

# Migrant worker mental health in Southeast Asia: a bibliometric analysis of public health research (2005–2025)

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## Article Info

### Article history:

Received Mar 17, 2026

Revised Apr 28, 2026

Accepted May 22, 2026

### Keywords:

Bibliometric analysis

Mental health

Migrant workers

Social determinants of health

Southeast Asia

## ABSTRACT

Southeast Asia hosts an estimated 10–14 million intraregional labor migrants who face disproportionate mental health burdens. No bibliometric study has systematically mapped the intellectual landscape or knowledge gaps of migrant worker mental health research specific to this region. A bibliometric analysis was conducted on peer-reviewed literature indexed in Web of Science and Scopus (January 2005–December 2025), following the BIBLIO checklist. VOSviewer and Bibliometrix (R v4.4) were used for keyword co-occurrence network mapping and publication trend analysis, respectively. A total of 487 eligible records were identified. Annual output grew from fewer than 10 publications per year before 2010 to over 60 per year from 2021 onward. Thailand dominated as the primary study setting (38.6%) and top-producing country (31.4%). Five thematic clusters emerged: i) depression and anxiety screening, ii) occupational stressors, iii) acculturation and social support, iv) healthcare access barriers, and v) social determinants of health. Symptom-prevalence research declined from 68% to 31% while equity-focused research grew from <1% to 14% over two decades. The field has grown substantially but remains geographically concentrated. Equity-focused, structurally informed research agendas are urgently needed to reduce mental health disparities among the region's most vulnerable workers.

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## 1. INTRODUCTION

Southeast Asia sustains one of the world's most extensive intraregional labor migration systems. Persistent economic differentials between lower-middle-income countries of origin, principally Myanmar, Cambodia, and the Lao People's Democratic Republic, and more industrialized destination economies, particularly Thailand, Malaysia, and Singapore, have generated an estimated 10–14 million documented intraregional labor migrants [1]. Thailand alone hosts more than 3 million registered foreign workers [2]. This mobile labor force is concentrated in high-risk occupational construction, manufacturing, agriculture, fisheries, and domestic work, generating substantial exposure to physical hazards, psychosocial stressors, and structural vulnerabilities, including legal precarity and restricted access to social protection. The mental health consequences represent a substantial, equity-relevant, and underaddressed public health challenge with region-wide policy implications.

Mental health disorders constitute a significant and underrecognized dimension of migrant worker health in the region. A systematic review and meta-analysis synthesizing 19 studies from ASEAN countries reported pooled prevalence rates of 34.77% for depression and 37.72% for anxiety among international

migrant workers [3], substantially exceeding those in comparable general industrial populations in Thailand [4]. Depression, anxiety, and stress rates of 35.8%, 42.2%, and 17.8%, respectively, have been documented among Bangladeshi migrants in Thailand [5]. Earlier studies reported depressive symptoms in 53.03% of Myanmar migrant workers in southern Thailand [6] and in 69.7% of Cambodian migrant workers [7]. These findings collectively document a persistent, substantial, and modifiable mental health burden accumulated across two decades of research.

The structural determinants of this burden are well-characterized. Low-quality housing, wage theft, restricted freedom of movement, language barriers, discrimination, social isolation, documentation insecurity, and limited healthcare access collectively produce psychological distress [1], [8]. The WHO Commission on Social Determinants of Health (CSDH) framework emphasizes that such structural conditions systematically generate health inequities that cannot be addressed through individual behavioral interventions alone [9]. Despite this conceptual foundation, most primary research in the Southeast Asian context remains concentrated in cross-sectional symptom-prevalence designs, with limited engagement with structural determinants, equity comparisons, or policy-relevant frameworks.

Bibliometric analysis provides a rigorous, reproducible methodology for mapping the intellectual landscape of a research field, identifying knowledge gaps, tracing thematic evolution, and surfacing opportunities for future investigation [10], [11]. Recent bibliometric studies have addressed adjacent domains: Han *et al.* [12] provided the first global bibliometric overview of international migrants' mental health, but did not disaggregate by regional labor migration system or policy context; Li and Wei [13] analyzed immigrants' health education literature without focusing on mental health outcomes or the ASEAN region; and Sheikh and Hamid [14] examined migration and women's health from 2000 to 2023 but were not specific to labor migrants or Southeast Asia. None mapped the distinct institutional actors, disease burden profile, or policy environment of the Southeast Asian labor migrant mental health field a critical gap this study addresses directly.

