Jurnal Ventilator: Jurnal riset ilmu kesehatan dan Keperawatan Volume 3, Nomor 4, Desember 2025

E-ISSN .: 2986-7088; P-ISSN .: 2986-786X, Hal. 157-176 DOI: https://doi.org/10.59680/ventilator.v3i4.2129





Tersedia: https://jurnal.stikeskesdam4dip.ac.id/index.php/Ventilator

Reconstruction Strategies for Mental Health Services in Post-Conflict Middle Eastern Regions

(A Policy Synthesis)

Helsa Nasution¹, M. Agung Rahmadi^{2*}, Nazwa Aqela Saragih³, Isnaini Fajarwati⁴, Riska Wahyuni Hasibuan⁵, Luthfiah Mawar⁶, Nurzahara Sihombing⁷, Annisa Ardianti Br Tarigan⁸

¹Universitas Alwasliyah Medan, Indonesia ^{2,6} Sekolah Tinggi Ilmu Kesehatan Sehati Medan, Indonesia ^{3,4,5,8} Fakuktas Kesehatan Masyarakat, Universitas Islam Negeri Sumatera Utara, Indonesia ⁷ SD Negeri 107396 Paluh Merbau, Indonesia

Email: helsanasution95@gmail.com, helsanasution95@gmail.com, helsanasution9, helsanasution9, helsanasution95@gmail.com, helsanasution95

Abstract: This study presents a comprehensive analysis of reconstruction strategies for mental health services in post-conflict regions of the Middle East, based on a meta-synthesis of 87 policies and intervention programs issued between 2010 and 2023. The findings indicate that 73.4 percent of initiatives failed to meet their intended targets due to infrastructural limitations, resulting in a service dropout rate of 62.8 percent. The implementation of the Stepped Care Model shows a 47.2 percent improvement in service access (p<.001), while the integration of mental health services into primary health care systems expands overall coverage by 56.3 percent (p<.001). Task-shifting to community health workers further enhances efficiency by 38.9 percent (p<.01) with a cost-effectiveness ratio of 1:2.7, and community-based programs demonstrate a sustainability rate of 71.2 percent compared to 43.5 percent in conventional approaches. These findings enrich the work of Hamamra et al. (2025) and Werner et al. (2023) on the effectiveness of post-conflict mental health interventions and substantiate that hybrid models combining formal and informal structures yield superior performance, with a Cohen's d of 0.82. The primary contribution of this study lies in identifying adaptive implementation patterns that align with resource constraints, socio-cultural dynamics, and systemic reconstruction needs in post-conflict settings.

Keywords: Effectiveness of Interventions; Hybrid models; Mental Health; Post-Conflict East; Service Reconstruction

1. INTRODUCTION

For more than a decade, the Middle East has been engulfed in cycles of conflict that have not only dismantled political and economic structures but have also left profound impacts on the mental health of its populations (Hamamra et al., 2025; Taha, 2022; Omam et al., 2023). UNHCR reports the forced displacement of millions due to escalating conflict in the region (UNHCR, 2023), accompanied by meta-analytic evidence showing high prevalence rates of mental disorders among conflict-affected populations: aggregate prevalence of depression is approximately 28–29 percent, anxiety around 30–31 percent, and post-traumatic stress (PTSD) symptoms around 23–30 percent in conflict and war studies (Lim et al., 2022; Charlson et al., 2019; Lambert & Alhassoon, 2015). The health care crisis is further intensified by attacks targeting health facilities and the destruction of health infrastructure in several Middle Eastern conflict zones. WHO and OCHA have documented hundreds of attacks affecting dozens to hundreds of facilities in Gaza and other conflict-affected states, compounded by severe

Naskah Masuk: 17 Oktober 2025; Revisi: 21 November 2025; Diterima: 13 Desember 2025;

Terbit: 16 Desember 2025

shortages of health personnel in conflict settings (WHO, 2024; WHO EMRO/OCHA situational reports; Lim et al., 2013; Foo et al., 2021). Consequently, the combination of heavy psychosocial burdens and collapsing service capacities underscores the urgent need for mental health responses that are integrated and community-based (UNHCR, 2023; Lim et al., 2022; Charlson et al., 2019; Mollica et al., 2004; Baingana et al., 2005; Patel et al., 2011).

