Integrating Mental Health Services in Existing Healthcare System in Pakistan: A Public Mental Health Approach

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Abstract. This study intended to implement the Comprehensive Mental Health Services Plan (CMHSP); a cost-efficient, evidence-based, sustainable model of mental health services within the existing healthcare system in Khyber Pakhtunkhwa (KP) province of Pakistan. The CMHSP defined a package of mental health services based on the WHO Mental Health Action Plan (2013–2030) and Interagency Standing Committee (IASC) Guidelines. The study aimed to improve access to mental health services in a lower-middle-income country with limited resources. The study was informed by the Active Implementation Framework (AIF) to ensure replicability in similar contexts. The efficacy of the CMHSP is demonstrated through the constructs of the AIF model including a) exploration and adoption, b) program installation, c) initial implementation, and d) full implementation. The baseline and end-line data were collected through a mixed-method design. It was observed that following the implementation of the intervention for three years, the prevalence of Depression, Anxiety, Trauma, stress-related disorders, and somatic disorders were reduced by almost 25%. The at-risk groups identified in the community were children, adolescents, women, and first responders. And the protective factors were identified as help-seeking behavior, community support, religion, awareness of healthcare workers, and the availability of mental health services. This study is significant in answering the mental health challenges of Low- and Middle-Income Countries (LMICs), regarding the delivery of evidence-based mental health services in an integrated and culturally sensitive manner in a low-resource setting.

Keywords: Mental Health · Depression · Anxiety · Trauma · Pakistan · LMICs · Public Mental Health · Implementation Research · Mental Health Action Plan · Healthcare system · Evidence-based · Culturally sensitive

1 Introduction

The World Health Organization proposes that there can be 'no health without mental health' (WHO 2018). As mental health disorders contribute significantly to the international burden of disease (WHO 2005a). United Nations under the Sustainable Development Goals (SDG), has also included Mental Health in its under target 3.4 calling

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the countries to ensure, "by 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being". According to a WHO report, mental illness accounts for 4 out of 10 leading causes of disability worldwide, for Pakistan, an underdeveloped country, this figure goes up to 5 out of 10 leading causes of disability (WHO and UNHCR 2012). In Pakistan, there is a dire lack of statistics on mental health, but a rough estimate suggests that around 50 million people are suffering from mental illness (WHO 2017). Health expenditure in Pakistan stands at 0.9% of the Gross Domestic Product (GDP) (Pakistan Economic Survey, 2014–15), with no known provision for mental health. There is no policy framework to define a policy direction or guide resource allocation for mental health (Rathod et al. 2017). While Pakistan Mental Health Act was promulgated in 2001 its implementation suffers from a lack of resources needed (Tareen and Tareen 2016). There are no figures available for specified budgetary allocation for Mental Health and Psychosocial Support (MHPSS) Services. In Pakistan, mental health service availability is 0.0006 beds in a mental hospital and 0.422 beds in a psychiatric unit in general hospitals for a 100,000 population (WHO 2017). As for the human resource in mental health, there is only 1 psychiatrist available for a million people and 1 psychologist for 2 million people (WHO 2017). These are all serving at selected urban hospitals, making mental health services inaccessible to the larger population.

Within Pakistan, the province of Khyber Pakhtunkhwa (KP) has long been under the influence of natural and man-made disasters (Shah et al. 2020). These disasters significantly impact the collective sense of security and induced mental health issues in the population (Updegraff et al. 2008). After insurgency, during the years 2011–2013 mental health issues were rampantly reported but trauma responses peaked when the horrendous attack on Army Public School in Peshawar occurred in late 2014, causing the capital city to lose 150 plus children and teachers. This was the time when the Health Department KP realized the need for mental health services in the public sector. With financial support from Department for International Development (DFID) UK, a small project to provide Mental Health & Psychosocial Support (MHPSS) services to the affectees of the school attack was initiated by the Health Department KP. Later the project funded by UNICEF and the Health Department KP worked towards the development of a sustainable, evidence-based mental c as a pilot.

The Public Mental Health Approach

Public Health is 'the science of preventing disease, prolonging life, and promoting health through organized efforts and informed choices of society, organizations, communities, and individuals' (Winslow 1920). The Public Health approach to mental health entails that prevention and promotion are essential components of mental health services that must be included in the healthcare system to prevent disorders and promote well-being (WHO 2013). In Pakistan, the healthcare system is divided into three tiers: Primary, Secondary, and Tertiary (Kurji et al. 2016). To ensure health equity, mental health services must be available at all healthcare levels to ensure the optimal well-being of the population. The Health Department in collaboration with UNICEF developed a package of CMHSP and piloted it to provide evidence-based, sustainable mental health services at all healthcare tiers. The pilot was implemented for a period of three years and a baseline, and end-line assessments were used to measure the impact of the intervention.

2 Methodology

2.1 Rationale of the Study

To integrate mental health care into the existing healthcare system through the provision of standardized psychosocial interventions at all levels to improve access to care, reduce stigma, improve social integration, and enhance human resources for mental health.

2.2 Aims and Objectives

The aim of the study was 'to address the treatment gap in mental health services at all healthcare levels in district Peshawar of Khyber Pakhtunkhwa province'. Whereas the objective is 'to assess the efficacy of a locally contextualized model of mental health services 'Comprehensive Mental Health Services Plan (CMHSP) focusing on prevention and promotion of mental health'.

