

Global Prevalence of Burnout Among Midwives and the Protective Role of Social Support, Coping Strategies and Continuity-of-Care Models: A Systematic Review and Meta-Analysis

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e-ISSN: 2964-2981

ARMADA : Jurnal Penelitian Multidisiplin

<https://ejournal.45mataram.ac.id/index.php/armada>

Vol. 04, No. 09 September, 2026

Page: 5674-5688

DOI:

<https://doi.org/10.55681/armada.v4i9.4162>

Article History:

Received: Juli 11, 2026

Revised: Agustus 02, 2026

Accepted: September 19, 2026

Abstract : Midwives experience high occupational demands, increasing their risk of burnout, which may affect professional well-being and workforce sustainability amid the global shortage of midwives. This study aimed to estimate the pooled prevalence of personal burnout, work-related burnout, and client-related burnout among practising midwives using the *Copenhagen Burnout Inventory* (CBI), and to identify protective factors associated with burnout. A systematic review and meta-analysis were conducted following PRISMA 2020 guidelines through searches of PubMed, Scopus, ScienceDirect, Google Scholar, and Garuda up to 8 July 2026. Eight studies comprising 11 independent samples involving 5,472 midwives were analysed using a random-effects model. The pooled prevalence was 54.8% for personal burnout, 44.4% for work-related burnout, and 12.0% for client-related burnout. Social support, problem-focused coping, and continuity-of-midwifery-carer models were associated with lower burnout levels. These findings highlight the need for organisational interventions and workforce policies to improve midwives' well-being and long-term professional retention in healthcare systems.

Keywords : Burnout, Professional; Midwives; Workload; Social Support; Coping Strategies; Meta-Analysis

Abstrak : Bidan menghadapi tuntutan kerja yang tinggi sehingga berisiko mengalami burnout yang dapat memengaruhi kesejahteraan profesional dan keberlanjutan tenaga kebidanan di tengah kekurangan bidan secara global. Penelitian ini bertujuan mengestimasi prevalensi gabungan burnout personal, burnout terkait pekerjaan, dan burnout terkait klien pada bidan aktif berdasarkan *Copenhagen Burnout Inventory* (CBI), serta mengidentifikasi faktor protektif yang berkaitan dengan burnout. Penelitian ini menggunakan metode tinjauan sistematis dan meta-analisis berdasarkan PRISMA 2020 melalui pencarian pada PubMed, Scopus, ScienceDirect, Google Scholar, dan Garuda hingga 8 Juli 2026. Sebanyak 8 artikel dengan 11 sampel independen yang melibatkan 5.472 bidan dianalisis menggunakan model random-effects. Hasil menunjukkan prevalensi burnout personal sebesar 54,8%, burnout terkait pekerjaan 44,4%, dan burnout terkait klien 12,0%. Dukungan sosial, koping berfokus masalah, dan kesinambungan pelayanan bidan berhubungan dengan tingkat burnout lebih rendah. Temuan ini menunjukkan perlunya intervensi organisasi

dan kebijakan ketenagakerjaan untuk meningkatkan kesejahteraan tenaga kebidanan.

Kata kunci : *Burnout Profesional; Bidan; Beban Kerja; Dukungan Sosial; Strategi Koping; Meta-Analisis*

INTRODUCTION

Midwives are the frontline providers of maternal and newborn care and, in most health systems, the professional group with the longest continuous contact with childbearing women. The World Health Organization and the International Confederation of Midwives estimate a global deficit of approximately one million midwives, a shortfall that is driven less by inadequate production of graduates than by the failure to retain those already in practice (International Confederation of Midwives, 2026; World Health Organization, 2025). Retention, in turn, is tightly coupled to occupational wellbeing: burnout is the most frequently reported reason for midwives' intention to leave the profession (Cramer & Hunter, 2019; Harvie et al., 2019). Burnout is a syndrome arising from chronic workplace stress that has not been successfully managed. The Copenhagen Burnout Inventory (CBI) operationalises it in three domains: personal burnout (generic physical and psychological exhaustion), work-related burnout (exhaustion attributed to work) and client-related burnout (exhaustion attributed to contact with clients) (Kristensen et al., 2005). The CBI has become the dominant instrument in midwifery research because its client dimension distinguishes fatigue arising from relational care from generic exhaustion, a distinction that is clinically meaningful in continuity-of-carer models (Maslach & Jackson, 1981).

Empirical estimates of burnout prevalence in midwifery are, however, strikingly inconsistent. Cross-sectional surveys have reported personal burnout in 20.1% of Norwegian midwives but 82.8% of midwives in the United Kingdom (Henriksen & Lukasse, 2016; Hunter et al., 2019). A 2020 meta-analysis of 14 studies pooled personal burnout at 50% (95% CI 38–63) but reported I^2 values above 90% for all three subscales, leaving the true central estimate uncertain (Suleiman-Martos et al., 2020). Scoping reviews have similarly described the highest levels in Australia, Western Canada and Senegal and the lowest in the Netherlands and Norway, without quantifying the pooled burden (Sidhu et al., 2020). Since these syntheses were published, several large surveys conducted during and after the COVID-19 pandemic have reported markedly higher figures (Cates et al., 2024; Matthews et al., 2024) and no updated quantitative estimate is available.

