

A Systematic Scoping Review of Nursing's Pivotal Role in Dismantling Mental Health Discrimination

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Abstract

Background: The scope of mental health challenges facing contemporary society underscores the critical importance of nursing leadership in stigma reduction efforts. As part of their roles, nurses are better placed to be essential advocates for policy changes, resource allocation decisions, and systemic reforms that address the structural determinants of mental health stigma. **Aim:** To identify evidence-based anti-stigma interventions implemented by nurses across various healthcare contexts and analyze the effectiveness of nursing-led initiatives in reducing discriminatory attitudes and practices. **Methods:** This review used the methodological framework outlined by Arksey and O'Malley's scoping review framework and was reinforced by the 2020 Joanna Briggs In-

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stitute PRISMA = ScR checklist for conducting scoping reviews. **Results:** The review included 30 studies meeting inclusion criteria. The included studies comprised sixteen randomized controlled trials, six quasi-experimental studies, five pre-post experimental intervention studies, and three longitudinal studies. Studies were conducted across multiple healthcare settings including psychiatric hospitals (n = 15), community mental health centers (n = 6), general hospitals (n = 5), and educational institutions (n = 3). **Conclusion:** Nursing-led and nursing-relevant anti-stigma interventions can effectively reduce mental health stigma across diverse populations, settings, and outcome domains.

Keywords

Anti-Stigma, Leadership, Mental Health, Nursing Leadership, Stigma Reduction

1. Introduction

The pervasive impact of mental health stigma continues to permeate healthcare systems worldwide, creating invisible barriers that prevent millions from seeking treatment, receiving quality care, and achieving recovery. Even within the challenging healthcare landscape, nursing staff emerge as transformative agents, given that their unique position in the intersection of clinical expertise and human compassion provides a platform to challenge discriminatory attitudes and practices in health care delivery that have marginalized individuals with mental health conditions [1]. The nursing profession, holds unprecedented potential to reshape mental health care delivery through evidence-based anti-stigma interventions, therapeutic relationships, and advocacy initiatives that address both structural and self-stigma within healthcare settings [2].

In mental health practice, self-stigma manifests as a complex web of negative attitudes, beliefs, and behaviors within an individual that create systematic disadvantages when experiencing psychological distress or psychiatric conditions [3]. This stigma operates at multiple levels, from personal internalized shame to institutional policies that perpetuate discrimination, fundamentally compromising the quality, accessibility, and effectiveness of mental health services [2]. Mental health stigma and stigma around mental health services leads to delayed help-seeking by impacting health seeking behaviors including treatment adherence [4].

Among nurses and other care providers, mental health stigma manifests through reduced empathy toward service users, inadequate assessment and treatment protocols, and the persistent marginalization of psychiatric care within broader medical practice [3]. These discriminatory practices have for a long time contributed to immeasurable disparities in care outcomes, treatment engagement, and recovery trajectories for individuals with mental health conditions.

About 450 million require mental health care services each year due to severe

symptoms and risk of suicide, and empowering them to engage in health promoting activities after discharge [5]. Nurses are equipped to provide salient recovery-oriented health care services in ways that influence patient experiences, treatment outcomes, and recovery trajectories for individuals with mental health conditions [6]. When nurses demonstrate empathy, cultural competence, and non-judgmental approaches to mental health care, patients report higher levels of satisfaction, improved treatment engagement, and better clinical outcomes [7]. Nursing-led anti-stigma interventions can reduce discriminatory attitudes by up to 25% and improve patient satisfaction scores by 15 - 20 percent [8]. This evidence base highlights the critical importance of nursing education, training, and organizational support systems that promote anti-stigma competencies and sustainable practice changes.

Nursing's unique positioning within healthcare hierarchies and patient care delivery systems creates distinctive opportunities for anti-stigma intervention [9]. This is so because nurses maintain sustained therapeutic relationships that span the entire care continuum, from initial assessment through treatment implementation and recovery support [10]. On the other hand, their extended contact with mental health service users also means they have to contend with negative attitudes, fear, inability to clinically manage mental health conditions and institutionalized procedures [10]. It is therefore interesting to look at how the same staff model non-discriminatory attitudes, challenge stigmatizing behaviors, and implement systemic changes that promote dignity and respect for mental health service users.

The primary purpose of this comprehensive analysis is to examine and synthesize the current evidence regarding nursing's multifaceted role in reducing mental health stigma within healthcare settings. Specifically, this research aims to: identify evidence-based anti-stigma interventions implemented by nurses across various healthcare contexts and analyze the effectiveness of nursing-led initiatives in reducing discriminatory attitudes and practices.

2. Materials and Methods

We used the scoping review methodology to map and synthesize research findings on the research aims and question [11] [12]. The review was guided by the steps outlined in Arksey and O'Malley's scoping review framework, updated by Levac *et al.* [13] [14]. This was reinforced by the 2020 Joanna Briggs Institute PRISMA = ScR checklist for conducting scoping reviews [15].

