



Ten Years Later: What Have We Learned from Implementing the WHO-Designed Problem Management Plus Globally? A Scoping Review of Barriers and Lessons Learned

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Abstract

Problem Management Plus (PM+) is a brief transdiagnostic intervention developed by the World Health Organization in 2015 and is intended to be delivered by lay counselors to address the vast mental health treatment gap particularly in low- and middle-income countries. Over the last 10 years, PM+ has been implemented across the globe with numerous randomized control trials providing evidence for its efficacy. This scoping review examines the global implementation of PM+, identifying barriers, lessons learned, and key practices for successful deployment across diverse settings. Following PRISMA guidelines, a comprehensive search across five electronic databases (Academic Search Complete, PsycINFO, MEDLINE, CINAHL, and SocINDEX) was conducted. Two pairs of authors independently reviewed and selected peer-reviewed articles, with all four reviewers extracting data. Of the 292 studies retrieved, 82 articles met the eligibility criteria and were included in the review. The literature comprised 19 randomized controlled trials, 18 descriptive studies, 14 study protocols, 12 mixed methods studies, eight field reports/reflections, six feasibility/pilot studies, and five qualitative studies. Thirty-one articles addressed implementation barriers, while 30 discussed lessons learned. Using an ecological systems framework, we categorized findings into three levels: individual/micro (participant and counselor engagement), community/mezzo (training and implementation), and institutional/macro (scaling up PM+ within governmental and political structures). Published research demonstrates the effectiveness of the PM+ intervention in mediating symptoms of common mental health distress. This review synthesizes key implementation barriers and effective strategies for scaling PM+ across settings that can be used by researchers and service providers in future implementation.

Introduction

Despite decades of evidence-based interventions, common mental disorders (CMDs) such as depression and anxiety remain among the leading causes of the global health burden, impacting millions worldwide [1-3]. Globally, 75% - 90% of individuals with a mental health condition remain untreated [4, 5]. More than 83% of individuals with mental health conditions reside in low- and middle-income countries (LMICs), which are disproportionately affected by humanitarian crises like war, forced displacement, and natural disasters [6]. Heightened stigma [7, 8], infrastructure constraints, scarcity of trained mental health professionals, and lack of funding prevent mental health treatments from reaching global communities with the greatest need [9, 10].

Common mental disorders respond effectively to evidence-based interventions [11-13]. If left untreated, these conditions may become chronic and create significant psychological harm, physical impairment, and an increased risk of suicide [14-16]. Early interventions with front-line treatment strategies like cognitive behavioral therapy (CBT) have been shown to reduce psychological symptoms of distress and promote overall functioning [17, 18].

In 2008, the World Health Organization began to develop and test a series of low-intensity, task shifting interventions as part of its Mental Health Gap Action Programme (mhGAP) [19]. Task shifting, an approach that moves the delivery of evidence-based interventions from skilled mental health providers to lay counselors [20], has demonstrated promise in LMICs [21-23]. Problem Management Plus (PM+), a brief, transdiagnostic intervention for adults suffering from common mental health problems in low- and middle-income countries, was developed through the mhGAP initiative in 2015 [24]. PM+ targets symptoms of depression, anxiety, posttraumatic stress,

and grief, as well as addresses practical problems like economic challenges and relationship issues. Four core evidence-based strategies are employed in PM+: a) managing stress, b) managing problems, c) behavior activation, and d) strengthening social support. PM+ is not designed to intervene with suicidal individuals or those suffering from severe mental illness.

For nearly ten years, mounting evidence from RCTs has demonstrated PM+'s positive impact on psychological distress in conflict-affected populations. Schafer and colleagues [25] conducted the first systematic review and meta-analysis on outcomes of PM+ and its digital adaptation, Step-by-Step (Sbs). The meta-analysis represented 23 studies (including 5,298 participants) conducted in Pakistan, Lebanon, Kenya, Jordan, The Netherlands, Nepal, Australia, Austria, China, Colombia, Switzerland, Turkey, and the UK. The PM+ intervention was used with populations exposed to war, humanitarian crises, health stressors, and gender-based violence. The study found small to moderate favorable effects across psychological distress indicators and positive mental health outcomes with the largest effects for general distress at both the post-intervention and short-term follow-up assessments. Some researchers have raised concerns about the sustainability of participant gains from PM+, given that outcomes are usually only measured through short-term assessments [26]. The results do indicate the effectiveness of PM+ as a scalable intervention to address common mental disorders and support the well-being of individuals in LMICs. However, the potential for PM+ to have a continual and meaningful impact lies in the effective implementation and scalability of the intervention. To date, there has not been a comprehensive overview of key practices and processes specific to the potential success of implementing PM+ across global settings. Specifically, this study seeks to address the gap in the literature on barriers and lessons learned while implementing the PM+.

The aim of this study is to provide a scoping review of the literature on the applications of the WHO-designed PM+ intervention across various contexts globally. This study also aims to describe the barriers encountered in implementing PM+ and the corresponding lessons learned in addressing these barriers.

Methods

This scoping review was conducted following the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines [27]. A literature search was completed by a four-member review team on July 31st, 2024. This review provides an overview of the global use of the WHO-designed PM+ and highlights the barriers and lessons learned in its implementation.

Five electronic databases (Academic Search Complete, PsycINFO, MEDLINE, CINAHL, and SocINDEX) were searched to identify peer-reviewed articles published after January 1, 2015, and reporting on any aspect of implementation of the WHO developed Problem Management Plus (PM+). The Boolean Search strategy matched the following criteria: Problem Management Plus or PM+ in the title or abstract. Limiters used were peer-reviewed articles in the English language and those published 2015 onwards because the PM+ was developed in 2015. Studies that were systematic or scoping reviews about the PM+ were removed.

All studies that met the following eligibility criteria were included in the review; published in a peer-reviewed journal, published in the English language, published 2015 onwards, and about the PM+. The search returned 292 records: 91 records from MEDLINE, 89 from Academic Search Complete, 45 from CINAHL Complete, 43 from APA PsycInfo and 24 from SocIndex. These records included 144 duplicates that were removed. A total of 148 remaining articles were entered into an excel sheet for the first phase of review. Please see Figure 1.

