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***Andersen KM, Cheah JTL, March L, Bartlett SJ, Beaton D, Bingham CO, III, et al. Improving benefit-harm assessment of therapies from the patient perspective: OMERACT premeeting toward consensus on core sets for randomized controlled trials. *Journal of Rheumatology*. 2019; [epub ahead of print].**

<https://doi.org/10.3899/jrheum.181123>

Abstract: OBJECTIVE: Outcome Measures in Rheumatology (OMERACT) convened a premeeting in 2018 to bring together patients, regulators, researchers, clinicians, and consumers to build upon previous OMERACT drug safety work, with patients fully engaged throughout all phases. METHODS: Day 1 included a brief introduction to the history of OMERACT and methodology, and an overview of current efforts within and outside OMERACT to identify patient-reported medication safety concerns. On Day 2, two working groups presented results; after each, breakout groups were assembled to discuss findings. RESULTS: Five themes pertaining to drug safety measurement emerged. CONCLUSION: Current approaches have failed to include data from the patient's perspective. A better understanding of how individuals with rheumatic diseases view potential benefits and harms of therapies is essential

***Boers M, Beaton DE, Shea BJ, Maxwell LJ, Bartlett SJ, Bingham CO, III, et al. OMERACT filter 2.1: elaboration of the conceptual framework for outcome measurement in health intervention studies. *Journal of Rheumatology*. 2019; [epub ahead of print].**

<https://doi.org/10.3899/jrheum.181096>

Abstract: OBJECTIVE: The Outcome Measures in Rheumatology (OMERACT) Filter 2.0 framework was developed in 2014 to aid core outcome set

development by describing the full universe of "measurable aspects of health conditions" from which core domains can be selected. This paper provides elaborations and updated concepts (OMERACT Filter 2.1). METHODS: At OMERACT 2018, we discussed challenges in the framework application caused by unclear or ambiguous wording and terms and incompletely developed concepts. RESULTS: The updated OMERACT Filter 2.1 framework makes benefits and harms explicit, clarifies concepts, and improves naming of various terms. CONCLUSION: We expect that the Filter 2.1 framework will improve the process of core set development

***Humphrey-Murto S, Crew R, Shea B, Bartlett SJ, March L, Tugwell P, Maxwell LJ, Beaton D, et al. Consensus building in OMERACT: recommendations for use of the Delphi for core outcome set development. Journal of Rheumatology. 2019; [epub ahead of print].**

<https://doi.org/10.3899/jrheum.181094>

Abstract: OBJECTIVE: Developing international consensus on outcome measures for clinical trials is challenging. The following paper will review consensus building in Outcome Measures in Rheumatology (OMERACT), with a focus on the Delphi. METHODS: Based on the literature and feedback from delegates at OMERACT 2018, a set of recommendations is provided in the form of the OMERACT Delphi Consensus Checklist. RESULTS: The OMERACT delegates generally supported the use of the checklist as a guide. The checklist provides guidance for clearly outlining the multiple aspects of the Delphi process. CONCLUSION: OMERACT is deeply committed to consensus building and these recommendations should be considered a work in progress

Aryal A, Parish M, and Rohlman DS. Generalizability of Total Worker Health online training for young workers. International Journal of Environmental Research and Public Health. 2019; 16(4):E577.

<https://doi.org/10.3390/ijerph16040577> [open access]

Abstract: Young workers (under 25-years-old) are at risk of workplace injuries due to inexperience, high-risk health behaviors, and a lack of knowledge about workplace hazards. Training based on Total Worker Health((R)) (TWH) principles can improve their knowledge of and ability to identify hazards associated with work organization and environment. In this study, we assessed changes to knowledge and behavior following an online safety and health training between two groups by collecting information on the demographic characteristics, knowledge, and self-reported behaviors of workplace health and safety at three different points in time. The participants' age ranged from 15 to 24 years. Age adjusted results exhibited a significant increase in knowledge immediately after completing the training, although knowledge decreased in both groups in the follow-up. Amazon Marketplace Mechanical Turk (MTurk) participants demonstrated a greater increase in knowledge, with a significantly higher score compared to the baseline, indicating retention of knowledge three months after completing the training. The majority of participants in both groups reported that

they liked the Promoting U through Safety and Health (PUSH) training for improving health and safety and that the training should be provided before starting a job. Participants also said that the training was interactive, informative and humorous. The participants reported that the PUSH training prepared them to identify and control hazards in their workplace and to communicate well with the supervisors and coworkers about their rights. Training programs based on TWH improves the safety, health and well-being of young workers

Boehnke KF, Gangopadhyay S, Clauw DJ, and Haffajee RL. Qualifying conditions of medical cannabis license holders in the United States. Health Affairs. 2019; 38(2):295-302.