2.3 Frameworks Informing Implementation Approach

The study was based on the implementation research paradigm. Implementation research has been identified as a significant component of mental health services research as it attempts to provide solutions to a range of implementation problems (Brownson et al. 2012). It is broadly defined as, 'A scientific inquiry into questions concerning implementation-the act of carrying into effect, which in health research can be policies, programmes, or individual practices (collectively called interventions).' (Peters et al. 2013). It is conducted in the usual health service provision setting with an emphasis on health conditions, evidence-based interventions & programs, or healthcare settings with an aim to reduce the gap in treatment and quality of care (Proctor et al. 2012).

There is a huge treatment gap in mental health services in LMICs, this gap must be filled by taking evidence-based interventions to the general population through existing health systems (WHO 2017). This helps in the reduction of stigma as well as uses the existing resources thus the public would find it convenient to access these services. The current study combined the elements of implementation frameworks for the integration of mental health services in the existing healthcare services. The active implementation framework (AIF), and an evaluation framework implementation outcomes taxonomy (IO).

AIF is a process framework representing the overarching phases of this research (Fixsen et al. 2005) whereas the IO is an evaluation framework that differentiates between implementation and clinical/system outcomes (Proctor et al. 2011). The AIF frameworks guides towards the creation of conditions to facilitate the use of evidence-based practices that are replicable and robust for uptake in other similar conditions (DuMont et al. 2019).

The AIF provides the mechanisms and strategies to ensure that the translation of innovations into practice produces desired health outcomes. The formula of success that it presents, includes an evidence-based innovation/intervention, effective implementation, and enabling contexts (Blanchard et al. 2017). The AIF five core components are; a) an evidence-based intervention, b) implementation drivers, c) implementation stages, d)

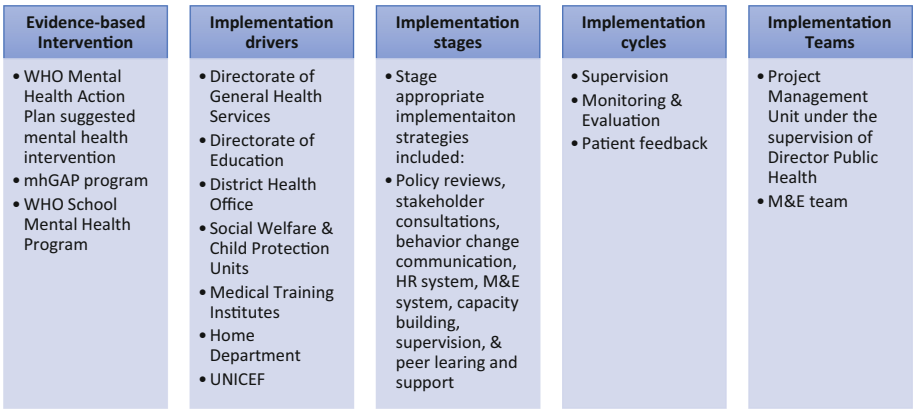

Fig. 1. The active implementation framework constructs

improvement cycles, and e) implementation teams. Figure 1 provides an overview of the AIFs as conceptualized for this implementation study.

The component of the implementation stages served as a guide for the implementation of the intervention. It comprises four stages that often overlap (Lock and La Via 2015). Figure 2 presents the implementation stages for this implementation study.

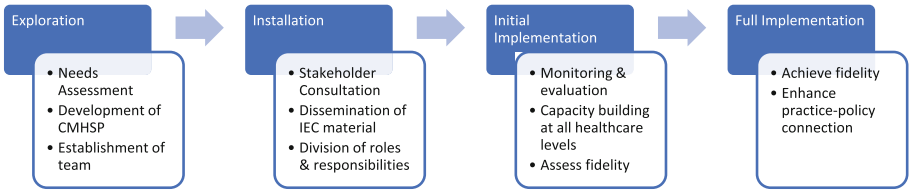

Fig. 2. Implementation stages adapted for the implementation of CMHSP

2.4 Research Design

An explanatory mixed methods design was employed for the implementation study. Data at baseline and end line was collected using qualitative and quantitative methods, this data was integrated at the interpretation phase to implement policy decisions. Data were collected at the following levels through the indicated toolkits:

a) **Individual and Community level –** three tools adapted to collect data from individuals in the community based on the WHO & UNHCR MHPSS (WHO and UNHCR 2012) needs assessment toolkit, the WHO AIMS (WHO 2005b), and the following tools.

   o **Tool 1 and 1a** for individual interviews at the community level for adults with questions adapted from the WHO toolkit, MSPSS-Multidimensional Scale of

Perceived Social Support (Zimet et al. 1988), the measure of connectedness (Betancourt et al. 2012).
- **Tool 1b** for individual interviews for children 12 – 18 years of age. The tool was adapted from SDQ – Strengths and Difficulties Questionnaire (Goodman et al. 2010), CHS – Child Hope Scale (Snyder et al. 1997), KIDCOPE (Spirito et al. 1988), MSPSS- Multidimensional Scale of Perceived Social Support (Zimet et al. 1988), and measure of connectedness (Betancourt et al. 2012).
- **Tool 2** for focus group discussions at the community level

b) **NGO level –** the non-governmental organizations working on psychosocial support were assessed on the:

- IASC MHPSS 4W's (Who is Where, When, doing What) mapping tool was distributed online among NGOs in KP to obtain an overview, with an expected outcome of enhancing coordination amongst different sectors.
- **Tool 3** covered the individual key informant interviews at the NGO level.

c) **Primary Health Care level –** data at this level was collected from healthcare providers and District Health Officers (DHOs).