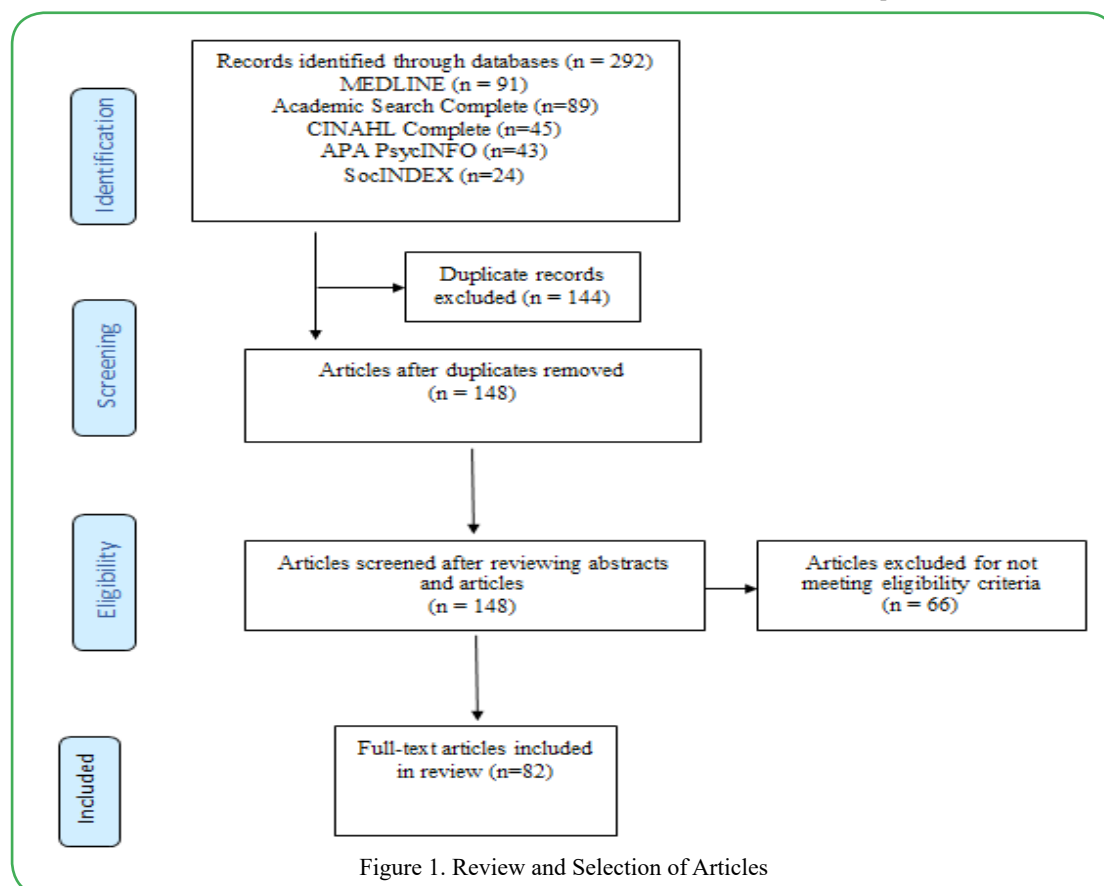


Figure 1. Review and Selection of Articles

All four authors (SS, LS, AG, RD) reviewed 148 abstracts independently for the first phase of review. Articles that focused on any aspect of delivering the PM+ intervention in any format were

eligible for the study. Articles that were not specifically about the PM+ were removed. Sixty-six articles were deemed not relevant to our study because they were not about the PM+ or were scoping or

systematic reviews. All four authors agreed on the selection of the articles, and any discrepancies were resolved through discussion. Eligible articles included descriptive studies, field reports, reflections, pilot studies, feasibility studies and randomized control trials, mixed methods studies and qualitative studies.

A total of 82 articles were entered into the next phase of review. Two teams of authors (SS and AG; LS and RD) reviewed the full texts of all the 82 articles independently as per eligibility criteria. The review was guided by the following research questions:

1. In which global contexts and among which populations has PM+ been implemented, and what are the key features of its implementations?
2. What types of studies have used PM+, and what specific problems or conditions have been addressed using the PM+?
3. What are the barriers encountered, and the lessons learned in the global implementation of PM+?

Data Abstraction

The articles included in this review were assessed and coded by the research team according to established criteria. Each eligible article was reviewed and coded independently by three teams of two authors each. Coding was completed using a data abstraction form, developed

to synthesize findings from all eligible peer-reviewed published studies. The data abstraction form was developed to systematically extract core study components, for example, publication details, study design, sample, study location, target population; focus of intervention; measured outcome, barriers and lessons learned. Barriers to the implementation of PM+ and the lessons learned were identified and categorized into key themes. Using Bronfenbrenner's ecological systems approach [28], these themes were then organized according to those related to the micro system (individual level), mezzo system (community or organizational level), and macro system (societal, governmental or policy-level systems). Discrepancies in coding were resolved through discussion and consensus and used to inform and modify the data abstraction form. Data abstractors maintained over 95% inter-rater reliability across all articles.

Findings

Study Characteristics

Core study characteristics like the author and year, purpose of study, focus of PM+ intervention, type of study, geographical site of the study, population, sample and measured outcomes were extracted from all the 82 studies reviewed and are presented in Table 1.

| | Author/ Year | Purpose of Study | Focus of PM+ Intervention | Type of Study | Country/ Region | Population | N | Measured Outcomes |
|---|-------------------------|---|-----------------------------------|---------------------------|--------------------|-------------------------------|-----|---|
| 1 | Acatürk et al., 2022 | Assess the feasibility, acceptability, perceived impact, potential cost-effectiveness | | Single-blind pilot RCT | Turkey | Syrian refugees | 46 | -Symptoms: Depression, Anxiety, PTSD, Self-identified problems -Psychological functioning -Cost: Health service utilization -Productivity loss |
| 2 | Akbay-Safi et al., 2021 | Describe population, procedures, settings, challenges | Gender based violence | Field report | Turkey | Survivors of GBV/Syria | 20 | |
| 3 | Akhtar et al., 2021 | Describe the process of cultural adaptation for group PM+ | -- | Descriptive | Jordan, Turkey | Syrian refugees | -- | -- |
| 4 | Akhtar et al., 2021 | Test safety and acceptability of group PM+ | Refugee parents of minor children | Feasibility RCT | Syria | Parents among Syrian refugees | 64 | -Symptoms: Depression, anxiety, PTSD, prodromal psychosis, grief, children's psychological distress -Adverse events, % of participants completing gPM+ |
| 5 | Akhtar et al., 2020 | Describe study protocol for group PM+ trial | Common mental disorders | Single-blind, two arm RCT | Jordan | Syrian refugees | 480 | |
| 6 | Ali & Ari 2021 | Describe the impact of PM+ on refugees | -- | Reflection | Iraq | Syrian refugees | -- | -- |

Table 1. to be cont...

| | | | | | | | | |
|----|------------------------|---|-------------------------------------|------------------------------------|---------------------------------|--|-----|---|
| 7 | Alozkan et al., 2021 | Evaluate feasibility and acceptability of PM+ with Emotional Processing (EP) | Psychological distress | Descriptive study protocol | Netherlands | Syrian, Eritrean, Iraqi refugee youth | 90 | -Feasibility and Acceptability measures: recruitment, attendance, protocol adherence, adverse events, qualitative assessments -Symptoms: psychological distress, functional impairment, PTSD, social support, self-identified problems |
| 8 | Basil et al., 2021 | Describe the impact of PM+ on helpers | -- | Personal reflection | Netherlands | Syrian refugees | -- | -- |
| 9 | Brown et al., 2023 | Describe strategy to reduce gaps in MH support in higher education | -- | Descriptive, Call to action | United States | College students | -- | -- |
| 10 | Bryant et al., 2017 | Test effectiveness of PM+ | Common mental disorders | RCT | Nairobi, Kenya | Women experiencing gender-based violence | 421 | Primary outcome: Psychological distress Secondary outcome: functioning, symptoms of PTSD, personally identified problems and stressful life events |
| 11 | Bryant et al., 2022a | Evaluate long term impact of group PM+ | Mental health | RCT | Jordan | Syrian refugees | 410 | Primary outcomes: Depression and anxiety Secondary outcomes: Disability, posttraumatic stress, personally identified problems, prolonged grief, psychotic symptoms, parenting and children's mental health |
| 12 | Chiumento et al., 2017 | Evaluate effectiveness and cost effectiveness of group PM+ | Common mental disorders | Two-arm, single blind RCT protocol | Rural Pakistan | Women | 612 | -Symptoms: depression, anxiety, PTSD, social support, economic outcomes -Level of functioning -Acceptability |
| 13 | Chiumento et al., 2021 | Describe cascade model of training/ supervision and lived experiences of task-sharing | | Description reflection | | Refugees and asylum seekers | | |
| 14 | Coleman et al., 2021 | Describe the process for culturally adapting PM+ | | Descriptive | Rwanda, Peru, Mexico and Malawi | | | |
| 15 | Dawson et al., 2015 | Describe therapeutic foundations and core strategies of PM+ | Common mental disorders | Descriptive | -- | -- | -- | -- |
| 16 | Dawson et al., 2016 | Test feasibility and acceptability of PM+ | Adversity and gender based violence | Feasibility trial | Nairobi, Kenya | Women | 70 | Psychological distress |

Table 1. to be cont...