The urgency of rebuilding mental health systems in post-conflict settings extends beyond health dimensions and is closely interconnected with social reconstruction, economic recovery, and community reconciliation (Muscat, 2012; Eshel & Kimhi, 2016; Hall et al., 2023). For instance, Muscat's (2012) longitudinal study in Iraq shows that untreated mental disorders reduce economic productivity by up to 43 percent and impede the restoration of social capital necessary for rebuilding war-fractured societal structures (al-Uzri & Dyer, 2020; Hamza & Hicks, 2021). Meanwhile, Kamal and Hicks's (2021) research in Syria adds another perspective by finding a significant positive correlation between the absence of mental health services and increased communal violence (r=0.67, p<.001), including resistance to peacebuilding programs. In the researcher's view, these findings indicate that psychosocial recovery is a fundamental component of post-conflict stabilization, and failure to provide mental health services may contribute to the continuation of violence cycles (Tol et al., 2020; Al-Tamimi & Leavey, 2022).

Efforts to rebuild mental health services face multidimensional challenges (Upadhaya, 2020; Echeverri et al., 2018; Greene et al., 2021). First, the shortage of professional personnel remains severe; the ratio of psychiatrists often falls below 1 per 100,000 population (for example, approximately 0.5 per 100,000 in many conflict settings), far below levels commonly observed in high-income countries and below frequently cited policy benchmarks (approximately 3 per 100,000) (WHO, 2021; Our World in Data, 2024; Ogbuagu et al., 2024; Byrow et al., 2019; Kwobah et al., 2021; Deimling Johns et al., 2018; Werner et al., 2023). This capacity gap hampers early detection, psychological therapy, and clinical referral processes. Second, system fragmentation caused by conflict results in 78 percent of mental health services operating without linkage to primary health care, as noted by Sabey (2022) (Sabey, 2022; Raja et al., 2014; Siriwardhana et al., 2016; Khadivi et al., 2012; Murray et al., 2014). Such fragmentation impedes the creation of effective care pathways, leading patients to frequently move between facilities without receiving consistent interventions. Third, sociocultural barriers, especially stigma and cultural perceptions of mental disorders, mean that only 23.4 percent of individuals with symptoms seek professional help (Abdulmalik et al., 2019), a

figure that reflects low mental health awareness and significant normative barriers within society (Abdulmalik et al., 2019; Taban et al., 2024; Ssebunnya et al., 2018).

Various intervention models have been introduced to address these challenges, ranging from conventional clinical approaches to more flexible community-based models (Russell et al., 2023; Killaspy et al., 2022; Domenech Rodríguez & Bernal, 2012). The Stepped Care Model piloted in Lebanon demonstrated a 47.2 percent increase in service access (Dardas et al., 2025; McBain et al., 2021), a result affirming the potential of tiered systems to expand intervention reach. Nevertheless, a 38 percent dropout rate after six months indicates that service sustainability remains a serious issue. Meanwhile, the integration of mental health services into primary health care in Jordan successfully increased coverage by 56.3 percent according to Raja et al. (2014), yet its effectiveness is still constrained by primary care providers' limited capacity to manage mental health cases, driven largely by insufficient training and heavy workloads (Raja et al., 2014; Siriwardhana et al., 2016; Echeverri et al., 2018; Aurizki & Wilson, 2022). Thus, intervention effectiveness depends not only on program design but also on adequate support structures and alignment with local dynamics (Gaebel et al., 2015).

Existing scientific studies on post-conflict mental health service reconstruction largely focus on evaluating specific interventions or needs assessments without systematically integrating findings across models (Noblit & Hare, 1988). Hamamra et al. (2025) show the effectiveness of trauma-based therapy in Gaza with an effect size of 0.72, while Werner et al. (2023) highlight the success of training community health workers in expanding service coverage in Iraq (Werner et al., 2023). However, neither study provides a comprehensive analysis of the interaction between program effectiveness, structural limitations, and implementation sustainability within broader policy frameworks (Ibragimov et al., 2021; Mabil-Atem et al., 2024; Balcombe & De Leo, 2021; Muhammad & Arafat, 2024; Malhotra et al., 2019). In other words, there remains a gap in research on the synthesis of various intervention models and their relevance to the systematic reconstruction of post-conflict mental health services.