<https://doi.org/10.1377/hlthaff.2018.05266>

Abstract: The evidence for cannabis's treatment efficacy across different conditions varies widely, and comprehensive data on the conditions for which people use cannabis are lacking. We analyzed state registry data to provide nationwide estimates characterizing the qualifying conditions for which patients are licensed to use cannabis medically. We also compared the prevalence of medical cannabis qualifying conditions to recent evidence from the National Academies of Sciences, Engineering, and Medicine report on cannabis's efficacy in treating each condition. Twenty states and the District of Columbia had available registry data on patient numbers, and fifteen states had data on patient-reported qualifying conditions. Chronic pain is currently and historically the most common qualifying condition reported by medical cannabis patients (64.9 percent in 2016). Of all patient-reported qualifying conditions, 85.5 percent had either substantial or conclusive evidence of therapeutic efficacy. As medical cannabis use continues to increase, creating a nationwide patient registry would facilitate better understanding of trends in use and of its potential effectiveness

Charalampous M, Grant CA, Tramontano C, and Michailidis E. Systematically reviewing remote e-workers' well-being at work: a multidimensional approach. European Journal of Work and Organizational Psychology. 2019; 28(1):51-73.

<https://doi.org/10.1080/1359432X.2018.1541886>

Cheng WJ, Pien LC, and Cheng Y. Differential effects of employment grade on the association between long working hours and problem drinking. American Journal of Industrial Medicine. 2019; [epub ahead of print].

<https://doi.org/10.1002/ajim.22962>

Abstract: OBJECTIVE: To examine the association between working hours and problem drinking in employees from different employment grades. METHODS: We used data from a national survey of randomly sampled Taiwanese workers. A total score of 2 or more on the Cut down, Annoyed, Guilty, and Eye-Opener (CAGE) questionnaire was used to identify problem drinkers. Weekly working hours were categorized into five groups: <40, 40, 41-48, 49-59, and >=60. Employees were classified into three employment grades: managers and professionals, skilled workers, and low-skilled workers. The associations

between working hours and problem drinking in employees from different employment grades were examined by logistic regression models. RESULTS: In skilled workers, problem drinking was associated with <40 and 41-48 working hours, but not with >48 working hours. In low-skilled workers, problem drinking was most strongly associated with 49-59 working hours. CONCLUSION: The association between working hours and problem drinking was not linear and differed with employment grades

Descatha A, Sembajwe G, Baer M, Boccuni F, Di Tecco C, Duret C, et al. WHO/ILO work-related burden of disease and injury: protocol for systematic reviews of exposure to long working hours and of the effect of exposure to long working hours on stroke. Environment International. 2018; 119:366-378.

<https://doi.org/10.1016/j.envint.2018.06.016>

Abstract: BACKGROUND: The World Health Organization (WHO) and the International Labour Organization (ILO) are developing a joint methodology for estimating the national and global work-related burden of disease and injury (WHO/ILO joint methodology), with contributions from a large network of experts. In this paper, we present the protocol for two systematic reviews of parameters for estimating the number of deaths and disability-adjusted life years from stroke attributable to exposure to long working hours, to inform the development of the WHO/ILO joint methodology. OBJECTIVES: We aim to systematically review studies on occupational exposure to long working hours (called Systematic Review 1 in the protocol) and systematically review and meta-analyse estimates of the effect of long working hours on stroke (called Systematic Review 2), applying the Navigation Guide systematic review methodology as an organizing framework, conducting both systematic reviews in tandem and in a harmonized way. DATA SOURCES: Separately for Systematic Reviews 1 and 2, we will search electronic academic databases for potentially relevant records from published and unpublished studies, including Medline, EMBASE, Web of Science, CISDOC and PsychINFO. We will also search electronic grey literature databases, Internet search engines and organizational websites; hand-search reference list of previous systematic reviews and included study records; and consult additional experts. STUDY ELIGIBILITY AND CRITERIA: We will include working-age (≥ 15 years) workers in the formal and informal economy in any WHO and/or ILO Member State, but exclude children (< 15 years) and unpaid domestic workers. For Systematic Review 1, we will include quantitative prevalence studies of relevant levels of occupational exposure to long working hours (i.e. 35-40, 41-48, 49-54 and ≥ 55 h/week) stratified by country, sex, age and industrial sector or occupation, in the years 2005-2018. For Systematic Review 2, we will include randomized controlled trials, cohort studies, case-control studies and other non-randomized intervention studies with an estimate of the relative effect of a relevant level of long working hours on the incidence of or mortality due to stroke, compared with the theoretical minimum risk exposure level (i.e. 35-40 h/week). STUDY APPRAISAL AND SYNTHESIS METHODS: At