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|----|---------------------------|---|------------------------------|--------------------------------------|---------------------------------|--------------------------------------|--------------------|---|
| 17 | de Graff et al., 2022 a | Describe a study protocol to evaluate the effectiveness, cost effectiveness and implementation of PM+ and gPM+ and digital SBS | | Study protocol for meta-analysis | Europe, Middle East | Syrian refugees | 1619 | Psychological distress |
| 18 | de Graff et al., 2022 b | Describe a study protocol to evaluate effectiveness and cost effectiveness of PM+ | Psychological distress | Study protocol | Netherlands | Syrian refugees | 380 | Psychological distress |
| 19 | de Graff et al., 2022 c | Test feasibility and acceptability of PM+, understand likelihood of effectiveness and cost effectiveness | Psychological distress | Mixed methods using single blind RCT | Netherlands | Syrian refugees | 60-Quan 16-Qual | Primary outcomes: Symptoms of depression, anxiety Secondary outcomes: Psychological functioning, symptoms of PTSD, self-identified problems, service utilization |
| 20 | Dozio et al., 2021 | Describe adaptation procedures, findings, challenges of gPM+ | Functional impairment | Field report | Central African Republic | War affected population | 946 | PTSD Functional impairment |
| 21 | Falgas-Bague et al., 2024 | Test feasibility, acceptability and efficacy of adapted PM+ for moms and Thinking Healthy program plus Strong Minds Strong Communities intervention | Mental health and well-being | RCT protocol | Zambia | Mothers | 265 | Feasibility (participation) Acceptability (completion) Psychological distress Qualitative feedback |
| 22 | Fuhr et al., 2020 | Describe pathways for scaling up PM+ and EASE | -- | Descriptive | Lebanon, Netherlands and Turkey | Syrian refugees | -- | Identifying pathways for scale-up -Policy and financial pathway -Health services pathway |
| 23 | Fuhr et al., 2020 a | Report on the use of Theory of Change (ToC) to plan the scale up of PM+ | -- | Descriptive | Turkey | Syrian refugees | 24 | Theory of change map identifying 3 key elements of scaling up |
| 24 | Fuhr et al., 2021 | Describe need for PM+ | Alcohol abuse | Descriptive | Uganda, Ukraine | Conflict affected | -- | -- |
| 25 | Galea et al., 2022 | Describe experience of students and faculty delivering PM+ | -- | Descriptive | Tampa Bay | Low-income Spanish-speaking patients | 5 | Qualitative experiences of students delivering PM+ |
| 26 | Gebrekrstos et al., 2021 | Field report on a pilot study | Refugee Setting | Descriptive | Tigray region of Ethiopia | Eritrean refugees | 43 | Challenges encountered lessons learned |

Table 1. to be cont...

| | | | | | | | | |
|----|---------------------------|--|--------------------------------------|---|-----------|--|-----|---|
| 27 | Goloktionova et al., 2021 | Describe experience of 2 mental health program coordinators | Violence | Descriptive | Ukraine | Armed conflict affected populations | -- | -- |
| 28 | Hamdani et al., 2017 | Describe study Protocol for a randomized controlled trial | Common Mental Disorders | Descriptive | Pakistan | Outpatient clinic patients | -- | -- |
| 29 | Hamdani et al., 2020 | Evaluate cost-effectiveness of PM+ | Anxiety, depression, and functioning | RCT | Pakistan | Outpatient clinic patients | 346 | Primary outcomes- Symptoms of depression and anxiety Secondary outcomes- Functioning and PTSD Tertiary outcomes- Cost-effectiveness |
| 30 | Jordans et al., 2021 | Test effectiveness of group PM+ | Common mental disorders | RCT | Nepal | Adults affected by humanitarian crisis | 611 | Primary outcome: Psychological distress Secondary outcomes: Depression symptoms, PTSD symptoms, heart-mind problems, social support, somatic symptoms, functional impairment |
| 31 | Kantor et al., 2023 | Examine asylum seekers self-perceived problems and experiences with aPM+ | Trauma | Multi-method approach; RCT & Qualitative interviews | Austria | Afghan asylum seekers | 88 | Primary outcomes: Self-perceived problems and consequences, somatic symptoms, anxiety, depression and PTSD Secondary outcomes: experiences with PM+ |
| 32 | Kayira, et al., 2023 | Test feasibility of screening and PM+ | Perinatal depression | Feasibility RCT | Malawi | Pregnant and postpartum women | 173 | Primary outcome: Feasibility Secondary outcome: Depression symptoms |
| 33 | Keyan et al., 2019 | Present study protocol for a multicenter, parallel-group, RCT | Psychological distress | Study protocol | Jordan | Adults with psychological distress | 800 | Primary outcome: Depression and anxiety symptoms. Secondary outcomes: Well-being, changes in self-identified problems, quality of life and cost-effectiveness. |
| 34 | Keyan et al., 2021 | Describe study protocol for RCT | Psychological distress | Study protocol | Australia | Individuals with high levels of distress | -- | -- |
| 35 | Khan et al., 2019 | Test feasibility and acceptability of gPM+ | Common mental disorders | Mixed method: RCT and qualitative | Pakistan | Women | 240 | Primary outcomes: Anxiety and depression Secondary outcome: Worry, sleep impairment, positive and negative mood, anhedonia, and COVID-19-related concerns. |

Table 1. to be cont...

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|----|--------------------------|---|------------------------------|-----------------------|--|---|-----|--|
| 36 | Knefel, et al., 2022 a | Evaluate effectiveness of adapted PM+ | Common mental disorders | RCT | Austria | Afghan asylum seekers or refugees | 88 | Primary outcome: General health Secondary outcomes: Post-migration living difficulties, PTSD symptoms, quality of life, self-perceived problems, and integration Tertiary outcomes: Trauma exposure |
| 37 | Knefel, et al., 2022 b | Investigate perceptions of usability of adapted PM+ | Mental health problems | Mixed method | -- | Mental health professionals | 29 | Perceptions of mental health professionals on the adapted PM+ |
| 38 | Knefel, et al., 2022 c | Investigate mental health professionals' perception of usability of PM+ | -- | Qualitative | Afghanistan | Asylum seekers and refugees | 29 | |
| 39 | Logie, et al. 2022 | Evaluate the feasibility and effectiveness youth-tailored mental health interventions combined with PM+ | Depression and anxiety | Three-arm cluster RCT | Uganda | Refugees and displaced youth | 330 | Primary outcome- Depression Secondary outcomes- Mental health literacy, attitudes towards mental health help-seeking, adaptive coping strategies, and mental health stigma, mental well-being, level of functioning |
| 40 | Luzano & Mordeno, 2024 | Examine the efficacy of PM+ | Mental health | RCT | Philippines | Conflict exposed college students | 26 | Psychological wellbeing, functionality, posttraumatic stress disorder, anxiety, and depression scores |
| 41 | Marchetti, et al., 2024 | Evaluate scale-up of PM+ in 5 countries | Mental health | Mixed methods | Ethiopia, Benin, Croatia, Bosnia and Herzegovina | Individuals aged 16 and older with emotional distress | 87 | Reduction in self-reported problems, depression, and anxiety and improved functioning Qualitative themes: General health, family relationships, psychosocial problems and daily activities |
| 42 | McBain, et al., 2021 | Evaluate stepped model of depression care combining PM+ and antidepressant therapy (ADT) | Depression | Study protocol | Malawi | HIV/AIDS affected adults | -- | -- |
| 43 | McBride, et al., 2021 | Describe two remote PM+ trainings | Mental health and well-being | Descriptive | New York City, Europe and East Africa | -- | 26 | Lessons learned |
| 44 | Mediaville, et al., 2022 | Evaluate capacity of 2 WHO interventions: Doing What Matters and PM+ | Anxiety and depression | RCT | Spain | Healthcare workers | 232 | Anxiety and Depression |

Table 1. to be cont...