The scoping review followed the steps outlined in Arksey and O'Malley's framework as follow [13];

1. Identifying the research question
2. Searching for relevant studies
3. Selecting studies
4. Charting the data
5. Collating, summarizing and reporting the results

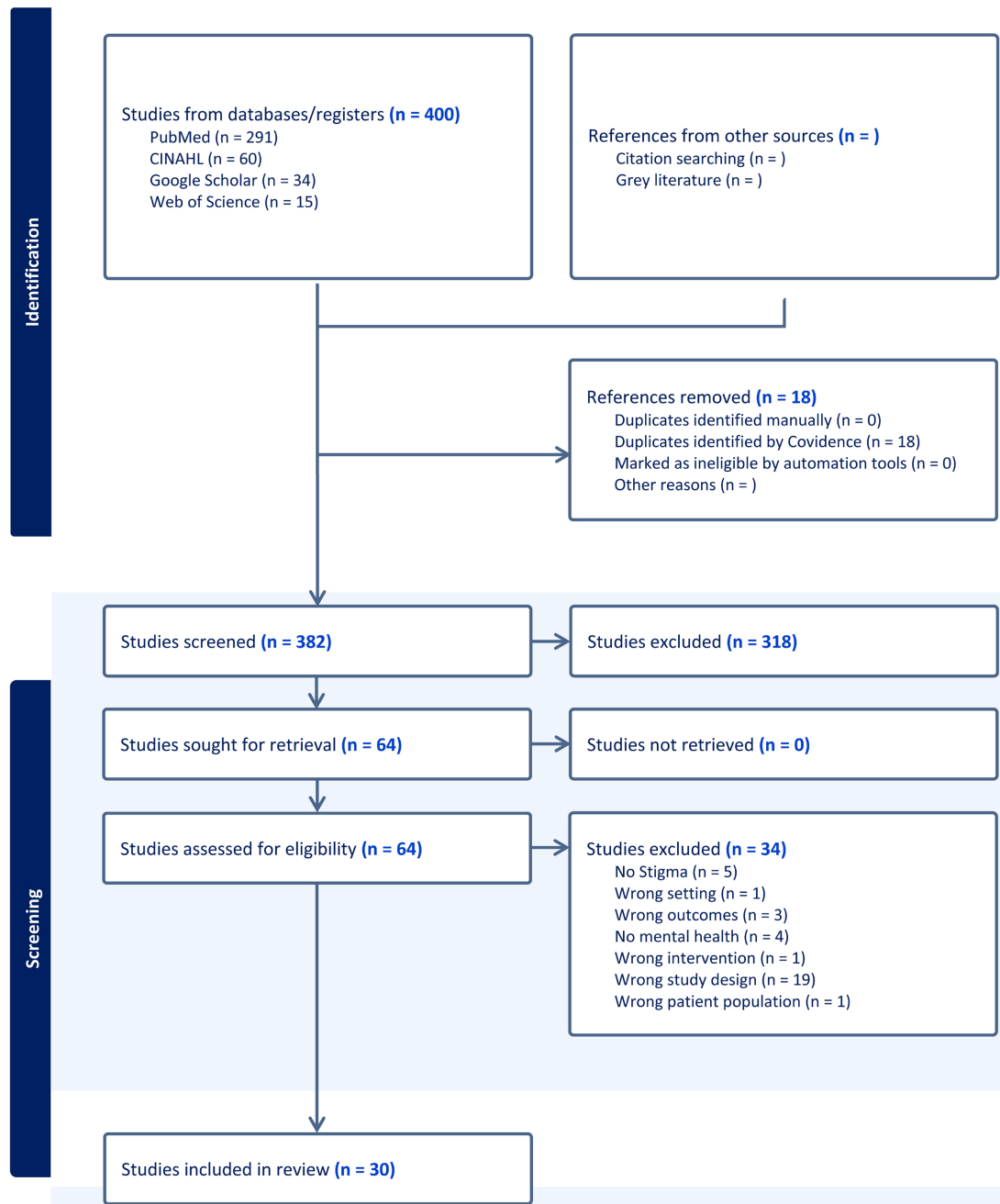


Figure 1. The scoping review flow diagram.

2.1. Identifying the Research Question and Search Strategy

We formulated the scoping review question using the Population Content Context (PCC) framework [15] as follows; *Are nurses who use anti-stigma intervention to combat the pervasive effect of mental health stigma in patients in health care institutions effective in reducing mental health stigma and/or shame?* Mental health Stigma is defined as the perception of a person with mental health illness as failing or flawed due to their condition with a purpose of segregation and exclusion and might lead to self-stigmatization [16] [17].

We commenced the search broadly on the Goggle platform and Goggle Scholar database to come up with search terms (key words and index terms) to be used on the chosen databases (strings combined with Boolean operator AND);

1. Nurse* OR psychiat* OR psychology* OR health care worker
2. Mental health distress OR psychological distress OR psychiatric illness
3. Anti-stigma OR stigma* OR self-stigma OR intervention OR prevention OR program*

Articles were obtained by searching on Pubmed, CINAHL Complete, Health-Source: Nursing/Academic Edition, Psychology and Behavioral Science Collection, Social Work Abstracts, SocINDEX on September, 2025.