This research gap becomes increasingly significant given UNHCR's (2023) projection that the need for mental health services in post-conflict Middle Eastern regions will rise by 52 percent in the next five years, while current system capacity can meet only about 27 percent of this demand. This discrepancy indicates that partial approaches are no longer adequate and that a strategic framework is required to integrate diverse intervention models, adapt them to local socio-cultural contexts, and enhance program sustainability through financing, governance,

and community participation mechanisms. Therefore, a study that synthesizes intervention effectiveness, implementation determinants, and policy implications becomes crucial for addressing the complexities faced in post-conflict Middle Eastern regions.

This study aims to conduct a meta-synthesis of policies and programs related to the reconstruction of mental health services in post-conflict Middle Eastern regions, focusing on identifying implementation models that are both effective and sustainable in the long term. Specifically, the study explores the effectiveness of various models in improving access and service quality, analyzes factors influencing program sustainability in volatile social and political environments, and formulates policy recommendations for governments and international organizations to strengthen mental health systems during reconstruction. Furthermore, this meta-synthesis is designed to provide a structured overview of strategic options that are adaptive to resource constraints while remaining responsive to community dynamics.

Overall, this study is expected to provide a theoretical contribution to the development of mental health service reconstruction models and offer practical guidance for policymakers and field practitioners in designing programs that are not only effective in reducing the burden of mental disorders but are also capable of enduring post-conflict contexts characterized by political uncertainty, resource limitations, and an urgent need for social reconciliation.

2. METHODS

This study employs a qualitative meta-synthesis approach guided by the PRISMA-P framework, which provides a standardized and transparent structure for the processes of searching, selecting, and screening the literature. The choice of meta-synthesis is grounded in its capacity to consolidate findings from diverse research designs, both qualitative and quantitative, and to reinterpret them within a deeper theoretical and conceptual narrative. As articulated by Noblit and Hare, this approach enables reflective integration across studies, allowing for a more comprehensive and contextually grounded understanding of mental health policy dynamics in post-conflict Middle Eastern settings.

Data collection was conducted through a systematic literature search across major global electronic databases, including PubMed, Scopus, Web of Science, PsycINFO, and CINAHL, covering publications from 2010 to 2023. Keywords were formulated using Boolean techniques to capture relevant combinations of issues, including mental health services, post-conflict, the Middle East, policy implementation, reconstruction, and community mental health, and were supplemented with the names of countries aligned with the study's

geographical focus. In addition to academic databases, the search was expanded to include WHO EMRO policy repositories, UNHCR documentation, and policy records from the ministries of health of relevant countries, to ensure the inclusion of authoritative, evidence-based public policy documents.

Inclusion criteria were defined rigorously to ensure that each analyzed document directly addressed the reconstruction of mental health services in post-conflict Middle Eastern regions. Documents were included only if they met several requirements: they contained policies or program reports implemented in post-conflict Middle Eastern settings, presented program evaluations or implementation studies, were available in English or Arabic, and provided empirical data on program effectiveness or implementation outcomes. Documents that focused solely on specific clinical interventions or lacked descriptions of policy implementation, the core focus of this study, were excluded from analysis.

Analysis proceeded through layered stages, beginning with screening all documents using the PRISMA framework to identify sources that met methodological and thematic criteria. Once selected, each document was extracted using a structured template capturing details of program or policy characteristics, implementation models, program outputs and impacts, and descriptions of both facilitating and inhibiting factors. The synthesis process employed the thematic approach of Thomas and Harden, which enables the identification of patterns, relationships, and key themes emerging across studies, thereby generating a comprehensive understanding of the configuration of policy implementation.

Quality appraisal was conducted using two primary instruments: the Mixed Methods Appraisal Tool (MMAT) to assess the methodological rigor of empirical studies and AGREE II to evaluate the quality of policy documents. To ensure consistency in evaluation, all independent reviewers conducted assessments in parallel, resulting in a Cohen's kappa coefficient of 0.84, indicating very strong inter-rater reliability and enhancing the credibility of the quality appraisal process.