| | | | | | | | | |
|----|----------------------------|--|------------------------------|--------------------------|------------------------------|--|--------------------|---|
| 45 | Melchior et al., 2023 | Test effectiveness of a stepped-care program using DWM and PM + | Psychological distress | Study protocol for RCT | France | Unsheltered | 210 | Primary: Depression and anxiety Secondary outcomes: PTSD, symptoms of psychosis, quality of life, resilience |
| 46 | Miller-Suchet et al., 2024 | Examine mediators and moderators of Group PM+ | Mental Health | Mixed methods | Colombia | Venezuelan female refugees and migrants | 128 | More stable, less marginalized participants improved the most. Group PM+ related skill acquisition was not a mediator of the association between attendance and mental health outcomes. |
| 47 | Musoti et al., 2023 | Evaluate outcomes of PM+ and Doing What Matters in Times of Stress | Mental health and well-being | Quasi-experimental study | Iraq | Displaced persons and host persons | 1220 | Mental health progress and functionality |
| 48 | Nemiro et al., 2021 | Describe PM+ implementation in 3 settings | Psychological distress | Case study | Ethiopia, Syria and Honduras | Refugees, war-affected populations, rural poor | 3 | -- |
| 49 | Nyongesa et al., 2022 | Evaluate acceptability and feasibility of telephone delivery adapted PM+ | Common mental disorders | Mixed methods | Kenya | Young people living with HIV (YLWH) | Quan 70 Qual 39 | Acceptability: Recruitment, retention, session duration and completion. Symptoms: Depression, anxiety, functioning with HIV social support |
| 50 | Pedersen, et al., 2023 | Compare cost of PM+ training using competency-based framework to standard PM+ training | -- | Mixed methods | Nepal | -- | -- | Quantitative outcomes: Cost analysis Qualitative outcomes: Acceptability |
| 51 | Pedersen et al., 2021 | Describe lessons learned from piloting competency assessment tool | -- | Field report | Ethiopia | Eritrean refugee victims of torture | -- | -- |
| 52 | Perera et al., 2022 | Evaluate culturally adapted PM+ and identify implementation factors | Mental health problems | Mixed methods | Colombia | Venezuelan refugees and Colombian returnees | 72 | Quantitative outcomes: Subjective wellbeing Quality of Life Self-identified Problems Qualitative outcomes: Factors influencing the implementation of PM+ |
| 53 | Perera et al., 2020 | Describe process for cultural adaptation of PM+ | Mental health problems | Descriptive | Colombia | Venezuelan refugees and Colombian returnees | -- | -- |

Table 1. to be cont...

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|----|--|--|--|---|-------------|--|---|---|
| 54 | Poudel-Tandukar et al., 2022 | Assess feasibility and acceptability of PM+ with immigrants and evaluate effectiveness of PM+ vs. community support services | Mental health problems | Mixed Methods: Two arm RCT + Qualitative Evaluation | USA | Bhutanese immigrants | 232 | <p>Feasibility and acceptability: Attendance, retention rates, program acceptability, intervention delivery fidelity</p> <p>Primary outcomes: Stress, anxiety and depressive symptoms</p> <p>Secondary outcomes: chronic psychological stress, coping, family conflict resolution, social networking</p> |
| 55 | Purgato et al., 2023 (RESPOND PROJECT) | Evaluate effectiveness and cost effectiveness of culturally adapted self-help stress management guide (DWM) and PM+. | Psychological distress | Protocol for RCT | Italy | Migrants resettled in Italy | (Protocol paper- no trial yet) | Depression, anxiety, PTSD, resilience, wellbeing, self-identified problems, quality of life, cost analysis |
| 56 | Rahman et al., 2016 | Test feasibility and acceptability of PM+ compared to TAU | Psychological distress | Single blind pilot RCT | Pakistan | Conflict affected population | 60 | <p>Primary outcome: Psychological distress</p> <p>Secondary outcomes: Functioning, PTSD</p> |
| 57 | Rawlinson et al., 2020 (PROSPER PROJECT) | Compare delivery of group and individual PM+ and assess feasibility of a 3-arm RCT | Emotional distress and functional impairment | Protocol for 3-arm RCT | UK | Asylum seekers and refugees | 105 (anticipated- this is protocol paper) | <p>Primary outcomes: Anxiety and depressive symptoms</p> <p>Secondary outcomes: Subjective wellbeing functional status progress on identified problems presence of PTSD presence of depressive disorder service usage</p> <p>Feasibility outcomes: Recruitment and retention of therapists & participants fidelity suitability of study measures linguistic or cultural barriers</p> |
| 58 | Rodríguez-Cuevas et al., 2021 | Describe implementation of PM+ | Common mental disorders | Field report | Mexico | Rural residents experiencing poverty & high mental health burden | -- | -- |
| 59 | Roos et al., 2023 (RESPOND PROJECT) | Evaluate effectiveness and cost effectiveness of remote delivery of stepped care DWM & PM+ | Psychological distress | Two-arm, parallel-group RCT | Netherlands | Polish migrants | 212 | <p>Primary outcome: Psychological distress</p> <p>Secondary outcomes: Self-reported symptoms of depression, anxiety, PTSD</p> |

Table 1. to be cont...

| | | | | | | | | |
|----|-------------------------|--|---|---|----------|--------------------------------|-----|---|
| 60 | Sabry et al., 2022 | Describe telephone delivery of PM+ during pandemic | Common mental disorders | Personal reflection | Egypt | Refugees and asylum seekers | -- | -- |
| 61 | Sangraula et al., 2023 | Compare effectiveness of gPM+ delivery supervised by nonspecialists vs. specialists | Psychological distress | Study protocol | Colombia | Venezuelan and colombian women | 128 | Psychosocial wellbeing general distress Functioning |
| 62 | Sangraula et al., 2021 | Describe process for cultural adaptation of PM+ | Common mental disorders | Descriptive | Nepal | Earthquake-impacted community | -- | -- |
| 63 | Sangraula et al., 2020 | Describe feasibility and acceptability of adapted gPM+ | Common mental disorders | Mixed methods | Nepal | Earthquake-impacted community | 121 | Feasibility & acceptability: Attendance retention rates program acceptability intervention delivery fidelity Primary clinical outcome: Depressive symptoms Secondary clinical outcomes: Daily functioning general psychological distress psychosocial MH problems PTSD Other outcomes: Skills for reducing tension perceived social support |
| 64 | Sangraula et al., 2018 | Evaluate feasibility and acceptability of Group PM+ | Common mental disorders and Functional impairment | Study Protocol for Mixed Methods | Nepal | Earthquake-impacted community | -- | Feasibility & acceptability: Attendance, retention rates, acceptability, fidelity Primary clinical outcome: Symptoms of depressive Secondary clinical outcomes: Functioning, psychological distress, psychosocial problems, PTSD Other outcomes: Reducing tension skills, perceived social support |
| 65 | Shrestha et al., 2023 | Implement and evaluate feasibility, acceptability, and effectiveness of DeVI (PM+ with DV component) | Domestic violence | Study Protocol for Parallel cluster RCT | Nepal | Women experiencing IPV | -- | IPV risk reduction, psychological distress |
| 66 | Sijbrandij et al., 2017 | Describe rationale for PM+ for Syrian refugees and introduce the STRENGTHS program | Common mental disorders | Descriptive review paper | -- | Syrian refugees | -- | Effectiveness outcomes: Depression, anxiety, functioning Cost Implementation outcomes: Recruiting/ retention staff, Fidelity Reach. Dose, quality of interventions |

Table 1. to be cont...