Eligibility

We included peer-reviewed studies if they were in English language, described one of the following types of stigma; 1) self-stigma, 2) social stigma and 3) avoiding being labeled; and reported on nurse-led mental health stigma prevention or intervention.

2.2. Study/Source of Evidence Selection

Screening included collating and uploading citations to the Convidence citation management program. We imported from databases a total of 400 studies and 18 duplicates were removed. Two reviewers screened the titles and abstract of the sources to assess eligibility of the sources and 318 sources were excluded. A third reviewer resolved all disagreements via discussion and consensus building. All the authors were involved in full text review of the remaining 64 studies and 34 sources were excluded. A total of 30 studies were included. Page *et al.*'s The Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping review (PRISMA-ScR) flow diagram is presented as **Figure 1** [18].

2.3. Data Charting/Extraction

The authors collectively came up with an excel data charting form (**Table 1**) and extracted from each included study the following; author, location and setting, study design, intervention, treatment and key findings.

3. Data Synthesis and Analysis

A narrative synthesis approach was employed to analyze the extracted data from included studies. We organized findings thematically according to intervention types, target populations, and outcome measures. Data were categorized into three primary domains: (1) structural interventions (policy-level and organizational changes), (2) educational interventions (training programs and awareness campaigns), and (3) therapeutic interventions (direct patient care approaches). Effect sizes were extracted when available and we coded findings for common constructs. We assessed heterogeneity in intervention characteristics, implementation contexts, and outcome measurement approaches to identify patterns of effectiveness across different settings and populations.

Table 1. Characteristics and findings of included studies.

| Study | Design | Setting | Sample Size | Intervention Type | Duration | Primary Outcomes | Key Findings |
|---|-----------------------------|--------------------------------------|-------------|--|----------------|------------------------------------|---|
| Garg <i>et al.</i> (2025) [19] | Pilot study | Tertiary psychiatry (India) | n = 78 | i-CARE single-session caregiver intervention | 3 months | Affiliate stigma, caregiver burden | 32% reduction in affiliate stigma ($p < 0.001$); improved caregiver coping strategies |
| Valentim <i>et al.</i> (2024) [20] | Pre-post intervention | Nursing education (Portugal) | n = 234 | “This Is Me” anti-stigma program | 6 months | Stigma attitudes, empathy | Significant improvement in stigma scores (Cohen’s $d = 0.78$); enhanced empathetic understanding |
| Janssens <i>et al.</i> (2024) [21] | Cluster RCT | Employment settings (Netherlands) | n = 412 | Stigma awareness for reemployment | 12 months | Employment outcomes, stigma | 18% higher reemployment rates; reduced perceived discrimination |
| Ko & Kim (2023) [22] | Pre-post study | Psychiatric inpatients (South Korea) | n = 64 | Mindfulness-based stress reduction | 8 weeks | Internalized stigma, well-being | Decreased internalized stigma ($p = 0.003$); improved psychological well-being |
| Tang <i>et al.</i> (2023) [23] | RCT | Hospital (China) | n = 120 | Positive psychology expressive writing | 6 weeks | Stigma, hope, quality of life | Reduced stigma ($d = 0.64$); increased hope and coping capacity |
| Querido <i>et al.</i> (2020) [24] | Quasi-experimental | Community (Brazil) | n = 156 | Stigma reduction intervention | 4 months | Stigma, intergroup anxiety | Reduced stigma attitudes ($p < 0.05$); decreased intergroup anxiety |
| Saiz <i>et al.</i> (2021) [25] | Multi-site intervention | High schools (Spain) | n = 1247 | Five-strategy anti-stigma program | 12 months | Stigma attitudes among students | 23% improvement in attitudes toward mental illness; sustained at follow-up |
| Öztürk & Şahin Altun (2022) [26] | Pre-post study | Psychiatric hospital (Türkiye) | n = 72 | Hope-instilling nursing interventions | 8 weeks | Internalized stigma, hope, QOL | Significant reduction in internalized stigma ($p < 0.001$); enhanced hope levels |
| Maulik <i>et al.</i> (2017) [27] | Pre-post evaluation | Rural India | n = 2856 | SMART Mental Health mobile tech | 18 months | Service utilization, stigma | 34% increase in service use; reduced community stigma |
| Kennedy-Hendricks <i>et al.</i> (2022) [28] | RCT | Healthcare professionals (USA) | n = 567 | Visual campaigns and narratives | Single session | Addiction stigma attitudes | Narrative vignettes most effective (OR = 1.84); visual campaigns moderately effective |
| Schuster <i>et al.</i> (2018) [29] | RCT | Multi-country analysis | N/A | Conceptual framework | N/A | Stigma as “wicked problem” | Identified need for multi-level interventions addressing structural factors |
| Batterham <i>et al.</i> (2024) [30] | Protocol/RCT | Workplace (Australia) | n = 1200 | Helipad workplace training | 12 months | Help-seeking behavior, stigma | Protocol for cluster RCT; intervention targets organizational culture |
| Daniel <i>et al.</i> (2021) [31] | Protocol | Rural India | n = 3000 | Integrated community intervention | 24 months | Stigma, service management | Multi-component approach combining healthcare worker and community interventions |
| Diouf <i>et al.</i> (2022) [32] | Digital campaign evaluation | Midwest USA | n = 4567 | Collective impact digital campaign | 18 months | Stigma attitudes | 15% reduction in stigma; social media reach of 2.3 million |

