Integrated programs for common mental illnesses within primary care and community settings in Latin America: a scoping review of components and implementation strategies

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Summary

Integrated programs for common mental illnesses are evidence-informed practices yet to be routinely implemented in Latin America. It synthesizes the literature on integrated programs for common mental illnesses (anxiety, depression, and posttraumatic stress disorder) in Latin American primary care and community settings. It maps program components (the 'what') to the collaborative care model core components and implementation strategies (the 'how') to the Expert Recommendations for Implementing Change (ERIC) taxonomy. Results from 18 programs across six countries (Belize, Brazil, Chile, Colombia, Mexico, Peru) show wide heterogeneity in component and strategy combinations. Overall, provider-level components and strategies were more common than family- or community-level ones. 'Team-based care' was the most commonly reported component, and 'family/user engagement' the least. The most common implementation strategy was 'supporting clinicians,' while 'changing infrastructure' was the least. Programs commonly addressed depression and only four followed experimental designs. We found limited evidence on the potential mechanisms of integrated program components and strategies.

Keywords: Depression; Anxiety; PTSD; Implementation strategies; Integrated service; Collaborative care; Primary care; Latin America; Scoping review; Implementation research

Introduction

Mental illnesses contribute significantly to morbidity, mortality and decreased quality of life worldwide.[1,2] Depression and anxiety, two common mental illnesses, were respectively ranked as the second and seventh causes of disability globally.[3] The burden of common mental illness is expected to continue increasing, particularly in low- and middle-income countries (LMICs). Latin America is a region composed of 16 LMICs and four high-income countries.[4] Latin America encompasses Mexico in North America, seven countries in Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama) and seven countries in South America (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela). The burden due to

common mental illness in Latin America is partially driven by the large mental health treatment gap, the percentage of individuals who need mental healthcare but do not receive treatment.[5] In 2016, the estimated treatment gap was 74.70% in Latin America, 73.10% in South America, and 78.7% Mesoamerica (Central America and Mexico).[6]

To address the large mental health treatment gap, the World Health Organization (WHO) has long advocated for the integration of mental health services within primary care and community settings.[1] The integration of mental health services is considered a feasible strategy to reach a wide proportion of the population, decrease mental health stigma and address both mental and physical health outcomes.[1,7] Integrated mental health services programs ('integrated programs') involve providing pharmacological and/or psychological interventions within primary care or community settings.[1] Multiple studies conducted suggest that primary care-based integrated programs are effective at improving mental health outcomes and quality of life in high-income countries and LMICs.[8]

Cubillos et al.'s typology categorized six integrated models of mental health programs that have been implemented in LMICs based on the organizational strategies and their level of complexity (9). From simple to complex, this taxonomy spans (1) the general training on mental healthcare for lay or primary healthcare workers, (2) mental healthcare interventions delivered by lay (3) or by primary healthcare workers, (4) consultation liaison from mental health specialists to primary healthcare workers (5) stepped care and (6) collaborative care.[9] Stepped care and collaborative care are considered the highest integrated models. Stepped care involves following structured clinical criterium and a pathway of care to systematically increase or decrease treatment intensity based on the patient's needs.[9] Collaborative care is a multicomponent model that was originally designed in the United States (US) to treat and systematically follow-up people with depression in primary care settings while leveraging the limited time of mental health specialist.[10,11] More recently it has been adapted to treat a wide range of common mental illness (e.g. posttraumatic stress disorder -PTSD-, anxiety)[12,13] and implemented in multiple LMICs[14,15] aiming to address the scarcity of mental health professionals. Of all the integrated models, collaborative care is supported by the largest body of evidence for a range of common mental illnesses and both high-income countries and LMICs.

Successful implementation requires more than translating evidence-informed practice (the 'what') from one context, traditionally in a high-income country, to a different one, commonly in a LMIC. Instead, adopting, implementing and sustaining integrated programs at scale would require important changes to the delivery of mental health services at the provider-, organizational- and wider community-levels. Implementation strategies

are the methods or techniques used to enhance adoption, implementation, and sustainment of an evidence-informed intervention.[16] To achieve implementation success, implementation scientists advocate for the tailoring or matching of implementation strategies to the local context.