- **Tool 4a** included open-ended questions for DHOs
- **Tool 4b** included closed-ended questions for primary health care providers based on WHO AIMS.

d) **Tertiary Health Care level –** this is the level with pre-existing mental health services. The following tools were used:

- **Tool 5** closed-ended questions for mental health professionals based on WHO AIMS
- **Tool 6** open-ended questions for mental health experts for FGD

2.5 Sampling

District Peshawar is divided into 4 towns for administrative purposes, to take a representative sample, two Union Councils were selected from each town (1 urban and 1 rural). The sample size was adjusted per each tool, using convenience sampling and data was collected by Community mobilizer Teams of the Social Welfare Department. The participants were recruited for the study from the community areas assigned to these teams. For children, data was collected from public sector schools in 4 towns (2 in each town) and the community (children out of schools) whereas, for adults, data was collected directly from the community. For children, consent to participate was sought from their parents prior to the collection of data, and for adults, verbal consent was sought at the time of data collection.

At the community level, 320 children from 4 towns completed the survey tool of which 161 participants self-identified as boys, and 159 as girls. The sample had a median age of 15.2 years (SD 2.0). 72.5% of the participants were enrolled in school which

included 201 girls and 119 boys. Amongst the sample, 29.5% of participants were working for daily wages. Furthermore, 83% of the participants lived with their parents, 15.1% with their relatives, and 1.9% lived alone.

For adults, 160 respondents (75 women & 85 men) with a median age of 34.5 years (SD 12.9) completed the survey. 50% of the respondents were married, 48.5% were unmarried, and 1.3% were widowed. A total of 15 FGDs and interviews were completed with 131 participants (61 women & 70 men) including; teachers, religious leaders, healers, social activists, Lady Health Workers, Medical Officers, Youth Counselors, Community Based Organization (CBO) representatives, Child Protection Representatives, and Jirga (community leader) heads.

Details are presented in Table 1.

Table 1. .

Service level	Tool	Sample size
Community level	Tool 1a	160 with a 10:10 male/female ratio
	Tool 1b	300
	Tool 2	4 FGDs with 6–10 participants each
NGO level	Tool 3	10 NGOs
Primary health care level	Tool 4a	1 interview
	Tool 4b	3 interviews
Tertiary health care level	Tool 5	4 interviews
	Tool 6	2 FGDs with 4 participants each

3 Implementation Strategy and Intervention

3.1 Exploration

3.1.1 Baseline

For the baseline, an assessment was completed for all four levels identified in the research design, and results were compiled for comparison and assessment with the endline, four years after the implementation of the intervention.

3.1.2 Comprehensive Mental Health Services Plan (CMHSP)

A comprehensive, integrated, and responsive mental health and psychosocial support service plan was developed to be tested at the community and system level in an all-inclusive and cost-effective manner. Since sustainability was the primary goal, the CMHSP focused on developing a non-specialized workforce for mental health to enhance the capacity of the Health Department. Utilizing the WHO mental health service organization pyramid the plan was designed. CMHSP suggests mental health services at all

healthcare levels embed a stepped care approach in the system as a paradigm in the provision of person-centered care targeting the needs of the individual rather than offering a one-size-fits-all approach to care. Individuals will be more likely to receive a service that more optimally matches their needs and contexts. The stepped care approach framework ensures (Government of Australia, 2013) (Fig. 3):

- Improving the targeting of low intensity psychological services.
- Cross sectorial early intervention for children and youth.
- Addresses service gap.
- Management of severe and complex mental health needs in a primary care setting through expert advice.

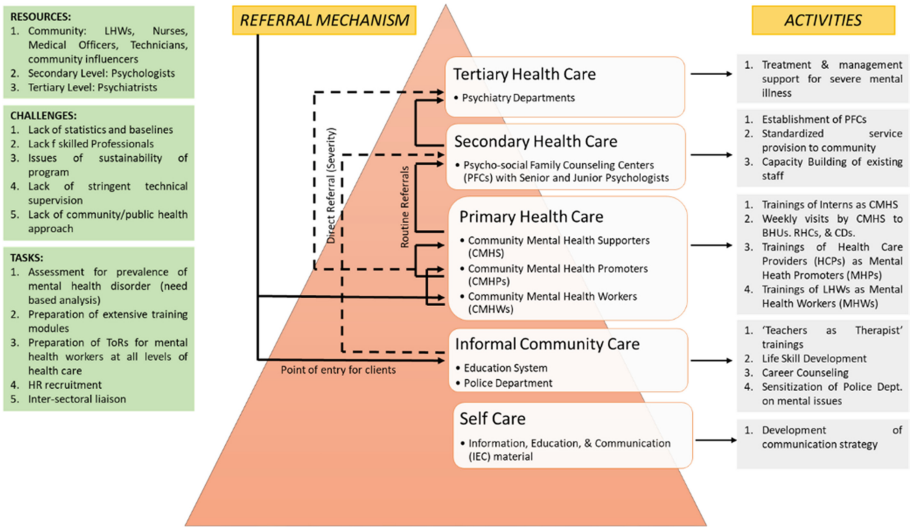

Fig. 3. Comprehensive mental health action plan (CMHSP). Copyright health department KP & UNICEF Pakistan.