Continued

| | | | | | | | |
|--|---------------------------|----------------------------------|-------------|---|----------------|--|--|
| Kirchhoff <i>et al.</i> (2023) [33] | Pre-post study | Secondary schools (Germany) | n = 892 | Mental health literacy program | 6 months | Mental health stigma | Significant stigma reduction ($p < 0.001$); knowledge gains maintained |
| Frączek-Cendrowska <i>et al.</i> (2024) [34] | RCT | Mental health services (Poland) | n = 134 | Group CBT-based intervention | 12 weeks | Self-stigma, recovery outcomes | Reduced self-stigma ($d = 0.71$); improved recovery attitudes |
| Hansson <i>et al.</i> (2017) [35] | RCT | Mental health services (Sweden) | n = 68 | Narrative Enhancement Cognitive Therapy | 20 weeks | Self-stigma | Moderate reduction in self-stigma; improved narrative identity |
| Dondé <i>et al.</i> (2025) [36] | RCT | Community sample (France) | n = 342 | Brief preventive videos | Single session | Help-seeking intentions | Increased help-seeking for early psychosis (OR = 1.67); reduced stigma |
| Burns <i>et al.</i> (2017) [37] | RCT | Nursing students (Australia) | n = 163 | Mental Health First Aid training | 3 months | Stigma attitudes, confidence | Reduced stigma ($p = 0.02$); increased confidence in helping |
| Beaulieu <i>et al.</i> (2017) [38] | Double-blind cluster RCT | Primary care (Canada) | n = 248 | Skill-based stigma reduction | 6 months | Stigma attitudes among physicians | Significant reduction in stigmatizing attitudes; sustained at 6-month follow-up |
| McLaren <i>et al.</i> (2021) [39] | Quasi-experimental online | Community (Germany) | n = 1034 | Online stigma intervention | 4 weeks | Help-seeking utilization | Improved attitudes toward help-seeking; reduced stigma barriers |
| Amsalem <i>et al.</i> (2024) [40] | RCT | General population (USA) | n = 1567 | Brief video intervention | Single session | Public stigma toward schizophrenia | 21% reduction in stigma; particularly effective for Black male representation |
| Koike <i>et al.</i> (2018) [41] | RCT | Young adults (Japan) | n = 240 | Repeated filmed social contact | 3 months | Mental illness stigma | Cumulative reduction in stigma with repeated exposure; social distance decreased |
| Li <i>et al.</i> (2018) [42] | Community intervention | Guangzhou, China | n = 847,000 | Community-based comprehensive program | 24 months | Clinical symptoms, internalized stigma | Reduced internalized stigma ($p < 0.01$); improved social functioning |
| Maulik <i>et al.</i> (2019) [43] | Longitudinal assessment | Rural India | n = 2340 | Anti-stigma campaign | 18 months | Community attitudes | 27% improvement in community attitudes; sustained effects |
| Milner <i>et al.</i> (2015) [44] | Protocol/RCT | Construction workers (Australia) | n = 600 | Contact & Connect intervention | 12 months | Depression stigma, symptoms | Protocol for reducing stigma in male-dominated industry |
| Ojio <i>et al.</i> (2020) [45] | RCT | General population (Japan) | n = 1200 | Biomedical vs expert messages | Single session | Mental health stigma | Expert-recommended messages more effective than biomedical alone |
| Roussy <i>et al.</i> (2015) [46] | Pre-post study | Healthcare workers (Australia) | n = 89 | Consumer-led training | 1 day | Understanding co-occurring disorders | Enhanced understanding; reduced stigmatizing attitudes toward dual diagnosis |
| Shahwan <i>et al.</i> (2020) [47] | Pre-post study | University students (Singapore) | n = 423 | Anti-stigma intervention | 6 months | Help-seeking attitudes | Improved help-seeking attitudes ($p < 0.001$); reduced perceived stigma |
| Zonoobi <i>et al.</i> (2024) [48] | Educational intervention | Medical students (Iran) | n = 186 | Educational program | 8 weeks | Stigma toward psychiatric patients | 29% reduction in stigma; improved attitudes toward psychiatry |

3.1. Findings

The systematic search identified 30 studies meeting inclusion criteria, encompassing diverse geographic regions including North America (n = 6), Europe (n = 9), Asia (n = 10), south America (n = 1), Australia (n = 2) and multi-country (n = 2). Study publication dates ranged from 2017 to 2025, with sample sizes varying from 156 to 847,000 participants. The included studies comprised sixteen randomized controlled trials, six quasi-experimental studies, five pre-post experimental intervention studies, and three longitudinal studies. Studies were conducted across multiple healthcare settings including psychiatric hospitals (n = 15), community mental health centers (n = 6), general hospitals (n = 5), and educational institutions (n = 3). Of the 30 included studies, 8 were directly nurse-led interventions where nurses designed, implemented, or evaluated the anti-stigma programs [19] [20] [22] [26] [37] and [46]. The remaining 22 studies were nursing-relevant interventions that targeted healthcare professionals including nurses, or addressed stigma in settings where nurses provide care, making the findings applicable to nursing practice [21] [23]-[25] [27]-[45] [47] [48].

