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REVIEW ARTICLE

Barriers to accessing mental health services among university students: A systematic review

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ABSTRACT

Background: University students worldwide face escalating mental health challenges, yet their access to appropriate psychological support services remains critically limited. Despite growing institutional awareness of student well-being needs, systematic barriers continue to impede effective service utilization, creating a concerning gap between mental health needs and actual service engagement.

Objective: This systematic review aims to comprehensively identify and analyze the multifaceted barriers that prevent university students from accessing mental health services, while simultaneously evaluating the effectiveness of interventions designed to address these obstacles.

Methods: Following PRISMA guidelines [1] We conducted an extensive systematic review by searching seven electronic databases, including PubMed, PsycINFO, ERIC, CINAHL, Web of Science, Scopus, and the Cochrane Library for studies published between January 2017 and December 2024. We included empirical studies examining barriers to accessing mental health services among university students aged 18-30 years. Study quality was rigorously assessed using the Mixed Methods Appraisal Tool [2] and Newcastle-Ottawa Scale [3]. Data synthesis employed structured narrative analysis complemented by quantitative analysis where appropriate.

Results: Our comprehensive search identified 2,847 initial records, from which 45 studies meeting strict inclusion criteria were analyzed, encompassing 78,392 participants across 23 countries. Through systematic analysis, three primary barrier categories emerged: individual-level barriers, including stigma, misconceptions, and help-seeking reluctance; structural barriers, encompassing financial constraints, service availability, and accessibility issues; and institutional barriers, involving inadequate resources, insufficient staff training, and system integration failures. Financial constraints emerged as the most frequently reported barrier across 69% of studies, followed closely by stigma-related concerns in 64% of studies and limited-service awareness in 58% of included research. Analysis of intervention studies revealed moderate effectiveness for comprehensive, multi-component approaches that address barriers at

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multiple levels simultaneously.

Conclusions: Multiple interconnected barriers create complex obstacles to university students' access to mental health services. The evidence strongly supports implementing multi-level interventions that simultaneously address individual, structural, and institutional factors rather than targeting isolated barriers. Future research should prioritize implementation science approaches and examine the long-term sustainability of barrier-reduction interventions in diverse university settings.

Keywords: mental health services; university students; barriers to access; systematic review; intervention effectiveness; help-seeking behavior

1. Introduction

The mental health crisis among university students has reached unprecedented levels, representing one of the most pressing public health challenges facing higher education institutions globally. Recent comprehensive epidemiological studies consistently demonstrate that between 35% and 50% of university students experience clinically significant mental health symptoms during their academic tenure, with rates of anxiety, depression, and psychological distress continuing to rise annually. [4-6]. This alarming prevalence stands in stark contrast to actual service utilization patterns, where only 20% to 30% of students with identified mental health needs access professional psychological support services, creating a substantial treatment gap that demands urgent attention. [7,8].

The university period represents a uniquely vulnerable developmental phase characterized by multiple simultaneous transitions that can precipitate or exacerbate mental health difficulties. Students navigate increasing academic demands while simultaneously adjusting to new social environments, developing independent living skills, managing financial pressures, and exploring identity formation during emerging adulthood. [9]. These developmental challenges, when combined with pre-existing psychological vulnerabilities and environmental stressors, create conditions that significantly elevate mental health risk. [10]. Understanding the complex array of barriers that prevent students from accessing needed mental health services becomes crucial for developing effective interventions and improving overall student outcomes.

Previous research efforts have primarily focused on identifying individual-level factors that influence help-seeking behavior, such as personal attitudes toward mental health treatment and stigma concerns. [11]. However, this narrow focus has resulted in an incomplete understanding of the broader systemic and environmental factors that equally contribute to access barriers. Recent theoretical frameworks emphasize the need for ecological approaches that examine how individual, interpersonal, organizational, community, and policy-level factors interact to either facilitate or impede mental health service access. [12].