The CMHSP is composed of self-care, informal community care, and system-based care (for which a proposed set of interventions were curated, Table 2), as explained with brief descriptions below:

a) ***Self-Care:***

Self-care is a concept representing a range of health-related decisions and care undertaken by individuals on their own behalf (Dean 1995). It is a deliberate action that individuals, family members, and the community should engage in to maintain good health. Considering the high burden of non-communicable diseases (NCDs) on the public health system there is a strong need to refocus on health promotion, disease prevention, and self-care amongst the public.

The promotion of self-care is an educational and empowering process that ensures that individuals with the right information can make the right decision as

far as their own health is concerned. Hence, promoting self-care amongst the public was a key component for which a communication strategy was developed for the promotion of the CMHSP.

b) ***Informal Community Care:***
Informal Community care includes mental health services without input from specific health professionals. It comprises services provided in the community that are not part of the formal health and welfare system and may include a range of approaches through traditional healers, teachers, police, village health workers, non-governmental organizations, and laypeople, for example. The CMHSP prioritized schools for targeted interventions at the community level and engaged the Department of Education for institutionalized coordination and sustainability of interventions and their effects. Hence, the 'Teachers as Therapists' intervention was developed, with the aim of equipping teachers with relevant and appropriate knowledge and skills as counselors to facilitate and promote early screening of mental health problems in students. Through tailor-made training and supervision programs, the teachers would be enabled to manage minor mental health problems of students themselves and make referrals to the public health care service as and when required. The project enhanced the capacity of 3,785 teachers from 155 middle, 140 high, and 30 higher secondary schools in district Peshawar. The ultimate beneficiaries of the program were around 102,488 students in the district. The project also supported and mobilized the participating schools to integrate mental health education, self-awareness, and life skills through a range of co-curricular activities at the school level and celebrating relevant national and international events and days like World Mental Health Day.

c) ***Primary Health Care (PHC):***
Primary healthcare service works at the community/field level to provide preventive, and promotive healthcare services to the community closer to their homes based on the whole-of-society approach (WHO and UNICEF 2018). Many LMICs, including in Pakistan, have limited access to healthcare services in remote rural areas, particularly for disadvantaged and vulnerable populations (Mailu et al. 2020). Over the years, the Government of Pakistan has launched several community-level interventions to bridge this service gap. Lady Health Workers (LHWs) Programme, launched in 1994, is one such initiative. The aim of this programme was to strengthen health systems at the household and community level and link them to hospital-based services (Glenton et al. 2013). The programme has enrolled more than 110,000 LHWs across the country, they are trained and deployed to carry out monthly visits to assigned households in the community to advise on health promotion, screening, basic management, and referral of health concerns (Schaaf et al. 2020). LHWs are recruited from within the community thus they can provide culturally appropriate services to their community.

For the implementation of CMHSP, collaboration was established with the National Programme for LHWs in KP for engaging the Lady Health Workers (LHWs) for interventions at PHC level. The project enhanced the capacity of 1,155 LHWs, serving in district Peshawar, on targeted modules on 'specialized mental health screening with the provision of basic level interventions'. The modules were

adapted from WHO's mhGAP intervention guide and translated into Urdu (local language) for the LHWs.

Medical Health Professionals (MHPs) including 200 Medical Officers/Technicians, already working at 48 Basic Health Units (BHU), 35 Civil Dispensaries (CDs), and 5 Rural Health Centers (RHCs), were trained on WHO's mhGAP intervention, for screening as well as provision of MHPSS services to provide the mild intensity interventions.

d) ***Secondary Health Care***

At the Secondary Health Care Level, tier two of the health service system comprising category B, C, & D hospitals, the CMHSP established and maintained 10 Psychosocial Family Counseling Centers (PFCs). PFCs, within the secondary health care system, aimed at providing extensive psychological interventions, with a focus on the curative aspects of the mental health service. The PFCs were connected with respective healthcare centers at the primary healthcare level through a designed and functional reciprocal referral mechanism.

e) **Tertiary Health Care**

At the Tertiary Care level, Psychiatry Departments of Medical Teaching Hospitals provided specialized pharmacological mental health services. The facilities related to PFCs at the secondary health care level and the primary health care level through an institutionalized referral system that worked along both the vertical and horizontal lines of the system to facilitate referrals with an inbuilt efficiency mechanism, facilitating the provisions of needed services to the public in the most cost-effective manner possible.