Despite their effectiveness, integrated programs are yet to be widely adopted, implemented, and scaled up.[17] For instance, many Latin American countries still rely on specialized, verticalized psychiatric services and provide limited mental health services within primary care and community settings.[18–20] Qualitative reviews have previously identified and described the most common barriers preventing integrated service programs from being widely implemented in LMICs.[17,21] For instance, Esponda et al.'s systematic review described implementation barriers within the outer setting (e.g. lack of mental health policy or program), inner setting (e.g. absence of standardized manuals) or the characteristics of the intervention (e.g. high complexity and costs).[17] Implementation researchers suggest that to overcome implementation barriers, implementation strategies, "the methods or techniques that enhance the adoption or implementation[22]" of an evidence-informed intervention, should be carefully designed to match such barriers.[16,22,23] As a first step towards advancing the science of identifying and selecting implementation strategies of integrated service programs for common mental illnesses in Latin America, we sought to map and describe the implementation strategies of such programs, addressing a current gap in the literature. This review may support future implementation efforts and assessments focused on the tailoring and assessment of implementation strategies as a step towards widely adopting and implementing integrated programs for common mental illnesses in Latin America.

The primary aim of this scoping review was to systematically describe the implementation of integrated models for common mental illness in primary care and community settings in Latin America. Addressing existing gaps in the literature, we aimed to answer the following research question and objectives: What are the program components and implementation strategies of integrated programs for people (children and adults) living with common mental illnesses (depression, anxiety, PTSD) delivered in primary care and community settings in Latin America? What are the core interventions and components that make up these models (the 'what')? What are the implementation strategies used to enhance the adoption, implementation or scale-up of these programs (the 'how')? We focused on Latin America, a region with partially shared cultural and health systems contexts, as well as a long history of psychiatric institutionalization that has been transitioning to integrated programs since the Caracas declaration.[20] In answering these questions, results from this study will support implementation researchers and

mental health leaders seeking to study and promote the adoption of evidence-informed, context-appropriate intervention packages in Latin America and in LMICs.

Methods

This study was designed as a scoping review, a type of review designed to provide a summary and mapping of the available literature and identify knowledge gaps.[24] Scoping reviews can be used to inform more specific future research questions in a systematic review or meta-analysis. We completed this scoping review following the stages described by the Joanna Briggs Institute (JBI) Scoping Review Methods Group.[24] We followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses- Scoping Review extension (PRISMA-ScR) reporting recommendations (View Supplementary Table S1). Throughout the scoping review, we consulted with stakeholders and experts in global mental health, implementation research and mental health research and practice in Latin America. This scoping review was registered in January 2023 (https://osf.io/fkb74/).

Developing the search strategy

To define the research question and objectives, we conducted an exploratory search of seminal publications and existing systematic reviews and scoping reviews on related topics. Originally, we intended to focus on the methodologies and processes for selecting implementation strategies of collaborative care programs for common mental illnesses within primary care and community settings in Latin America. However, because the literature on this topic was limited, our review aimed a broader scope to focus the program components and the implementation strategies of collaborative care programs for common mental illnesses within primary care and community settings in Latin America. We developed the search strategy in collaboration with a research librarian with expertise in conducting scoping reviews on public health research topics. Our search strategy was guided by the 'Population-Concept-Context' framework for scoping reviews[24]: 1) General population of children or adults living in Latin America (Population); 2) Common mental illnesses: anxiety, depression and PTSD (Concept 1); 3) Implementation of programs (Concept 2); and 4) Primary care and/or community-based settings (Context). Supplementary Methods 1 presents additional details related to the development of the search strategy, the final list of search terms by database, and the number of results obtained through each database.

Our goal was to create a list of search terms that would both align with the study objectives and capture the breadth and depth of the diverse academic traditions and scientific terminology in Latin America in both English and Spanish. We started by compiling a list of landmark articles that met with the 'Population-Concept-Context' domains and identified key terms. We then tested such key terms in PubMed and Scielo, which is a database that compiles publications from the Latin American/South American region. Through an iterative process, we refined the search terms, running searches for each concept alone and in combination, and identifying additional landmark articles and key terms from the citations list. Early in this process, we noticed great variation in the use of terms related to the concepts of 'implementation' and 'collaborative care' across Latin America. To address this variation and capture the breadth of the literature, we decided to use broader, alternative terms that would capture the literature related to our topics of interest (e.g. primary care, community care). We also decided to combine these terms utilizing the Boolean operator 'OR' instead of 'AND'. We created a final list of search terms for the PubMed database and later adapted it to each of the databases (See 'data sources' below).