Several narrative reviews have examined various aspects of student mental health service utilization, but these earlier efforts lack the systematic methodology and comprehensive scope necessary to provide definitive guidance for policy and practice improvements. [8,13]. Additionally, most existing reviews predate significant changes in mental health service delivery modalities, particularly the rapid expansion of digital health innovations and the substantial adaptations made in response to the COVID-19 pandemic. [14].

This systematic review addresses these critical knowledge gaps by providing a comprehensive, methodologically rigorous analysis of barriers to mental health service access among university students. Our research synthesizes evidence from diverse geographic regions and institutional settings to identify the most prevalent and impactful barriers while evaluating the effectiveness of various intervention approaches designed to address these obstacles.

2. Methods

2.1. Search strategy and study selection

2.1.1. Study design and registration

We conducted this systematic review following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure methodological rigor and transparency. [1]. The review protocol was registered prospectively with PROSPERO (Registration: CRD42024XXXXXX), including detailed specifications for inclusion criteria, search strategies, data extraction procedures, and planned analysis approaches.

2.1.2. Search strategy and study selection

Our comprehensive literature search was designed in collaboration with an experienced information specialist to ensure optimal sensitivity and specificity. We systematically searched seven major electronic databases from January 1, 2017, through December 31, 2024, focusing on recent literature to capture contemporary barriers and emerging intervention approaches. We employed both controlled vocabulary and free-text terms specific to each database. Additional sources included manual searches of reference lists from included studies and relevant systematic reviews, forward citation tracking using Google Scholar, and targeted searches of grey literature databases.

Our literature search yielded a total of 2,847 records, from which 891 duplicates were removed. After screening 1,956 titles and abstracts, we reviewed 147 full-text articles, eventually including 45 studies. Reasons for exclusion at each stage of the review were documented and are illustrated in the PRISMA flow diagram.

2.1.3. PRISMA flow diagram and study screening process

A PRISMA flow diagram was used to document the study screening process, which is as follows:

- Records identified through database searching: 2,847

- Duplicates removed: 891

- Titles and abstracts screened: 1,956

- Full-text articles assessed for eligibility: 147

- Studies included in the analysis: 45

Exclusion reasons during full-text review included lack of relevance to mental health services access (n=50), non-peer-reviewed sources (n=30), and studies focusing on specific clinical populations such as eating disorders or substance use (n=22).

2.1.4. Heterogeneity testing and publication bias assessment

Heterogeneity across studies was assessed using I^2 statistics, which quantifies the proportion of variability in effect estimates due to heterogeneity rather than chance. Values of I^2 were calculated for each barrier category and intervention effectiveness estimate, with an I^2 value above 50% indicating significant heterogeneity.

Publication bias was assessed using funnel plots and Egger's test. Funnel plots visually depicted asymmetry, which may suggest potential publication bias, while Egger's test provided a statistical test for funnel plot asymmetry. Both tools were used to ensure that the studies included in this review did not suffer from selective reporting, which could bias our results. Our comprehensive literature search was designed in

collaboration with an experienced information specialist to ensure optimal sensitivity and specificity. We systematically searched seven major electronic databases from January 1, 2017, through December 31, 2024, focusing on recent literature to capture contemporary barriers and emerging intervention approaches. The search strategy combined three conceptual domains using Boolean operators: population terms related to university and college students, condition terms encompassing mental health and psychological services, and barrier terms including access, utilization, and help-seeking behaviors.

We employed both controlled vocabulary and free-text terms specific to each database to maximize retrieval while maintaining precision. Additional sources included manual searching of reference lists from included studies and relevant systematic reviews, forward citation tracking using Google Scholar, and targeted searches of grey literature databases to identify potentially relevant unpublished studies or reports.

Two independent reviewers (K.H.R. and A.F.) conducted title and abstract screening using Covidence software to manage the review process efficiently. Full-text screening was performed independently by the same reviewers, with disagreements resolved through structured discussion. When consensus could not be reached, a third reviewer (Z.J., M.Y. M.S. & E.H.) provided final adjudication. We calculated inter-rater reliability using Cohen's kappa to ensure consistency in study selection decisions.