Table 2. Proposed interventions at different healthcare levels

Psychological interventions/Treatments			
S#	Basic level interventions (Community - LHWs)	Mild Intensity interventions (primary health care)	Extensive interventions (Secondary health care)
1	Empathic listening	Anger management	Behavior therapy
2	Psychoeducation	Counseling	DBT
3	Relaxation training	Group therapy	CBT
4	Stress management		TFCBT
5			EMDR

3.1.3 Establishment of Team

A Project Management Unit (PMU) was established at the Directorate General Health Services Khyber Pakhtunkhwa, which was Supervised by the Director of Public Health, headed by the Deputy Director of Public Health, and staffed with a Technical Lead,

Training Officer, M&E Officer, Information Management Officer, Finance Officer, and a Team Assistant.

The PMU was technically supported by UNICEF as well and monthly review meetings were held between the team to review and revise implementation strategies.

3.2 Installation

3.2.1 Stakeholder Consultation

A Multi-sectoral stakeholder consultation was held to receive ownership from all stakeholders in health (provincial and district level), education, social welfare, child protection, UN, and local organizations. The CMHSP bases its success on intersectoral collaboration for referral of people with mental health conditions identified at different service tiers. The consultation was chaired by the Director General Health Services and also endorsed by the Provincial Mental Health Authority.

3.2.2 Financial Resources

The United Nations Children Fund (UNICEF) committed to supporting the operational and human resource costs of the project throughout implementation and assessment.

3.2.3 Dissemination of Information Education and Communication (IEC) Material

Simultaneously, extensive IEC material was disseminated in the community via different information channels, social media, print media, public posters and banners, and radio programs to initiate dialogue on the significance and need for mental health care. The IEC material was adapted from WHO and UNICEF's work in similar contexts.

3.2.4 Division of Roles and Responsibilities

All sectors involved in the implementation (health, education, social welfare) were given roles and responsibilities and PMU initiated close coordination with all stakeholders to ensure that timelines were met efficiently. An intersectoral core Project Implementation Committee was notified by the Directorate General Health Services that included all stakeholders (Health, Education, Social Welfare, Child Protection, UNICEF) to periodically review the project implementation and arrive at informed decision making.

3.2.5 Capacity Building at All Healthcare Levels

For the initial implementation training sessions were initiated at all service levels and it took 18 months to complete training of all service tiers, considering the workload and other engagements of service providers at different levels. The training sessions were conducted by Master trainers in health and education, trained by the technical officer from the PMU. After training, each batch was assigned a supervisor and monthly supervision was initiated for all batches. Simultaneously the project hired 24 clinical psychologists to provide services at the secondary care level.

3.2.6 Information Management System

An Information Management System was developed for the CMHSP to consolidate real-time data from all service tiers. The data was collated and translated into daily, weekly, and monthly reports for uptake by the project donors and implementors. It also generated authentic data on regional statistical trends in mental health.

3.3 Initial Implementation

3.3.1 Provision of Mental Health Services at All Levels of Community and Healthcare

After the initial 18 months of the installation phase, service provision at all levels was initiated. The Self-care and community level services installed the sensitivity to take responsibility for personal mental health in the community, which led to an increased help-seeking behavior. Referrals were generated at different healthcare levels to other tiers and people displayed comfort in initiating dialogue on mental health. The trained healthcare providers helped other professionals within their own healthcare facilities to understand their mental health needs. Thus keeping the momentum of mental health services alive at the community as well as administration level.

3.3.2 Use of Data for Continuous Improvement

The PMU developed an MHPSS Monitoring and Evaluation Framework, closely aligned to the Information Management System, with identified indicators and methods of monitoring. A team was notified by the Directorate General Health Services including government officials, members from UNICEF and PMU to perform weekly, monthly, bi-annual, and annual monitoring exercises. Whereas for the evaluation of services all service providers were provided monthly supervision along with periodic patient feedback consolidation exercises. The outcome indicators were regularly revisited by the core team and changes were made as required.

3.3.3 Assess Fidelity

Fidelity is defined as the extent to which the implementation of an intervention adheres to the originally developed model (Mowbray et al. 2003). To assess the fidelity of the intervention, the service quality and standard were closely monitored via regular supervision sessions. These sessions were held for the LHWs, Medical Officers, teachers, and Psychologists. Within these sessions, the cases managed by them were examined and good bad practices where bad practices were identified to help the service providers improve treatment outcomes. Simultaneously, sessions were held with the health facility and educational institutes management to inquire about the larger outcome of the intervention and its impact on the services of the institution as a whole. To further the assessment of fidelity, service seekers were randomly accessed to get feedback on the services. Towards the end of the four years of the implementation of the project, an independent team of experts was commissioned to evaluate the implementation of the intervention. And the panel reported high fidelity in the service provision in the health

and education sectors. It was highlighted that referrals in mental health could still be improved through better compliance.

3.4 Full Implementation

3.4.1 Improved Outcomes

The endline conducted four years after the implementation of the intervention informed on improved outcomes for mental health service provision in pilot district these outcomes translated as reduced prevalence of mental illnesses, increased help-seeking behavior in mental health, enhanced awareness of healthcare professionals on mental health needs of the community, and the availability of contextualized resources for mental health.

3.4.2 Enhance Practice-Policy Connection

The outcomes of this intervention were used to inform policy for the province. Based on the health outcomes, the Government of Khyber Pakhtunkhwa sanctioned budget for this intervention to be integrated into the regular services of the Health Department. It also informed the finalization and implementation of the Khyber Pakhtunkhwa MHPSS Strategy.