Selecting the data sources

The following six databases were searched to identify studies relevant to public mental health conducted in the Latin American region: PubMed, EMBASE, CINAHL, PsycINFO, Scielo and LILACS (WHO/PAHO Virtual Health Library).

Defining the eligibility criteria and study selection process

Inclusion criteria

We included reports published in English or Spanish between January 01, 2000 and January 09, 2023. We included publications with the following characteristics a) peer-reviewed with original research b) all types of study designs: quantitative studies, qualitative studies, mixed methods studies, literature reviews, and writing pieces such as editorials, commentaries, viewpoints, if they were published in a peer-reviewed journal; c) focused on the general population (children or adults) of at least one Latin American country; d) described a practice (program/intervention/service) that aimed to address anxiety, depression, PTSD or common mental illnesses (unspecified), at least partially; was implemented by primary or lay health workers; and within a primary care or community setting; and e) was centered on describing the implementation process or implementation strategies of such practice, at least partially. We included any program that was delivered within primary care or community settings and was provided by lay or primary healthcare workers at least partially, regardless of them being explicitly labeled 'collaborative care' or 'integrated' models.

Exclusion criteria

We chose to focus on original research and thus decided to exclude publications that were not peer-reviewed,

such as book chapters (as they are not original research) and conference abstracts (as they did not provide enough details about program implementation). We also excluded publications that focused on subsets of the population (e.g. healthcare workers); addressed severe mental illnesses *only* (e.g. schizophrenia); were implemented by mental health specialists *only* (e.g. psychologists, psychiatrists); were implemented within specialized mental health settings *only;* or did not describe the implementation process or implementation strategies of a practice as a primary focus.

Selection of reports
After searching the databases with our final list of search terms, we imported the results into Covidence software, a web-based collaboration software platform that streamlines the production of literature reviews. Duplicates were automatically flagged by Covidence and manually confirmed. Selection of reports was conducted in two phases: first, title and abstract screening and second, full text review. Initial title/abstract screening was performed by the lead author (APA). A team of reviewers, who were researchers fluent in at least one of the languages (English/Spanish) and with expertise in primary care (APA), psychiatry (MF), psychology (AF, MR), public mental health (APA, BC, EC, LD, LMS, APM) and/or implementation science (APA, EC) in the Latin American region performed the second screenings. The lead author (APA) developed instructions for reviewers detailing the eligibility criteria for the title and abstract screening. To ensure inter-screener agreement, reviewers were trained in two phases. First, each of the second reviewers screened at least 30 randomly selected sources following the eligibility criteria. The team of reviewers and the lead author (APA) met to review how the eligibility criteria were applied to the sources, 30% of all the sources, and all the discrepancies. All discrepancies were solved through team discussion and retraining of individual reviewers was completed when appropriate. When at least 60% consensus was achieved, each reviewer continued to screen at least 20 other sources and discussed discrepancies one-on-one with the lead author (APA) until consensus was achieved through one-on-one discussions. When more than 75% consensus was achieved between the lead author and the second reviewers, each team member continued to screen sources independently. Conflicts continued to be solved by consensus discussions between the lead author and at least one of the second reviewers through meetings. When conflicts could not be solved between the two reviewers, a third person (JK) was involved to guide the final decision. After finalizing the title and abstract screening phase, including addressing all the conflicts, the lead author (APA) reviewed 50 of the papers that made it to the full text review phase and added further details to the instructions for reviewers, providing examples of the type of full text content that

should be included or excluded, while maintaining the eligibility criteria utilized in the title and abstract screening phase. This was done at this phase to ensure that the information of selected sources was aligned with the research question and instructions were clear to reviewers. This was particularly relevant for criteria that could not be ascertained with the limited information usually provided in titles and abstracts, such as the criterium about implementation (see "e" above). For instance, instructions for the screening phase indicated that the title or abstract should broadly refer to the program implementation strategies or processes. Instructions for the full text review phase further indicated that publications needed to describe the actual implementation process or the implementation strategies (See Supplementary Methods 2). Each second reviewer revised at least 30 full text papers and discrepancies until consensus with the lead author (APA) was reached. Following this process, second reviewers proceeded to review the full text papers. Team meetings continue to be held every two weeks to ensure that eligibility criteria and instructions were followed by all the team members throughout the full text review. Conflicts were resolved by consensus discussions between the lead author and at least one of the second reviewers. When conflicts could not be solved between the two reviewers, a third person (JK) was involved to guide the final decision.