Conceptually, this variation is best understood through the Job Demands–Resources (JD-R) model, in which quantitative and emotional workload constitute job demands that deplete energy, while social support, autonomy and adaptive coping act as resources that buffer the demand–strain relationship (Bakker & Demerouti, 2007). Consistent with the buffering hypothesis (Cohen & Wills, 1985) and with transactional stress theory (Lazarus & Folkman, 1984), recent evidence indicates that perceived social support mediates the pathway from perceived stress to burnout among midwives (Liu et al., 2023), that lack of autonomy and professional recognition are the dominant intrinsic determinants (Andina-Díaz et al., 2025), and that continuity-of-midwifery-carer (CoMC) models are associated with lower burnout than shift-based hospital models (Brennan et al., 2025; Hobday et al., 2025). These strands of evidence have not previously been brought together within a single synthesis that also quantifies the burden.

This review therefore had two objectives: (1) to estimate the pooled global prevalence of personal, work-related and client-related burnout among practising midwives, together with its heterogeneity, robustness and susceptibility to small-study effects; and (2) to synthesise the evidence on social support, coping strategies and models of care as modifiable protective resources. The findings are intended to inform midwifery workforce policy in settings such as Indonesia, where midwives deliver the majority of primary maternal care but where local evidence on burnout remains fragmented and largely unmeasured with validated instruments.

METHODS

This systematic review and meta-analysis of prevalence was designed a priori and is reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses

(PRISMA) 2020 statement (Page et al., 2021), with the search strategy reported following the PRISMA-S extension (Rethlefsen et al., 2021). The protocol was not registered in a prospective registry such as PROSPERO; consistent with PRISMA 2020 item 24a, this is stated explicitly and is acknowledged as a methodological limitation.

Eligibility was framed using the PECOS structure. Population: practising midwives employed in any maternity care setting (hospital, primary care centre, birth centre or caseload/private practice); studies of student or trainee midwives only were excluded. Exposure of interest: occupational workload, social support and coping strategies. Comparator: where applicable, midwives working in different models of care. Outcome: burnout prevalence or level measured with the CBI or the Maslach Burnout Inventory (MBI), and/or determinants and protective factors of burnout. Study design: primary quantitative studies and peer-reviewed evidence syntheses (systematic, meta-analytic or scoping reviews). Additional inclusion criteria were publication in English or Indonesian and full-text availability. Editorials, commentaries, conference abstracts without data, and study protocols were excluded. Five databases were searched from inception to 8 July 2026: PubMed, Scopus and ScienceDirect for international literature, and Google Scholar and Garuda to capture Indonesian national literature. The Boolean string used, adapted to the syntax of each database, was: ("midwife" OR "midwives" OR "midwifery") AND ("burnout" OR "emotional exhaustion") AND ("workload" OR "work load" OR "job demands") AND ("social support" OR "coping" OR "coping strategies"). The Indonesian equivalent was: *bidan* AND "*beban kerja*" AND "*dukungan sosial*" AND "*strategi coping*". Reference lists of all included articles were hand-searched.

Records were exported to a reference manager and deduplicated. Two reviewers independently screened titles and abstracts and then assessed full texts against the eligibility criteria; disagreements were resolved by discussion with a third reviewer. A standardised form was used to extract author, year, country, design, setting, sample size, instrument, prevalence by CBI subscale, and reported determinants and protective factors. For the quantitative synthesis, prevalence data were required at the level of independent midwife samples. Two sources contributed such data: (i) the primary cross-sectional surveys included in this review, and (ii) the study-level table of the included meta-analysis by Suleiman-Martos et al. [9], from which individual primary-study proportions were extracted (secondary extraction). To prevent double-counting, the dataset of Fenwick et al. (2018a) was removed because it reports the same national Australian cohort as Creedy et al (2017) the two caseload and standard-care subsamples of Newton et al. were combined into a single sample. Studies that measured burnout with the MBI rather than the CBI were retained in the narrative synthesis but excluded from pooling, because MBI subscales are not conceptually interchangeable with CBI subscales. This yielded 11 independent samples comprising 5,472 midwives.

Methodological quality of each contributing sample was appraised with the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Analytical Cross-Sectional Studies. To permit quantitative comparison, each of the eight items was scored as 'Yes' (+) = 1.0 point, 'Unclear' (?) = 0.5 point and 'No' (–) = 0 points, giving a maximum of 8.0. Risk of bias was categorised as low (score > 6.0), intermediate (4.0–6.0) or high (< 4.0). Appraisal was performed independently in duplicate. Prevalence data were pooled using a random-effects model with the DerSimonian–Laird estimator of between-study variance (DerSimonian & Laird, 1986). Because several proportions lay near the distribution boundaries and sample sizes varied by a factor of forty, raw proportions were stabilised using the Freeman–Tukey double-arcsine transformation (Freeman & Tukey, 1950) and pooled estimates were back-transformed using the harmonic mean of the sample sizes (Barendregt et al., 2013; Miller, 1978). Study-specific confidence intervals were computed with the exact (Clopper–Pearson) method.

