

## The Impact of Stigma on Mental Health Service Utilization and Treatment Adherence: A Systematic Review

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### ABSTRACT

**Background:** Mental health conditions are widespread, yet many people either delay seeking help or do not remain in treatment once they start. Stigma, whether felt personally, expressed by others, or reinforced by institutions, continues to play a major role in shaping these behaviors. Because stigma can limit service use and disrupt adherence, it is important to understand how it operates across different settings. **Methods:** Following PRISMA guidelines, a systematic review was undertaken. Searches were carried out in PubMed, Scopus, Web of Science, Embase, and Google Scholar for studies published between January 2015 and July 2025. Eligible papers examined stigma as a factor influencing help-seeking, service use, or treatment adherence. Study quality was evaluated with the R-AMSTAR tool, and findings were summarized thematically. **Findings:** Twenty-six studies were included: 10 systematic reviews and meta-analyses, 9 observational studies, and 7 intervention or implementation studies. Public stigma was consistently linked with reduced help-seeking, with those perceiving high stigma being about half as likely to pursue care. Self-stigma was strongly tied to treatment dropout and poor adherence, while structural stigma compounded barriers in low- and middle-income countries. Interventions showing promise ranged from peer support and school-based initiatives to provider training and broader policy reforms. **Conclusion:** Stigma remains a major barrier to mental health care worldwide. Tackling it requires strategies that work at multiple levels and are sensitive to cultural contexts, with the ultimate goal of reducing barriers, supporting adherence, and narrowing the global treatment gap.

**Keywords:** stigma; mental health; treatment adherence; help-seeking; systematic review; service utilization.

### INTRODUCTION

Mental health disorders are one of the world's major public health problems that affect all populations of all ages, socioeconomic classes, and cultures [1]. According to the World Health Organization, it is estimated that one in eight people in the world today is living with a mental disorder; these may range from mild depression and anxiety disorder, to more severe conditions such as bipolar disorder and schizophrenia [2]. Despite high incidence and increased recognition of the burden of mental illness, there is a large treatment gap [3]. Most people potentially requiring evidence-based treatments do not seek professional services or drop out too early during treatment [4]. Stigma towards mental health illness is one of the most prevalent barriers to reducing this gap [5].

A review of the literature on stigma has defined it as a complex social process comprising negative stereotyping, discrimination, and prejudice against those with mental illness [6]. Public stigma (society's view of people with mental illness), self-stigma (individual expectation about themselves and their mental illness), and structural stigma (administrative practices imposed by institutions that disadvantage individuals with mental illness) [7, 8], stigma in these areas is associated with the development of health-seeking behaviours, treatment, and risk intervening behaviours [9].

While the adverse impact of stigma on mental health care utilization is well understood, its magnitude is poorly recorded. It is also reported that stigma hurts help-seeking, delays service-seeking, and reduces

the likelihood that individuals with whom treatment recommendations are made will remain in treatment [10, 11]. Once the above-mentioned initial barriers to access to care are overcome, stigma may worsen noncompliance to treatment and medications, which decreases the outcome of treatment [12]. Not only does noncompliance with treatment have harmful consequences for an individual's personal recovery, but it also results in tremendous costs for health systems in terms of rehospitalization, lifetime disability, and loss of productivity [13, 14].

This stigma-treatment adherence paradox is especially concerning given already stretched mental health budgets [15]; perceived stigma rooted in poverty, lack of infrastructure, and ill-trained professionals is likely to overlap with other barriers to create double obstacles to care in low- and middle-income countries (LMICs) [16]. Even in high-income countries, social attitudes and entrenched culture can be proxies for stigma [17]. In addition, it is necessary to develop and implement effective anti-stigma interventions that are culturally sensitive and adapted to work effectively with certain populations, which can be difficult to achieve due to health disparities, economic inequities, and inequalities in LMICs [19]. This suggests that whilst stigma is a universal barrier, it can manifest differently, and affect individuals in different ways, across different cultural and socioeconomic contexts [18].

A systematic review is a key tool for synthesizing the evidence to help understand these dynamics. Despite the issue's importance, only a few studies have described the impact of stigma on service utilization and adherence across populations, disorders, and healthcare settings. A systematic review can also inform and guide interventions that seek to eliminate stigma, increase access to care, and improve adherence by synthesizing our knowledge. The main objective of this study is to systematically review evidence about the effects of stigma on mental health service use and adherence to treatment. By presenting the nature and the extent of these effects, this review seeks to illuminate how stigma is an important determinant of mental

health. Finally, our knowledge of these mechanisms could be used to inform policy and interventions to increase service coverage and retain individuals in effective long-term treatment.