This bibliometric analysis pursues four specific objectives: i) To map publication volume trends in Southeast Asian migrant worker mental health research from 2005 to 2025; ii) To identify the most productive countries, institutions, journals, and authors; iii) To characterize primary thematic clusters through keyword co-occurrence network analysis; and iv) To identify persistent research gaps and propose priority directions for future investigation and ASEAN public health policy. This study presents the first dedicated bibliometric analysis of migrant worker mental health research in Southeast Asia, filling a gap left unaddressed by prior global or thematic bibliometric reviews. By systematically mapping 20 years of literature (2005–2025) across dual databases and applying both VOSviewer co-occurrence network analysis and Bradford's Law, this study generates the first region-specific intellectual map, identifies five distinct thematic clusters with quantified temporal evolution, and produces actionable, ASEAN-contextualized research priority recommendations, contributions not achievable through narrative review or single-database approaches. The remainder of this article is organized as follows: Section 2 describes the research methodology; Section 3 presents results and discussion organized by analytical dimension; and Section 4 provides conclusions with targeted policy recommendations.

## 2. METHOD

This study follows the BIBLIO (Bibliometric Reporting in the Biomedical Literature with Optimal Items) checklist [15], a minimum-requirements reporting guideline for bibliometric reviews, to ensure transparency and replicability. Adherence to this checklist ensures that all reported items meet international standards for bibliometric study quality. The full checklist compliance table is available from the corresponding author upon request.

### 2.1. Data sources and search strategy

Literature was retrieved from two complementary databases: the Web of Science Core Collection (WoSCC; Science Citation Index Expanded, Social Sciences Citation Index, Emerging Sources Citation Index) and Scopus (Elsevier). Dual-database retrieval is the current methodological best practice for bibliometric analysis, as it maximizes coverage by compensating for each database's indexing limitations [10]. The academic rationale for search term selection followed two principles: i) Population specificity, terms such as 'migrant worker,' 'foreign worker,' 'labor migrant,' 'undocumented migrant,' and 'irregular migrant' were selected to capture the full spectrum of labor migration statuses in the region, including both documented and undocumented populations, while excluding refugee and asylum-seeker literature, which operates under a different legal and policy framework; ii) Outcome breadth, mental health terms included depression, anxiety, psychological distress, PTSD, stress, substance use, and suicidality to reflect the full range of outcomes documented in the literature and recognized in clinical practice. Geographic terms encompassed all ten ASEAN member states and the collective term 'ASEAN.'

The following search string was applied to titles, abstracts, and keywords:

WoS: TS=(("migrant worker\*" OR "labor migrant\*" OR "labour migrant\*" OR "foreign worker\*" OR "undocumented migrant\*" OR "irregular migrant\*") AND ("mental health" OR "depression" OR "anxiety" OR "stress" OR "psychological distress" OR "PTSD" OR "post-traumatic stress" OR "substance use" OR "suicid\*")) AND ("Southeast Asia" OR "Thailand" OR "Malaysia" OR "Singapore" OR "Myanmar" OR "Cambodia" OR "Lao\*" OR "Vietnam" OR "Indonesia" OR "Philippines" OR "ASEAN"))

Scopus: TITLE-ABS-KEY(("migrant worker\*" OR "labor migrant\*" OR "foreign worker\*") AND ("mental health" OR "depression" OR "anxiety" OR "psychological distress")) AND ("Southeast Asia" OR "Thailand" OR "Malaysia" OR "Singapore" OR "Myanmar" OR "Cambodia" OR "ASEAN"))

The search covered January 1, 2005, to December 31, 2025. The 2005 start date reflects the field's emergence following the expansion of ASEAN labor migration governance frameworks, including the 2007 ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers. Only English-language records were included to ensure cross-tool comparability in bibliometric software.