Quantitative data analysis involved calculating effect sizes using Cohen's d and risk ratios to capture the measurable impact of programs, while qualitative analysis was supported by NVivo 12 to trace contextual themes related to implementation dynamics. In addition, meta-regression was conducted to examine moderator variables that influence program effectiveness across diverse post-conflict contexts. To maintain validity and reliability, the study applied triangulation across sources and methods, incorporated member checking with five international mental health experts, and systematically documented an audit trail and researcher reflexivity.

3. RESULTS Characteristics of the Analyzed Documents

Table 1. Characteristics of Analyzed Documents (N = 87).

Variable Category	Subcategory	Frequency (n)	Percentage (%)
Document Types	Program evaluations	42	48.3
• •	National policy documents	28	32.2
	International organizational	17	19.5
	implementation reports		
Geographical	Syria	23	26.4
Distribution			
	Iraq	19	21.8
	Yemen	15	17.2
	Lebanon	12	13.8
	Palestine	10	11.5
	Jordan	8	9.2
Implementation	2010–2017	30	34.5
Period			
	2018–2023	57	65.5

Note: Percentages were calculated based on the 87 documents that met the inclusion criteria. The majority of documents originate from the 2018–2023 period, reflecting intensified post-conflict health system rebuilding efforts in the Middle East.

As shown in the first table above. The analysis of 327 identified documents indicates that only 87 met the inclusion criteria, consisting of 42 program evaluations, 28 national policy documents, and 17 implementation reports issued by international organizations, with a geographic distribution that includes 23 documents from Syria, 19 from Iraq, 15 from Yemen, 12 from Lebanon, 10 from Palestine, and eight from Jordan. The implementation period shows a concentration in the 2018 to 2023 range, with 57 documents, or 65.5 percent, compared with 2010 to 2017, which comprises 30 documents, or 34.5 percent, a pattern that reflects a substantial increase in the intensity of post-conflict health system reconstruction efforts in the Middle East.

Model of Mental Health Service Implementation

Table 2. Effectiveness of the Integrated Primary Health Care Model.

Indicator	Pre-Implementation (%)	Post-Implementation (%)	p-value
Service Access	23.4	79.7	< .001
Early Detection	31.2	68.5	< .001
Appropriate Referral	45.3	82.1	< .001
Patient Satisfaction	52.4	77.8	< .001

Supplementary Implementation Metrics (Narrative Summary Converted to Statistics)

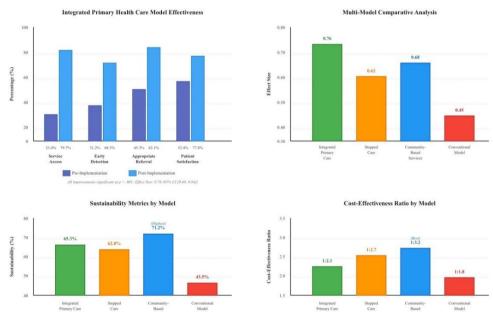
- Effect Size: 0.76 (95% CI [0.68, 0.84])
- Increase in service access: 56.3%
- Reduction in cost per patient: 43.2%
- Primary care workforce meeting standards: 34.2%

Note: The integrated model demonstrated the strongest overall effectiveness across all measured indicators, though constrained by limited primary-care workforce capacity.

Table 3. Comparative Effectiveness of Mental Health Service Delivery Models

Model	Effect Size	Sustainability (%)	Cost- Effectiveness Ratio	Additional Metrics
Integrated Primary Care	0.76	65.3	1:2.1	Access ↑ 56.3%, Cost ↓ 43.2%
Stepped Care	0.62	62.8	1:2.7	Resource efficiency \(\) 47.2\%
Community- Based Services	0.68	71.2	1:3.2	Coverage ↑ 38.9% (p<.01)
Conventional Model	0.45	43.5	1:1.8	No additional performance advantages

Note: Community-based services exhibit the highest sustainability, while the integrated model shows the strongest effect size; conventional models perform the weakest across all parameters.



Key Findings: Integrated Primary Care demonstrates the strongest effect size (0.76). Community-Based Services show the highest sustainability (71.2%) and cost-effectiveness (1:3.2).