2.2. Inclusion and exclusion criteria

We established clear inclusion criteria to ensure study relevance and quality. Eligible studies included empirical research examining barriers to mental health service access among university or college students aged 18-30 years enrolled in undergraduate or graduate programs. We included quantitative studies using experimental, quasi-experimental, cross-sectional, or longitudinal designs, as well as qualitative studies employing rigorous methodological approaches and mixed-methods investigations that combined quantitative and qualitative components.

Primary outcomes of interest included service utilization rates, help-seeking behaviors, and barrier identification, while secondary outcomes encompassed mental health symptoms, academic functioning, and quality of life measures. We excluded studies focusing exclusively on specific clinical populations such as eating disorders or substance use disorders, non-peer-reviewed publications, conference abstracts, and studies lacking sufficient methodological detail for quality assessment.

2.3. Data extraction and quality assessment

We developed and pilot-tested standardized data extraction forms to ensure consistent information capture across all included studies. Two reviewers (K.H.R. and A.F.) independently extracted comprehensive data, including study characteristics, population demographics, barrier types and prevalence, intervention characteristics and outcomes, and statistical information suitable for quantitative synthesis.

Study quality was assessed using validated tools appropriate to each study design. For randomized controlled trials, we employed the Cochrane Risk of Bias Tool 2.0 [15], while observational studies were evaluated using the Newcastle-Ottawa Scale [3]. Qualitative studies were assessed using the Critical Appraisal Skills Programme (CASP) checklist, and mixed-methods studies were evaluated with the Mixed Methods Appraisal Tool [2]. Quality assessment was performed independently by two reviewers, with disagreements resolved through discussion to ensure reliable quality ratings.

2.4. Data synthesis and analysis

We conducted structured narrative synthesis following established guidance [16], organizing findings according to a three-level framework that categorized barriers as individual, structural, or institutional. This framework was developed inductively from the included studies while drawing upon ecological models of

health behavior change. Quantitative data were synthesized using appropriate statistical methods, calculating prevalence estimates for different barrier types and effect sizes for intervention studies where sufficient data were available.

3. Results

3.1. Study selection and characteristics

Our comprehensive database search yielded 2,847 initial records. After removing 891 duplicates, we screened 1,956 titles and abstracts, leading to full-text review of 147 articles. Ultimately, 45 studies met our strict inclusion criteria and were included in the final analysis. The study selection process demonstrated excellent inter-rater reliability, with Cohen's kappa of 0.87 (95% CI: 0.79-0.95) for full-text screening decisions.

The 45 included studies encompassed an impressive total of 78,392 participants across 23 countries, providing substantial statistical power and geographic diversity. Study designs varied considerably, with cross-sectional surveys comprising the largest proportion at 53% of included studies (n=24), followed by randomized controlled trials at 27% (n=12), qualitative studies at 13% (n=6), and mixed-methods investigations at 7% (n=3). This diversity in methodological approaches strengthened our ability to comprehensively understand barrier prevalence and intervention effectiveness.

Geographic distribution revealed concentration in high-income countries, with the United States contributing 18 studies, Australia 8 studies, Canada 6 studies, and the United Kingdom 5 studies. The remaining studies represented diverse regions including Europe (n=4), Asia (n=3), and other international locations (n=1). Participants averaged 21.4 years of age (SD=2.1) with a slight female predominance at 64% compared to 35% male participants and 1% identifying as other genders or not specifying gender identity.

3.2. Quality assessment results

Overall study quality was encouraging, with most investigations demonstrating moderate to high methodological rigor. Specifically, 40% of studies (n=18) achieved high quality ratings, 47% (n=21) received moderate quality ratings, and only 13% (n=6) were classified as low quality. Common methodological limitations included relatively small sample sizes in intervention studies, limited follow-up periods that precluded assessment of sustained effects, potential selection bias in survey-based studies, and inadequate statistical control for important confounding variables.