## 2.2. Eligibility criteria

Records were included if they met all of the following criteria: peer-reviewed journal articles or review articles; focused on migrant worker populations (economic/labor migrants; documented or undocumented) in Southeast Asian countries as the destination context; reporting at least one mental health outcome (depression, anxiety, psychological distress, PTSD, stress, well-being, substance use, or suicidality); published between January 1, 2005 and December 31, 2025; available in English. Records were excluded if they were conference proceedings, editorials, letters, or book chapters; focused exclusively on refugees, asylum seekers, or internally displaced persons; studies where Southeast Asia was the origin rather than the destination context; or duplicate records identified by DOI and title matching. The application of these criteria was designed to ensure that the analytical corpus reflected contemporary, peer-reviewed evidence directly relevant to the ASEAN labor migration mental health context, while minimizing heterogeneity introduced by adjacent but conceptually distinct populations such as refugees or internal migrants.

## 2.3. Screening and selection procedure

Title and abstract screening were conducted by the author against the eligibility criteria. Full-text review was performed for all records passing title-abstract screening. Ambiguous cases were resolved by full-text review and, where ambiguity persisted, by consultation with an independent academic colleague to arrive at a consensus decision. Deduplication was performed using DOI-based matching as the primary method, supplemented by title string matching for records lacking DOIs. The complete record selection process is summarized in the PRISMA-ScR flow diagram (Figure 1).

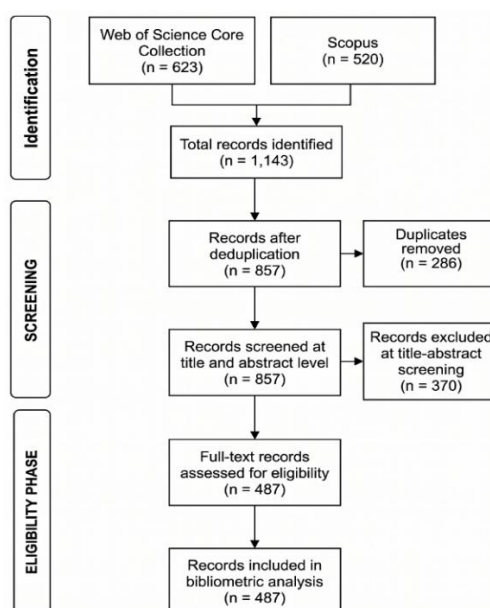


Figure 1. PRISMA-ScR flow diagram of record selection

## 2.4. Analytical tools

Two platforms were employed: i) VOSviewer (v1.6.20) [16] for co-authorship network analysis, keyword co-occurrence analysis, and bibliographic coupling; and ii) Bibliometrix R package (v4.4) [17] for publication trend analysis, Bradford's Law analysis of core journals, and h-index computation. Time-slicing was set at 2005–2010, 2011–2015, 2016–2020, and 2021–2025. Keyword normalization merged variant spellings (e.g., 'labour migrant' / 'labor migrant'; 'PTSD' / 'post-traumatic stress disorder'). The minimum keyword occurrence threshold was set at three occurrences.

## 2.5. Publication bias considerations

Bibliometric analyses are inherently subject to publication bias arising from database indexing selectivity. To mitigate this, a dual-database approach was employed to maximize indexed coverage. Nevertheless, journals not indexed by WoSCC or Scopus, publications in languages other than English, and grey literature remain excluded. The ASEAN Citation Index (ACI) was not incorporated due to software incompatibility with VOSviewer and Bibliometrix. Regional journals indexed only in ACI may therefore be underrepresented, and this limitation is particularly relevant for interpreting the apparent low output from origin-country institutions (Myanmar, Cambodia, Laos), which may publish more frequently in vernacular-language or regionally indexed journals not captured in the present analysis.

## 3. RESULTS AND DISCUSSION

### 3.1. Search results and record selection

The combined database search retrieved 1,143 initial records (WoSCC:  $n = 623$ ; Scopus:  $n = 520$ ). After deduplication ( $n = 286$  duplicates removed), 857 unique records underwent title-abstract screening; 370 were excluded for failing to meet migrant worker population and/or Southeast Asia geographic destination criteria. Full-text review confirmed eligibility for all 487 remaining records. The PRISMA-ScR flow diagram (Figure 1) summarizes the selection process. This three-stage screening procedure ensured systematic and transparent record inclusion consistent with BIBLIO checklist standards.