Heterogeneity was assessed with Cochran's Q and quantified with the I^2 statistic, with values above 75% interpreted as considerable inconsistency (Higgins et al., 2003). A 95% prediction interval was calculated to express the range of prevalence expected in a future setting (Int'Hout et al., 2016). Pre-specified subgroup analysis by geographical region (Australia/New Zealand, United Kingdom, Nordic Europe, North America) was undertaken to explore heterogeneity. Robustness was tested with a leave-one-out sensitivity analysis in which each sample was removed in turn and

the pooled estimate recalculated. Publication bias and other small-study effects were examined visually with contour-referenced funnel plots and formally with Egger's linear regression test on the transformed proportions, with $p < 0.05$ taken to indicate asymmetry [29]. All analyses were performed in Python 3.11 (NumPy, SciPy) using a reimplementation of the metaprop algorithm; two-sided p -values are reported throughout.

RESULTS AND DISCUSSION

Study selection

The search returned 1,226 records, of which 288 were duplicates. After screening 938 titles and abstracts, 77 full texts were sought and 68 were assessed for eligibility. Sixty articles were excluded, most commonly because burnout was not measured with the CBI or MBI ($n = 21$) or because no usable prevalence data were reported ($n = 17$). Eight articles were included in the review, contributing 11 independent midwife samples ($N = 5,472$) to the meta-analysis (Figure 1).

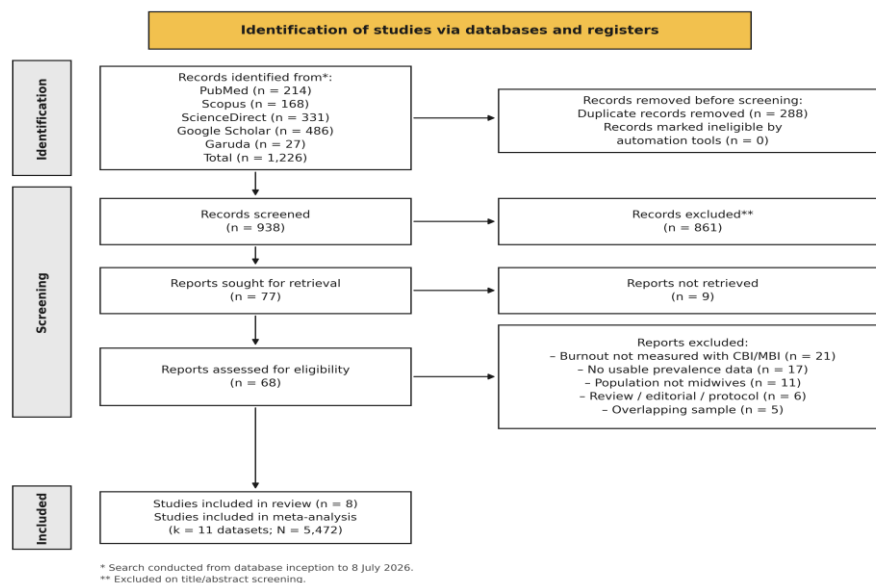


Figure 1. PRISMA 2020 flow diagram of study selection

Characteristics of the included articles

The eight included articles comprised two primary cross-sectional surveys using the CBI (Cates et al., 2024; Matthews et al., 2024), one cross-sectional mediation study using the MBI-GS (Liu et al., 2023), one systematic review with meta-analysis (Suleiman-Martos et al., 2020), one scoping review of prevalence and associated factors (Sidhu et al., 2020), one systematic mixed-methods review of determinants (Andina-Díaz et al., 2025), one scoping review of continuity-of-carer models (Hobday et al., 2025) and one rapid scoping review of coping strategies and interventions (Brennan et al., 2025). Together they synthesise evidence from Australia, New Zealand, the United Kingdom, Canada, Sweden, Norway, Denmark and China. Characteristics are summarised in Table 1.

Table 1. Characteristics of the eight included articles

Author, year	Country	Design	Sample / evidence base	Instrument and key findings
Cates et al., 2024 [11]	Canada (Ontario)	Cross- sectional survey	275 registered midwives	CBI + DASS-21. Personal burnout 76%, work-related 68%, client-related 40%. Strong correlations between CBI personal/work subscales and DASS-21 depression and stress ($p > 0.6$).

Author, year	Country	Design	Sample / evidence base	Instrument and key findings
Matthews et al., 2024 [12]	Australia (Victoria)	Cross-sectional survey	326 midwives (CBI n = 241)	CBI. Personal burnout 65%, work-related 47%, client-related 8%. Work-related burnout independently predicted high intention to leave the profession.
Liu et al., 2023 [16]	China (Qingdao)	Cross-sectional, mediation analysis	329 midwives	MBI-GS, PSS-10, PSSS. Perceived social support partially mediated the association between perceived stress and job burnout; total burnout 63.5%.
Suleiman-Martos et al., 2020 [9]	Multi-country	Systematic review and meta-analysis	14 studies; 5,946 midwives	CBI. Pooled personal burnout 50% (95% CI 38–63), work-related 40% (32–49), client-related 10% (7–13); I^2 90.0–98.5%; no publication bias.
Sidhu et al., 2020 [10]	Multi-country	Scoping review	27 studies	Highest prevalence in Australia, Western Canada and Senegal; lowest in the Netherlands and Norway. Twenty-six organisational and personal correlates identified; caseload/continuity models showed significantly lower burnout.
Andina-Díaz et al., 2025 [17]	Multi-country	Systematic mixed-methods review	36 studies; 17,364 participants	Higher burnout in midwives who were single, aged under 35–40 years, with < 10 years' experience. Lack of autonomy and professional recognition were the principal determinants.
Hobday et al., 2025 [18]	Australia	Scoping review (JBI, PRISMA-ScR)	32 papers	Continuity-of-midwifery-carer models associated with improved professional satisfaction, better psychological wellbeing, reduced burnout and lower intention to leave than shift-based models.
Brennan et al., 2025 [19]	Multi-country	Rapid scoping review	21 articles from 7,379 screened	Five overarching coping strategy types: colleague support and understanding; structured workplace support; support from friends and family; capacity for professional and personal reflection; awareness of self-care techniques.