| | | | | | | | | |
|----|-------------------------|---|------------------------------------|---|--------------------------|---|------------------------|--|
| 67 | Sijbrandij et al., 2016 | Evaluate effectiveness of PM+ among women | Gender based violence | Study protocol for RCT | Kenya | Women affected by adversity and gender-based violence | 494 | Primary outcomes: Psychological distress, general functioning Secondary outcomes: PTSD symptoms, perceived problems Other outcomes: Adverse life events, Costs of care |
| 68 | Sijbrandij et al., 2015 | Test effectiveness and cost effectiveness of adapted PM+ | Common mental disorders | Study protocol for RCT | Pakistan | Adults attending primary health care centers | 346 | Psychological distress disability and functioning service utilization/cost analysis |
| 69 | Slomski A. 2017 | Assess reduction in psychological distress after receiving PM+ | Psychological distress | RCT | Kenya | Women with history of GBV | 421 | Psychological distress |
| 70 | Smith et al. 2021 | Evaluate delivery of PM+ by primary care nurses | Depression and anxiety | Study protocol for RCT | Rwanda | Adult primary care attendees in eight health centers | -- | Symptoms of depression, functioning Implementation outcomes: Reach, effectiveness, adoption, implementation and maintenance (REACH framework) |
| 71 | Spaaij et al. 2023 | Identify factors for large-scale implementation of PM+ | Common mental disorders | Qualitative study SPIRIT project | Switzerland | Syrian refugees | 22 | 3 themes: Preconditions for successful scale-up Requirements to support scale-up Perceived benefits of scale-up |
| 72 | Spaaij et al., 2022 | Assess feasibility and acceptability of PM+ | Psychological distress | Mixed methods pilot RCT STRENGTHS project | Switzerland | Syrian refugees | 59 - Quan 18 - Qual | Quantitative outcomes: Retention rate, mean intervention adherence, treatment fidelity, practicality, demand, efficacy, safety, adverse events Qualitative outcomes: Experiences with pilot trial, experiences with PM+, suggestions for RCT and scaling-up |
| 73 | Spaaij et al. 2023 | Examine the effect of PM+ on post migration living difficulties | Post migration living difficulties | RCT | Netherlands, Switzerland | Syrian refugees | 119 | Post migration living difficulties |
| 74 | Surkan et al., 2024 | Test feasibility of PM+ | Psychological distress | Feasibility trail + Qualitative Study | France | Arabic speaking migrants | 15 | Themes of self-control, self-reliance, motivation, application of techniques, support and interaction with others. Implementation challenges |

Table 1. to be cont...

| | | | | | | | | |
|----|-----------------------|--|-------------------------|-------------------------------|-------------|---------------------------------------|-----|---|
| 75 | Qi et al., 2023 | Test effectiveness of PM+ | Mental health | RCT | China | Parents with children who have Autism | 73 | Social anxiety for children, parenting stress and social support |
| 76 | Uygun et al. 2020 | Evaluate cost effectiveness of culturally adapted Group PM+ | Psychological distress | Study protocol for RCT | Turkey | Syrian refugees | 190 | Psychological distress Treatment fidelity and adherence Treatment dose/attendance Economic analysis |
| 77 | Van't Hof et al. 2018 | Evaluate feasibility and acceptability of PM+ | Adversity | Qualitative study | Kenya | Women | 27 | Experiences of PM+, acceptability and feasibility, relationship between CHVs and participants, perception of participants families, barriers and enabling factors to engagement, integration and scale-up of PM+ facilitators and barriers to using CHVs as PM+ providers |
| 78 | Van't Hof et al. 2020 | Evaluate effectiveness adapted group PM+ | Psychological distress | Study protocol | Nepal | Communities affected by adversity | 72 | Psychological distress levels of perceived social support general functioning barriers and facilitators to scale up and integrate group PM+ into other services |
| 79 | Woodward et al. 2022 | Explore the potential barriers and facilitators in scaling up of PM+ | -- | Qualitative study | Netherlands | Syrian refugees | 42 | Outcomes describe the potential systemic factors influencing scalability of PM+ |
| 80 | Woodward et al. 2021 | Describe conceptual framework for scaling up PM+ at system level | -- | Descriptive: Conceptual paper | -- | -- | -- | Conceptual framework (3 phases) -Deepening (learning by doing) -Broadening (repeating and linking) -Scaling up (embedding) |
| 81 | Woodward et al. 2023 | Examine factors for scaling up PM+ | Common mental disorders | Qualitative study | Jordan | Syrian refugees | 17 | Enabling (+) and/or constraining (-) the potential for scaling up of PM+ |
| 82 | Zhang et al. 2020 | Test effectiveness of PM+ | Depression and anxiety | RCT | China | Patients with multiple myeloma | 80 | Reduction in psychological distress, depression, anxiety |

Table 1. Overview of Selected Articles

Studies by Year

PM+ was introduced in 2015 by the World Health Organization's mhGAP initiative with the aim of reducing the burden of mental illness and addressing the treatment gap, particularly in low-income settings. Since its inception, PM+ has been implemented across diverse contexts and populations to address a range of mental health conditions globally. Between 2015 and 2019, the number of studies utilizing PM+ was relatively limited. However, following the onset of the COVID-19 pandemic, there was a substantial increase in research employing PM+ (see Figure 2), which notably incorporated various virtual platforms for delivery and implementation. Among the 82 studies published on PM+, 22 were released at the peak of the pandemic in 2021, with 17 published in 2022, and 14 in 2023. (See Figure 2.)

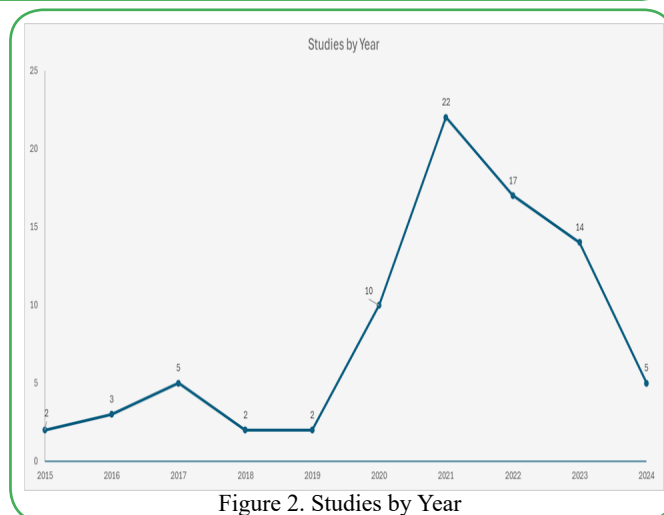


Figure 2. Studies by Year

Studies by Location

Seventy-seven studies specified the geographical region in which they were conducted or planned. Most of these studies were conducted in Asia, located in the countries of Afghanistan, China, Iraq, Jordan, Nepal, Pakistan, the Philippines and Syria. Twenty-one studies were conducted in Europe, in the countries of Austria, Italy, France, the Netherlands, Spain, Switzerland, Turkey, Ukraine and the United Kingdom. Fifteen studies were based in Africa, covering the Central African Republic, Egypt, Ethiopia, Kenya, Malawi, Rwanda, Uganda and Zambia. In North America, only four studies were carried out, specifically in the United States and Mexico. In South America, four studies were all based in Colombia. Additionally, one study was conducted in Australia. Eight studies spanned multiple countries, which in addition to the above listed countries included Benen, Bosnia and Herzegovina, Croatia, Honduras, Lebanon and Peru. (See Figure 3.)

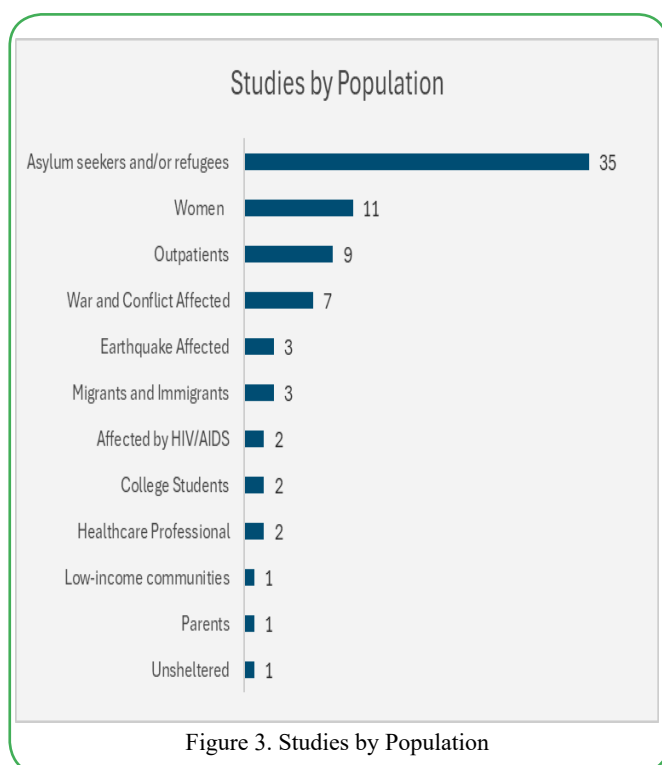


Figure 3. Studies by Population

Type of Studies

The majority of studies employing PM+ have been randomized controlled trials (RCTs). The second largest category consists of descriptive studies which outline various aspects of the PM+ intervention. Some elucidate the therapeutic foundations and strategies of PM+, while others document processes related to cultural and linguistic adaptations, training models, delivery mechanisms and implementation practices. Additionally, some studies explore the application of PM+ in higher education contexts and pathways for scaling up the intervention to larger populations. Several studies have focused on outlining protocols for either feasibility trials or fully powered RCTs. A significant number of studies utilize mixed methods, gathering both quantitative and qualitative data from various stakeholders. Fewer studies are field reports or personal reflections detailing experiences related to the delivery, training or implementation of PM+. Specifically, six studies are classified as feasibility or pilot studies, and only five are purely qualitative in nature. (See Figure 4.)