### 3.2. Annual publication trends

Publication volume demonstrated consistent and accelerating growth across the 20 years (Figure 2). During the earliest interval (2005–2010), the field yielded fewer than 10 eligible records per year, reflecting its nascent stage. The 2011–2015 period saw moderate growth, averaging approximately 15–20 publications annually, driven primarily by Thai and Malaysian institutions. A substantial acceleration occurred from 2016 onward, coinciding with: i) The ASEAN Consensus on the Protection and Promotion of the Rights of Migrant Workers (2017); ii) Thailand's Eastern Economic Corridor (EEC) framework formalization [18]; and iii) The Lancet Commission on Global Mental Health (2018) scale-up of mental health research investment. The COVID-19 pandemic produced an additional surge from 2020 onward, with annual output exceeding 60 records per year by 2021, a pattern consistent with COVID-19-driven acceleration in adjacent bibliometric fields [13], [14].

These growth dynamics carry an important interpretive implication: more than 50% of all identified publications have appeared in the five years 2021–2025, creating an inherent recency bias in citation counts and impact metrics. Foundational studies from the 2005–2015 period may appear less influential than their actual formative contribution to the field warrants. Scholars and policy audiences should therefore interpret citation frequency data with appropriate caution, recognizing this structural feature of the corpus.

### 3.3. Leading source journals

Journal distribution was analyzed using Bradford's Law of Scattering to identify core, mid-zone, and peripheral journals. Table 1 presents the top five journals by publication count. The dominance of open-access, broad-scope public health journals PLOS ONE ( $n = 54$ , 11.1%), BMC Public Health ( $n = 48$ , 9.9%), and the International Journal of Environmental Research and Public Health ( $n = 41$ , 8.4%) reflects global open-access norms in public health research and the inherently interdisciplinary nature of migrant mental health research. The presence of Asian Journal of Psychiatry ( $n = 19$ , 3.9%) with a 5-year impact factor of 9.8 indicates that the topic has achieved recognition within specialist psychiatric literature. The concentration in open-access venues also suggests accessibility to researchers from lower-resource settings, consistent with the field's equity orientation.

### 3.4. Geographic distribution and institutional analysis

Thailand dominated as both the primary study destination (38.6% of records) and the top-producing country (31.4% of corresponding authorships), as shown in Table 2. This dual dominance reflects three converging factors: i) Thailand's position as the region's largest labor-receiving country, hosting over 3

million registered foreign workers and thus offering the largest accessible study populations [2]; ii) the research capacity and international networks of Thai universities—Mahidol University led with  $n = 62$  records, followed by Chulalongkorn University ( $n = 41$ ) and Burapha University ( $n = 24$ )—which have developed specialized migrant health research programs with funding from IOM and WHO Thailand; and iii) national policy visibility through Thailand's bilateral MOU frameworks with Myanmar, Cambodia, and Laos, which created structured employer-mediated recruitment channels that facilitated research access.

The geographic concentration carries a critical limitation. Malaysia (approximately 2.4 million documented foreign workers), Singapore (approximately 1.1 million), and rapidly expanding industrial zones of Vietnam and Indonesia remain substantially understudied relative to their labor-receiving scale [19]. Countries of origin—Myanmar ( $n = 12$ ), Cambodia ( $n = 8$ ), Laos ( $n < 5$ )—contribute minimal research output, reflecting research infrastructure disparities that parallel and arguably reproduce the labor migration hierarchy itself [20]. This asymmetry means the field's intellectual landscape has been predominantly shaped by destination-country and high-income-country partner perspectives, with minimal input from origin-country researchers or participatory approaches involving workers themselves.

Country collaboration network analysis identified three primary clusters: i) A Thailand-centered cluster involving Mahidol University, Chulalongkorn University, and Australian and UK partners; ii) A Singapore-Malaysia cluster with London School of Hygiene and Tropical Medicine linkages; and iii) An emerging US-based diaspora health research cluster extending to regional institutions. These patterns suggest international research agendas are substantially shaped by destination-country and high-income-country priorities, reinforcing the epistemic asymmetry documented in the output data.