4 Results

The intervention was implemented in the provincial capital city of Peshawar for four years to access the viability and effectiveness of CMHSP. A baseline and end line provided the requisite evidence to establish the effectiveness of the intervention through a mixed-method approach.

4.1 Quantitative Data

4.1.1 Community Level Data

Data to measure the distress level was calculated using the Strengths and Difficulties Questionnaire, it indicates the level of clinically significant mental health issues (emotional and social) in a person and the tendency of a person to develop these issues in near future. As per the data collected during the baseline, 31.5% of children between the ages of 12–18 years were found to have clinically significant mental health issues. Whereas 11.2% of children were reported to be at a risk for developing clinically significant mental health issues. It was further observed that girls reported internalizing their problems (i.e., negative behaviors that are focused inward such as sadness, fearfulness, social withdrawal, somatic complaints, etc.) while boys reported externalizing their problems (i.e., negative behaviors focused outwards such as hyperactivity, bullying, vandalism, conduct issues, etc.). In the endline, around 25.8% of children between the ages of 12–18 years were found to have clinically significant mental health issues. While 9% of children were reported to be at risk for developing clinically significant mental health issues.

In adults, women reported a higher level of distress (35.9%) as compared to men (29.7%). Women reported feeling helpless and not in control of their lives which is reflected in their persistent ill-health. Whereas men reported externalizing their problems by expressing anger and struggling to meet the demands of everyday life. In the endline, the distress level of women was reported at 21.2% as compared to men at 25%.

4.1.2 Healthcare Data

The data at baseline reported that at PHC and secondary health care level no designated services for mental health were being offered. Only 5% of healthcare providers at this level reported confidence in identifying mental health issues in a patient. Whereas the endline data revealed that around 80% of healthcare providers at PHC reported confidence in identifying and referring mental health issues.

The baseline revealed that no mental health services were offered at the secondary care level, whereas the endline revealed the presence of fully functional PFCs at all secondary care hospitals in district Peshawar.

The tertiary care level had designated Psychiatric Units with admission facilities available for patients with mental health conditions, endline revealed that their patient load was gradually sifting, and they were receiving referrals from PHC and secondary care level.

4.2 Qualitative Data

4.2.1 Community Level Data

Major sources of distress reported during community-based interviews are reported in Table 3.

Table 3. .

Theme	Sources of distress
Economic	Poverty
	Unemployment
Necessities	Lack of drinking water
	Shortage of medical and educational facilities
Safety & Security	Fear of terrorism and floods
	Safety and security issues
	Sexual abuse
	Violence in family and school
Social and interpersonal	Loss of relatives
	Problems at school
Gender-based	Lack of control in personal life decisions for women
	Upcoming marriage

The population identified religion, community support, help-seeking behavior, awareness of healthcare workers, and availability of health services as protective factors from mental health illnesses.

4.2.2 Healthcare Data

Some of the themes that emerged out of FGDs with healthcare providers and health management regarding the implementation of CMHSP in district Peshawar are:

Overall Feedback – participants reported overall positive feedback to the integration of CMHSP within the KP healthcare system. Healthcare providers highlighted receiving people with mental health issues at their healthcare facilities and feeling handicapped at helping them. But the training through this project gave them the confidence to manage the cases appropriately.

Capacity Building – the modules used during training were duly vetted by the health and education departments which were highly appreciated by management on both sides. The management informed of including these modules in regular service training to ensure that mental health services are prioritized with other healthcare services.

Supervision – the participants reported that supervision was one of the motivating factors for them as it 'opened channels' of learning for them. One of the participants shared that knowing that an intervention is going to get mainstreamed within the regular health service with the component of supervision is an 'excellent approach for young doctors to build their capacity'.

Ownership of the Department – the management as well as healthcare providers agreed that the ownership of the department at the provincial and district level adds to the significance of the intervention and boosts health outcomes.

5 Discussion

To the best of the authors' knowledge, this was the first time when such an extensive pilot was implemented in an LMIC at the district administration level using a standardized implementation and design framework. The study employed AIF and IO frameworks; our implementation approach consisted of a) Exploration, b) Installation, c) Initial Implementation, and d) Full Implementation, for integrating mental health services into the existing healthcare. During the pilot, careful consideration was placed on the stages of need assessment, development of the CMHSP, capacity building of staff at different service tiers, assessment of fidelity, and the enhancement of the practice-policy connection.

This study is significant in answering the mental health challenges of LMICs, regarding the delivery of evidence-based mental health services in an integrated and culturally sensitive manner in a low-resource setting. The design (CMHSP) can be easily replicated following the AIF framework in similar settings in a resource efficient, accessible, and acceptable manner while generating dialogue for mental health and reducing stigma in the community.