## MATERIALS AND METHODS

### Eligibility Criteria and Search Strategies

This systematic review was carried out following PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement guidelines for high-quality reporting of systematic reviews that ensure transparency and reproducibility of the research process. The review was structured using the PICO model: Population (People of all ages, genders and cultures in the presence of mental health disorders), Intervention (Stigma factors (public, self, structural stigma) and interventions that reduce stigma), Comparison (Not applicable as the review focused on synthesising evidence and did not need comparators), Outcomes (MHS utilisation, treatment engagement, therapy/medication adherence and treatment outcomes).

The search strategy was done using peer-reviewed studies published in English from January 2015 to July 2025, covering the period when stigma-related mental health research rapidly expanded. The search was based on five major electronic databases that is, PubMed, Scopus, Web of Science, Embase, and Google Scholar. Only peer-reviewed publications written in English were included. This decision was made for two main reasons. First, reliable translation of non-English articles was beyond the scope of the review and could have introduced errors or inconsistencies in interpreting key findings. Second, English remains the dominant language in global academic publishing, and many high-impact journals disseminate research primarily in English. While this restriction may have led to the exclusion of some relevant evidence published in other languages, it was necessary to ensure accuracy, feasibility, and comparability across studies. The search strategy combined MeSH terms and keywords, linked with Boolean operators as shown in Table 1. Reference lists of included articles and related systematic reviews were also screened for additional studies.

**TABLE 1:** Overview of Search Strategy.

Category	Details
Databases Searched	PubMed, Scopus, Web of Science, Embase, Google Scholar
Time Frame	January 2015 – July 2025
Language	English only
Search Terms	#1 AND #2 AND #3
#1 (Population)	“mental health disorder” OR “psychiatric illness” OR “depression” OR “schizophrenia” OR “bipolar disorder”
#2 (Exposure/Intervention)	“stigma” OR “self-stigma” OR “public stigma” OR “structural stigma” OR “mental health-related stigma”
#3 (Outcome)	“treatment adherence” OR “medication adherence” OR “help-seeking behavior” OR “service utilization”

**Inclusion Criteria**

Studies were eligible if they directly examined the connection between stigma and mental health outcomes, with a particular focus on service utilization or treatment adherence. Eligible works included original, peer-reviewed empirical research articles that employed qualitative, quantitative, or mixed-methods approaches and systematic reviews and meta-analyses that synthesized evidence on stigma effects in mental health. Only studies published in English between January 2015 and July 2025 were used in the review to ensure the relevance and comparability of findings.

**Exclusion Criteria**

Exclusion criteria were applied to ensure methodological rigor and relevance. Editorials, conference abstracts, dissertations, and commentaries without peer review were excluded. Similarly, articles that did not explicitly address stigma as a determinant of mental health service utilization or treatment adherence were excluded. Studies conducted exclusively in non-human or laboratory settings and publications written in languages other than English were also omitted.

**Screening Process**

All found articles were imported into EndNote reference manager to remove duplicates. Titles and abstracts were screened by two reviewers independently to determine eligibility. Potentially relevant articles were then screened by full-text. Any disagreements were settled by discussion, with a tie-breaking third reviewer resolving minor conflicts that they could not come to an agreement over.

**Quality Assessment**

In assessing the methodological quality, suitable instruments were applied based on the study design. The R-AMSTAR (Revised Assessment of Multiple Systematic Reviews) tool was applied to assess the selected articles [27].

**Data Extraction**

A systematic extraction form was created in a structured format to gather major information of each study, such as author(s), publication year, country of origin, study design, and population characteristics. Information on the type of stigma addressed, whether public, self, or structural, was also documented, alongside the outcomes assessed, such as service utilization, treatment adherence, dropout rates, and treatment outcomes.

Where applicable, the characteristics of stigma-reduction interventions were noted in addition to the key findings of each study. Data extraction was performed by two reviewers independently and cross-checked for accuracy.