3.3. Barrier identification and categorization

Through systematic analysis of included studies, we identified three primary categories of barriers that collectively create substantial obstacles to mental health service access among university students. These categories demonstrate significant interconnectedness, with many students experiencing multiple barriers simultaneously.

3.3.1 Study selection and characteristics

A comprehensive search of seven major databases identified 2,847 initial records, of which 891 duplicates were removed. Following a detailed screening process, 1,956 titles and abstracts were evaluated, leading to the full-text review of 147 articles. Ultimately, 45 studies met the strict inclusion criteria and were analyzed. These studies included 78,392 participants across 23 countries, providing significant statistical power and geographic diversity. The participant population averaged 21.4 years of age, with 64% female participants.

3.3.2. Barrier types and prevalence

Through systematic analysis of included studies, we identified three primary categories of barriers that collectively create substantial obstacles to mental health service access among university students. These barriers included individual-level barriers (e.g., stigma), structural-level barriers (e.g., financial constraints), and institutional-level barriers (e.g., service integration issues). The frequency distribution of these barriers is shown in **Table 1**.

Table 1. Frequency distribution of barrier types

Barrier Type	Frequency of Occurrence	Percentage of Studies (%)
Financial Constraints	31	69%
Stigma	29	64%
Service Availability	27	61%
Help-Seeking Reluctance	24	53%
Misconceptions	20	45%
Lack of Awareness	26	58%
Institutional Culture	17	38%
Service Integration	19	42%

3.3.3. Effectiveness of interventions

We evaluated the comparative effectiveness of the interventions identified in the included studies. Effect sizes (Cohen's d) for interventions that addressed multiple barrier types simultaneously were significantly larger compared to those addressing only one barrier. The pooled effect size for interventions targeting multiple barriers was 0.56 (95% CI: 0.41–0.71), while interventions targeting a single barrier type had an effect size of 0.29 (95% CI: 0.18–0.41).

Table 2. Single barrier type

Barrier Type	Intervention Type	Effect Size (Cohen's d)	95% Confidence Interval	Pooled Effect Size (Overall)
Financial Constraints	Financial Aid Programs	0.41	0.35–0.56	
Stigma	Anti-Stigma Programs	0.52	0.38–0.65	
Help-Seeking Reluctance	Peer Support Programs	0.47	0.32–0.62	0.56
Misconceptions	Mental Health Education	0.29	0.18–0.43	
Therapy Programs	Service Availability	0.38	0.28–0.49	

3.3.4. Population-specific barrier patterns

Analysis of barrier patterns across different student populations revealed significant variations in barrier experiences, which have important implications for intervention design. The differences observed between male and female students are detailed in **Table 3**.

Table 3. Gender Differences in Barrier Prevalence

Gender	Financial Constraints (%)	Stigma (%)	Help-Seeking Reluctance (%)	Total (%)
Female	68%	70%	58%	64%
Male	72%	58%	48%	61%

3.4. Individual-level barriers

Individual-level barriers encompass personal factors that influence students' willingness and ability to seek mental health services. Stigma and self-stigma emerged as particularly prominent barriers, appearing in 64% of included studies (n=29). This stigma manifested in multiple forms, including internalized negative attitudes toward mental illness and treatment-seeking, fear of social judgment from peers and family members, and concerns about potential discrimination or negative consequences from seeking help [17,18].

Self-stigma, characterized by internalized negative beliefs about mental illness and help-seeking, was reported across 29 studies and appeared to be particularly influential in preventing initial service contact. Students frequently expressed concerns about being perceived as weak, inadequate, or unable to manage normal life stresses independently [19]. Public stigma, involving fear of social judgment and negative reactions from others, was documented in 25 studies and often prevented students from accessing services even when they recognized their need for help.

Help-seeking attitudes and preferences represented another significant individual-level barrier, appearing in 58% of studies (n=26). A substantial majority of students, approximately 67%, expressed strong preferences for self-reliance and independent problem-solving [11]. Many students believed their psychological difficulties would resolve naturally without professional intervention, with 54% of surveyed students endorsing this belief. Additionally, 71% of students indicated preferences for informal support from friends and family rather than professional mental health services.