Extracting and charting the data
We extracted data from relevant publications using Covidence software.[25] Data were independently extracted by the lead author and one of the second reviewers, who held discussions to resolve discrepancies. We created a data extraction instrument that was tested and refined, making sure that questions captured our topics of interest and were understandable. Our final data extraction instrument included the following information a) general information of the publication, such as author and year, study aims, methods and participants; b) the practice (program/intervention/service) being implemented, including the program components, common mental illness, setting, providers and recipients; c) the implementation strategies to deliver the practice within primary care or community settings; and d) the description of implementation factors. Supplementary Table S2 shows the final data extraction instrument.

We coded program components following the collaborative care model core principles as delineated by the Advancing Integrated Mental Health Solutions (AIMS) and preliminary results from our literature review, which allowed us to maximize data extraction[26] (See Supplementary Table S2). We first identified and classified the main modality or modalities of the core intervention. We then coded and fitted each additional program component to the collaborative care model. Identified implementation strategies were coded according to the Expert Recommendations for

Implementing Change (ERIC) taxonomy for implementation strategies.[23,27] We also included 'other' fields to capture program components or implementation strategies that did not fit with the collaborative care model or the ERIC taxonomy.

Synthesizing the data

Study characteristics were tabulated for first author, year, language, country, study aims, study type, sample size and sample characteristics (See Supplementary Table S3). We also tabulated the practice (program/intervention/service) characteristics: common mental illness, modality of core intervention, program components, recipients, providers, scale, implementation stage and reporting of implementation factors (yes/no) (See Supplementary Table S4). Program components were classified based on the core components of the collaborative care model (See Supplementary Table S4). We classified implementation strategies following the ERIC taxonomy and ranked ERIC categories according to the number of programs that included them (See Supplementary Table S4). We selected key examples of implementation strategies for each ERIC taxonomy (See Table 1).

Results

Our search resulted in 2877 records from Pubmed (N = 339), Embase (N = 762), PyscInfo (N = 380), LILACS (N = 399), CINAHL (N = 451) and Scielo (N = 547) (Fig. 1). Duplicate records were removed (N = 897; 31.2% of total records), 1980 (68.8% of total records) titles and abstracts were screened, and 357 (18.03% of screened titles and abstracts) full text publications were assessed for eligibility. At the full text review state, 324 (90.8% of full texts) studies were excluded due to not focusing on practice implementation (N = 110; 30.8% of full texts), not being in Spanish or English (n = 80; 22.4% of full texts), not being peer reviewed (N = 38; 10.6% of full texts), not addressing a common mental illness (N = 38; 10.6% of full texts), not focusing on a program implemented by a lay or primary healthcare worker (N = 21; 5.9% of full texts), an ineligible subset of the population (N = 12; 3.4% of full texts), not focusing on a practice implemented within a primary care or community setting (N = 9; 2.5% of full texts). An additional 16 studies were excluded due to not being able to locate the full text version (4.5% of full texts). We included 33 studies in the narrative synthesis (9.2% of full texts).

Overview of included studies

The 33 retained studies were published between 2006 and 2022 (median = 2020). Most studies were published in English (N = 29, 87.88%). Single-country studies were conducted in Colombia (N = 8, 24.24%)[28–35], Chile

(N = 7, 21.21%)[36–42], Mexico (N = 5, N = 15.15%)[43–47], Brazil (N = 4, 12.12%)[48–51], Belize (N = 1, 3.03%)[52], and Peru (N = 3, 3%)[53–55]. There were five multi-country studies (15.15%)[56–59], three of which were about the same program (Scale-up of Prevention and Management of Alcohol Use Disorders and Comorbid Depression in Latin America -SCALA-, O'Donnell 2021, O'Donnel 2022[58], Jane-Llopis 2022[57]). The most common methodological approach was narrative (e.g. viewpoint, narrative description; N = 11, 33.33%), followed by quantitative (N = 7, 21.21%), qualitative (N = 5, 15.15%) and mixed/multi methods (N = 15.15%). Four of the quantitative studies were experimental: two were modified stepped wedge trials that referred to the same program (Detection and Integrated Care for Depression and Alcohol Use in Primary Care -DIADA-; Torrey 2020, Gomez-Restrepo 2021), one was a cluster randomized controlled trial (Martinez 2018) and one was an individual-level randomized controlled trial (Fritsch 2020). Study participants included healthcare providers, healthcare administrators, lay healthcare workers, and adult and adolescent service users. See Supplementary Table S3 for additional study characteristics.