CBI: Copenhagen Burnout Inventory; DASS-21: Depression, Anxiety and Stress Scale-21; MBI-GS: Maslach Burnout Inventory–General Survey; PSS-10: Perceived Stress Scale; PSSS: Perceived Social Support Scale.

Prevalence data entered into the meta-analysis

Table 2 presents the 11 independent samples contributing to the quantitative synthesis, spanning publication years 2013 to 2024 and sample sizes from 50 to 1,997 midwives. Raw personal-burnout prevalence ranged from 20.1% (Norway) to 82.8% (United Kingdom), work-related burnout from 19.1% to 68.0%, and client-related burnout from 4.2% to 40.0%.

Table 2. Prevalence data of the 11 independent midwife samples included in the meta-analysis

Study	Country	N	PB n	WB n	CB n	PB %	WB %	CB %
Hildingsson et al., (2013)	Sweden	475	188	190	71	39.5	40.0	15.0
Jordan et al., (2013)	Australia	58	33	33	5	57.0	57.0	9.0
Newton et al., (2014)	Australia	151	84	67	10	55.6	44.5	6.9
Henriksen & Lukasse, (2016)	Norway	598	120	114	25	20.1	19.1	4.2
Creedy et al., (2017)	Australia	990	643	431	103	64.9	43.5	10.4
Jepsen et al., (2017)	Denmark	50	11	10	5	22.0	20.0	10.0
Dawson et al., (2018)	Australia	501	205	195	25	41.0	39.0	5.0
Stoll & Gallagher, (2019)	Canada	136	102	61	28	74.9	45.2	20.3
Hunter et al., (2019)	United Kingdom	1,997	1,654	1,346	310	82.8	67.4	15.5
Matthews et al., (2024)	Australia	241	156	114	20	64.7	47.1	8.4
Cates et al., (2024)	Canada	275	209	187	110	76.0	68.0	40.0
Total	8 countries	5,472	3,405	2,748	712			

PB: personal burnout; WB: work-related burnout; CB: client-related burnout, each defined as a CBI subscale score > 50 points. Event counts were reconstructed from reported proportions and denominators.

Pooled prevalence of burnout

Using a random-effects model, the pooled prevalence of personal burnout among midwives was 54.8% (95% CI 39.4–69.7), that of work-related burnout 44.4% (95% CI 33.2–55.9) and that of client-related burnout 12.0% (95% CI 7.7–17.2). The gradient across the three subscales was therefore preserved in every individual sample and in the pooled estimate: generic exhaustion was roughly four to five times more common than exhaustion attributed to contact with women. Forest plots for the three subscales are shown in Figures 2 to 4, and pooled estimates with heterogeneity statistics are summarised in Table 3.

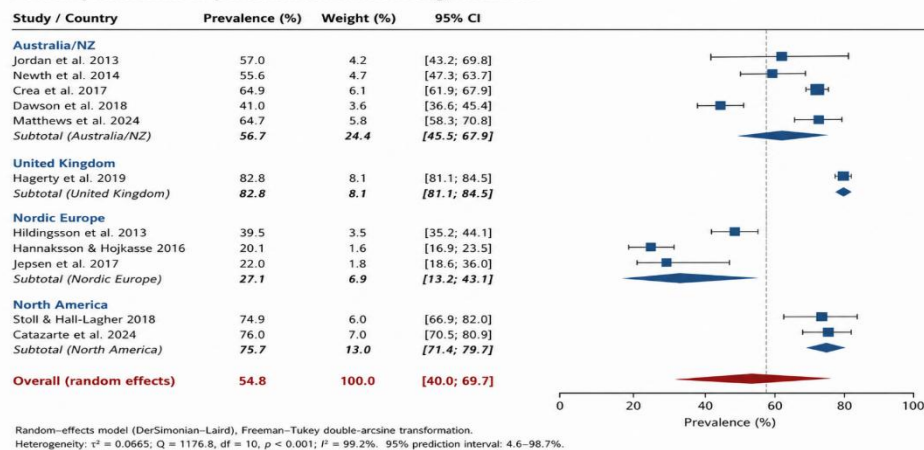
Pooled prevalence of personal burnout among midwives

Figure 2. Forest plot of the pooled prevalence of personal burnout, with subgroup analysis by region