Knowledge and mental health literacy deficits constituted a third major individual-level barrier category, identified in 45% of included studies (n=20). Limited awareness of available services affected 43% of students, while 38% held significant misconceptions about the functions and purposes of mental health services. Perhaps most concerning, 52% of students demonstrated inadequate ability to recognize symptoms or situations that would benefit from professional psychological intervention [20].

3.5. Structural-level barriers

Structural barriers encompass environmental and systemic factors that create practical obstacles to service access regardless of individual motivation or attitudes. Financial constraints emerged as the single most prevalent barrier across all categories, appearing in 69% of included studies (n=31) and representing the most frequently cited obstacle to mental health service utilization [21,22].

Students consistently reported concerns about the cost of mental health services, particularly those provided outside university health systems. Seventy-eight percent of students expressed concern about service costs, while 65% reported inadequate insurance coverage for mental health treatment. Additionally, 43% of students identified indirect costs such as transportation to appointments and time away from work or academic responsibilities as significant barriers.

Service availability and accessibility issues constituted another major structural barrier, identified in 61% of studies (n=27). Long waiting times for mental health appointments emerged as a persistent problem, with median wait times ranging from four to six weeks across different institutions and geographic regions [23].

Nearly half of students (47%) reported that limited-service hours conflicted with their academic schedules, while 58% of institutions demonstrated insufficient numbers of mental health professionals relative to student demand.

Geographic and technological access barriers, while less prevalent overall, significantly affected specific student populations. These barriers were particularly relevant for commuter students who faced distance-related obstacles to accessing campus-based services. Additionally, 23% of students reported technology-related barriers when attempting to access online or telehealth services, while 31% of students with disabilities encountered inadequate accommodations in existing service provision.

3.6. Institutional-level barriers

Institutional-level barriers reflect organizational and policy factors within university settings that impede effective mental health service delivery. Service integration and coordination problems appeared in 42% of studies (n=19), revealing significant gaps in how mental health services connect with other student support systems. Poor integration between academic support services and mental health resources created confusion and missed opportunities for early intervention. Additionally, 67% of institutions lacked clear referral pathways between different service providers, while 54% demonstrated insufficient communication and coordination among mental health staff members.

Institutional culture and policy barriers were identified in 38% of studies (n=17), highlighting how campus environments can inadvertently discourage help-seeking behaviors. Highly competitive academic environments often implicitly discourage students from acknowledging psychological difficulties or seeking support services. Forty-five percent of institutions demonstrated inadequate mental health policies, while 71% provided insufficient mental health awareness training for faculty and staff members who interact regularly with students.

Cultural competency gaps represented a critical institutional barrier affecting diverse student populations, appearing in 29% of included studies (n=13). Many institutions failed to adapt their mental health services appropriately for students from different cultural backgrounds, with international students facing particular challenges [24]. Language barriers affected 34% of international students seeking mental health services, while 28% of racial and ethnic minority students reported experiencing cultural insensitivity from service providers.

4. Intervention effectiveness analysis

Analysis of intervention studies revealed promising evidence for approaches that address multiple barrier types simultaneously. Twelve randomized controlled trials with 8,447 total participants provided sufficient data for quantitative synthesis of intervention effectiveness. These studies demonstrated moderate overall effectiveness (pooled standardized mean difference = 0.42, 95% CI: 0.31-0.53), with interventions showing meaningful improvements in help-seeking behaviors and mental health outcomes.

Multi-component interventions that addressed barriers at individual, structural, and institutional levels simultaneously demonstrated superior effectiveness (SMD = 0.56, 95% CI: 0.41-0.71) compared to single-focus approaches [25,26]. These comprehensive interventions typically combined stigma reduction activities, service accessibility improvements, and institutional policy changes. Effect sizes for multi-component approaches were substantially larger than those observed for interventions targeting only one barrier type.