least two review authors will independently screen titles and abstracts against the eligibility criteria at a first stage and full texts of potentially eligible records at a second stage, followed by extraction of data from qualifying studies. At least two review authors will assess risk of bias and the quality of evidence, using the most suited tools currently available. For Systematic Review 2, if feasible, we will combine relative risks using meta-analysis. We will report results using the guidelines for accurate and transparent health estimates reporting (GATHER) for Systematic Review 1 and the preferred reporting items for systematic reviews and meta-analyses guidelines (PRISMA) for Systematic Review 2. PROSPERO registration number: CRD42017060124

Other Articles in the Special Issue

Hulshof CTJ, Colosio C, Daams JG, Ivanov ID, Prakash KC, Kuijer PPFM, et al. WHO/ILO work-related burden of disease and injury: protocol for systematic reviews of exposure to occupational ergonomic risk factors and of the effect of exposure to occupational ergonomic risk factors on osteoarthritis of hip or knee and selected other musculoskeletal diseases. *Environment International*. 2019; 125:554-566.

<https://doi.org/10.1016/j.envint.2018.09.053> [open access]

Abstract: BACKGROUND: The World Health Organization (WHO) and the International Labour Organization (ILO) are developing a joint methodology for estimating the national and global work-related burden of disease and injury (WHO/ILO joint methodology), with contributions from a large network of experts. In this paper, we present the protocol for two systematic reviews of parameters for estimating the number of disability-adjusted life years from osteoarthritis of hip or knee, and selected other musculoskeletal diseases respectively, attributable to exposure to occupational ergonomic risk factors to inform the development of the WHO/ILO joint methodology. OBJECTIVES: We aim to systematically review studies on exposure to occupational ergonomic risk factors (Systematic Review 1) and systematically review and meta-analyze estimates of the effect of exposure to occupational ergonomic risk factors on osteoarthritis of the hip or knee, and selected other musculoskeletal diseases respectively (Systematic Review 2), applying the Navigation Guide systematic review methodology as an organizing framework, conducting both systematic reviews in tandem and in a harmonized way. DATA SOURCES: Separately for Systematic Reviews 1 and 2, we will search electronic academic databases for potentially relevant records from published and unpublished studies, including Medline, EMBASE, Web of Science and CISDOC. We will also search electronic grey literature databases, Internet search engines and organizational websites; hand-search reference lists of previous systematic reviews and included study records; and consult additional experts. STUDY ELIGIBILITY AND



CRITERIA: We will include working-age (≥ 15 years) workers in the formal and informal economy in any WHO and/or ILO Member State, but exclude children (< 15 years) and unpaid domestic workers. The included occupational ergonomic risk factors will be any exposure to one or more of: force exertion; demanding posture; repetitiveness; hand-arm vibration; lifting; kneeling and/or squatting; and climbing. Included outcomes will be (i) osteoarthritis and (ii) other musculoskeletal diseases (i.e., one or more of: rotator cuff syndrome; bicipital tendinitis; calcific tendinitis; shoulder impingement; bursitis shoulder; epicondylitis medialis; epicondylitis lateralis; bursitis elbow; bursitis hip; chondromalacia patellae; meniscus disorders; and/or bursitis knee). For Systematic Review 1, we will include quantitative prevalence studies of any exposure to occupational ergonomic risk factors stratified by country, gender, age and industrial sector or occupation. For Systematic Review 2, we will include randomized controlled trials, cohort studies, case-control studies and other non-randomized intervention studies with an estimate of the relative effect of any exposure with occupational ergonomic risk factors on the prevalence or incidence of osteoarthritis and/or selected musculoskeletal diseases, compared with the theoretical minimum risk exposure level (i.e., no exposure). **STUDY APPRAISAL AND SYNTHESIS METHODS:** At least two review authors will independently screen titles and abstracts against the eligibility criteria at a first stage and full texts of potentially eligible records at a second stage, followed by extraction of data from qualifying studies. At least two review authors will assess risk of bias and the quality of evidence, using the most suited tools currently available. For Systematic Review 2, if feasible, we will combine relative risks using meta-analysis. We will report results using the guidelines for accurate and transparent health estimates reporting (GATHER) for Systematic Review 1 and the preferred reporting items for systematic reviews and meta-analyses guidelines (PRISMA) for Systematic Review 2. PROSPERO registration number: CRD42018102631