**Data Analysis**

Extracted data were synthesized narratively to account for the heterogeneity of study designs and reported outcomes. Studies were grouped into three overarching categories: (1) dimensions of stigma and their influence on help-seeking behavior, (2) stigma as a barrier to treatment engagement and adherence, and (3) strategies to mitigate stigma and improve treatment outcomes. Where available, quantitative findings such as effect sizes, odds ratios (ORs), and confidence intervals (CIs) were summarized to highlight statistical associations. Qualitative evidence was thematically analyzed and integrated into the synthesis to comprehensively understand stigma's impact on mental health service utilization and treatment adherence.

**RESULTS**

The search of online databases yielded 430 studies. After the exclusion of 89 duplicates, 341 titles and abstracts were screened, excluding 255 articles that did not match the inclusion criteria. Out of the 86 full-text articles assessed, 60 were excluded due to a lack of focus on stigma, inappropriate study design, or being non-peer-reviewed materials such as editorials or commentaries. Ultimately, 26 studies were included in the systematic review. Geographically, the included studies reflected diverse contexts, with evidence drawn from high-income countries, Low- and Middle-Income countries (LMICs), and multi-regional samples. Study designs were also varied, consisting of systematic reviews, meta-analyses, observational studies, and implementation studies, each contributing different methodological perspectives. Thematic analysis identified three overarching areas. First, dimensions of stigma and their influence on help-seeking behavior, where public and self-stigma were strongly associated with reduced willingness to access care. Second, stigma as a barrier to treatment engagement and adherence, as stigma consistently predicted medication non-adherence, therapy dropout, and poor recovery outcomes. Third, strategies to mitigate stigma and improve treatment outcomes, with interventions such as peer-led programs, school-based approaches, and policy-level reforms showing promise in reducing stigma and enhancing adherence.

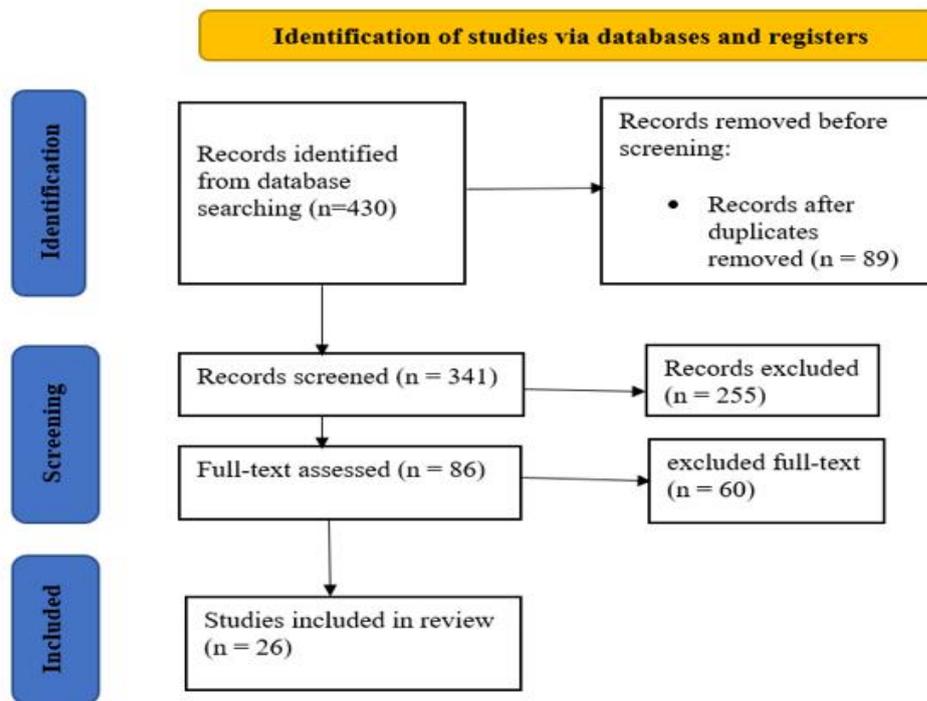


FIGURE 1: PRISMA flow diagram indicating the study selection and inclusion process.

TABLE 2: Summary of Included Studies.