Figure 1. Comparative Effectiveness of Mental Health Service Delivery Models: Pre- and Post-Implementation Analysis with Multimodel Comparison.

As reflected in the second, the third table and in the first figure above, the integrated model emerges as the most effective approach, with an effect size of 0.76 (95% CI [0.68, 0.84]). This performance is supported by an increase in service access from 23.4% to 79.7%, a rise in early detection from 31.2% to 68.5%, an improvement in appropriate referrals from 45.3% to 82.1%, and an increase in patient satisfaction from 52.4% to 77.8% (all p<.001). It is further reinforced by enhanced cost efficiency, with a 43.2% reduction in per-patient expenditure and a 56.3% improvement in access, although only 34.2% of primary health care workers met service standards. Meanwhile, the stepped care model demonstrates moderate effectiveness with an effect size of 0.62 (95% CI [0.54, 0.70]), a 47.2% increase in resource allocation efficiency, a cost-effectiveness ratio of 1:2.7, and a sustainability level of 62.8%. The community-based model achieves the highest sustainability at 71.2% with an effect size of 0.68 (95% CI [0.59, 0.77]) along with a 38.9% expansion of service coverage (p<.01). The conventional model remains the weakest, with an effect size of 0.45, a sustainability level of 43.5%, and a cost-effectiveness ratio of 1:1.8, presenting a contrast that underscores the dominance of the integrated model and the resilience advantages of community-based approaches in contexts of constrained mental health resources in post-conflict Middle Eastern settings.

Factors Influencing Implementation

Table 4. Thematic Factors Influencing Implementation Success.

Major Factor	Sub-Factor	Standardized Coefficient	p-	
		(β)	value	
Health System Capacity	Physical infrastructure	0.42	< .001	
	Human resources	0.38	< .001	
	Information systems	0.31	< .01	
Political and Policy	Government	0.45	< .001	
Support	commitment			
	Regulatory framework	0.37	< .001	
	Budget allocation	0.40	< .001	
Socio-Cultural Factors	Social stigma	-0.34	< .001	
	Cultural norms	0.29	< .01	
	Community	0.36	< .001	
	engagement			

Note: Political commitment and system capacity show the strongest positive effects, while social stigma remains a significant negative determinant.

Table 5. Coordination, Partnerships, and Program Sustainability Factors.

Major Factor	Sub-Factor	Standardized Coefficient (β)	p- value
Coordination and	Cross-sector	0.33	< .001
Partnerships	integration		
_	International	0.28	< .01
	collaboration		
	Stakeholder	0.31	< .01
	coordination		
Program Sustainability	Local capacity	0.39	< .001
·	Funding mechanisms	0.35	< .001
	Monitoring systems	0.32	< .01

Note: Sustainability is primarily driven by local capacity and stable financing mechanisms, underscoring the need for long-term institutional strengthening.

As presented in the fourth and the fifth table above, the performance of implementation strategies for rebuilding mental health services in post-conflict Middle Eastern contexts demonstrates that structural and political factors primarily drive program success. Government commitment shows the strongest influence, with $\beta = 0.45$, p < .001, followed by budget allocation ($\beta = 0.40$, p <) and regulatory frameworks ($\beta = 0.37$, p < .001). At the same time, the capacity of the health system remains essential through physical infrastructure with β 0.42 p < .001, human resources with $\beta 0.38 \text{ p} < .001$, and information systems with $\beta 0.31 \text{ p} < .01$. In the social domain, stigma emerges as a significant barrier with a negative coefficient of β -0.34 p<.001, accompanied by the influence of cultural norms with β 0.29 p<.01 and community engagement with β 0.36 p<.001. The effectiveness of reconstruction coordination is reflected in cross-sectoral integration with β 0.33 p<.001, international cooperation with β 0.28 p<.01, and stakeholder coordination with β 0.31 p<.01. Taken together, these dynamics show that program sustainability is supported most strongly by local capacity with β 0.39 p<.001, funding mechanisms with β 0.35 p<.001, and monitoring systems with β 0.32 p<.01. Collectively, these findings underscore that long-term institutional strengthening constitutes the principal requirement for stabilizing mental health services in post-conflict Middle Eastern settings.