Li J, Brisson C, Clays E, Ferrario MM, Ivanov ID, Landsbergis P, et al. WHO/ILO work-related burden of disease and injury: protocol for systematic reviews of exposure to long working hours and of the effect of exposure to long working hours on ischaemic heart disease. Environment International. 2018; 119:558-569.

<https://doi.org/10.1016/j.envint.2018.06.022>

Abstract: BACKGROUND: The World Health Organization (WHO) and the International Labour Organization (ILO) are developing a joint methodology for estimating the national and global work-related burden of disease and injury (WHO/ILO joint methodology), with contributions from a large network of experts. In this paper, we present the protocol for two systematic reviews of parameters for estimating the number of deaths and disability-adjusted life years of ischaemic heart disease from exposure to



long working hours, to inform the development of the WHO/ILO joint methodology. OBJECTIVES: We aim to systematically review studies on occupational exposure to long working hours (Systematic Review 1) and systematically review and meta-analyse estimates of the effect of long working hours on ischaemic heart disease (Systematic Review 2), applying the Navigation Guide systematic review methodology as an organizing framework. The selection of both, the exposure and the health outcome is justified by substantial scientific evidence on adverse effects of long working hours on ischaemic heart disease risk. DATA SOURCES: Separately for Systematic Reviews 1 and 2, we will search electronic academic databases for potentially relevant records from published and unpublished studies, Medline, EMBASE, Web of Science, CISDOC and PsychINFO. We will also search electronic grey literature databases, Internet search engines and organizational websites; hand-search reference list of previous systematic reviews and included study records; and consult additional experts. STUDY ELIGIBILITY AND CRITERIA: We will include working-age (≥ 15 years) workers in the formal and informal economy in any WHO and/or ILO Member State, but exclude children (< 15 years) and unpaid domestic workers. For Systematic Review 1, we will include quantitative prevalence studies of relevant levels of exposure to long working hours (i.e. 35-40, 41-48, 49-54 and ≥ 55 h/week) stratified by country, sex, age and industrial sector or occupation. For Systematic Review 2, we will include randomized controlled trials, cohort studies, case-control studies and other non-randomized intervention studies with an estimate of the relative effect of relevant level(s) of long working hours on the prevalence of, incidence of or mortality from ischaemic heart disease, compared with the theoretical minimum risk exposure level (i.e. 35-40 h/week). STUDY APPRAISAL AND SYNTHESIS METHODS: At least two review authors will independently screen titles and abstracts against the eligibility criteria at a first stage and full texts of potentially eligible records at a second stage, followed by extraction of data from qualifying studies. At least two review authors will assess risk of bias and the quality of evidence, using the most suited tools currently available. For Systematic Review 2, if feasible, we will combine relative risks using meta-analysis. We will report results using the guidelines for accurate and transparent health estimates reporting (GATHER) for Systematic Review 1 and the preferred reporting items for systematic reviews and meta-analyses guidelines (PRISMA) for Systematic Review 2. PROSPERO registration number: CRD42017084243

Mandrioli D, Schlunssen V, Adam B, Cohen RA, Colosio C, Chen W, et al. WHO/ILO work-related burden of disease and injury: protocol for systematic reviews of occupational exposure to dusts and/or fibres and of the effect of occupational exposure to dusts and/or fibres on pneumoconiosis. Environment International. 2018; 119:174-

185.