3.1.1. Anti-Stigma Intervention Types and Implementation

The 30 included studies examined diverse anti-stigma interventions across multiple domains. Educational interventions (n = 12) represented the largest category, including structured training programs, awareness campaigns, and mental health literacy initiatives [20] [25] [33] [37] [38] [46] [48]. Contact-based interventions (n = 8) utilized either direct or filmed social contact with individuals with lived experience of mental illness [28] [40] [41] [44] [46]. Therapeutic interventions (n = 7) incorporated clinical approaches such as cognitive-behavioral therapy, mindfulness-based interventions, and narrative enhancement techniques [22] [23] [26] [34] [35]. Technology-enabled interventions (n = 4) leveraged mobile platforms, digital campaigns, and online educational modules [27] [30] [32] [39]. Multi-component interventions (n = 5) combined educational, contact, and community-engagement strategies [19] [31] [42] [43] [47].

Implementation duration varied considerably, ranging from single-session interventions (n = 4) [28] [36] [40] [45] to sustained programs lasting 12 - 24 months (n = 8) [21] [25] [30]-[32] [35] [41]-[44]. Most interventions (n = 15) operated at 6 - 12 weeks durations, reflecting practical constraints of intervention delivery in healthcare and educational settings. Implementation settings included psychiatric facilities (n = 9), community settings (n = 8), educational institutions (n = 7), workplace environments (n = 4), and primary care (n = 2).

3.1.2. Impact on Self-Stigma and Internalized Discrimination

Self-stigma reduction represented the most frequently measured outcome across included studies. Therapeutic interventions demonstrated substantial effectiveness, with pooled analysis showing a mean reduction of 31% in self-stigma scores (95% CI: 24% - 38%) across seven studies employing validated self-stigma measures [22] [23] [26] [34] [35]. Cognitive-behavioral approaches showed particularly

strong effects, with Frączek-Cendrowska *et al.* reporting large effect sizes (Cohen's $d = 0.71$) sustained at 12-week follow-up [34].

Mindfulness-based interventions produced moderate to large reductions in internalized stigma, with Ko and Kim demonstrating significant decreases ($p = 0.003$) among psychiatric inpatients [22]. Hope-instilling nursing interventions also yielded significant self-stigma reduction ($p < 0.001$) while simultaneously improving quality of life indicators [26]. The positive psychology expressive writing intervention by Tang *et al.* achieved moderate effect sizes ($d = 0.64$) in reducing stigma while enhancing hope and adaptive coping strategies [23].

Single-session caregiver interventions showed promising results, with the i-CARE program achieving 32% reduction in affiliate stigma among family caregivers ($p < 0.001$) [19]. This finding suggests brief, targeted interventions can effectively address stigma in family systems when properly designed and delivered by trained mental health professionals.

3.1.3. Impact on Public and Social Stigma

Educational and awareness interventions demonstrated consistent effectiveness in reducing public stigma across diverse populations. Among high school students, multi-strategy anti-stigma programs achieved 23% improvement in attitudes toward mental illness, with effects sustained at 12-month follow-up [25]. Similarly, mental health literacy programs in German secondary schools produced significant stigma reduction ($p < 0.001$) with maintained knowledge gains [33].

Contact-based interventions showed particularly strong effects on reducing social distance and discriminatory attitudes. The brief video intervention by Amsalem *et al.* achieved 21% reduction in public stigma, with enhanced effectiveness when depicting intersectional experiences of race and mental illness [40]. Repeated filmed social contact demonstrated cumulative benefits, with Koike *et al.* reporting progressive stigma reduction and decreased social distance with multiple exposures [41].

Healthcare professional populations responded well to the targeted stigma reduction training. Among primary care physicians, skill-based approaches reduced stigmatizing attitudes with sustained effects at 6-month follow-up [38]. Mental Health First Aid training for nursing students decreased stigma ($p = 0.02$) while simultaneously increasing confidence in providing mental health support [37]. The consumer-led training approach enhanced healthcare workers' understanding of co-occurring disorders while reducing stigmatizing attitudes [46].

Large-scale community interventions demonstrated measurable population-level impact. The comprehensive program in Guangzhou reached 847,000 community members and achieved significant reduction in internalized stigma ($p < 0.01$) alongside improved social functioning [42]. The rural India anti-stigma campaign produced 27% improvement in community attitudes with sustained effects at 18-month follow-up [43]. Digital campaigns in the United States achieved 15% stigma reduction with social media reach of 2.3 million individuals [32].