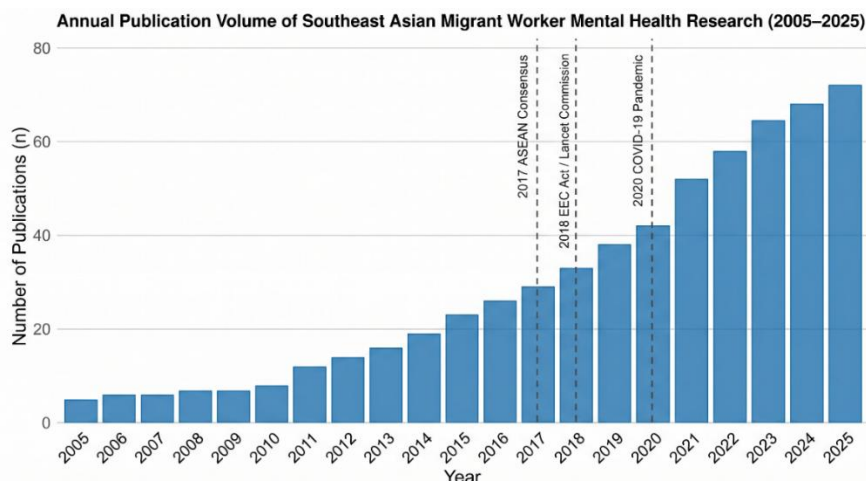


Figure 2. Annual publication trends, 2005–2025 ( $n = 487$ )

Table 1. Top 5 source journals by publication count (2005–2025)

| Rank | Journal   | Records (n) | % of total | 5-yr IF |
|------|---|-------------|------------|---------|
| 1    | PLOS ONE  | 54          | 11.1%      | 3.7     |
| 2    | BMC Public Health   | 48          | 9.9%       | 3.9     |
| 3    | International Journal of Environmental Research and Public Health | 41          | 8.4%       | 4.8     |
| 4    | Global Health Action  | 22          | 4.5%       | 3.2     |
| 5    | Asian Journal of Psychiatry                                       | 19          | 3.9%       | 9.8     |

Note. IF = Impact Factor. Data from WoS Journal Citation Reports (2024)

### 3.5. Keyword co-occurrence analysis and thematic clusters

Keyword co-occurrence analysis identified 214 keywords meeting the minimum occurrence threshold ( $\geq 3$  occurrences). Five primary thematic clusters emerged, as presented in Table 3. Figure 3 displays the complete keyword co-occurrence network; node size represents keyword frequency, and link thickness represents co-occurrence strength. The five clusters are spatially differentiated in the network, indicating meaningful thematic separation while maintaining cross-cluster links that reflect conceptual interdependencies.

Table 2. Top 10 countries by research output (Corresponding author, 2005–2025)

| Rank | Country        | Records (n) | % of total | First year |
|------|----------------|-------------|------------|------------|
| 1    | Thailand       | 153         | 31.4%      | 2005       |
| 2    | United States  | 87          | 17.9%      | 2006       |
| 3    | United Kingdom | 54          | 11.1%      | 2007       |
| 4    | Australia      | 41          | 8.4%       | 2007       |
| 5    | Malaysia       | 36          | 7.4%       | 2008       |
| 6    | Singapore      | 28          | 5.7%       | 2009       |
| 7    | Netherlands    | 19          | 3.9%       | 2008       |
| 8    | Myanmar        | 12          | 2.5%       | 2013       |
| 9    | Cambodia       | 8           | 1.6%       | 2015       |
| 10   | Indonesia      | 7           | 1.4%       | 2016       |

Note. Countries of origin (Myanmar, Cambodia) contribute substantially less output than destination countries.