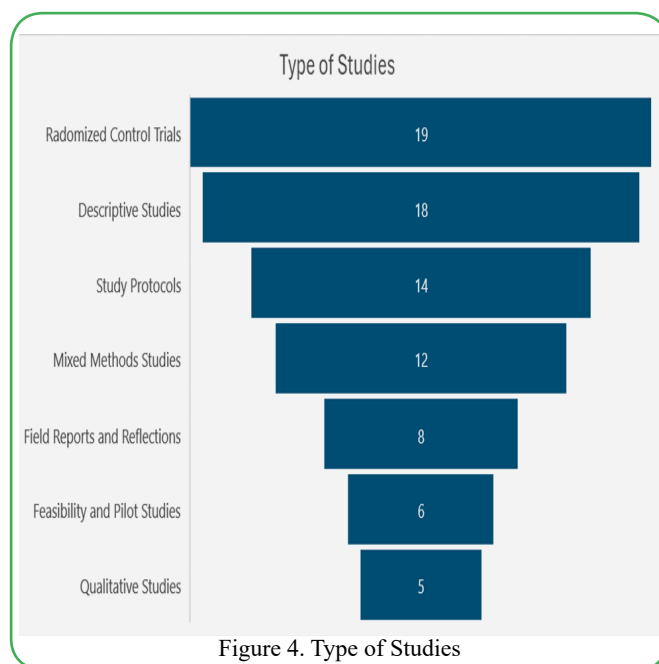


Figure 4. Type of Studies

Focus of Intervention

Among the 82 studies reviewed, 66 specified the focus of the PM+ intervention. The majority of these studies (n=52) focused on addressing common mental disorders, including depression, anxiety, trauma and post-traumatic stress disorder (PTSD). Five studies specifically targeted issues related to violence in armed conflict or gender-based violence, while an additional five studies addressed general well-being, including functioning, interactions with children in refugee contexts, and challenges related to post-migration adjustment. Furthermore, one study aimed to address adversity, and another focused specifically on perinatal depression. (See Figure 5.)

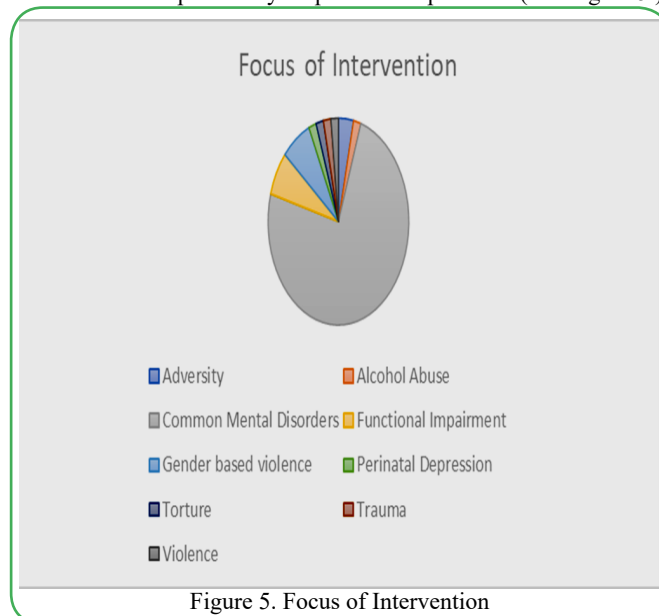


Figure 5. Focus of Intervention

PM+ Implementation: Barriers and Lessons Learned

An overall examination of the 82 studies included in this scoping review identified 31 studies that discussed barriers and 30 studies that described lessons learned from implementing the PM+ intervention. Using an ecological systems approach [28] the barriers and lessons learned were grouped into the following three categories: (1) Participant and Counselor Engagement (Individual/Micro) (2) Training and Implementation (Community/Mezzo), and (3) Scaling Up PM+ in Governmental and Political Structures (Institutional/Macro). The following section describes the barriers and corresponding lessons learned in each category. (See Figure 6.)

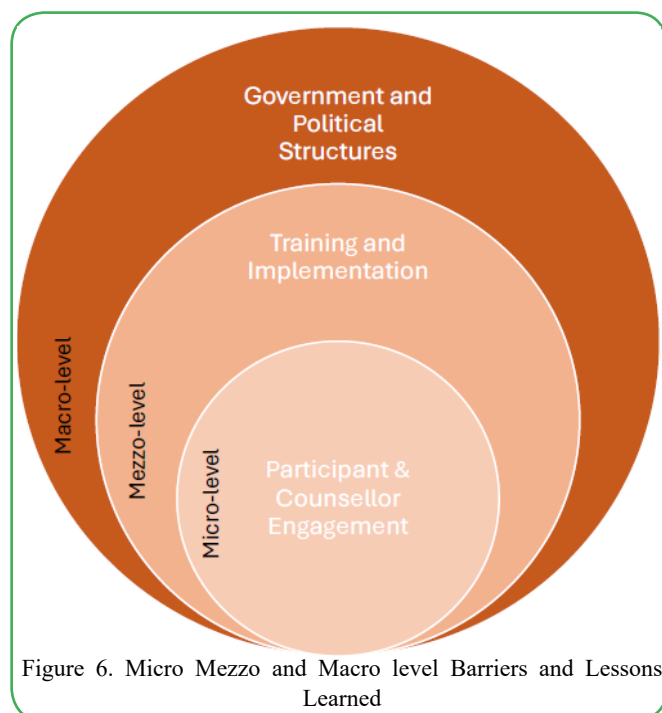


Figure 6. Micro Mezzo and Macro level Barriers and Lessons Learned

Participant Engagement

Five articles identified stigma related to mental health needs as a significant barrier in engaging with treatment [29-32]. One participant verbalized the following:

Stigma is still a big issue we are facing in our culture and in between refugees. Because of stigma, most of the people, maybe they didn't seek any help until they reach big problems [...] I think we can increase the awareness in the community, and we will have to keep stigma in our mind; that it is still a problem. But I think in the last 10 years, stigma, as it is, become maybe a little bit not like before, but for example, in the rural areas, it is still big issue [32].

Another barrier noted was the propensity of clients towards a medical model of treatment. Engaging in a psycho-social model of treatment seemed alien to many. One participant noted:

Sometimes our people [Jordanian/Middle Eastern] they do not believe in counselling, therapeutic sessions. They only believe in medication. Like "Give me medication, then I will get improved." So, we have to change the mentality of our people first [32].

Additionally, participants' literacy levels, limited understanding of mental health concepts and/or the presence of cultural norms that encourage patience and tolerance often led them to underreport symptoms and overreport levels of improvement upon receiving treatment. Gebrekristos and colleagues noted, "...it was common to underreport symptom severity because to express distress is seen as 'complaining against God'" [33].

Two studies identified concerns around confidentiality as a barrier for both participants and lay providers: with both groups belonging to close knit communities, participants and providers were wary of their privacy being protected [34, 35]. Other cultural norms affected the participation of women in PM+. Among Syrian refugees in Jordan, females needed permission of a male family member to participate in PM+ groups, further limiting their access to treatment [32].