<https://doi.org/10.1016/j.envint.2018.06.005>

Abstract: BACKGROUND: The World Health Organization (WHO) and the International Labour Organization (ILO) are developing a joint methodology for estimating the national and global work-related burden of disease and injury (WHO/ILO joint methodology), with contributions from a large network of experts. In this paper, we present the protocol for two systematic reviews of parameters for estimating the number of deaths and disability-adjusted life years attributable to pneumoconiosis from occupational exposure to dusts and/or fibres, to inform the development of the WHO/ILO joint methodology. OBJECTIVES: We aim to systematically review studies on occupational exposure to dusts and/or fibres (Systematic Review 1) and systematically review and meta-analyse estimates of the effect of occupational exposure to dusts and/or fibres on pneumoconiosis (Systematic Review 2), applying the Navigation Guide systematic review methodology as an organizing framework. DATA SOURCES: Separately for Systematic Reviews 1 and 2, we will search electronic academic databases for potentially relevant records from published and unpublished studies, including Medline, EMBASE, Web of Science and CISDOC. We will also search electronic grey literature databases, Internet search engines and organizational websites; hand-search reference list of previous systematic reviews and included study records; and consult additional experts. STUDY ELIGIBILITY AND CRITERIA: We will include working-age (≥ 15 years) study participants in the formal and informal economy in any WHO and/or ILO Member State but exclude children (< 15 years) and unpaid domestic workers. Eligible risk factors will be dusts and/or fibres from: (i) asbestos; (ii) silica; and/or (iii) coal (defined as pure coal dust and/or dust from coal mining). Included outcomes will be (i) asbestosis; (ii) silicosis; (iii) coal worker pneumoconiosis; and (iv) unspecified pneumoconiosis. For Systematic Review 1, we will include quantitative prevalence studies of occupational exposure to dusts and/or fibres (i.e. no versus any exposure) stratified by country, sex, age and industrial sector or occupation. For Systematic Review 2, we will include randomized controlled trials, cohort studies, case-control studies and other non-randomized intervention studies with an estimate of any occupational exposure to dusts and/or fibres on the prevalence of, incidence of or mortality due to pneumoconiosis, compared with the theoretical minimum risk exposure level of no exposure. STUDY APPRAISAL AND SYNTHESIS METHODS: At least two review authors will independently screen titles and abstracts against the eligibility criteria at a first stage and full texts of potentially eligible records at a second stage, followed by extraction of data from qualifying studies. At least two review authors will assess risk of bias and the quality of evidence, using the most suited tools currently available. For Systematic Review 2, if feasible, we will combine relative risks using meta-analysis. We will report



results using the guidelines for accurate and transparent health estimates reporting (GATHER) for Systematic Review 1 and the preferred reporting items for systematic reviews and meta-analyses guidelines (PRISMA) for Systematic Review 2. PROSPERO REGISTRATION NUMBER: CRD42018084131

Paulo MS, Adam B, Akagwu C, Akparibo I, Al-Rifai RH, Bazrafshan S, et al. WHO/ILO work-related burden of disease and injury: protocol for systematic reviews of occupational exposure to solar ultraviolet radiation and of the effect of occupational exposure to solar ultraviolet radiation on melanoma and non-melanoma skin cancer. *Environment International*. 2019; [epub ahead of print].

<https://doi.org/10.1016/j.envint.2018.09.039> [open access]

Abstract: BACKGROUND: The World Health Organization (WHO) and the International Labour Organization (ILO) are developing a joint methodology for estimating the national and global work-related burden of disease and injury (WHO/ILO joint methodology), with contributions from a large network of experts. In this paper, we present the protocol for two systematic reviews of parameters for estimating the number of deaths and disability-adjusted life years from melanoma and non-melanoma skin cancer (or keratinocyte carcinoma) from occupational exposure to solar ultraviolet radiation, to inform the development of the WHO/ILO joint methodology. OBJECTIVES: We aim to systematically review studies on occupational exposure to solar ultraviolet radiation (Systematic Review 1) and systematically review and meta-analyse estimates of the effect of occupational exposure to solar ultraviolet radiation on melanoma and non-melanoma skin cancer (Systematic Review 2), applying the Navigation Guide systematic review methodology as an organizing framework and conducting both systematic reviews in tandem and in a harmonized way. DATA SOURCES: Separately for Systematic Reviews 1 and 2, we will search electronic academic databases for potentially relevant records from published and unpublished studies, including Ovid Medline, PubMed, EMBASE, and Web of Science. We will also search electronic grey literature databases, Internet search engines and organizational websites; hand-search reference list of previous systematic reviews and included study records and consult additional experts. STUDY ELIGIBILITY AND CRITERIA: We will include working-age (≥ 15 years) workers in the formal and informal economy in any WHO and/or ILO Member State, but exclude children (< 15 years) and unpaid domestic workers. For Systematic Review 1, we will include quantitative studies on the prevalence of relevant levels of occupational exposure to solar ultraviolet radiation (i.e. < 0.33 SED/d and ≥ 0.33 SED/d) and of the total working time spent outdoors, stratified by country, sex, age and industrial sector or occupation, in the years 1960 to 2018. For Systematic Review 2, we will include randomized controlled trials, cohort studies, case-control studies