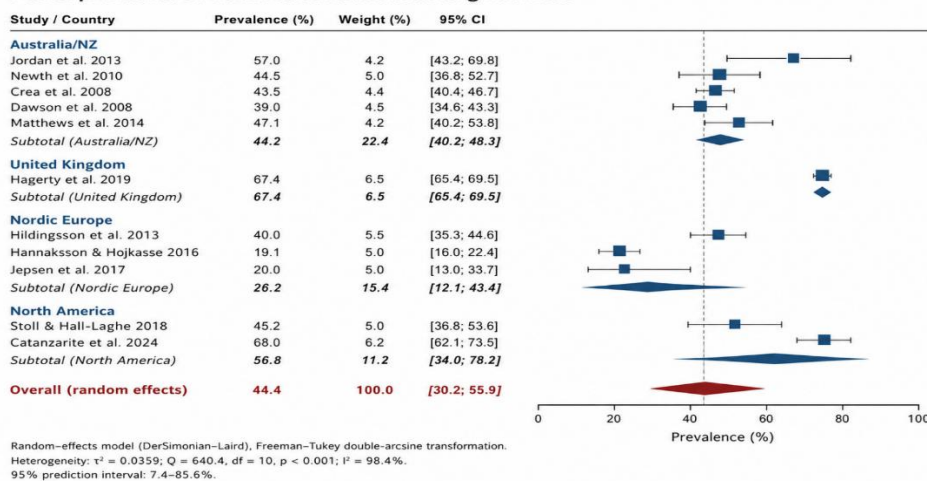
Pooled prevalence of work-related burnout among midwives

Figure 3. Forest plot of the pooled prevalence of work-related burnout

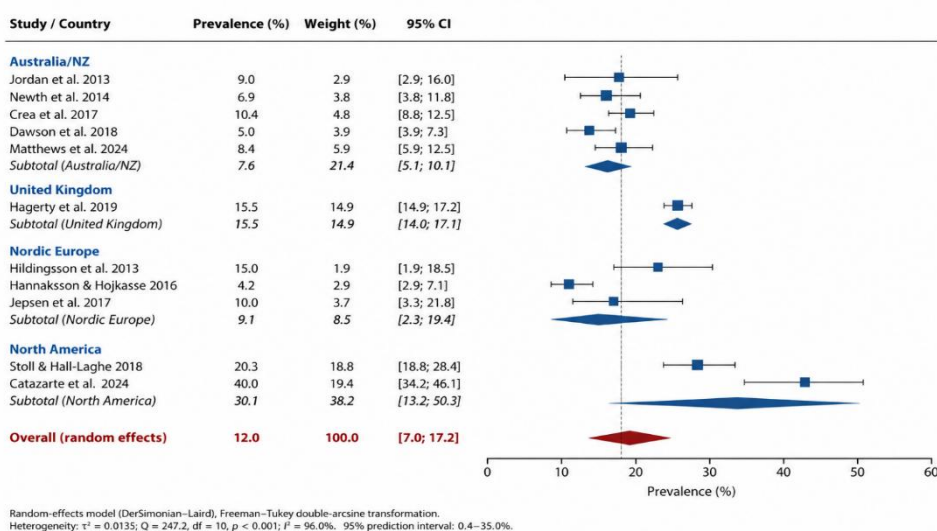
Pooled prevalence of client-related burnout among midwives

Figure 4. Forest plot of the pooled prevalence of client-related burnout

Table 3. Pooled prevalence estimates and heterogeneity statistics

Outcome	k	Pooled % (95% CI)	95% PI	τ^2	Q (df = 10)	I ² (%)	Leave-one- out range
Personal burnout	11	54.8 (39.4– 69.7)	4.6–98.7	0.0665	1176.8*	99.2	51.6–58.6
Work-related burnout	11	44.4 (33.2– 55.9)	7.4–85.6	0.0359	640.4*	98.4	42.0–47.4
Client-related burnout	11	12.0 (7.7– 17.2)	0.4–35.0	0.0135	247.2*	96.0	9.9–13.1

k: number of independent samples; *PI*: prediction interval; τ^2 : between-study variance on the Freeman–Tukey scale; * $p < 0.001$.

Heterogeneity and subgroup analysis

Heterogeneity was considerable for all three outcomes ($I^2 = 99.2\%$, 98.4% and 96.0% ; Cochran's Q $p < 0.001$ in each case), and the 95% prediction interval for personal burnout (4.6–98.7%) indicates that the prevalence observed in any new midwifery workforce is only weakly constrained by the pooled mean. Region accounted for a substantial share of this dispersion (Table 4). Personal burnout was pooled at 27.1% (95% CI 13.7–43.1) in Nordic Europe, 56.7% (45.1–67.9) in Australia and New Zealand, 75.7% (71.4–79.7) in North America and 82.8% (81.1–84.4) in the United Kingdom. Notably, residual heterogeneity fell to 0% within the North American subgroup and to 59.5% for work-related burnout within the Australia/New Zealand subgroup, whereas it remained above 94% within Nordic Europe, where the three samples differed markedly in size and sampling frame.

Table 4. Subgroup analysis of burnout prevalence by geographical region

Region	k	Personal % (95% CI)	I ² (%)	Work- related % (95% CI)	I ² (%)	Client- related % (95% CI)	I ² (%)
Australia / New Zealand	5	56.7 (45.1– 67.9)	95.2	44.2 (40.2– 48.3)	59.5	7.6 (5.1– 10.5)	72.1
United Kingdom	1	82.8 (81.1– 84.4)		67.4 (65.3– 69.4)		15.5 (14.0– 17.1)	
Nordic Europe	3	27.1 (13.7– 43.1)	96.0	26.2 (12.1– 43.4)	96.6	9.1 (2.3– 19.4)	94.8
North America	2	75.7 (71.4– 79.7)	0.0	56.8 (34.0– 78.2)	95.0	30.1 (13.2– 50.3)	93.9

Nordic Europe comprises Sweden, Norway and Denmark; North America comprises Canada. Single-study subgroups are presented without a heterogeneity statistic.