Of the strategies introduced in PM+, participants identified the stress management strategy as the most practiced skill and the problem-solving strategy as the most challenging [30, 36]. Challenges with the problem-solving strategy included participant difficulty in identifying

solvable vs. unsolvable problems, as well as challenges in choosing a single problem to address. Participants also struggled to identify potential solutions to the identified problem. Many participants were focused on prioritizing immediate practical problems, such as the need for adequate housing or employment, over problems related to mental health [29, 30, 31, 37, 38].

Nine studies identified additional barriers faced by participants in accessing PM+. Many clients experienced competing priorities for time due to family responsibilities and work commitments. Often work opportunities arose spontaneously creating challenges in scheduling and rescheduling. Additional barriers included access to transportation and childcare [22, 30, 33, 35, 36, 39, 40-42].

Several studies addressed lessons learned specific to participant engagement. Integrating PM+ into general health care was believed to increase access and reduce stigma of seeking mental health support [43]. Akhtar and colleagues [44] found that initial engagement in PM+ was key to its acceptance and retention of participants through treatment completion. Completing the first session greatly improved the likelihood of participants remaining engaged through to session five. Intentionality and focus on initial engagement strategies, particularly for men were found to be important in successfully recruiting and retaining participants [45]. Meaningful strategies to increase and retain engagement with PM+ included: (a) better education and messaging around the goals and content of PM+; (b) assurance and consistency in providing confidentiality; (c) paying attention to gender concordance between participants and providers; and (d) engaging family members at different points of the intervention to provide additional support. Further, using key stakeholders for implementation of PM+ and endorsement from community role models was found to play a significant role in encouraging acceptability and participation in the intervention [31, 35, 37, 46]. Goloktionova et al., [47] identified the usefulness of developing a workbook for participants to use. This would increase participant engagement throughout the intervention to reinforce learning between sessions and once sessions conclude.

Counselor Engagement

Much of the PM+ treatment delivery occurs in low resource settings by trained community volunteers. Community helpers, who originate from the same marginalized communities as their clients, often struggle with balancing PM+ training and skill acquisition against other pressing responsibilities. The multiple roles these volunteer workers juggle create substantial barriers to retention and sustained engagement [32, 35, 48, 49, 50]. Four studies identified providing financial compensation and a clear pathway for volunteer workers towards professional job growth as key strategies to increase community volunteer retention [29, 32, 51, 52].

In addition to the increased workload for community volunteer providers, compassion fatigue was another notable concern [51, 53]. Providers were at risk of experiencing secondary trauma through delivery of the PM+, and sensitivity to provider mental health was a key feature in the retention of community providers [37, 47, 54]. The inclusion of trauma-informed care training and practice, directed to both the community volunteers as well as participants, was identified as an important consideration [46].

Several studies identified the importance of establishing selection criteria in choosing volunteers for PM+ [50, 55]. Identified criteria could include effective use of language, social skills, and openness and capacity for reflective listening. Lay providers who had prior experience within the helping professions were found to be more successful in engaging in a manualized protocol. However, individuals with minimal experience were also capable of exhibiting crucial helping competencies given adequate training [30, 52, 55, 56].

Both Akhtar et al., [44], and Goloktoionova et al., [47] found that the effectiveness of the providers is closely linked to their personal experience with the intervention. When volunteers can both learn and apply PM+ coping mechanisms themselves, they experience a significant boost in self-efficacy, which enhances their ability to support participants.

Robust training and supervision were noted to be critical in contributing to community provider retention [29, 51, 52]. Barriers related to supervision included the need for sufficient and ongoing supervision [50] and confidentiality in supervision [35]. McBride and colleagues [52] found that remote training and supervision could be a viable option for those challenged with transportation and scheduling barriers. Offering training and supervision remotely could increase the ability to recruit a more diverse group of community volunteers to serve as PM+ providers.

Training and Implementation

A substantial barrier to the delivery of the PM+ was the length of sessions. Participants noted that sessions were too long, a barrier particularly salient when many clients had to work or care for children and families [34, 39, 57]. Gerbrekristos et al. [33] identified the inconsistent session length as a significant barrier. Session one required an average of 90 minutes, session two took approximately 100 minutes, and session four approximately 120 minutes. Notably, revising the managing problems strategy (session three) often took more than 30 minutes, depending on the client's problem. The ambiguity of implementation protocols also emerged as problematic for community health workers.

The methodology of PM+ does not inherently define or recommend how a programme using this intervention could or should be practically implemented and sustainably maintained. In many ways, these are the central questions that could make or break any intervention (regardless of methodology) [47].

In addition to session length, several studies addressed the need for flexibility in the number and modality of PM+ sessions offered based on the individual needs of the participants [30, 31, 35, 38, 46, 55]. This included exercising flexibility in determining appropriateness of some components of the PM+ training regarding participant situation (i.e., avoiding the "staying well" component due to COVID pandemic lockdown constraints) and augmenting with specific strategies tailored to the needs of the population receiving the intervention. This might include strategies aimed at reducing symptoms specific to post migration distress [58]. Likewise, findings by Bryant and colleagues [59] indicated that providing augmentation strategies following group PM+ may promote sustained benefit across time.

Contextual challenges in implementing PM+ included language differences and the limited effectiveness of standardized assessments across diverse settings [51]. Further, the PM+ content about understanding adversity was challenging. As Dozio et al., [36] report:

... the word "adversity" has no corresponding translation in some languages including Sangho (the language spoken in the Central African Republic). Moreover, in most conflict and post conflict contexts, adversity is an integral part of people's lives. Therefore, it was very complicated for the team to work around this notion. Participants had difficulty understanding the reflection that was required around adversity and raised concerns to PM+ interventionists for not considering their most pressing problems like hunger or lack of water [36].

A commonly cited lesson learned was the critical role of engaging key stakeholders in the cultural review of PM+ implementation material to ensure the applicability, accessibility, and acceptability for the population being served [36, 40, 46, 47, 48, 60]. While cultural adaptation can be a resource-intensive process, ensuring the appropriate cultural adaptation of the PM+ was key to its successful implementation.

An important concern cited in several studies regarding implementing PM+ in low resource contexts was the reduced capacity to address more complex mental health needs that extended beyond the scope of PM+ [40, 55]. Since the PM+ intervention is not intended to address more complex mental health issues, severe distress identified during assessment should be considered carefully for inclusion. Clear guidelines need to be established to determine when PM+ is appropriate based on the level of distress [40].

Ten studies highlighted lessons learned related to the training process for effectively delivering PM+ [30, 32, 33, 38, 40, 46, 49, 52, 61]. Woodward et al., [32] identified the limited access to qualified trainers and supervisors as a significant barrier. Half of these studies emphasized the critical role of supervision in helping counselors maintain a high level of effectiveness in delivering PM+ core components and underscored the importance of providing refresher training throughout the implementation process [30, 33, 40, 49, 61]. Key lessons also include the value of post-training assessments in guiding supervisors to support the development of counselor competency [61].

Several studies addressed the use of role-plays in training and the importance of how they are structured. Nemiro et al., 2021, found that providing multiple opportunities for role-plays prior to participant engagement contributes significantly to counselor skill uptake. Additional lessons include focusing role-play activities to address a limited number of skills at one time; adapting role-play scenarios to resonate with participant populations; recruiting role-play actors and raters from those with prior PM+ experience; and seeking feedback from trainees on role-play performances [33, 49, 61].

Other mezzo-level training and implementation concerns included the need for improved recruitment strategies, such as better education around the goals and content of the intervention to increase participation [51] and the need to develop effective data collection guidance [46]. Musosto et al., [26] raised a particularly salient concern about the sustainability of participant gains from PM+, given that outcomes are usually only measured through short-term assessments.

Scaling Up PM+ in Governmental and Political Structures

The power of lay delivered interventions like the PM+ lies in their potential for scale up and reach. In humanitarian contexts where PM+ is delivered by community volunteers within refugee communities, government regulations regarding the employability of refugees can create enormous confusion and difficulties in recruiting and utilizing volunteers [32, 40]. In these contexts, consumer distrust of government entities can further exacerbate participation difficulties [32, 37, 55]. Systemic barriers such as the complexity of navigating formal health systems and lack of funding were identified, as well as consumer access barriers due to lack of health insurance or prohibitive deductibles [31, 32, 50].