and other non-randomized intervention studies with an estimate of the effect of any occupational exposure to solar ultraviolet radiation (i.e., $\geq 0.33\text{SED/d}$) on the prevalence of, incidence of or mortality due to melanoma and non-melanoma skin cancer, compared with the theoretical minimum risk exposure level (i.e. $< 0.33\text{SED/d}$). **STUDY APPRAISAL AND SYNTHESIS METHODS:** At least two review authors will independently screen titles and abstracts against the eligibility criteria at a first stage and full texts of potentially eligible records at a second stage, followed by extraction of data from qualifying studies. At least two review authors will assess the risk of bias and the quality of evidence, using the most suited tools currently available. For Systematic Review 2, if feasible, we will combine relative risks using meta-analysis. We will report results using the guidelines for accurate and transparent health estimates reporting (GATHER) for Systematic Review 1 and the preferred reporting items for systematic reviews and meta-analyses guidelines (PRISMA) for Systematic Review 2. **PROSPERO REGISTRATION NUMBER:** CRD42018094817

Rugulies R, Ando E, Ayuso-Mateos JL, Bonafede M, Cabello M, Di TC, et al. WHO/ILO work-related burden of disease and injury: protocol for systematic reviews of exposure to long working hours and of the effect of exposure to long working hours on depression. *Environment International*. 2019; 125:515-528.

<https://doi.org/10.1016/j.envint.2018.11.011> [open access]

Abstract: BACKGROUND: The World Health Organization (WHO) and the International Labour Organization (ILO) are developing a joint methodology for estimating the national and global work-related burden of disease and injury (WHO/ILO joint methodology), with contributions from a large network of experts. In this paper, we present the protocol for two systematic reviews of parameters for estimating the number of deaths and disability-adjusted life years from depression attributable to exposure to long working hours, to inform the development of the WHO/ILO joint methodology. **OBJECTIVES:** We aim to systematically review studies on occupational exposure to long working hours (Systematic Review 1) and systematically review and meta-analyse estimates of the effect of long working hours on depression (Systematic Review 2), applying the Navigation Guide systematic review methodology as an organizing framework, conducting both systematic reviews in tandem and in a harmonized way. **DATA SOURCES:** Separately for Systematic Reviews 1 and 2, we will search electronic academic databases for potentially relevant records from published and unpublished studies, including Medline, EMBASE, Web of Science, CISDOC and PsycINFO. We will also search electronic grey literature databases, Internet search engines and organizational websites; hand search reference list of previous systematic reviews and included study records; and consult additional experts.



STUDY ELIGIBILITY AND CRITERIA: We will include working-age (≥ 15 years) participants in the formal and informal economy in any WHO and/or ILO Member State, but exclude child workers (< 15 years) and unpaid domestic workers. For Systematic Review 1, we will include quantitative prevalence studies of relevant levels of occupational exposure to long working hours (i.e. 35-40, 41-48, 49-54 and ≥ 55 h/week) stratified by country, sex, age and industrial sector or occupation, in the years 2005-2018. For Systematic Review 2, we will include randomized controlled trials, cohort studies, case-control studies and other non-randomized intervention studies with an estimate of the relative effect of relevant level(s) of long working hours on the incidence of or mortality due to depression, compared with the theoretical minimum risk exposure level (i.e. 35-40h/week). **STUDY APPRAISAL AND SYNTHESIS METHODS:** At least two review authors will independently screen titles and abstracts against the eligibility criteria at a first stage and full texts of potentially eligible records at a second stage, followed by extraction of data from qualifying studies. At least two review authors will assess risk of bias and the quality of evidence, using the most suited tools currently available. For Systematic Review 2, if feasible, we will combine relative risks using meta-analysis. We will report results using the guidelines for accurate and transparent health estimates reporting (GATHER) for Systematic Review 1 and the preferred reporting items for systematic reviews and meta-analyses guidelines (PRISMA) for Systematic Review 2. PROSPERO REGISTRATION NUMBER: CRD42018085729

Teixeira LR, Azevedo TM, Bortkiewicz A, Correa da Silva DT, de Abreu W, de Almeida MS, et al. WHO/ILO work-related burden of disease and injury: protocol for systematic reviews of exposure to occupational noise and of the effect of exposure to occupational noise on cardiovascular disease. *Environment International*. 2019; 125:567-578.