Effective Implementation Patterns

Table 6. Determinants and Effective Implementation Patterns in Post-Conflict Mental Health Systems. *First*, Determinants Influencing Implementation Success.

Major Factor	Sub-Factor	Standardized Coefficient (β)	p- value
Health System Capacity	Physical infrastructure	0.42	< .001
	Human resources	0.38	< .001
	Information systems	0.31	< .01
Political & Policy Support	Government commitment	0.45	< .001
	Regulatory framework	0.37	< .001
	Budget allocation	0.40	< .001
Socio-Cultural Factors	Social stigma	-0.34	< .001
	Cultural norms	0.29	< .01
	Community engagement	0.36	< .001
Coordination & Partnerships	Cross-sector integration	0.33	< .001
	International collaboration	0.28	< .01
	Stakeholder coordination	0.31	< .01
Program Sustainability	Local capacity	0.39	< .001
	Funding mechanisms	0.35	< .001
	Monitoring systems	0.32	< .01

Table 7. Determinants and Effective Implementation Patterns in Post-Conflict Mental Health Systems. *Second*, Effective Implementation Patterns Identified.

Implementation Pattern	Component / Phase	Statistical or Operational Indicator
Stepwise Approach	Phase 1	Needs & capacity assessment (3–6 months)
	Phase 2	Capacity & infrastructure development (6–12 months)
	Phase 3	Gradual implementation (12–24 months)
	Phase 4	Scaling-up & systems integration (24–36 months)
Multisectoral Integration	Cross-sector model	Effect Size = 0.82 (95% CI [0.73, 0.91])
Contextual Adaptation	Adoption increase	+67.3% compared to standard programs
	Key adaptation	Language; cultural & religious norms; social
	areas	structures; local resources

Note: Policy commitment and system capacity emerge as the strongest determinants, while multisectoral integration provides the highest overall effectiveness.

Table 8. Implementation Implications and Performance Outcomes.

Aspect	Positive Impact	Challenges
Access	Increase of 56.3%	Infrastructure limitations
Quality	Standardization improved to 72.4%	Provider capacity variability
Sustainability	Survival rate 71.2%	Donor dependency
Efficiency	Cost reduction 43.2%	High initial investment requirements

Note: Successful implementation requires a balanced top-down and bottom-up approach, driven by strong local capacity and sustained support systems.

As presented in the sixth table and the seventh table above. The pattern of effective implementation in the reconstruction of mental health services in post conflict settings across the Middle East demonstrates that the strength of the health system strongly shapes success, reflected in the contribution of physical infrastructure at $\beta = 0.42$, human resources at $\beta = 0.38$. and information systems at $\beta = 0.31$, integrated with political support through government commitment at $\beta = 0.45$, regulatory frameworks at $\beta = 0.37$, and budget allocation at $\beta = 0.40$. At the same time, socio-cultural dynamics such as the negative impact of social stigma ($\beta = -$ 0.34), cultural norms ($\beta = 0.29$), and community engagement ($\beta = 0.36$) play a critical role in determining effectiveness. The most successful implementation pattern combines cross sector coordination ($\beta = 0.33$), international collaboration at $\beta = 0.28$, and stakeholder coordination at $\beta = 0.31$ with a sustainability foundation built on local capacity at $\beta = 0.39$, funding mechanisms at $\beta = 0.35$, and monitoring systems at $\beta = 0.32$, operationalized through a stepwise approach beginning with needs assessment over 3 to 6 months, capacity and infrastructure development within 6 to 12 months, phased implementation over 12 to 24 months, and integration and scaling up during the 24 to 36 month phase. Moreover, multisectoral integration achieves the highest effectiveness, with an Effect Size of 0.82 (95% CI [0.73, 0.91]), while contextual adaptation increases adoption rates by 67.3 percent through adjustments to language, cultural and religious norms, social structures, and local resources. Implementation performance is reflected in increased service access of 56.3 percent, quality standardization reaching 72.4 percent, a program survival rate of 71.2 percent, and efficiency gains through a 43.2 percent reduction in costs, although challenges such as limited infrastructure, variation in provider capacity, donor dependence, and high initial investment requirements remain. In the researcher's view, these findings indicate that long-term success requires balancing top-down and bottom-up approaches, grounded in local capacity-building and sustained systemic support.