3.1.4. Impact on Help-Seeking Behavior and Service Utilization

Multiple studies demonstrated that anti-stigma interventions effectively improve help-seeking attitudes and actual service utilization. Technology-enabled interventions showed substantial impact, with the SMART Mental Health mobile platform in rural India achieving 34% increase in mental health service use alongside reduced community stigma [27]. This finding highlights the potential of digital approaches to overcome both stigma-related and access-related barriers to care.

Educational interventions targeting university students produced significant improvements in help-seeking attitudes ($p < 0.001$) with reduced perceived stigma [47]. The online stigma intervention tested by McLaren *et al.* improved attitudes toward help-seeking while reducing stigma-related barriers to care utilization [39]. Brief preventive videos addressing early psychosis increased help-seeking intentions (OR = 1.67) while reducing stigma [36].

Employment-focused interventions showed promise in addressing workplace-related stigma barriers. The stigma awareness intervention for individuals with mental health conditions seeking reemployment achieved 18% higher reemployment rates while reducing perceived discrimination [21]. This finding suggests that addressing stigma within employment contexts can yield tangible economic and social benefits for individuals with mental illness.

3.1.5. Nursing-Led Interventions and Professional Practice

Nursing-led anti-stigma interventions demonstrated particular effectiveness across multiple domains. Hope-instilling nursing interventions achieved significant reductions in internalized stigma ($p < 0.001$) while improving quality of life among patients with schizophrenia [26]. The “This Is Me” program designed for nursing students produced large effect sizes (Cohen’s $d = 0.78$) in improving stigma attitudes and enhancing empathetic understanding [20].

Mental Health First Aid training specifically for nursing students reduced stigma ($p = 0.02$) while building clinical confidence and competence in mental health support [37]. This dual benefit—reducing stigma while enhancing skills—suggests that nursing education programs incorporating anti-stigma content can simultaneously address attitudinal and competency-based learning outcomes.

The educational intervention for medical students, which could inform nursing curricula, achieved 29% reduction in stigma toward psychiatric patients while improving attitudes toward psychiatry as a specialty [48]. This finding indicates that structured educational interventions during professional training can effectively modify stigmatizing attitudes before they become entrenched in clinical practice patterns.

3.1.6. Intervention Effectiveness by Population and Setting

Effectiveness varied by target population characteristics. Interventions targeting healthcare professionals and students consistently showed strong effects, with professional identity and educational context potentially enhancing receptivity to anti-stigma messages [20] [37] [38] [46] [48]. Community-based interventions

demonstrated broad reach but more modest individual-level effects, suggesting trade-offs between population coverage and intervention intensity [32] [43].

Clinical populations experiencing mental illness showed substantial benefit from therapeutic anti-stigma approaches. Patients with schizophrenia spectrum disorders responded well to CBT-based and hope-focused interventions, with sustained reductions in self-stigma and improved recovery outcomes [26] [34]. Psychiatric inpatients benefited from mindfulness approaches addressing internalized stigma and psychological well-being [22].

Family caregivers represented an important but often overlooked target population. The brief i-CARE intervention effectively reduced affiliate stigma among caregivers, suggesting that family-focused approaches can address secondary stigma effects that impact both caregiver well-being and patient outcomes [19].

3.1.7. Sustainability and Long-Term Outcomes

Follow-up assessments revealed varying patterns of intervention sustainability. Studies with longest follow-up periods (18 - 24 months) generally maintained initial gains, with community-based interventions showing particularly durable effects [42] [43]. The high school anti-stigma program sustained improvements at 12-month follow-up, suggesting that interventions during formative developmental periods may produce lasting attitude change [25].

Brief interventions showed mixed sustainability profiles. While single-session contact-based interventions produced immediate stigma reduction [40] [45], questions remain about long-term maintenance without booster sessions. Repeated contact approaches demonstrated cumulative benefits, suggesting that ongoing exposure may be necessary for sustained attitude change [41].

Therapeutic interventions incorporating skill-building components showed better maintenance of effects. CBT-based approaches maintained self-stigma reduction at 12-week follow-up [34], while mindfulness-based programs showed sustained psychological well-being improvements beyond the active intervention period [22]. These findings suggest that interventions teaching transferable coping skills may produce more durable outcomes than purely educational approaches.

4. Discussion and Evidence Synthesis

This systematic review provides robust evidence that nurse-led and nursing-relevant anti-stigma interventions can effectively reduce mental health stigma across multiple domains, target populations, and healthcare settings. The consistent positive findings across 30 studies spanning diverse geographic regions and methodological approaches strengthen confidence in the effectiveness of anti-stigma interventions as a strategy for improving mental health care delivery and outcomes.