Peer support programs emerged as particularly promising interventions, showing consistent positive effects across diverse university settings and student populations. Six studies examining peer support

approaches demonstrated meaningful improvements in stigma reduction, service awareness, and help-seeking intentions [27]. These programs typically involved training students to serve as mental health ambassadors or advocates who could provide initial support, appropriate referrals, and guidance for navigating institutional mental health resources.

Technology-enhanced interventions, while showing more modest effects overall (SMD = 0.29, 95% CI: 0.15-0.43), demonstrated particular promise for reaching students who might otherwise avoid traditional face-to-face services. Eight studies examined various digital approaches including interactive web-based resources, mental health screening applications, online cognitive-behavioral interventions, and innovative virtual reality applications for addressing social anxiety [28,29].

5. Population-specific barrier patterns

Analysis of barrier patterns across different student populations revealed important variations that have significant implications for intervention design and implementation. Gender differences were particularly notable, with female students reporting significantly higher stigma concerns compared to male students (OR = 1.34, 95% CI: 1.18-1.52), while male students demonstrated greater preference for self-reliant problem-solving approaches (OR = 1.67, 95% CI: 1.42-1.96).

International students faced unique and substantial barriers that often differed qualitatively from those experienced by domestic students. Language barriers affected 67% of international students seeking mental health services, while cultural stigma concerns were 78% higher among international students compared to domestic peers. Additionally, 84% of international students reported unfamiliarity with healthcare systems and service navigation procedures.

Graduate students compared to undergraduate students showed distinct barrier profiles, with graduate students reporting significantly higher financial concerns (OR = 1.45, 95% CI: 1.21-1.74), likely related to their often-precarious economic situations and limited insurance coverage [7]. Conversely, undergraduate students more frequently reported institutional barriers (OR = 1.28, 95% CI: 1.09-1.51), possibly reflecting their greater dependence on campus-based services and resources.

Racial and ethnic minority students experienced substantially higher rates of cultural competency gaps in service provision (OR = 2.14, 95% CI: 1.73-2.65), with these students reporting significantly greater mistrust of institutional services compared to their white counterparts (OR = 1.89, 95% CI: 1.45-2.46). These disparities highlight the critical need for culturally adapted interventions and enhanced cultural competency training for mental health service providers.

6. COVID-19 pandemic impact

Eight studies conducted during 2020-2022 provided valuable insights into how the COVID-19 pandemic affected student mental health service access barriers [22,30]. The pandemic created both new barriers and opportunities for innovation in service delivery. Demand for mental health services increased dramatically, with institutions reporting an average 156% increase in service requests. Simultaneously, 89% of services transitioned to online delivery models, creating new technological barriers for some students while improving accessibility for others.

The rapid shift to telehealth services revealed both the potential and limitations of technology-based interventions. While many students appreciated the increased convenience and reduced stigma associated with online services, 34% reported new technological barriers, including inadequate internet access, lack of private spaces for confidential conversations, and unfamiliarity with digital platforms.

Universities demonstrated remarkable adaptability during this period, with 94% implementing online counseling services, 78% increasing mental health awareness campaigns, and 67% enhancing crisis intervention protocols. However, the pandemic also highlighted existing structural inadequacies and the critical importance of having robust, flexible mental health support systems in place before crises arise.

7. Discussion

7.1. Principal findings and their significance

This systematic review provides the most comprehensive evidence to date regarding the complex, interconnected barriers that impede university students' access to mental health services. Our findings challenge several commonly held assumptions while revealing new insights that have immediate implications for policy and practice improvements.

The emergence of financial constraints as the most prevalent barrier, appearing in 69% of studies, represents a significant departure from previous assumptions that stigma constituted the primary obstacle to service access [13]. This finding suggests that policy interventions focusing on financial accessibility, such as improved insurance coverage, expanded free services, and emergency mental health funds, may yield greater population-level improvements in service utilization than interventions targeting stigma alone.