Table 3. Keyword co-occurrence thematic clusters (VOSviewer, frequency  $\geq 3$ )

| Cluster    | Core keywords   | Theme                                     |
|------------|---|---|
| 1 (Red)    | depression, anxiety, DASS-21, CES-D, PHQ-9, prevalence, screening                             | Symptom measurement and epidemiology      |
| 2 (Blue)   | workplace stress, occupational health, working conditions, job insecurity, fatigue            | Occupational and workplace determinants   |
| 3 (Green)  | acculturation, social support, perceived discrimination, language barrier, loneliness, coping | Psychosocial and acculturation processes  |
| 4 (Yellow) | healthcare access, help-seeking, health literacy, insurance, barriers, service utilization    | Healthcare access and service delivery    |
| 5 (Purple) | social determinants, health equity, documentation status, structural factors, COVID-19        | Structural/social determinants (emerging) |

Figure 3 illustrates the keyword co-occurrence network, with Cluster 1 occupying the central-right position as the most densely interconnected cluster, while Cluster 5 (social determinants) appears at the network periphery, reflecting its more recent emergence and lower volume relative to established clusters. This spatial arrangement underscores the field's historical anchoring in biomedical symptom measurement (Cluster 1) and its incremental expansion toward structural and equity-oriented conceptual territory (Cluster 5). The cross-cluster linkages visible in the network confirm that these themes, while analytically distinct, co-occur in a substantial proportion of publications, indicating methodological and conceptual integration rather than isolated specialization.

Cluster 1 (depression and anxiety screening) was the largest cluster, reflecting the field's foundational emphasis on establishing baseline prevalence estimates using standardized instruments. The DASS-21 was the most frequently co-occurring instrument keyword, consistent with its validated use in migrant populations [3], [5]. This cluster represented 68% of publications in 2005–2010. Cluster 2 (occupational stressors) was the second largest; key studies documented associations between high job strain and psychological distress in manufacturing and agriculture sectors [6], [21]. Cluster 3 (acculturation and social support) demonstrated consistent centrality across all time periods, with perceived discrimination showing the highest co-occurrence link strength [22], [23]. Cluster 4 (healthcare access barriers) grew substantially from 2016 onward, with language barriers, documentation-related fear, and cost as primary obstacles [1], [8]. Cluster 5 (social determinants of health) was the smallest but fastest-growing cluster, emerging predominantly post-2020; 'social determinants of health,' 'health equity,' and 'COVID-19' registered keyword burst strength scores  $>7.0$  in 2021–2025 [9], [24].

### 3.6. Temporal thematic evolution

Table 4 quantifies the proportional shift in publication emphasis across four time periods, demonstrating the field's structural maturation from symptom-prevalence documentation toward equity-focused frameworks. This longitudinal perspective reveals that the field has undergone a qualitative intellectual reorientation, not merely quantitative growth. Understanding this evolution is essential for identifying where investment in new research directions will generate the greatest incremental value for ASEAN public health policy and practice.

The decline of Cluster 1 from 68% to 31% and the growth of Cluster 5 from  $<1\%$  to 14% over 20 years represent a meaningful disciplinary maturational transition from 'is there a problem?' toward 'why does the problem exist and how can structural conditions be changed?' This trajectory aligns with global public health calls for research that informs structural rather than purely behavioral interventions. Such a shift also signals growing engagement with intersectionality frameworks and policy-level evidence generation, which are prerequisites for effective ASEAN-level governance responses.

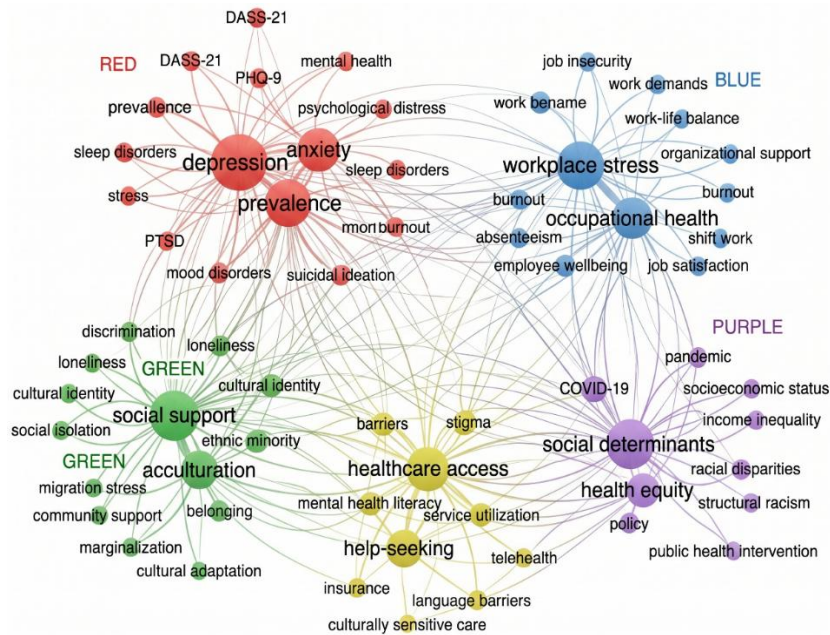


Figure 3. VOSviewer keyword co-occurrence network (n = 214 keywords; five thematic clusters). Node size = keyword frequency; link thickness = co-occurrence strength