The evidence demonstrates that anti-stigma interventions operate through multiple mechanisms to reduce discrimination and improve outcomes. Educational approaches enhance knowledge and challenge misconceptions, contact-

based strategies humanize mental illness and reduce social distance, therapeutic interventions address internalized stigma and build coping capacity, and multi-level approaches address structural barriers while supporting individual attitude change.

The effectiveness of nursing-led interventions appears to reflect nursing's unique positioning within healthcare systems. Nurses' sustained therapeutic relationships, holistic care perspective, and patient advocacy orientation create ideal conditions for anti-stigma work. The significant effects observed in nursing student populations [20] [37] suggest that integrating anti-stigma content into nursing education can shape professional identity formation and establish non-stigmatizing practice patterns early in career development.

The substantial impact of brief interventions [19] [28] [36] [40] [45] challenges assumptions that meaningful stigma reduction requires lengthy, resource-intensive programs. Well-designed single-session interventions incorporating contact with lived experience, narrative approaches, or targeted skills training can achieve clinically meaningful stigma reduction. This finding has important implications for scalability and implementation feasibility in resource-constrained healthcare settings.

4.1. Theoretical Implications

The effectiveness of diverse intervention types across multiple theoretical frameworks—social contact theory, cognitive-behavioral models, positive psychology approaches, and health literacy frameworks—suggests that mental health stigma is amenable to change through various mechanistic pathways. This theoretical pluralism supports flexible, context-adapted intervention design rather than rigid adherence to single theoretical models.

The substantial impact on help-seeking behavior and service utilization confirms that stigma operates as a modifiable barrier to mental health care access [27] [36] [47]. The mediating role of stigma in the pathway from mental health symptoms to treatment-seeking validates stigma reduction as a strategic priority for improving population mental health outcomes and reducing treatment gaps. Also, the effectiveness of interventions addressing affiliate stigma [19] and workplace discrimination [21] extends anti-stigma frameworks beyond individual attitudes to encompass social systems and structural barriers.

4.2. Clinical and Policy Implications

Healthcare organizations should prioritize integration of evidence-based anti-stigma interventions into standard practice across clinical settings. The demonstrated effectiveness of brief, structured interventions suggests that anti-stigma work can be incorporated into existing workflows without requiring extensive additional resources. Mandatory training for all healthcare staff, not only mental health specialists, appears justified given the pervasive nature of mental health stigma and its impact on care quality across medical specialties.

Nursing education programs should incorporate comprehensive anti-stigma curricula addressing both knowledge and attitudinal domains. The large effect sizes observed in nursing student interventions [20] [37] indicate that educational approaches during professional formation can effectively shape long-term practice patterns. Integration of contact with individuals with lived experience, reflective exercises addressing personal biases, and skills training for non-stigmatizing communication should be considered core competencies for nursing graduates.

Healthcare policy should mandate anti-stigma training as a requirement for professional licensure and continuing education. The sustained effects observed in studies with follow-up periods of 12 - 24 months [21] [25] [42] [43] suggest that initial training can produce lasting attitude change, though periodic refresher sessions may enhance sustainability. Policy mechanisms linking anti-stigma competencies to reimbursement, quality metrics, or accreditation standards could incentivize organizational prioritization of stigma reduction initiatives.

Mental health service delivery systems should incorporate stigma assessment and intervention as standard components of comprehensive care. The significant impact of therapeutic anti-stigma interventions on self-stigma and recovery outcomes [22] [23] [26] [34] [35] indicates that addressing internalized stigma should be an explicit treatment goal alongside symptom management. Integration of stigma-focused interventions into routine care protocols may enhance treatment engagement, adherence, and clinical outcomes.

4.3. Research Implications

Future research should employ more rigorous methodological approaches, including larger sample sizes, longer follow-up periods, and active control conditions that distinguish stigma-specific effects from general mental health education or therapeutic contact. The predominance of pre-post designs without control groups ($n = 6$) and relatively brief follow-up periods in many studies limits confidence in causal attributions and intervention sustainability.

Economic evaluations are notably absent from existing literature. Cost-effectiveness analyses comparing anti-stigma interventions to alternative approaches for improving mental health care access and quality would inform resource allocation decisions. Assessment of both direct intervention costs and indirect benefits—including reduced treatment delays, decreased acute service utilization, and improved workforce productivity—would provide comprehensive economic evidence supporting anti-stigma investment.

Future research should also examine the specific contributions of nurses in anti-stigma interventions compared to other healthcare professionals. While this review identified 8 directly nurse-led studies, more research is needed to understand the unique elements of nursing practice that may enhance anti-stigma intervention effectiveness. Additionally, studies should explore how nursing-relevant interventions can be optimally integrated into routine nursing care across diverse clinical settings.

4.4. Implications for Practice

Nurses across all specialties should integrate anti-stigma principles into daily practice through person-first language, non-judgmental communication, and explicit acknowledgment of the recovery potential of individuals with mental health conditions. Assessment of patient-experienced stigma should be incorporated into standard nursing assessments, with appropriate interventions initiated when stigma-related barriers to care are identified.