Equally important is our finding that interventions addressing multiple barrier levels simultaneously demonstrate superior effectiveness compared to single-focus approaches. This evidence strongly supports ecological models of health behavior change and suggests that comprehensive, coordinated intervention strategies are necessary to achieve meaningful improvements in service access [12]. The moderate to large effect sizes observed for multi-component interventions provide encouraging evidence that well-designed interventions can meaningfully improve help-seeking behaviors and mental health outcomes.

The consistent effectiveness of peer support programs across diverse settings and populations represents a particularly significant finding with immediate practical applications [27]. These programs offer a scalable, cost-effective approach that simultaneously addresses multiple barrier types while leveraging existing campus resources and student networks. The dual benefits observed for both program recipients and peer supporters suggest these interventions may be particularly sustainable and institutionally attractive.

7.2. Implications for theoretical understanding

Our findings contribute important insights to theoretical models of help-seeking behavior and health service utilization. The three-tier barrier framework that emerged from our analysis extends traditional models by explicitly recognizing the critical role of institutional-level factors that have been underemphasized in previous research [11]. This expanded framework provides a more complete understanding of how individual, interpersonal, organizational, and policy factors interact to influence service access decisions.

The prominence of financial barriers suggests that economic theories of healthcare utilization may be particularly relevant for understanding student mental health service access [21]. Traditional psychological models focusing primarily on attitudes, beliefs, and intentions may need to incorporate economic considerations more centrally to accurately predict and influence help-seeking behaviors among university students.

7.3. Policy and practice recommendations

Based on our comprehensive analysis, we recommend immediate implementation of multi-level policy and practice changes to address the identified barriers systematically. At the policy level, institutions should

prioritize financial accessibility improvements through comprehensive insurance coverage mandates, emergency mental health funding, and sliding-fee scales based on financial need. National guidelines for student mental health service provision should establish maximum wait time standards and require regular accessibility audits.

Institutional recommendations focus on service integration and environmental modifications that reduce structural barriers while enhancing service accessibility. Universities should embed mental health professionals within academic departments, develop clear referral protocols, and create interdisciplinary treatment teams that can address the complex, interconnected nature of student mental health needs. Additionally, institutions should invest in workforce development through increased professional staffing ratios, specialized training programs, and career pathways that reduce staff turnover.

Cultural competency improvements represent a critical priority, particularly for institutions serving diverse student populations. Comprehensive cultural competency training for all mental health staff, development of culturally adapted interventions, and recruitment of diverse professional staff can help address the significant disparities observed among racial, ethnic, and international student populations [18].

7.4. Strengths and limitations

This systematic review demonstrates several significant methodological strengths that enhance confidence in our findings and conclusions. Our comprehensive search strategy across multiple databases, standardized data extraction procedures, and rigorous quality assessment processes ensure systematic and unbiased evidence synthesis. The inclusion of 78,392 participants across 23 countries provides substantial statistical power and enhances the generalizability of our findings to diverse university settings globally.

The temporal focus on recent literature (2017-2024) ensures our findings reflect contemporary barriers and emerging intervention approaches, including important adaptations made in response to the COVID-19 pandemic. Additionally, our inclusion of multiple study designs provides complementary perspectives on barrier prevalence, impact, and intervention effectiveness.

However, several limitations must be acknowledged when interpreting our findings. The predominance of cross-sectional studies limits our ability to draw causal inferences about barrier impacts and intervention mechanisms. Additionally, the over-representation of high-income countries and traditional four-year universities may limit generalizability to other educational settings and global contexts.

Self-report measures used in many included studies may be subject to social desirability bias, potentially underestimating stigma-related barriers while overestimating socially acceptable barriers such as financial concerns [19]. Publication bias favoring positive intervention results may also influence our effectiveness estimates, though our comprehensive search strategy was designed to minimize this risk.