Program characteristics, providers, intervention and components of integrated models (the 'what')

Program characteristics
Included studies were about 18 different programs. Depression was the most commonly addressed common mental illness, either alone (N = 6, 33.33%) or in combination with anxiety (N = 5, 27.78%) or PTSD (N = 1, 5.56%). Depression was also addressed in combination with other problems beyond common mental illnesses, such as comorbid alcohol use (N = 2, 11.11%) or suicide and alcohol use (N = 1, 5.56%). Three (16.67%) of the studies did not specify the type of common mental illness addressed by the program. Most of the programs served adults (N = 11, 61.11%), two of which only included women (11.11%). One program served adolescents (5.56%). The rest of the programs did not specify the type of program recipients (N = 6, 33.33%). Programs were implemented in primary healthcare facilities alone (N = 10, 55.55%), in primary healthcare facilities and community settings (N = 4, 22.22%), in primary healthcare facilities and mental health centers (N = 3, 16.67%), or in community settings (N = 1, 5.56%). See Supplementary Table S4 for additional program characteristics.

Program providers
Programs were most commonly provided by teams that included lay or primary healthcare workers and mental health specialists (e.g. psychologists or psychiatrists; N = 11, 61.11%). Five (27.78%) of the programs were provided only by lay or primary healthcare workers, of which four (22.22%) included social workers. One

ERIC category	Number of programs	Selected example: program name (country)	Selected examples: description of implementation strategy (Specific ERIC implementation strategy)
a. Support clinicians	17	National Program for the Detection and Treatment of Depression in Primary Care (Chile)	PHCWs detect and manage depression (Revise professional roles)
		PROACTIVE (Brazil)	LHCWs and nurse assistants deliver psychosocial intervention (Revise professional roles)
b. Train and educate stakeholders	16	PIH Mental Health Program (Mexico, Peru)	LHCWs participate in mental health course (2 h/day, 8 days) followed by on-site mentorship visits by psychologist (Educational outreach visits)
		SCALA (Colombia, Mexico, Peru)	Addiction specialist trained PHCW, who trained additional PHCW (Train-the-trainer)
c. Provide interactive assistance	10	Mental Health for Development in Apurimac	*Acompañamiento* of PHCW by clinical supervisors for 4 years, facilitation characterized by solidarity and willingness to walk with someone (Facilitation)
		Matrix Support (Brazil)	Senior psychiatrist provided support to PHCWs through weekly visits, phone calls or email (Provide clinical supervision)
d. Use evaluative and iterative strategies	9	Psychiatric Nurses Program (Belize)	Development and piloting of audit and feedback tool to evaluate the performance of psychiatric nurse practitioners and the National Mental Health program (Audit and provide feedback)
		DIADA (Colombia)	Pilot informed the intervention implementation and scale up (Stage implementation scale up)
e. Develop stakeholder relationships	8	SCALA (Colombia, Mexico, Peru)	Community advisory board (CAB) meetings to inform tailoring pre-, during and post-implementation of intervention (Use advisory boards and workgroups)
		Allillanchu Project	Year-long engagement of policymakers, PHCA, PHCW to assess feasibility and ensure buy-in (Inform local opinion leaders)
f. Adapt and tailor to context	7	DIADA	Formative research informed the intervention implementation (Assess for barriers and facilitators)
		Collaborative Care Program (Mexico)	Results from qualitative and quantitative program monitoring informed the program adaptation (e.g. less program components, less PHCWs involvement)
g. Engage consumers	4	Collaborative Care Program (Brazil)	Relatives participated in family psychotherapy and follow up visits following cultural norms (Involve patients and family members)
		PROACTIVE (Brazil)	Intervention delivered through home visits (N/A)
h. Use financial strategies	4	National Program for the Detection and Treatment of Depression in Primary Care (Chile)	Public health budget was approved and allocated to support National Mental Health Program (Access new funding); Financial incentives for PHCWs who obtain ongoing mental health training (Alter incentive structures)
		Mental Health for Development in Apurimac (Peru)	Peru's National Institute of Mental Health provided budget to design and implement the intervention (Access new funding)
i. Change infrastructure	4	DIADA (Colombia)	New kiosks in waiting room with built-in tablets for screening of depression and alcohol use (change physical structure and equipment)
		National Mental Health Program (Peru)	Program included in General Law of Health that guarantees countrywide availability of free mental health services (Mandate change); Creation of Community Mental Health Centers (CMHC), primary care facilities that supervise a network of PHC centers (Change infrastructure)