Reference	Study Design	Population	Stigma Dimension	Key Findings
GBD Collaborators (2022) [1]	Systematic analysis	204 countries	Public stigma (contextual)	Identified stigma as a cross-national barrier to mental health access.
Arias et al. (2022) [2]	Economic analysis review	Global	Structural stigma (indirect)	Highlighted the economic burden of untreated mental illness due to stigma.
Moitra et al. (2022) [3]	Systematic review	Depressive disorder patients	Public stigma	Stigma contributed to the global treatment gap.
Van den Broek et al. (2023) [4]	Systematic review	Low- and Middle-Income Countries (LMICs)	Public stigma	Interventions increased help-seeking behavior.
Clay et al. (2020) [5]	Systematic review	Low- and Middle-Income Country (LMICs) populations	Structural stigma	Interventions reduced stigma and improved service use.
Chukwuma et al. (2024) [6]	Systematic review	Psychiatric patients	Public stigma	Stigma worsened outcomes across multiple disorders.
Dubreucq et al. (2021) [7]	Systematic review	Adults with serious mental illness	Self-stigma	Self-stigma reduced recovery and increased non-adherence.
Eylem et al. (2020) [8]	Systematic review & meta-analysis	Racial minorities & majorities	Public stigma	Minority groups faced greater stigma, reducing care-seeking.
Schnyder et al. (2017) [9]	Systematic review & meta-analysis	Global samples	Public stigma	Stigma reduced the likelihood of help-seeking (OR = 0.62).
Sun et al. (2022) [10]	Systematic review & meta-analysis	Global samples	Public stigma	Peer-led interventions improved adherence and reduced stigma.
Laranjeira et al. (2023) [11]	Concept analysis	People with mental disorders	Treatment adherence	Defined therapeutic adherence as a multidimensional process influenced by stigma.

Reference	Study Design	Population	Stigma Dimension	Key Findings
Laranjeira et al. (2023) [11]	Concept analysis	People with mental disorders	Treatment adherence	Defined therapeutic adherence as a multidimensional process influenced by stigma.
Semahegn et al. (2020) [12]	Systematic review & meta-analysis	Psychiatric patients	Treatment stigma	Stigma is strongly linked to psychotropic non-adherence.
Alqahtani & Pringle (2024) [13]	Systematic review	Depressive disorder patients	Self-stigma	Self-stigma predicted dropout and poor medication adherence.
Achterbosch et al. (2025) [14]	Review of systematic reviews	Patients across multiple disease groups, including mental health conditions	Indirect (stigma as a barrier contributing to nonadherence)	Synthesized findings from 43 systematic reviews, showing that medication nonadherence leads to higher hospitalization rates, increased morbidity and mortality, and substantial direct and indirect healthcare costs (e.g., lost productivity). Emphasizes that addressing factors like stigma can improve adherence and reduce health system burden.
Kemp et al. (2019) [15]	Systematic review	Low- and Middle-Income Countries (LMICs)	Structural stigma	Structural stigma hindered the implementation of services.
Heim et al. (2018) [16]	Systematic review	Low- and Middle-Income Country (LMIC) primary care settings	Structural stigma	Stigma-reduction programs in primary care improved provider attitudes and patient access.
Rao et al. (2019) [17]	Systematic review	Global	Multi-level stigma	Identified state of stigma interventions and future directions.
Zay Hta et al. (2023) [18]	Systematic review	Pandemic contexts	Cultural stigma	Cultural factors influenced stigma during health crises.
Majeed et al. (2024) [19]	Systematic review	Low- and Middle-Income Countries (LMICs)	Structural stigma	Anti-stigma interventions are effective across populations.
Bouchard et al. (2022) [20]	Systematic review & meta-analysis	Severe mental illness + substance use	Public & self-stigma	High dropout rates are linked to provider stigma.
Eschliman et al. (2024) [21]	Scoping review	Health-related research	Structural stigma	Structural stigma is poorly operationalized, limiting policy.
Elshaikh et al. (2023) [22]	Systematic review	Older adults	Public stigma	Stigma prevents older adults from seeking mental health care.
Bannatyne et al. (2023) [23]	Systematic review	Medical students & doctors	Self-stigma	Anti-stigma interventions improved engagement and reduced self-stigma.
Song et al. (2023) [24]	Systematic review & meta-analysis	Young people	Public stigma	School-based interventions reduced stigma and improved service uptake.
Cutler et al. (2018) [25]	Systematic review	Multiple chronic diseases	Treatment stigma	Non-adherence had high economic costs.
Loots et al. (2021) [26]	Systematic review & meta-analysis	Schizophrenia & bipolar disorder patients	Treatment stigma	Interventions improved adherence in Serious Mental Illness (SMI).