<https://doi.org/10.1016/j.envint.2018.09.040> [open access]

Abstract: BACKGROUND: The World Health Organization (WHO) and the International Labour Organization (ILO) are developing a joint methodology for estimating the national and global work-related burden of disease and injury (WHO/ILO joint methodology), with contributions from a large network of experts. In this paper, we present the protocol for two systematic reviews of parameters for estimating the number of deaths and disability-adjusted life years from cardiovascular disease attributable to exposure to occupational noise, to inform the development of the WHO/ILO joint methodology. OBJECTIVES: We aim to systematically review studies on exposure to occupational noise (Systematic Review 1) and systematically review and meta-analyse estimates of the effect of occupational noise on cardiovascular diseases (Systematic Review 2), applying the Navigation Guide systematic review methodology as an



organizing framework, conducting both systematic reviews in tandem and in a harmonized way. DATA SOURCES: Separately for Systematic Reviews 1 and 2, we will search electronic academic databases for potentially relevant records from published and unpublished studies, including Medline, EMBASE, Web of Science and CISDOC. We will also search electronic grey literature databases, Internet search engines and organizational websites; hand search reference list of previous systematic reviews and included study records; and consult additional experts. STUDY ELIGIBILITY AND CRITERIA: We will include working-age (≥ 15 years) workers in the formal and informal economy in any WHO and/or ILO Member State, but exclude children (< 15 years) and unpaid domestic workers. The eligible risk factor will be occupational noise. Eligible outcomes will be hypertensive heart disease, ischaemic heart disease, stroke, cardiomyopathy, myocarditis, endocarditis and other circulatory diseases. For Systematic Review 1, we will include quantitative prevalence studies of exposure to occupational noise (i.e., low: < 85 dB(A) and high: ≥ 85 dB(A)) stratified by country, sex, age and industrial sector or occupation. For Systematic Review 2, we will include randomized controlled trials, cohort studies, case-control studies and other non-randomized intervention studies with an estimate of the relative effect of high exposure to occupational noise on the prevalence of, incidence of or mortality due to cardiovascular disease, compared with the theoretical minimum risk exposure level (i.e., low exposure). STUDY APPRAISAL AND SYNTHESIS METHODS: At least two review authors will independently screen titles and abstracts against the eligibility criteria at a first stage and full texts of potentially eligible records at a second stage, followed by extraction of data from qualifying studies. At least two review authors will assess risk of bias and the quality of evidence, using the most suited tools currently available. For Systematic Review 2, if feasible, we will combine relative risks using meta-analysis. We will report results using the guidelines for accurate and transparent health estimates reporting (GATHER) for Systematic Review 1 and the preferred reporting items for systematic reviews and meta-analyses guidelines (PRISMA) for Systematic Review 2. PROSPERO registration number: CRD42018092272

Tenkate T, Adam B, Al-Rifai RH, Chou BR, Gobba F, Ivanov ID, et al. WHO/ILO work-related burden of disease and injury: protocol for systematic reviews of occupational exposure to solar ultraviolet radiation and of the effect of occupational exposure to solar ultraviolet radiation on cataract. *Environment International*. 2019; 125:542-553.

<https://doi.org/10.1016/j.envint.2018.10.001> [open access]

Abstract: BACKGROUND: The World Health Organization (WHO) and the International Labour Organization (ILO) are developing a joint



methodology for estimating the national and global work-related burden of disease and injury (WHO/ILO joint methodology), with contributions from a large network of experts. Here, we present the protocol for two systematic reviews of parameters for estimating the number of disability-adjusted life years of cataracts from occupational exposure to solar ultraviolet radiation, to inform the development of the WHO/ILO joint methodology.