CAB, Community Advisory Board; CMHC, Community Mental Health Center; CHC, community health center; CHW, community health worker; DIADA, Detection and Integrated Care for Depression and Alcohol Use in Primary Care; LHCW, lay healthcare worker; N/A, Not applicable; PHC, Primary healthcare; PHCA, Primary healthcare administrator; PHCW, Primary healthcare workers; PIH, Partners in Health; SCALA, Scale-up of Prevention and Management of Alcohol Use Disorders and Comorbid Depression in Latin America.

Table 1: Frequency of categories of implementation strategies and illustrative examples of their use within programs.

program was provided by research staff and mental health specialists (5.56%), and one did not specify the type of provider (5.56%). Three (15.79%) programs included other types of providers (dentists, dietitians, occupational therapists, midwives) in the implementation team. Only one program from Argentina (5.55%, Razzouk 2012) involved traditional healers. Regarding the implementation stage, most programs were part of researcher-controlled pilot studies (N = 10, 55.55%) and the rest were implemented as part of routine care (N = 7, 38.89%), or were in the pre-implementation phase (N = 1, 5.55%). See
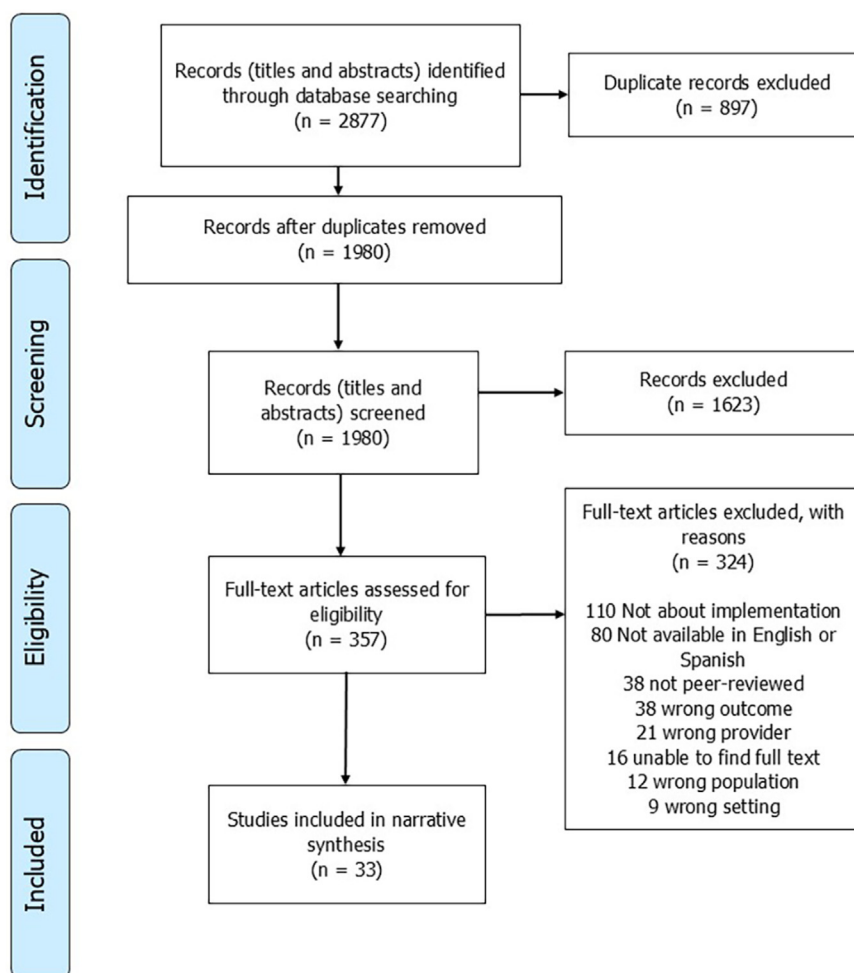
Fig. 1: Flowchart of the database searching process, removal of duplicates, title/abstract screening, full text review, and final narrative synthesis. Numbers and percentages of total records are shown.