**TABLE 3:** Systematic Review Quality (R-AMSTAR Evaluation).

Study (Year)	1	2	3	4	5	6	7	8	9	10	11	Score
1. GBD Collaborators (2022) [1]	1	1	1	1	1	1	1	0	1	0	0	8
2. Arias et al. (2022) [2]	1	1	0	0	1	0	1	0	1	0	0	5
3. Moitra et al. (2022) [3]	1	1	1	1	1	1	1	0	1	0	1	9
4. Van den Broek et al. (2023) [4]	1	1	1	0	1	1	1	0	1	0	1	8
5. Clay et al. (2020) [5]	1	1	1	0	1	1	1	1	1	1	1	10
6. Chukwuma et al. (2024) [6]	1	1	1	1	1	1	1	1	1	1	0	10
7. Dubreucq et al. (2021) [7]	1	1	1	0	1	1	1	1	1	1	0	9
8. Eylem et al. (2020) [8]	1	1	1	1	1	1	1	0	1	0	1	9
9. Schnyder et al. (2017) [9]	1	1	1	1	1	1	1	1	1	1	1	11
10. Sun et al. (2022) [10]	1	1	1	1	1	1	1	1	1	1	1	11
11. Laranjeira et al. (2023) [11]	1	1	1	0	1	1	1	0	1	0	0	7
12. Semahegn et al. (2020) [12]	1	1	1	1	1	1	1	1	1	1	0	10
13. Alqahtani & Pringle (2024) [13]	1	1	1	1	1	1	1	0	1	1	0	9
14. Achterbosch et al. (2025) [14]	1	1	1	1	1	1	1	0	1	0	1	9
15. Kemp et al. (2019) [15]	1	1	1	1	1	1	1	0	1	0	1	9
16. Heim et al. (2018) [16]	1	1	1	1	1	1	1	0	1	0	1	9
17. Rao et al. (2019) [17]	1	1	1	1	1	1	1	0	1	0	1	9
18. Zay Hta et al. (2023) [18]	1	1	1	0	1	1	1	0	1	0	1	8
19. Majeed et al. (2024) [19]	1	1	1	1	1	1	1	0	1	0	1	9
20. Bouchard et al. (2022) [20]	1	1	1	0	1	1	1	0	1	0	1	8
21. Eschliman et al. (2024) [21]	1	1	1	0	1	1	1	0	1	0	1	8
22. Elshaikh et al. (2023) [22]	1	1	1	1	1	1	1	1	1	0	1	10
23. Bannatyne et al. (2023) [23]	1	1	1	0	1	1	1	0	1	1	1	9
24. Song et al. (2023) [24]	1	1	1	0	1	1	1	1	1	0	1	9
25. Cutler et al. (2018) [25]	1	1	1	1	1	1	1	0	1	0	1	9
26. Loots et al. (2021) [26]	1	1	1	1	1	1	1	1	1	1	0	10

*Item 1: a priori design; item 2: duplicate study selection and data extraction; item 3: comprehensive literature search; item 4: publication status as an inclusion criteria; item 5: list of included and excluded studies; item 6: characteristics of included studies; item 7: documented assessment of the scientific quality of included studies; item 8: appropriate use of the scientific quality in forming conclusions; item 9: appropriate use of methods to combine study findings; item 10: assessment of publication bias likelihood; item 11: Conflict of interest documentation.*

### Study Findings

This systematic review revealed that stigma is a major, pervasive barrier to mental health care around the world, shaping both seeking assistance behavior and treatment adherence in diverse populations. Evidence consistently demonstrates that public stigma discourages individuals from accessing services. Stigma was significantly associated with reduced likelihood of help-seeking, with individuals perceiving high levels of stigma nearly 40% less likely to engage in professional care [9]. Also, stigma is a critical barrier among older adults, further illustrating that the effect cuts across age groups [22]. Racial and ethnic minorities were also disproportionately affected, reporting that stigmatizing attitudes within majority populations amplified inequities in care access for marginalized groups [8]. These findings underscore that stigma is a determinant of health-seeking behavior across cultures and demographics.

Beyond initial access, stigma also influences treatment engagement and adherence, often with harmful consequences. Self-stigma was strongly associated with feelings of shame, hopelessness, and withdrawal from care [7]. Among patients with depressive disorders, self-stigma significantly reduced medication adherence and contributed to higher dropout rates [13]. Medication non-adherence was also reported across broader psychiatric populations, as stigma was one of the strongest predictors of poor compliance with psychotropic treatment [14]. These findings align with economic analyses showing that non-adherence, often linked to stigma, contributes substantially to healthcare costs and productivity loss [25]. Similarly, provider stigma toward patients with coexisting severe mental illness and substance misuse contributed to high dropout rates in psychosocial interventions [20]. Together, these findings suggest that stigma prevents treatment initiation and undermines the effectiveness of ongoing interventions, worsening individual and societal outcomes.