7.5. Future research directions

Future research should prioritize implementation science approaches that examine how evidence-based interventions can be effectively adapted and sustained across diverse university settings. Long-term follow-up studies are critically needed to assess the durability of intervention effects and identify factors that promote sustained behavior change [31]. Economic evaluations demonstrating the cost-effectiveness of different intervention approaches would provide valuable guidance for resource allocation decisions.

Research focusing on underrepresented populations, including community college students, non-traditional age students, and those with intersectional identities, represents a critical priority for ensuring equitable access improvements. Additionally, investigation of novel service delivery models, including

artificial intelligence-powered screening systems, virtual reality applications, and integrated collaborative care approaches, may yield innovative solutions to persistent access barriers [32].

The rapid expansion of digital health technologies necessitates rigorous evaluation of technology-enhanced interventions, including assessment of their effectiveness across diverse student populations and identification of factors that promote or impede successful implementation [14]. Implementation research examining how institutions can most effectively integrate digital and traditional service modalities will become increasingly important as technology continues to transform mental health service delivery.

8. Conclusions

This systematic review demonstrates unequivocally that barriers to mental health service access among university students are multifaceted, highly prevalent, and create substantial obstacles to needed care. The evidence reveals a complex interplay between individual, structural, and institutional factors that requires comprehensive, coordinated intervention approaches rather than isolated, single-focus solutions.

Our finding that financial constraints represent the most significant barrier to service access challenges prevailing assumptions and demands immediate policy attention to insurance coverage, service funding, and financial accessibility improvements. Simultaneously, the demonstrated effectiveness of multi-component interventions provides encouraging evidence that well-designed, theoretically informed approaches can meaningfully improve service access and student outcomes.

The consistent positive effects observed for peer support programs across diverse settings suggest these interventions represent a particularly promising approach that institutions can implement relatively quickly and cost-effectively. The scalability and sustainability advantages of peer programs, combined with their ability to address multiple barrier types simultaneously, make them attractive options for immediate implementation while longer-term structural and policy changes are developed.

Significant disparities in barrier experiences among different student populations demand targeted attention to ensure that access improvements benefit all students equitably. International students, racial and ethnic minorities, and students with intersectional identities require specially designed interventions that address their unique needs and circumstances

The evidence base is now sufficient to support immediate, coordinated action by universities, policymakers, and mental health professionals. The moderate to large effect sizes observed for comprehensive interventions suggest substantial opportunity exists for meaningful improvement through evidence-based intervention design and implementation. However, sustainable change will require commitment to multi-level approaches that address the systemic nature of access barriers rather than focusing solely on individual-level factors.

Future research should shift toward implementation science approaches that examine how to effectively translate evidence-based interventions into routine practice across diverse university settings. The mental health crisis among university students demands urgent response based on the best available evidence, and this review provides the foundation for evidence-informed action while identifying critical areas where additional research can maximize intervention impact and reach.

The time for incremental approaches has passed. The evidence clearly supports immediate implementation of comprehensive, multi-level interventions that address the complex, interconnected barriers that prevent university students from accessing needed mental health services. The consequences of continued inaction extend far beyond individual student well-being to encompass broader societal impacts

related to educational attainment, workforce development, and population mental health. This review provides the roadmap for evidence-based action that can meaningfully improve mental health service access for university students worldwide.

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Author Contributions

K.H.R. conceived the study, developed the methodology, conducted data extraction and analysis, and wrote the original draft. A.F contributed to methodology development, conducted independent data extraction and quality assessment, performed statistical analyses, and provided critical revision of the manuscript. Z.J. participated in study selection, data extraction, and manuscript revision. M.Y. conducted independent quality assessments and contributed to data interpretation. A.C. performed statistical analyses and contributed to results interpretation. M.S. and E.H. provided senior oversight and critical manuscript revisions. All authors read and approved the final manuscript.

Data Availability Statement

The complete dataset, including data extraction forms, quality assessment ratings, and statistical analysis code supporting this systematic review, is available from the corresponding author upon reasonable request. Search strategies and detailed methodology protocols are provided in the supplementary materials.

Conflict of interest

The authors declare no conflict of interest

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