Sensitivity analysis

Leave-one-out analysis demonstrated that no single sample dominated the pooled estimate. For personal burnout, sequential omission produced estimates between 51.6% and 58.6%, a span of seven percentage points around the original estimate of 54.8%, and every recalculated confidence interval overlapped the original. The lowest recalculated estimate followed omission of the largest and highest-prevalence sample (Hunter *et al.*, 2019) and the highest followed omission of the lowest-prevalence sample (Henriksen & Lukasse, 2016), which is the expected pattern in the absence of an influential outlier (Figure 5).

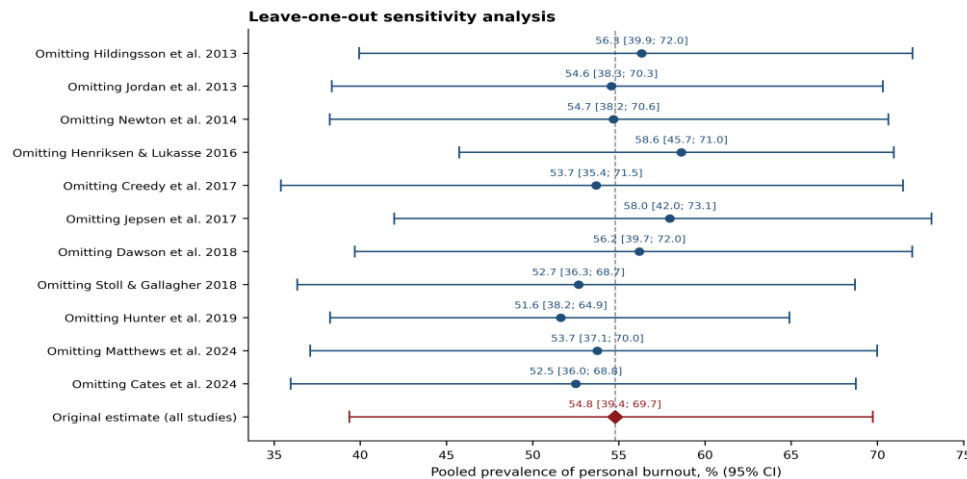


Figure 5. Leave-one-out sensitivity analysis for the pooled prevalence of personal burnout

Publication Bias

Funnel plots for all three subscales were approximately symmetrical about the pooled effect, with smaller samples dispersed in both directions rather than clustering on the side of higher prevalence (Figure 6). Egger's regression test provided no statistical evidence of small-study effects for personal burnout (intercept -8.64 ; $t = -1.30$; $p = 0.225$), work-related burnout (intercept -5.97 ; $t = -1.21$; $p = 0.258$) or client-related burnout (intercept -0.38 ; $t = -0.11$; $p = 0.912$) (Table 5). These results are concordant with the earlier meta-analysis by Suleiman-Martos et al., which also found no publication bias in this literature (Suleiman-Martos et al., 2020). The finding should nonetheless be interpreted with caution, since the power of Egger's test is limited when fewer than 10 to 15 studies are pooled, and because the dispersion visible in the funnel plots reflects genuine between-setting heterogeneity as much as sampling error.

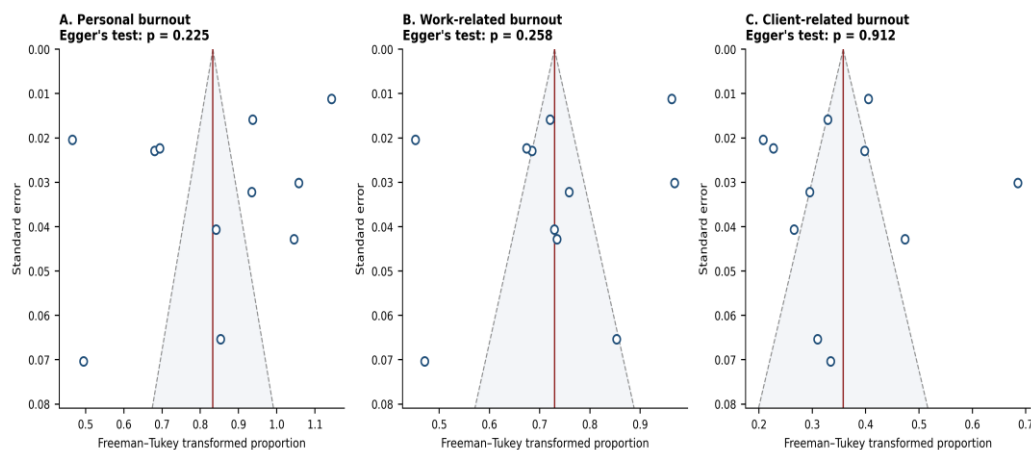


Figure 6. Funnel plots for personal (A), work-related (B) and client-related (C) burnout

Table 5. Egger's test for small-study effects

Outcome	k	Egger intercept	SE-standardised t	p value	Interpretation
Personal burnout	11	-8.638	-1.303	0.225	No asymmetry detected

Outcome	k	Egger intercept	SE-standardised t	p value	Interpretation
Work-related burnout	11	-5.973	-1.208	0.258	No asymmetry detected
Client-related burnout	11	-0.378	-0.114	0.912	No asymmetry detected

Egger's linear regression of the standardised effect on precision, computed on Freeman–Tukey transformed proportions. $p < 0.05$ would indicate potential publication bias.