Stigma does not operate in isolation; it interacts with broader structural barriers. In LMICs, structural stigma compounds other systemic challenges such as poverty, limited infrastructure, and workforce shortages [15, 16]. Evidently, structural stigma embedded in policies and institutional practices further reduced access, even when interventions were available [5]. This pattern was echoed in findings highlighting the difficulties of operationalizing structural stigma in health-related research, emphasizing how poorly understood and under-addressed this dimension remains [21]. These studies highlight the compounded disadvantages faced in LMICs, where stigma interacts with socioeconomic vulnerabilities to deepen inequities in mental health care.

Despite the obstacles, various strategies have successfully lessened stigma and led to better outcomes. Peer-led interventions were shown to significantly reduce stigma while simultaneously improving treatment engagement and adherence [10]. School and youth-based interventions also proved promising, demonstrating measurable reductions in stigma and increased help-seeking behavior among young populations [24]. Similar successes were observed in medical students and doctors, where targeted anti-stigma programs improved self-stigma levels and professional help-seeking [23]. For patients with severe mental illness, adherence-focused interventions, including psychoeducation and digital adherence monitoring, showed improvements when stigma was addressed as a core component [26]. Structural-level reforms, such as policy-driven stigma reduction strategies, were also critical in scaling effective interventions across healthcare systems [5, 16].

The findings indicate that stigma functions as both a universal and context-specific barrier. Globally, public and self-stigma reduce access and adherence, while in LMICs, structural stigma interacts with economic and infrastructural barriers to create compounded disadvantages [15]. On the other hand, peer-led, school-based, or policy-focused interventions tailored to community contexts can reduce stigma's impact and support long-term treatment adherence [24]. The persistence of stigma across diverse populations underscores its importance as a global mental health challenge, while the effectiveness of targeted interventions demonstrates that progress is possible when stigma is explicitly addressed.

## DISCUSSION

### Dimensions of Stigma and Their Influence on Mental Health Help-Seeking Behavior

Stigma has consistently emerged as a central determinant of whether individuals seek professional mental health care. Research has shown that mental health-related stigma was significantly associated with a reduced likelihood of active help-seeking, with an estimated 40% decrease in willingness to access care [9]. Racial disparities also play a role, as racial minority groups experienced greater levels of stigma, which

translated into reduced care-seeking compared to majority populations [8]. Self-stigma was particularly harmful, increasing feelings of hopelessness and shame, thereby reducing recovery and treatment engagement [24]. Older adults faced unique barriers, with evidence indicating that stigma acted as a critical barrier to help-seeking, even when mental health services were available [22]. Together, these findings confirm that stigma operates across demographic groups, cultural settings, and age cohorts to prevent individuals from accessing needed mental health services.

### Stigma as a Barrier to Treatment Engagement and Adherence

Stigma also plays a significant role in treatment adherence and continuity. Evidence from systematic reviews shows that non-adherence to psychotropic medication was strongly associated with perceived stigma among patients with major psychiatric disorders [12]. In the context of depression, research found that self-stigma significantly predicted dropout and poor adherence among adults with depressive disorders [13]. Stigma is not confined to patients but extends to healthcare environments, as provider stigma contributed to high dropout rates among people with substance misuse and severe mental illness [20]. Moreover, even when adherence-enhancing programs exist, interventions for schizophrenia and bipolar disorder patients often fail when stigma is not simultaneously addressed [26]. These findings highlight that stigma undermines adherence and contributes to poor treatment trajectories across multiple mental health conditions and settings.

### Strategies to Mitigate Stigma and Improve Mental Health Outcomes

Several evidence-based interventions have shown effectiveness in reducing stigma and improving treatment outcomes. Reviews of stigma reduction programs in LMICs concluded that core components of successful interventions included community engagement, psychoeducation, and culturally tailored messaging [5]. Peer involvement has also shown strong potential, with findings that peer-led interventions were effective in both reducing stigma and increasing adherence to treatment recommendations [10]. Youth-focused programs were particularly impactful, as anti-stigma interventions delivered in schools significantly reduced public stigma and increased service uptake among adolescents [24]. Similarly, targeted programs for medical students and doctors led to measurable reductions in self-stigma and greater professional help-seeking [24]. Beyond individual-level programs, structural stigma remains a significant barrier to equitable mental health care, particularly in resource-constrained settings [21]. Evidence highlights that system-wide policy changes and the integration of mental health into primary care are essential for sustaining stigma reduction efforts [17,18]. In addition, cultural factors strongly shape stigma during global health crises, underscoring the need for interventions to be context-specific and culturally responsive [19].