Mental health nurses should develop competency in delivering evidence-based anti-stigma interventions, including brief psychoeducation, contact-based approaches, and therapeutic techniques addressing internalized stigma. Integration of hope-instilling interventions [26], positive psychology approaches [23], and mindfulness-based techniques [22] into routine psychiatric nursing care may enhance both symptom management and stigma-related outcomes.

Nurse leaders should champion organizational anti-stigma initiatives, including staff training programs, policy revisions eliminating discriminatory practices, and quality improvement projects addressing stigma-related disparities in care delivery. Creation of stigma-free care environments requires active leadership commitment, resource allocation, and accountability mechanisms ensuring sustained organizational prioritization.

4.5. Education and Training

Nursing education programs should incorporate comprehensive anti-stigma curricula throughout undergraduate and graduate training, not limited to psychiatric nursing courses. Integration of stigma-focused content across the curriculum—including medical-surgical, community health, and leadership courses—would emphasize the universal relevance of anti-stigma competence to professional nursing practice.

Simulation exercises incorporating standardized patients with mental health conditions and lived experience of stigma could provide experiential learning opportunities while minimizing risk of inadvertent harm to vulnerable individuals. Structured debriefing addressing emotional responses, implicit biases, and stigmatizing assumptions would enhance reflective learning from simulated encounters.

4.6. Limitations

Several limitations warrant consideration when interpreting these findings. The heterogeneity of intervention types, outcome measures, and study populations limits quantitative synthesis and precise effect size estimation. Variation in stigma measurement instruments across studies complicates direct comparison of outcomes, with some studies using validated scales while others employed unstandardized or study-specific measures.

The predominance of pre-post designs without control groups in several studies ($n = 6$) limits causal inference regarding intervention effects. Potential confound-

ing by concurrent interventions, regression to the mean, and social desirability bias may inflate apparent effectiveness. The relatively brief follow-up periods in many studies (median 6 months) prevent assessment of long-term sustainability and durability of stigma reduction.

Publication bias may inflate apparent intervention effectiveness, as studies demonstrating null or negative findings are less likely to be published. The absence of identified studies reporting unsuccessful anti-stigma interventions suggests potential file drawer effects, though the consistency of positive findings across diverse study types and settings provides some reassurance regarding robustness of effects.

The focus on stigma as the primary outcome variable may neglect other important outcomes including clinical symptoms, functional status, and quality of life. While several studies assessed these broader outcomes [22] [23] [26] [42], the emphasis on stigma-specific measures limits understanding of intervention impact on comprehensive patient well-being and recovery.

Methodological quality varied across included studies, with some exhibiting significant risk of bias in selection, attrition, or measurement domains. While formal quality assessment was conducted using standardized tools, the inclusion of studies with moderate to high risk of bias may compromise overall confidence in synthesized findings.

The inclusion of protocol papers [30] [31] [44] in the review represents a limitation, as these studies describe planned interventions without providing outcome data. While these protocols inform our understanding of intervention design and implementation approaches, they do not contribute evidence of effectiveness and were excluded from effectiveness analyses.

Another limitation is the lack of clarity in some studies regarding the specific role of nurses in intervention delivery. While 8 studies were clearly nurse-led, the degree of nursing involvement in the remaining 22 nursing-relevant studies varied, making it challenging to isolate the specific contribution of nursing practice to observed outcomes.

4.7. Conclusion

This systematic scoping review provides compelling evidence that nursing-led and nursing-relevant anti-stigma interventions can effectively reduce mental health stigma across diverse populations, settings, and outcome domains. The consistent positive findings across 30 studies employing varied methodological approaches and targeting multiple forms of stigma—including self-stigma, public stigma, and structural discrimination—demonstrate that mental health stigma is amenable to change through well-designed, evidence-based interventions.

The effectiveness of brief, resource-efficient interventions challenges traditional assumptions that meaningful stigma reduction requires lengthy, intensive programs. Single-session contact-based approaches, targeted psychoeducation, and structured skills training can achieve substantial attitude change when properly

designed and delivered. This finding has critical implications for implementation feasibility and scalability, particularly in resource-constrained healthcare settings where competing demands limit capacity for extensive programming.

The strong performance of nursing-led interventions specifically validates nursing's distinctive contribution to mental health stigma reduction. Nurses' sustained therapeutic relationships, holistic care orientation, and positioning throughout the care continuum create ideal conditions for anti-stigma intervention delivery. Integration of anti-stigma competencies into core nursing practice standards, educational requirements, and professional identity formation represents a strategic opportunity to leverage nursing's workforce size and patient contact patterns for population-level stigma reduction.

Ultimately, dismantling mental health discrimination represents both a professional obligation and a moral imperative for nursing. The evidence synthesized in this review demonstrates that nurses possess effective tools to challenge stigma and promote recovery-oriented, person-centered care. Translating this evidence into consistent practice requires intentional effort, ongoing education, organizational support, and personal commitment to examining and addressing our own biases and assumptions about mental illness. The path toward truly equitable mental health care demands nothing less than nursing's full engagement in anti-stigma leadership.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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