Table 4. Temporal thematic evolution across four time periods

| Period    | Cluster 1 (%) | Cluster 2 (%) | Cluster 3 (%) | Cluster 4 (%) | Cluster 5 (%) |
|-----------|---------------|---------------|---------------|---------------|---------------|
| 2005–201  | 68            | 15            | 12            | 4             | <1            |
| 2011–2015 | 55            | 18            | 14            | 10            | 3             |
| 2016–2020 | 43            | 20            | 17            | 14            | 6             |
| 2021–2025 | 31            | 19            | 18            | 18            | 14            |

### 3.7. Critical discussion: implications for ASEAN public health governance

Four principal findings characterize the field's development with direct implications for policy and practice. First, the field's accelerating growth demonstrates growing recognition of migrant worker mental health as a legitimate public health priority. The post-2020 surge reflects COVID-19's role in exposing structural vulnerabilities of migrant populations [8], [1], consistent with adjacent bibliometric literature [13], [14]. Second, geographic concentration creates a knowledge asymmetry with policy consequences: intervention models developed in Thailand may not transfer effectively to Malaysia, Singapore, or Vietnam, where labor governance structures and cultural contexts differ substantially. The near-absence of origin-country research constitutes an epistemic injustice that mirrors the labor system's structural inequalities [20]. Third, the overrepresentation of cross-sectional symptom-prevalence designs reflects an enduring biomedical paradigm that prioritizes documenting the existence of a problem over explaining its structural production [9]. This paradigm also introduces systematic sampling bias by recruiting workers through employer networks, thereby excluding the most vulnerable undocumented and informally employed workers. Fourth, the emergence of Cluster 5 (social determinants/equity frameworks) represents the field's most consequential development for ASEAN governance. The growing application of intersectionality frameworks [25], [26] accounting for the compounding effects of gender, nationality, documentation status, and socioeconomic position offers the theoretical sophistication needed for differentiated policy responses. The ASEAN Consensus on Migrant Workers' Rights (2017) and the ASEAN Community Blueprint provide governance architecture through which equity-focused research findings could directly inform binding regional commitments, but only if the research agenda is redesigned to generate structural-level evidence.

### 3.8. Research gaps and priority directions

Three specific and actionable gaps emerge from the analysis, each representing a strategic research priority for the next decade. These gaps were identified through systematic synthesis of keyword network absences, temporal cluster data, and geographic output asymmetries documented in sections 3.4–3.6 above.

Addressing these gaps represents the highest-priority research investment opportunity for ASEAN migrant worker mental health scholarship in the 2026–2035 decade.

- a) Special Economic Zones (SEZs): Thailand's Eastern Economic Corridor, Iskandar Malaysia, Binh Duong (Vietnam), and Batam (Indonesia) represent the fastest-growing concentrations of migrant labor in the region, yet no study in the identified corpus examined mental health outcomes in SEZ contexts [27], [28]. SEZ labor governance structures frequently operate under modified regulatory frameworks that may reduce worker protections. SEZ-focused research represents the most immediate opportunity to generate novel, policy-relevant evidence.
- b) Undocumented and irregularly documented workers: This highest-risk subpopulation is almost absent from the literature. The corpus overwhelmingly addresses registered workers accessible through employer-facilitated sampling, systematically excluding those with the greatest legal precarity and most limited healthcare access [29], [30]. Methodological innovations, such as respondent-driven sampling, community-based participatory research, and mobile digital data collection, offer pathways to reach this population.
- c) Equity comparisons: No study directly compared mental health outcomes between migrant and host-country workers within shared occupational settings, making it impossible to quantify the equity gap attributable to migrant status itself empirically. Such comparative equity designs are explicitly called for in the WHO 2024 Operational Framework for Monitoring Social Determinants of Health Equity [9].

