



EVIDENCE SYNTHESIS
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Cochrane
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Evidence Synthesis Ireland Fellowship Scheme

Review Identification Form

Review Centre/Group Mentor

Mentor: Dr Francesca Wuytack

Centre: Trinity Centre for Maternity Care Research (TCMCR), School of Nursing & Midwifery,
Trinity College Dublin

Review title

Occupational biomechanical, psychosocial and organisational exposures associated with work-related musculoskeletal disorders among midwives: a systematic review

Review type and methods

This will be a systematic review of occupational biomechanical exposures and psychosocial/organisational exposures associated with work-related musculoskeletal disorders among midwives, with quantitative synthesis where appropriate and narrative synthesis where statistical pooling is not feasible.

The review will follow established systematic review methodology and PRISMA guidance. The review will be registered prospectively in PROSPERO. A comprehensive search of relevant electronic databases will be undertaken using a predefined search strategy. Studies will be independently screened against predefined eligibility criteria, followed by data extraction and assessment of risk of bias using appropriate validated tools according to study design. Where studies are sufficiently homogeneous in terms of population, exposure and outcome, relevant effect estimates will be pooled using meta-analysis. Statistical and clinical heterogeneity will be assessed, including use of the I^2 statistic where appropriate. Where meta-analysis is inappropriate, findings will be synthesised narratively according to biomechanical and psychosocial/organisational factors and musculoskeletal outcomes. Subsequently, a GRADE certainty of evidence assessment will be conducted.

The Fellow will develop skills in all stages of systematic review methodology, including protocol development and registration, search strategy development, conducting the search, study screening at title/abstract and full text level, data extraction, risk-of-bias assessment,

interpretation of epidemiological effect measures, assessment of heterogeneity, meta-analysis, narrative synthesis, GRADE certainty of evidence assessment, transparent review reporting using PRISMA, review publication, and review communication including a plain language summary and other outputs for specific stakeholders. The fellow will also learn the process of review planning, review management, and working as part of a multi-stakeholder review team.

Review information

This review is not externally funded or commissioned and is being undertaken by the Trinity Centre for Maternity Care Research (School of Nursing and Midwifery, Trinity College Dublin). The review addresses an important occupational health issue affecting midwives and will provide an evidence base to inform and support future primary research on occupational health and work-related musculoskeletal disorders among midwives. Key end-users will include midwives, maternity service managers, occupational health professionals, policymakers, employers, professional organisations and researchers. The review team will include representation from a practising midwife and an occupational health representative, ensuring that the perspectives of those working in clinical maternity care and occupational health are incorporated throughout the review. Public and patient involvement will be embedded within the review team through the involvement of a patient representative, who will contribute to the development and refinement of the review, interpretation of findings and dissemination of results.

Review details

Background

Work-related musculoskeletal disorders (WMSDs) are an important occupational health concern for midwives and may affect wellbeing, work ability, sickness absence and workforce retention. An earlier systematic review identified physical exposures and demanding work conditions as important factors associated with upper quadrant musculoskeletal disorders among healthcare professionals but highlighted limited evidence specific to midwives (Long et al., 2012). Over the past decade, research specifically examining WMSDs among midwives has increased (Okuyucu et al., 2020; Okuyucu et al., 2023). An up-to-date systematic review is warranted to consolidate the available evidence, identify potentially modifiable occupational factors and highlight gaps. This review will inform future primary research on occupational health within the Trinity Centre for Maternity Care Research and the TCD School of Nursing and Midwifery.

Objective

To identify and synthesise evidence on the associations between occupational (a) biomechanical and (b) psychosocial/organisational exposures and work-related musculoskeletal disorders among midwives.

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Population

Midwives working in any clinical/midwifery settings (e.g. maternity hospital, birth centre, etc.), regardless of age, sex, country, or level of experience.

Exposures

(1) Occupational biomechanical factors

- awkward or non-neutral postures
- sustained/static postures
- manual handling, lifting, transferring/repositioning
- forceful exertion
- pushing/pulling
- repetitive movements/tasks
- physical workload
- ergonomic/workstation characteristics

(2) Occupational psychosocial/organisational factors

- workload/work intensity
- time pressure
- staffing/workforce levels
- working hours and shift patterns
- job demands
- job control/autonomy
- social/organisational support
- job stress
- organisational climate

Where studies report specific midwifery tasks rather than exposures, these will be classified according to the underlying biomechanical or psychosocial/organisational exposure.

Comparison

Midwives with no exposure to the identified factors, or comparison groups/categories with different levels of exposure.

Outcomes

Musculoskeletal disorders (MSDs), including musculoskeletal pain/symptoms or disorders affecting areas such as the low back, neck, shoulders, upper limbs, and other body regions; outcomes may include prevalence, incidence, severity, or functional limitations. Secondary outcomes will include absenteeism, presenteeism, intention to leave, retention, and work ability.

Studies

Observational studies, including cross-sectional, cohort, case-control studies, mixed methods studies with quantitative data on occupational exposures and MSD outcomes, intervention studies if they provide relevant data.

Review current status

This review will start October 2026.

Any specific/desirable requirements for fellow (e.g. clinical expertise, methodological expertise)**Desirable requirements:**

- Interest in occupational health, midwifery and/or musculoskeletal health.
- Familiarity with literature searching, critical appraisal and research methods.
- Basic understanding of epidemiology and interpretation of quantitative research findings.
- Strong critical thinking, analytical and organisational skills.
- Good written and verbal communication skills.
- Ability to work collaboratively within a multidisciplinary research team and with a patient representative.

Estimated start and completion dates

October – April 2026