Supplementary Table S4 for additional characteristics of program providers.

Core intervention modality
Regarding the modality of the individual-level core intervention, a third of the programs combined individual psychotherapy with group education and/or medications (N = 6, 33.33%), of which 3 (16.67%) combined the three modalities (individual psychotherapy, group education, medications). Another third of the programs provided psychotherapy alone (N = 6, 33.33%), one of which was a digital technology-based intervention (van Loggerenberg, 2022), and another one included family therapy (Springer 2018). The rest of the interventions were medications and individual education (N = 3, 16.67%), individual education (N = 2, 11.11%) or unclear intervention modality (N = 1, 5.55%). See Supplementary Table S4 for additional characteristics of core intervention modalities.

Collaborative care program components
Regarding the collaborative care program components, eight of the programs (44.44%) included three or more components. The most frequent combination (N = 5, 27.78%) was 'care coordination', 'team-based care', 'measurement based care', and 'program monitoring and quality improvement'. Six of the programs (33.33%) combined two components, both of which used team-based care and measurement-based care. Finally, three programs (16.67%) utilized only one component: team-based care, program monitoring and quality improvement, or user and family engagement. For one of the programs, the components were unclear. The most utilized individual collaborative care components were team-based care, measurement-based care, and care coordination, which were respectively used in 14 (77.78%), 12 (66.67%), and 9 (50.00%) of the programs. See Supplementary Table S4 for additional characteristics of collaborative care program components.

Implementation strategies of integrated models (the 'how')

All ERIC categories of implementation strategies were represented. The most common ERIC categories were supporting clinicians, training and educating stakeholders, and providing interactive assistance, which were respectively used in 17, 16 and 10 of the programs. The least commonly used ERIC categories were engaging consumers, using financial strategies, and changing infrastructure. Table 1 presents the frequency of ERIC categories, and two selected examples and descriptions of individual implementation strategies within each type of category.

Discussion

This scoping review summarized the literature on the implementation of primary care and community integrated programs addressing common mental illnesses in Latin America. The 33 included publications covered 18 programs that most commonly addressed depression among adults seeking primary care services. Only four publications followed an experimental design and only six of the 20 Latin American countries were represented in this literature: Belize, Brazil, Chile, Colombia, Mexico and Peru. Most programs were implemented within the health facility-level and were part of researcher-led pilot studies. Our scoping review identified a wide heterogeneity of core interventions, collaborative care program components, and implementation strategies, as discussed below.

Our scoping review showed that integrated programs for common mental illness have utilized different combinations of core interventions and collaborative care components. Regarding core interventions, most programs delivered individual psychotherapy, either alone or in combination with medications or group education. Multiple studies conducted in high income countries and LMICs have shown that multiple types of individual psychotherapy and pharmacotherapy are effective at improving outcomes of common mental illness, such as symptom severity and quality of life.[60–62]

Most programs included components such as team-based care, with either lay or primary healthcare workers and mental health specialists, such as psychologists or psychiatrists. While the collaborative care model was designed for primary healthcare workers (e.g. physicians), programs frequently included lay healthcare workers such as community health workers, which may be due to the widespread scarcity of professional healthcare workers in certain Latin American countries.[19] Moreover, while the collaborative care model was originally designed with psychiatrists as consultants, we found that models also included psychologists as trainers, supervisors and consultants, which may reflect multiple traditions around mental health in Latin America.[10] The least utilized collaborative

care model component was 'user and family engagement', which involves developing shared plans that incorporate user goals and leads to better healthcare experience and improved patient outcomes.[26] The wide range of program components in our study is in line with Cubillos et al.'s systematic review, which found a wide spectrum of integrated models, the simplest one being general training of lay or primary healthcare workers and the most complex being the collaborative care mode.[9] This variety may reflect the planned or organic adaptation of the programs to the different health systems with varying degrees of human resources and equipment, organizational characteristics, governance and funding. Future studies should examine the effectiveness of combined or individual collaborative care program components in relation to implementation, health service and clinical outcomes.