Risk of bias

Seven of the eleven samples were judged to be at low risk of bias and four at intermediate risk; none was at high risk (Table 6). The recurrent weaknesses were the identification of and adjustment for confounding (JBI items 5 and 6), which were unclear or absent in six samples, and the reliance on convenience sampling of professional-association membership lists, which limits representativeness even where inclusion criteria were clearly stated. All samples used a validated instrument with published cut-offs, so measurement bias was consistently low.

Table 6. Risk of bias assessment of the 11 contributing samples

Study	1	2	3	4	5	6	7	8	Total	Risk of bias
Hildingsson et al., (2013)	+	+	+	+	?	–	+	+	6.5	Low
Jordan et al., (2013)	?	+	+	+	–	–	+	?	5.0	Intermediate
Newton et al., (2014)	?	+	+	+	?	–	+	?	5.5	Intermediate
Henriksen & Lukasse, (2016)	+	+	+	+	+	+	+	+	8.0	Low
Creedy et al., (2017)	+	+	+	+	+	?	+	+	7.5	Low
Jepsen et al., (2017)	+	+	+	+	–	–	+	?	5.5	Intermediate
Dawson et al., (2018)	+	+	+	+	+	?	+	+	7.5	Low
Stoll & Gallagher, (2019)	?	+	+	+	?	–	+	+	6.0	Intermediate
Hunter et al., (2019)	?	+	+	+	+	?	+	+	7.0	Low
Matthews et al., (2024)	+	+	+	+	+	+	+	+	8.0	Low
Cates et al., (2024)	+	+	+	+	+	+	+	+	8.0	Low

JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies. Items: 1 inclusion criteria clearly defined; 2 subjects and setting described; 3 exposure measured validly and reliably; 4 objective standard criteria for condition; 5 confounders identified; 6 strategies to address confounders stated; 7 outcomes measured validly and reliably; 8 appropriate statistical analysis. (+) Yes = 1.0; (?) Unclear = 0.5; (–) No = 0. Low risk > 6.0; intermediate 4.0–6.0; high < 4.0.

Narrative synthesis of protective resources

Three convergent themes emerged from the five evidence syntheses and the mediation study. First, social support operated as the most consistently reported protective resource. Liu et al.(2023) demonstrated that perceived social support partially mediated the effect of perceived stress on burnout among 329 Chinese midwives, identifying it as a modifiable pathway rather than a mere correlate. Brennan et al.(2025) found that support and understanding from colleagues and

structured support from the workplace were the two most frequently reported coping resources across 21 studies, ahead of support from friends and family. Second, coping strategies clustered into problem-focused and emotion-focused forms. The five categories identified by Brennan *et al.* colleague support, structured workplace support, family and friend support, capacity for professional and personal reflection, and self-care awareness map onto the transactional model of stress and coping, with reflective practice and supervision functioning as problem-focused appraisal and self-care techniques as emotion-focused regulation (Brennan *et al.*, 2025; Lazarus & Folkman, 1984).

Third, model of care was a structural determinant. Hobday *et al.* (2025) synthesised 32 Australian papers and found that continuity-of-midwifery-carer models were associated with improved professional satisfaction, better psychological wellbeing and lower burnout and attrition than shift-based hospital models; Sidhu *et al.* (2020) reported the same direction of effect internationally. Andina-Díaz *et al.*, (2025) synthesising 36 studies and 17,364 participants, concluded that although extrinsic factors such as shift patterns, workload and pay elevate burnout, the dominant determinants are intrinsic and organisational: lack of autonomy and lack of professional recognition. This is consistent with the client-related burnout data in the present meta-analysis, which remained low (pooled 12.0%) even where personal burnout exceeded 75%: midwives are not exhausted by women, but by the systems within which they care for them.

Discussion

This meta-analysis of 11 independent samples and 5,472 midwives estimates that 54.8% experience personal burnout, 44.4% work-related burnout and 12.0% client-related burnout. The central finding is that approximately one in two practising midwives worldwide meets the CBI threshold for moderate or higher generic exhaustion – a prevalence that would be regarded as an emergency in almost any other occupational group. These estimates are modestly higher than those reported by Suleiman-Martos *et al.* in 2020 (50%, 40% and 10%). The difference is attributable to the two post-2023 surveys added here: Cates *et al.* (2024) reported 76% personal and 68% work-related burnout in Ontario, and Matthews *et al.* (2024) 65% and 47% in Victoria. Although the present design cannot establish a temporal trend, the direction is consistent with the wider literature on health-workforce wellbeing after the COVID-19 pandemic and warrants prospective monitoring.

The magnitude of heterogeneity (I^2 96–99%) is the second substantive finding, and it is informative rather than merely inconvenient. Regional subgroup analysis showed a threefold gradient in personal burnout, from 27.1% in Nordic Europe to 82.8% in the United Kingdom, and residual heterogeneity fell to zero within the North American subgroup. Prevalence therefore tracks the organisation of maternity services – staffing ratios, autonomy, continuity of carer and professional recognition – far more closely than it tracks the personal attributes of midwives. Sidhu *et al.* (2020) reached the same conclusion descriptively, reporting the highest burnout in Australia and Western Canada and the lowest in the Netherlands and Norway. Read through the JD-R model, low-burnout systems are those in which job resources (autonomy, relational continuity, managerial support) have been kept proportionate to job demands (Bakker & Demerouti, 2007).