Mental health in Pakistan has long suffered due to intense stigma in the community and a lack of political interest. But with the recent global commitment to Sustainable

Development Goals, the Universal Health Coverage, and emerging challenges of mental health illness, the government has initiated work on mental health services at the policy level. At the national level, Pakistan has a National Mental Health Ordinance of 2001 (Tareen and Tareen 2016) while four major provinces of the country have their own Mental Health legislations. A review of these legislations reveals that they are grounded in a bio-medical approach to mental health. Furthermore, the legislations do not reflect the required shift in the delivery of mental health services from bio-medical to community-based services. It adapts the recovery approach in mental health services and focuses on the involvement of service users as partners in their own care and in the development of the services. This shift has been adapted by the Ministry of National Health Services Regulation and Coordination with the inclusion of mental health intervention in the Universal Health Coverage Benefit Package of Pakistan (GOP 2020) and the launch of the National Action Framework on Non-Communicable Diseases and Mental Health 2021–30 (GOP 2021). The framework has been endorsed by the National Inter-Ministerial Committee, which indicates the commitment of Provinces to implement the framework in their provinces.

The current implementation study aligns closely with the goals and objectives of the National Framework on NCDs and Mental Health as it provides a sustainable and cost-efficient model of integrating mental health services at the PHC level. Integrating mental health at PHC has been shown to improve the outcomes for persons with mental health illnesses by enhancing treatment uptake and ensuring accessible, available, and acceptable services (Mwape et al. 2010). The results reveal the effectiveness of this intervention in district Peshawar, which has a long running history of trauma triggers, so it has a chance to be efficacious throughout the country and in similar contexts elsewhere.

The results of baseline and endline reveal that integration would be beneficial not only in meeting our commitment to global targets but also improve the detection and management of mental health issues as people would be willing to access care that is available within their communities. Studies also reveal that one of the barriers to the uptake of mental health services is the fear and negative attitude of health care providers towards persons with mental health issues (Thornicroft et al. 2007). The implementation of CMHSP uses a three-pronged approach of sensitizing the policymakers, educating the care providers, and matching service to the needs of the community.

Considering the above background, the current study provides a significant and sustainable model to implement the existing mental health policies at all healthcare levels and the model is ideal for uptake by provincial governments while preparing action plans for the NCDs and Mental Health framework.

The recommendations of this study align with WHO's mental health action plan, which suggests that healthcare providers should be able to identify and attend to every service seeker's mental health needs. This skill of healthcare workers can help demystify mental health by encouraging people for seeking help, thus reducing the prevalence of mental health illnesses. The implementation model of CMHSP provides a holistic and person-centered approach to care that can be highly useful in not only the implementation of policies but also in de-stigmatize mental health for the community.

This project generated a range of communication materials that may be utilized and further structured for reaching out to the community. The project also sensitized

stakeholders from the community up to the policy level to increase the demand for mental health services. It presents an elaborate country-specific mental healthcare package that can be adapted by other countries for integrating mental health into the existing healthcare system.

This research has some limitations in monitoring and evaluation and representation of the sample to the entire country but adjusting for that the model is an appropriate fit for this region. The project is continued, and it requires careful monitoring to keep it on track and to target mental health issues in the community.

References

Betancourt, T.S., Salhi, C., Buka, S., Leaning, J., Dunn, G., Earls, F.: Connectedness, social support and internalizing emotional and behavioral problems in adolescents displaced by the chechen. Conflict **36**(4), 635–655 (2012)

Blanchard, C., Livet, M., Ward, C., Sorge, L., Sorensen, T.D., McClurg, M.R.: The activie implementation frameworks: a roadmap for advancing implementation of comprehensive medication management in primary care. Res. Soc. Adm. Pharm. **13**(5), 922–929 (2017). ISSN 1551–7411 https://doi.org/10.1016/j.sapharm.2017.05.006

Brownson, R.C., Colditz, G.A., Protor, K.K.: Dissemination and implementation research in health: translating science to practice. Oxford University Press, Oxford (2012)

Dean, K.: Health related behavior in health promotion: utilizing concept of self-care. Health Promot. Int. **10**(1), 35–40 (1995)

DuMont, K., Metz, A., Woo, B.: Five recommendations for how implementation science can better advance equity. AcademyHealth, Apr 2019. https://www.academyhealth.org/blog/2019-04/five-recommendations-how-implementation-science-can-better-advance-equity

Fixsen, D., et al.: Implementation Research: A Synthesis of the Literature. University of South Florida & The National Implementation Research Network, Tampa (2005)

Glenton, C., et al.: Barriers and facilitators to the implementation of lay health worker programmes to improve access to maternal and child health: qualitative evidence synthesis. Cochrane Database Syst. Rev. (10), CD010414 (2013). https://doi.org/10.1002/14651858.CD010414.pub2

Government of Pakistan Ministry of Finance. "Pakistan Economic Survey 2014–15". Accessed 02 Apr 2021. http://www.finance.giv.pk/survey_1415.html

Government of Pakistan. Essential Package of Health Services (EPHS). Ministry of National Health Services Regulation & Coordination (2020)

Government of Pakistam. National Action Framework for NCDs and Mental Health 2021–30. Ministry of National Health Services Regulation & Coordination (2021)

Goodman, A., Lamping, D.L., Ploubidis, G.B.: When to use broader internalising and externalising subscales instead of the hypothesised five subscales on the strengths and difficulties questionnaire (SDQ): data from British parents, teachers and children. J. Abnorm. Child Psychol. **38**, 1179–1191 (2010)

Kurji, Z., Premani, Z.S., Mithani, Y.: Analysis of the health care system of pakistan: lessons learnt and way forward. J Ayub Med Coll Abbottabad. Jul-Sep **28**(3), 601–604 (2016). PMID: 28712245