All the ERIC implementation strategies categories were represented in this scoping review. The most commonly reported categories ('supporting clinicians', 'training and educating stakeholders', and 'providing interactive assistance') involved intervening at the provider-level, which have been ranked as the most feasible strategies by implementation scientists.[23,27] 'Supporting clinicians' involved revising professional roles, specifically task-shifting or task-sharing, the process of re-distributing tasks from highly qualified providers to those with less training.[63] Mental healthcare tasks, such as detecting depression, delivering psychosocial interventions and/or prescribing medications were re-distributed from mental health specialists to primary care physicians (e.g. Chile) or lay healthcare workers (Brazil, Peru, Mexico). This approach has been widely used in LMICs globally and has been identified as a potentially effective method for reducing symptoms and improving quality of life of people living with mental illnesses in LMICs.[8] The second and third most common ERIC categories ('training and educating stakeholders', 'providing interactive assistance'), were frequently combined as part of task-sharing processes. For instance, strategies including a train-the-trainer implementation packages (e.g. Scale-up of Prevention and Management of Alcohol Use Disorders and Comorbid Depression in Latin America -SCALA-), conducting ongoing educational visits (e.g. Partners in Health mental health project) or conducting clinical supervision (e.g. Matrix Support).

The fourth and sixth most common ERIC categories ('use evaluative and iterative strategies', 'adapt and tailor to context') reflect the dynamic process of adapting and implementing programs in response to pre-implementation formative research, program evolvability during implementation and post-implementation adaptations in response to evaluation findings. Developing stakeholder relationships and engaging consumers are key categories of implementation strategies that may enhance the acceptability, adoption,

implementation and sustainability of a program. WHO has recently prioritized the meaningful engagement of people with lived experience as a public health priority to address the burden of mental illnesses and other chronic diseases.[64] Despite this, less than half of the programs reported engaging stakeholders (e.g. forming community advisory boards) or engaging consumers (e.g. family-based therapy), which may reflect the pilot nature of the studies. The least commonly used ERIC categories ('using financial strategies', 'changing infrastructure') are related to policy-level or structural changes, which have been ranked as two of the most impactful but least feasible implementation strategies.[27]

Our scoping review had limitations. First, this study only included publications in Spanish and English, which led to potentially excluding relevant publications in other languages, particularly Portuguese, spoken in Brazil. However, we were able to include studies from Brazil in Spanish or English, as 12.1% of the retained studies were from Brazil. Second, this review focused on peer-reviewed publications, which may have excluded relevant experiences related to the implementation of relevant programs described in government reports. Third, given the heterogeneous language about implementation science and strategies and collaborative care models across Latin America, we were unable to code these concepts based on language. Instead, we based our coding on 'content/ meaning', which was challenging as most strategies did not perfectly fit within one category. Moreover, most of the strategies did not fit into only one ERIC category and instead were coded for two or more categories. While we did not conduct a formal quality assessment of the literature, the challenges we faced when coding extracted data on implementation suggest that quality of implementation studies may be improved. This could be achieved by describing implementation strategies, interventions, and clinical and implementation outcomes using standardized reporting guidelines, such as the ASSESS tool for reporting and appraising qualitative, quantitative, and mixed methods implementation research.[65]

In conclusion, our scoping review about integrated services for common mental illnesses within primary care and community settings in Latin America found a wide heterogeneity of core interventions and program components (the 'what'), often with different combinations of implementation strategies (the 'how'). Our study highlighted three research gaps. First, the need to better understand which core program components and implementation strategies work, for which core interventions, for whom, and under what circumstances. To address this gap, next steps could involve conducting a realist review or mixed methods case study focused on a subset of the programs identified through this review to understand how program components and implementation strategies led to particular implementation and mental health outcomes within Latin American implementation contexts. Second, the lack of experimental evidence should be addressed through pragmatic implementation-effectiveness trials or quasi-experimental conducted in routine primary care and community settings. In addition to assessing effectiveness, future studies should aim to assess the implementability and sustainability of programs by utilizing appropriate study designs and collecting detailed qualitative and quantitative data about implementation strategies, implementation processes and implementation contextual factors. Finally, certain Latin American countries were under-represented in this review, which may reflect funding inequalities and the need for strengthening research and public health capacities in the region. South-to-South collaborations between early and late adopters of integrated service models could foster the translation of evidence-informed integrated service models to countries still relying on tertiary, vertical mental health services, such as the Central American Northern Triangle. Our scoping review provides the foundational literature to guide the design and adoption of integrated service models for common mental illnesses in Latin America and other LMICs.

Review

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