The subscale gradient reinforces this interpretation. In every sample, client-related burnout was the lowest of the three dimensions, and in the pooled analysis it was less than a quarter of personal burnout. Midwives who are severely exhausted nevertheless do not attribute that exhaustion to the women in their care. This pattern argues against interventions framed around individual resilience or compassion fatigue and in favour of structural reform. It also explains why continuity models, which increase relational contact with women while increasing autonomy and control over scheduling, reduce rather than increase burnout (Brennan *et al.*, 2025; Hobday *et al.*, 2025).

Social support and coping strategies function as the proximal mechanisms through which these structural conditions are experienced. The mediation evidence of Liu *et al.* (2023) and the buffering hypothesis of Cohen and Wills (1985) converge on the same practical implication: peer and supervisory support is the most accessible and least costly lever available to service managers, because it can be strengthened through scheduled clinical supervision, structured debriefing after traumatic events and protected handover time without restructuring the entire service model.

Training in problem-focused coping, time management, cognitive restructuring, reflective practice is a reasonable complement, but should not be positioned as a substitute for addressing workload and autonomy, since Andina-Díaz *et al.* identify the latter as the dominant determinants (2025).

Implications for practice and policy

For maternity service managers, the findings support three concrete measures: routine surveillance of burnout using a validated instrument such as the CBI rather than ad hoc workload audits; the institutionalisation of peer support and post-incident debriefing as scheduled, paid activities; and staffing models that protect autonomy and continuity. For policymakers and professional bodies, the regional gradient documented here implies that burnout benchmarks should be system-level performance indicators alongside clinical outcomes. In Indonesia and comparable middle-income settings, where midwives provide the majority of primary maternal care through community health centres and independent practice, the immediate priority is measurement: no nationally representative CBI-based estimate currently exists, and workforce planning is proceeding without it.

Strengths and limitations

Strengths include restriction of the pooled analysis to a single validated instrument with a common cut-off, removal of overlapping cohorts, use of a variance-stabilising transformation appropriate to proportions near the boundaries, and formal assessment of robustness and small-study effects. Several limitations qualify the findings. First, the protocol was not prospectively registered. Second, heterogeneity was extreme, and the resulting prediction interval is so wide that the pooled estimate should be read as a summary of the observed distribution rather than as a value transferable to an individual service. Third, nine of the eleven samples were extracted at the study level from an included meta-analysis rather than from the primary reports, which introduces dependence on the accuracy of that source. Fourth, all contributing samples were cross-sectional and most used convenience sampling, so causal direction cannot be established and self-selection by more distressed midwives is plausible. Fifth, the evidence base is geographically narrow: it is dominated by high-income Anglophone and Nordic countries, and contains no data from Southeast Asia, South Asia, Latin America or sub-Saharan Africa, which limits generalisability to precisely those settings where the midwifery shortage is most acute. Sixth, restriction to English- and Indonesian-language publications may have introduced language bias. Finally, although Egger's test was non-significant for all three outcomes, its power is low with eleven studies and the absence of detected asymmetry should not be equated with the absence of publication bias.

Recommendations for future research

Longitudinal and interventional designs are needed to establish whether increases in social support and autonomy precede reductions in burnout, as the JD-R model predicts. Cross-cultural validation of the CBI in Indonesian and other Southeast Asian midwifery workforces, followed by nationally representative prevalence surveys, would address the most consequential gap identified here. Trials of structured peer support and post-incident debriefing, with burnout and retention as co-primary outcomes, would test the most frequently recommended but least rigorously evaluated intervention in this literature.

CONCLUSION AND RECOMMENDATIONS

This systematic review and meta-analysis demonstrates that burnout is highly prevalent among practising midwives worldwide, with pooled prevalence estimates of 54.8% for personal burnout, 44.4% for work-related burnout, and 12.0% for client-related burnout. These findings indicate that burnout among midwives represents a substantial occupational concern, with variations across regions suggesting the influence of organisational and service-related factors in shaping burnout experiences. Social support, adaptive coping strategies, and continuity-of-midwifery-carer models were identified as important protective resources, whereas limited professional autonomy and insufficient recognition were associated with increased burnout risk. Therefore, addressing midwifery burnout requires a broader system-level approach that considers workplace organisation, professional support, and service delivery structures rather than focusing solely on individual resilience.

Future research should expand evidence from underrepresented regions, particularly low- and middle-income countries, including Indonesia, to improve the global understanding of burnout determinants among midwives. Longitudinal studies are also recommended to evaluate causal pathways and the effectiveness of organisational interventions. For healthcare practitioners and service managers, routine burnout assessment, strengthening peer-support systems, and creating work environments that promote professional autonomy may support midwives' well-being and retention. Policymakers should consider integrating burnout prevention strategies into workforce planning and maternity service policies to ensure sustainable and resilient midwifery services.

ACKNOWLEDGEMENT

The authors would like to express their gratitude to all researchers whose published studies contributed valuable evidence to this systematic review and meta-analysis. The authors also acknowledge the support and academic resources provided by their institutions throughout the research process. This study was conducted independently, and the authors appreciate all contributions that supported the completion of this work.

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