheriff F, Delclos G, Felknor SA, Tamers SL, et al. Potential scenarios and hazards in the work of the future: a systematic review of the peer-reviewed and gray literatures. *Annals of Work Exposures and Health*. 2020; 64(8):786-816.

<https://doi.org/10.1093/annweh/wxaa051> [open access]

Abstract: It would be useful for researchers, practitioners, and decision-makers to anticipate the hazards that workers will face in the future. The focus of this study is a systematic review of published information to identify and characterize scenarios and hazards in the future of work. Eleven bibliographic databases were systematically searched for papers and reports published from 1999 to 2019 that described future of work scenarios or identified future work-related hazards. To compile a comprehensive collection of views of the future, supplemental and ad hoc searches were also performed. After screening all search records against a set of predetermined criteria, the review yielded 36 references (17 peer-reviewed, 4 gray, and 15 supplemental) containing scenarios. In these, the future of work was described along multiple conceptual axes (e.g. labor market changes, societal values, and manual versus cognitive work). Technology was identified as the primary driver of the future of work in most scenarios, and there were divergent views in the literature as to whether technology will create more or fewer jobs than it displaces. Workforce demographics, globalization, climate change, economic conditions, and urbanization were also mentioned as influential factors. Other important themes included human enhancement, social isolation, loneliness, worker monitoring, advanced manufacturing, hazardous exposures, sustainability, biotechnology, and synthetic biology. Pandemics have not been widely considered in the future of work literature, but the recent COVID-19 pandemic illustrates that was



short-sighted. Pandemics may accelerate future of work trends and merit critical consideration in scenario development. Many scenarios described 'new' or 'exacerbated' psychosocial hazards of work, whereas comparatively fewer discussed physical, chemical, or biological hazards. Various preventive recommendations were identified. In particular, reducing stress associated with precarious work and its requirements of continual skill preparation and training was acknowledged as critical for protecting and promoting the health and well-being of the future workforce. In conclusion, the future of work will be comprised of diverse complex scenarios and a mosaic of old and new hazards. These findings may serve as the basis for considering how to shape the future of work

Southwick JD and Grizzell ST. Utilizing the ICF to enable evidence-based practice among vocational rehabilitation counselors. *Rehabilitation Counseling Bulletin*. 2020; 64(1):17-30.

<https://doi.org/10.1177/0034355220910782>

Sritharan J, Luo Y, and Harris MA. Trends in participation rates in case-control studies of occupational risk factors 1991-2017. *Occupational & Environmental Medicine*. 2020; 77(10):659-665.

<https://doi.org/10.1136/oemed-2019-106200>

Abstract: Objective: Declining participation has been observed in previous epidemiological studies, could occupational risk factor epidemiology be particularly vulnerable to this trend? The objective of this study was to assess trends of participation rates in occupational case-control studies. Methods: Five prominent occupational and epidemiological journals were pre-selected and all articles published between 1991 and 2017 were screened for case-control studies of occupational risk factors for chronic disease outcomes. The primary independent variable was median year of data collection, while the primary outcome variable was reported participation rate. We conducted linear regression, adjusting for study characteristics that included study gender mix, location of recruitment, disease outcome, and data collection method. Results: A total of 180 studies published in the five journals were included in the final analysis. The mean participation was higher for cases (78.9%) than for controls (71.5%). In linear regression, a significant trend of decreasing participation



was observed for both cases with a percent change of -0.50 per year (95% CI -0.75 to -0.25) for cases and a percent change of -0.95 per year (95% CI -1.23 to -0.67) for controls. After adjustment for study gender mix, location, disease outcome, and data collection method, the trend remained statistically significant for both case and control groups. Conclusion: Declining participation rates in case-control studies of occupational risk factors may reflect an overall decline of participation in population-based samples. Lower participation rates introduce the potential for bias and may deter future population-based studies of occupational risk factors.

Tas B. Demographic and clinical features and subsectoral differences in occupational contact allergens in clothing manufacturing workers. American Journal of Industrial Medicine. 2020; 63(11):1008-1016.

<https://doi.org/10.1002/ajim.23178>

Abstract: BACKGROUND: Epidemiologic data on the occurrence of contact dermatitis (CD) and the contact allergens involved in clothing manufacturing and its subsectors are scarce. This study aimed to determine the extent of occupational contact allergy and differences between work subsectors in clothing employees with CD. METHODS: A cross-sectional study was conducted with 272 clothing employees, who complained of CD and were diagnosed with occupational allergic contact dermatitis (OACD). Participants worked in accessory, dyeing, sewing, cutting, knitting, packing, cleaning, and ironing subsectors. Data on demographics, working-subsector, working-duration, and lesion-duration were collected, and participants were examined and patch tested. RESULTS: Participants included 173 females and 99 males. Dyeing workers were most frequently diagnosed with OACD, whereas cutting workers were least. Lesions were mostly located on the hands only. The most frequently detected allergens were nickel sulfate in accessory work; disperse blue-106 in dyeing, sewing, cutting, and knitting; cobalt chloride in packing; p-phenylenediamine in cleaning; and budesonide in ironing. CONCLUSIONS: Contact allergens show significant differences in frequency by work subsectors in clothing employees. Careful monitoring of workers for excessive exposures and for early signs of CD is warranted



Umar T. Safety climate factors in construction: a literature. Policy and Practice in Health and Safety. 2020; 18(2):80-99.
<https://doi.org/10.1080/14773996.2020.1777799>

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