Demonstrating cost effectiveness of the PM+ program was deemed critical for gaining support from potential funders [32]. However, in the context of humanitarian crises, difficulties in calculating the cost-effectiveness of PM+ were noted to be significant barriers. Outcomes were often "limited to direct healthcare costs and health-related outcomes of the PM+ intervention and not extend [ing] to the wider economic or social value of investing in mental health..." [62].

In areas where the intervention was modified to be delivered via telephone or internet, infrastructure barriers such as lack of cellular service and internet further complicated the modified intervention [39, 35, 38, 63]. Lack of light in the evenings, volatile conditions, and political conflict created additional challenges for both lay workers and participants [36].

Sixteen studies identified lessons learned about integrating PM+ or scaling up PM+ in community settings. Common themes include

critical need for key stakeholder engagement and endorsement at the individual and community levels; coordination with existing public health services, community centers and governmental institutions; and the critical role of cultural adaptation and contextualization of PM+ in implementation scale-up [31, 32, 35, 37, 40, 42, 43, 46, 49, 56, 59, 57, 60, 63-65].

As noted earlier, integrating PM+ into general health services can minimize stigma and barriers in accessing mental health support [43]. However, such an integration requires scaling up the intervention through institutional policy, political and regulatory systems, and broader health systems and budgetary processes. In addition, expansion to serve larger populations, different population groups, and different geographic sites is warranted. Studies on scaling up PM+ demonstrate improved outcomes when PM+ is integrated within a "stepped care" model of delivering healthcare. Stepped care is an approach to delivering mental health care by focusing on providing the least intensive, most effective treatment first and then "stepping up" to more intensive levels of care if necessary [41, 59].

Fuhr et al, [41] notes that health and social care systems whose mission is to provide mental health services for vulnerable populations are most effective in supporting the implementation of PM+. To successfully implement PM+, assessing the environmental factors that can help or hinder its success is crucial. This includes examining local and national policies, the organizational and bureaucratic structure of healthcare systems, the resources available within the health sector, and socio-economic and cultural factors. Additionally, it is important to consider specific needs and rights of individuals, ensuring that services are tailored and accessible to those who need them most [41, 64].

Discussion

Over the past decade, PM+ has been well-researched, demonstrating acceptability and effectiveness with varied populations globally. The current review of 82 studies addresses a gap in research on implementing Problem Management Plus. Specifically, this study seeks to address the gap in the literature on barriers and lessons learned while implementing PM+. Effective implementation of PM+ necessitates identifying and addressing micro, mezzo, and macro level barriers.

Several barriers found in implementing the PM+ include micro level barriers like participant stigma of mental illness and its treatment, propensity toward a medical model of treatment, concerns around confidentiality, limited understanding of mental health concepts, and prevailing cultural norms that impeded participation in treatment. Cultural and linguistic adaptation is essential for effective delivery in any context. Addressing micro-level barriers requires a significant degree of cultural competence, which plays a crucial role in overcoming issues such as stigma, differing cultural understandings of stress, and gender-related concerns. Other barriers found were related to PM+ strategies; participants struggled to identify solvable problems during treatment because of the overwhelming humanitarian crises surrounding them. Lessons learned involved integrating PM+ into primary healthcare, focusing on initial engagement, paying attention to gender concordance, and involving family members for additional support. Other barriers included struggles faced by lay volunteers in providing PM+ to their communities. These included juggling different responsibilities while acquiring skills and training to deliver PM+, concerns with not being adequately financially compensated, and the risk of experiencing secondary trauma. Lessons learned included finding resources to adequately compensate lay volunteers and providing effective training and supervision.

Mezzo level barriers included the structure and content of PM+ training and delivery. Inconsistent session length, lack of guidance on implementation, inability of PM+ to address more complex mental

health challenges and lack of qualified providers were identified as barriers. Among lessons learned were the critical role of supervision, post training sessions, use of role plays for training and skill uptake, improved strategies for lay counsellor recruitment and better education around the goals of PM+. Macro level barriers included complexity of navigating systems of healthcare, infrastructure barriers such lack of electricity and internet, transportation challenges and volatile conditions. Lessons learned included the critical need for stakeholder engagement, coordination with existing public health services and governmental institutions, and the need for cultural and linguistic adaptation of PM+. Identifying key community stakeholders who can support the cultural adaptation process is important.

Sustainability is heavily influenced by mezzo and macro-level factors, including the ability to scale up interventions, political will, healthcare infrastructure, and the availability of resources for training and delivery. Essential elements such as compensation for trainers, social safety nets that address basic needs, and physical safety within conflict zones are critical for success. One significant challenge is the added responsibility placed on existing lay volunteers, who require compensation, support, ongoing training, coaching, stipends, and supervision. It is crucial to treat these volunteers as employees and provide a nurturing environment that fosters their growth. Additionally, PM+ cannot be effectively delivered in isolation; it must be integrated into a broader support system to ensure its sustainability and effectiveness.

Using the theory of change (ToC) planning tool Fuhr et al., [41], identified two essential pathways for scale up: the policy and finance pathway and the health services and community pathway. The policy and finance pathway includes the identification and availability of responsive mental health policies and plans supporting systems of change, identification of initial fund sources, and establishment of a National Resource and Knowledge Centre that has a mandate to provide training to paraprofessionals and master trainers. The health services and community pathway, which is dependent on the policy and finance pathway, includes the identification of the implementing organization(s) that would lead the delivery of the intervention and specifics of strengthening implementation capacity. Brief interventions may be more successful when integrated into a stepped-care model [64].

Lack of basic needs in humanitarian settings remains a significant barrier to the success of PM+. The implementation of PM+ has underscored the critical importance of addressing basic needs such as food, housing, and income before effective mental health interventions can be realized, highlighting the intricate relationship between social determinants of health (SDOH) and mental well-being [66]. This theme is prevalent in the challenges participants faced in accessing the problem-solving coping strategy of PM+ due to the complexity and insolvability of the resource constraints they faced, as well as the lack of basic infrastructure (electricity, internet, cell service) within their local communities and is consistent with the broader literature on SDOH and well-being.

For many, PM+ serves as a starting point for enhancing well-being rather than a comprehensive solution for all mental health problems. Findings from this review point to a "floor" of basic needs beneath which PM+ is much less effective. PM+ may have better, and perhaps more sustained results, when delivered with safety net programs. Likewise, there is also a "ceiling" related to psychological needs that PM+ can address. PM+ is not designed to tackle severe mental health disorders or complex psychological issues. While PM+ has shown promise with certain populations, its success is inherently linked to the stabilization of essential needs and should be viewed as part of a broader framework for holistic mental health support. This finding is consistent with a wider call, including by the UN Special Rapporteur on the Right to Health, for "a substantial change in how mental health

problems are conceptualized and responded to” [37]. Despite the myriad challenges in the implementation of PM+, the intervention has promise in addressing many symptoms of common mental disorders, can be scaled up through the use of lay volunteers and remains a powerful tool in the attempt to close the treatment gap for mental illness. Future research on PM+ should focus on measuring the effectiveness of PM+ when combined with other basic needs services. Additionally, studies on PM+ implementation should continue to provide insights on lessons learned in different cultural, linguistic and socio-economic contexts around the world.

Limitations

This study makes an important contribution to the literature on implementation of the PM+ globally, however, it is not without limitations. The review is constrained by the quality and quantity of data available on PM+ implementation. Only 30 published studies were found that discussed barriers to implementation of PM+; while 31 studies explored lessons learned. Future research needs to focus on implementation science for PM+, developing guidance for adapting the PM+ training and interventions for diverse populations and measuring the sustained effect of the PM+ intervention in the long term.

Conclusion

PM+ is an effective, low resource, scalable treatment for common mental disorders. This study compiles the evidence on the implementation of PM+ across the globe describing implementation barriers and lessons learned. Limited research is available addressing implementation which remains an important challenge in delivering PM+ effectively. This study makes an important contribution to the literature on implementation of the PM+ in the last 10 years.

Conflicts of Interest: The authors declare no conflict of interest.

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