Methodologically, greater adoption of structural equation modeling [31], [32] and causal mediation analysis would enable the field to move from association to pathway-level understanding evidence substantially more useful for intervention design and policy advocacy. Participatory action research designs involving migrant workers as co-investigators represent an additional priority to address the epistemic asymmetry documented in this analysis.

### 3.9. Strengths and limitations

Strengths include: the first dedicated bibliometric analysis of the field; dual-database approach; adherence to BIBLIO checklist standards; explicit publication bias assessment; transparent eligibility criteria; and use of complementary analytical tools for convergent validity. These features collectively distinguish this study from prior narrative or scoping reviews and from adjacent bibliometric analyses that did not focus on Southeast Asia. Limitations include restriction to English-language publications; imperfect database indexing that may miss regionally indexed journals; non-incorporation of the ASEAN Citation Index due to tool incompatibility; and interpretive judgment inherent in assigning thematic cluster labels. These limitations are consistent with those acknowledged in comparable published bibliometric reviews [12]–[14].

## 4. CONCLUSION

Twenty years of research on migrant worker mental health in Southeast Asia reveal a field that has grown substantially—from fewer than 10 publications per year before 2010 to over 60 per year from 2021 onward—and has undergone meaningful thematic maturation, with social determinants and health equity frameworks growing from marginal (<1%) to emerging (14%) status in 2021–2025. This study is the first bibliometric analysis to systematically map this field's intellectual structure, contributing a novel evidence base for ASEAN migrant health policy and research priority-setting. By generating the first region-specific intellectual map and quantifying thematic evolution across five clusters over two decades, this work establishes a reproducible methodological benchmark for future bibliometric updates in this domain.

Despite this progress, the field remains constrained by geographic concentration in Thailand, overrepresentation of cross-sectional symptom-prevalence designs, and critical gaps in coverage of undocumented workers, SEZ contexts, and equity-comparative frameworks. Pooled depression and anxiety prevalence exceeding 34% among ASEAN migrant workers represents a substantial public health burden that is modifiable through structural policy intervention. The field's trajectory toward equity, structure, and policy relevance is encouraging but requires deliberate acceleration.

This study advances the following recommendations, differentiated by stakeholder group. For ASEAN Governments and Regional Institutions: establish a regional migrant worker mental health surveillance system with mandatory disaggregated reporting by documentation status, nationality, and sector; mandate mental health service access provisions in SEZ labor governance frameworks, including language-concordant services and documentation-status-blind care protocols; and integrate mental health equity indicators into ASEAN Universal Health Coverage monitoring dashboards. For Academic Institutions and Research Funders: redirect investment toward understudied contexts (Malaysia, Vietnam, Indonesia, SEZ settings) and populations (undocumented workers); fund origin-country research capacity in Myanmar, Cambodia, and Laos; and prioritize equity-comparative designs, participatory methods, and structural intervention studies over additional cross-sectional prevalence surveys. For Global Health Organizations:

incorporate ASEAN migrant worker mental health as a priority sub-population in WHO WPRO and SEARO mental health action plans; and support development and validation of culturally adapted mental health assessment tools in Burmese, Khmer, Lao, and Tagalog to enable standardized cross-national comparison.

### FUNDING INFORMATION

This research received no external funding.

### AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

| Name of Author    | C | M | So | Va | Fo | I | R | D | O | E | Vi | Su | P | Fu |
|-------------------|---|---|----|----|----|---|---|---|---|---|----|----|---|----|
| Suamuang Ruangrit | ✓ | ✓ |    |    | ✓  | ✓ |   |   | ✓ | ✓ | ✓  |    |   |    |

C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

### CONFLICT OF INTEREST STATEMENT

The author declares no conflict of interest.

### ETHICS APPROVAL

This study is a secondary bibliometric analysis of peer-reviewed literature indexed in publicly available databases (Web of Science and Scopus). No primary data were collected from human participants, and no personally identifiable information was accessed or processed. Accordingly, ethics committee approval was not required for this study.

### DATA AVAILABILITY

The complete record dataset used for bibliometric analysis is available from the corresponding author upon reasonable request.





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