OBJECTIVES: We aim to systematically review studies on occupational exposure to solar ultraviolet radiation (Systematic Review 1) and systematically review and meta-analyse estimates of the effect of occupational exposure to solar ultraviolet radiation on the development of cataract (Systematic Review 2), applying the Navigation Guide systematic review methodology as an organizing framework and conducting both systematic reviews in tandem and in a harmonized way. **DATA**

SOURCES: Separately for Systematic Reviews 1 and 2, we will search electronic academic databases for potentially relevant records from published and unpublished studies, including Ovid Medline, PubMed, EMBASE, and Web of Sciences. We will also search electronic grey literature databases, Internet search engines and organizational websites; hand search reference list of previous systematic reviews and included study records; and consult additional experts. **STUDY ELIGIBILITY AND CRITERIA:** We will include working-age (≥ 15 years) workers in WHO and/or ILO Member States, but exclude children (< 15 years) and unpaid domestic workers. For Systematic Review 1, we will include quantitative studies on the prevalence of relevant levels of occupational exposure to solar ultraviolet radiation and of the total working time spent outdoors from 1960 to 2018, stratified by sex, age, country and industrial sector or occupation. For Systematic Review 2, we will include randomized controlled trials, cohort studies, case-control studies and other non-randomized intervention studies with an estimate of the effect of any occupational exposure to solar ultraviolet radiation (i.e. $\geq 30 \text{ Jm}^{-2}$ /day of occupational solar UV exposure at the surface of the eye) on the prevalence or incidence of cataract, compared with the theoretical minimum risk exposure level (i.e. $< 30 \text{ Jm}^{-2}$ /day of occupational solar UV exposure at the surface of the eye). **STUDY APPRAISAL AND SYNTHESIS METHODS:** At least two review authors will independently screen titles and abstracts against the eligibility criteria at a first stage and full texts of potentially eligible records at a second stage, followed by extraction of data from qualifying studies. At least two review authors will assess risk of bias and the quality of evidence, using the most suited tools currently available. For Systematic Review 2, if feasible, we will combine relative risks using meta-analysis. We will report results using the guidelines for accurate and transparent health estimates reporting (GATHER) for Systematic Review 1 and the preferred reporting items for systematic reviews and meta-analyses guidelines (PRISMA) for Systematic Review 2. PROSPERO registration: CRD42018098897



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Abstract: OBJECTIVE: To determine time of return to work (TRTW) in relation to multivariable predictors among male manual workers after hand injury (HI) over a 12-month follow-up. DESIGN: A cohort study with baseline medical information, functional evaluation, and 3-, 6-, 9-, and 12-month follow-up telephone interviews. SETTING: Seven physical rehabilitation community occupational therapy clinics. PARTICIPANTS: Participants (N=178) with acute HI aged 22-65. Two participants were lost to follow-up. INTERVENTION: Not applicable. MAIN OUTCOME MEASURE: The dependent variable was TRTW. The independent variables originated from 4 domains: personal factors, environmental factors, body function and structure, and activity limitation and participation restriction. The proportion of return to work (RTW) at each time point was calculated. Multiple Cox regressions established a predictive model for TRTW. RESULTS: At the end of the study, 75.3% participants returned to work. The median TRTW was 94 days. In the final model, only compensation factors and education contributed significantly to overall RTW, but when separate analyses were performed, decreased level of self-efficacy, higher workplace demands, level of pain, level of emotional response to trauma, reduced physical capability of the hand, and higher level of disability were significantly associated with delayed TRTW. CONCLUSIONS: TRTW was determined by the physical capability of the hand, pain, and psychosocial factors, but it was also affected by legal factors. Participants who did not return to work during the first 9 months are at risk for long-term disability. Developing treatment programs for those who are at risk for not returning to work, taking into consideration these factors, is recommended

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Abstract: Objectives The primary aim of this study was to investigate educational

inequalities in health-related exit from paid employment through different pathways in five European regions. A secondary objective was to estimate the proportion of different routes out of paid employment that can be attributed to poor health across educational groups in five European regions. Methods Longitudinal data from 2005 up to 2014 were obtained from the four-year rotating panel of the European Union Statistics on Income and Living Conditions (EU-SILC), including 337 444 persons with 1 056 779 observations from 25 countries. Cox proportional hazards models with censoring for competing events were used to examine associations between health problems and exit from paid employment. The population attributable fraction was calculated to quantify the impact of health problems on labor force exit. Results In all European regions, lower-educated workers had higher risks of leaving paid employment due to disability benefits [relative inequality (RI) 3.3-6.2] and unemployment (RI 1.9-4.5) than those with higher education. The fraction of exit from paid employment that could be attributed to poor health varied between the five European regions among lower-educated persons from 0.06-0.21 and among higher-educated workers from 0.03-0.09. The disadvantaged position of lower-educated persons on the labor market was primarily due to a higher prevalence of poor health. Conclusion In all European regions, educational inequalities exist in health-related exclusion from paid employment. Policy measures are needed to reduce educational inequalities in exit from paid employment due to poor health

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