Economic analyses further demonstrate that reducing stigma and improving adherence can yield substantial cost savings by minimizing dropout rates and non-adherence-related health expenditures [14, 25]. Finally, implementation science emphasizes that scaling up anti-stigma interventions requires careful adaptation to local health systems and ongoing evaluation to ensure effectiveness across diverse populations [16]. Taken together, these results suggest that stigma can be reduced through multi-level interventions, improving both access to care and adherence across diverse populations.

### LIMITATIONS

This review came with several limitations that should be acknowledged. First, this review was limited to studies published in English between January 2015 and July 2025. As a result, evidence reported in other languages may not have been captured, which could reduce the global representativeness of the findings. However, translation of non-English articles was not feasible within the scope of this review and might have introduced interpretation errors. Moreover, much of the peer-reviewed literature on mental health stigma is published in English, which lessens but does not completely remove the risk of language bias. Second, grey literature such as conference abstracts, theses, and unpublished reports was not considered, potentially omitting emerging findings in this rapidly changing field. Finally, the variation in healthcare systems, socio-cultural contexts, and socioeconomic conditions may limit the generalizability of the results, especially when comparing higher-income countries and LMICs.

Internalized stigma functions through a chain of labels, emotions, and behaviors that directly affect adherence. For example, internalized stigma of being labeled “weak” or “incapable” may trigger emotions such as shame, hopelessness, and low self-esteem, which may then lead to avoidance behaviors such as cancelling appointments, skipping doses, or prematurely dropping out of care, which has consistently been linked to non-adherence in psychiatric populations [7, 12]. Self-stigma strongly predicts missed mediations and higher dropout rates among individuals suffering from depressive disorders [13]. This mechanism helps explain our findings that stigma was one of the most well-founded predictors of treatment disengagement. Clinically, even brief cognitive-behavioral strategies or targeted psychoeducation can disrupt this cycle by reframing labels, reducing shame, and promoting active coping.

Provider stigma could also be a contributing factor and can result in what is perceived as a lack of therapeutic alliance by the patient. This can present in several ways; an example was demonstrated by the large dropout rate seen in individuals with stimulant use disorder. A variety of parameters have to be accounted for, and as such, it can be challenging to develop a strong and good alliance from both perspectives [20]. A step that can be taken to mitigate this is by anti-stigma training, with the

focus is on the “rights agenda,” which achieves stigma reduction by affirming attitudes and behaviours to replace discrimination. This can be achieved with psychoeducation, increasing contact, or psychoeducation plus increasing contact, with increasing contact showing the most positive results in adults [24].

To mitigate stigma-related barriers to mental health care, three actionable and evidence-based strategies are proposed. Firstly, clinics should implement peer-led support programs, integrating trained individuals with personal experience into care teams to boost engagement, diminish perceived stigma, and facilitate treatment adherence, an approach that is backed by robust evidence across various environments [10,17]. Secondly, educational institutions in high-need regions should adopt targeted, youth-oriented anti-stigma programs, such as classroom-based initiatives and peer discussions, which have demonstrated effectiveness in reducing stigma and encouraging help-seeking behaviors among adolescents [24, 5]. Lastly, payers and health systems must require regular provider training on stigma awareness, complemented by straightforward, scalable prompts (e.g., EHR alerts or SMS reminders) to reinforce inclusive and non-judgmental care practices; this strategy not only tackles clinician self-stigma [23] but also corresponds with the multi-level intervention frameworks necessary to combat stigma in both high- and low-resource environments [5,17].

### CONCLUSION

Stigma remains a major barrier to mental health service use and treatment adherence worldwide, particularly in low- and middle-income countries. Public, self, and structural stigma all contribute to reduced help-seeking and poor continuity of care. Evidence from this review shows that multi-level, culturally sensitive interventions such as peer support, school-based programs, provider training, and policy reforms can effectively reduce stigma and improve engagement. Addressing stigma should remain a central priority in global mental health strategies.

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