Lock, J., La Via, M.C.: American academy of child and adolescent psychiatry (AACAP) committee on quality issues (CQI). Practice parameter for the assessment and treatment of children and adolescents with eating disorders. J. Am. Acad. Child Adolesc. Psychiatry. **54**(5), 412–425 (2015)

Mailu, E.W., Virendrakumar, B., Bechange, S., Jolley, E., Schmidt, E.: Factors associated with the uptake of cataract surgery and interventions to improve uptake in low- and middle-income countries: a systematic review. PLoS ONE **15**(7), e0235699 (2020)

Mowbray, C.T, Holter, M.C., Teague, G.B., Bybee, D.: Fidelity criteria: development, measurement, and validation. Am. J. Eval. **24**(3), 315–340 (2003). ISSN-1098–2140

Mwape, L., Sikwese, A., Kapungwe, A., et al.: Integrating mental health into primary health care in Zambia: a care provider's perspective. Int. J. Ment. Health Syst. **4**, 21 (2010). https://doi.org/10.1186/1752-4458-4-21

National practice standards for mental health workforce 2013. Accessed 21 Jan 2021. http://www.health.gov.au/internet/main/publishing.nsf/Content/5D7909E82304E6D2CA257C430004E877/File/wkstd13.pdf

Peters, D.H., Adam, T., Alonge, O., Agyepong, I.A., Tran, N.: Implementation research: what it is and how to do it. BMJ **347**, f6753 (2013). https://doi.org/10.1136/bmj.f675

Proctor, K., et al.: Implementation research in mental health services an emerging science with conceptual, methodological, and training challenges. Adm. Policy Ment. Health **36**, 24–34 (2008). https://doi.org/10.1007/s10488-008-0197-4

Proctor, E., Silmere, H., Raghavan, R., et al.: Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. Adm. Policy Ment. Health **38**(2), 65–76 (2011)

Rathod, S., Pinninti, N., Irfan, M., et al.: Mental health service provision in low- and middle-income countries. Health Serv. Insights (2017). https://doi.org/10.1177/1178632917694350

Rubenstein, L.V., Pugh, J.: Strategies for promoting organizational and practice change by advancing implementation research. J. Gen. Intern. Med. **21**, S58–S64 (2006). [PubMed:16637962]

Schaaf, M., Warthin, C., Freedman, L., Topp, S.M.: The community health worker as service extender, cultural broker and social change agent: a critical interpretive synthesis of roles, intent and accountability. BMJ Glob Health. **5**(6), e002296 (2020)

Shah, A.A., Gong, Z., Pal, I., Sun, R., Ullah, W., Wani, G.F.: Disaster risk management insight on school emergency preparedness–a case study of Khyber Pakhtunkhwa, Pakistan. Int. J. Disaster Risk Reduction **51**, 101805 (2020)

Snyder, C.R., Hoza, B., Pelham, W.E., Rapoff, M., Ware, L., Danovsky, M., et al.: The development and validation of the children's hope scale. J. Pediatr. Psychol. **22**, 399–421 (1997)

Spirito, A., Stark, L.J., Williams, C.: Development of a brief coping checklist for use with pediatric populations. J. Pediatr. Psychol. **13**(4), 555–574 (1988). https://doi.org/10.1093/jpepsy/13.4.555

Tareen, A., Tareen, K.I.: Mental health law in Pakistan. BJPsych Int. **13**(3), 67–69 (2016)

Thornicroft, G., Rose, D., Kassam, A.: Discrimination in health care against people with mental illness. Int. Rev. Psychiatry **19**(suppl 2), 113–122 (2007). https://doi.org/10.1080/09540260701278937

Updegraff, J.A., Silver, R.C., Holman, E.A.: Searching for and finding meaning in collective trauma: results from a national longitudinal study of the 9/11 terrorist attacks. J. Pers. Soc. Psychol. **95**(3), 709 (2008)

WHO. Mental health: facing the challenges, building solutions. Report from WHO European Ministerial Conference. Copenhagen, Denmark: WHO Regional Office for Europe (2005)

WHO. World Health Organization Assessment Instrument for Mental Health Systems. (WHO-AIMS) World Health Organization Geneva (2005)

WHO. Assessing Mental Health and Psychosocial Needs and Resources: Toolkit for Major Humanitarian Settings. World Health Organization Geneva (2012)

WHO. Comprehensive Mental Health Action Plan 2012–2030. World Health Organization Geneva (2013)

WHO. Mental Health Atlas. Country Profile Pakistan, Department of Mental Health and Substance Abuse. World Health Organization (2017)

WHO. Mental health: Strengthening our response. World Health Organization Geneva (2018)
WHO and UNICEF. A vision for primary health care in the 21st century: towards universal health coverage and the sustainable development goals. World Health Organization Geneva (2018)
WHO and UNHCR Assessing Mental Health and Psychosocial Needs and Resources: Toolkit for Major Humanitarian Settings. World Health Organization Geneva (2012)
Winslow, C.-E.A.: The untilled fields of public health. Science **51**, 23 (1920)
Zimet, G.D., Dahlem, N.W., Zimet, S.G., Farley, G.K.: The multi-dimensional scale of perceived social support. J. Pers. Assess. **52**, 30–41 (1988)