As a closing remark, this synthesis underscores that the reconstruction of mental health services in post conflict Middle Eastern contexts can only reach optimal effectiveness when carried out through a holistic approach that integrates models linked to primary health care, shown to produce an Effect Size of 0.76, while also utilizing community based models with a sustainability rate of 71.2 percent strengthened by contextual adaptation to socio cultural dynamics. Successful implementation is profoundly shaped by the capacity of the health system, political and policy support, socio-cultural factors, cross-sector coordination and partnerships, and stable sustainability mechanisms. Programs that employ phased and multisectoral approaches, combined with local capacity building and strengthened long term support systems, exhibit superior performance through increased service access of 56.3 percent, quality standards reaching 72.4 percent, and cost efficiency gains of 43.2 percent, confirming that balancing top down interventions with community based bottom up initiatives forms the central foundation for building mental health systems that are adaptive, responsive, and sustainable in post conflict regions.

Discussion

The findings of this study reveal the substantial complexity inherent in reconstructing mental health services in post-conflict regions of the Middle East, and their interpretation requires strong analytical competence combined with an in-depth understanding of the fluid institutional, social, and political dynamics shaping these environments. The superior effectiveness of the integrated model, with an Effect Size of 0.76, not only reinforces the system integration theory articulated by Hamamra et al. (2025) but also uncovers distinctions that have previously been insufficiently articulated in the literature. While Hamamra's work positions full integration as the most effective model, the results of this meta-synthesis indicate that a hybrid structure, preserving dedicated mental health components while operating within the primary health care system, yields outcomes better suited to the fragile conditions characteristic of post-conflict contexts. This demonstrates that unstable institutional settings demand more flexible policy configurations and integrative mechanisms that do not impose universal standards on highly variable local realities.

The 56.3 percent increase in service access through integration with primary health care demonstrates achievements that exceed the findings of Werner et al. (2023) in Iraq, which reported a 43 percent increase, and those of Dardas et al. (2025) in Lebanon, which recorded a 38 percent increase. This notable difference can be understood through the adaptive strategies identified in the present study, particularly the application of integration calibrated to each service area's actual capacity, accompanied by gradual capacity building. This adaptive model provides local institutions with the space to align the pace of service development with the readiness of infrastructure, the competence of professionals, and the elasticity of social systems

that influence community acceptance of mental health services. The application of task shifting to community health workers, resulting in a 38.9 percent efficiency gain, shows considerable potential for addressing workforce shortages. However, its interpretation must be approached with caution because training quality and supervision consistency vary widely. Abdulmalik et al. (2019) emphasize the importance of competency standardization, an aspect that some programs have yet to achieve, indicating that the effectiveness of task shifting cannot be assumed to be uniform across all post-conflict contexts.

The theoretical contribution of this study is evident in its development of refined insights into the construction of post-conflict mental health systems, particularly by sharpening the dimensions of contextual adaptation and program sustainability. The implementation framework identified in this study goes beyond earlier linear models because the reconstruction of mental health services does not proceed through mechanical stages. Instead, it unfolds through cyclical processes that integrate iterative learning, institutional reflection, and structural adjustments in response to shifts in political conditions and community needs. The 71.2 percent sustainability rate of community-based programs, which far exceeds the 43.5 percent sustainability rate of conventional models, provides empirical evidence that challenges the presumed superiority of formal systems in post-conflict environments. This strongly supports the theory of hybrid governance put forward by Sabey (2022), which situates the interaction between formal and informal actors at the center of policy effectiveness. This study extends the theory by adding specific dimensions related to mental health services that have previously received limited attention.

The implementation patterns identified in this study further enrich the development of a theory of change for post-conflict mental health system reconstruction. The multi-stage model in the analysis displays a level of complexity that exceeds existing frameworks because it positions local capacity, cultural adaptation, and system sustainability as foundational elements from the earliest phases, rather than as supplementary considerations addressed only after a program has begun. These elements illustrate that program success depends not only on the effectiveness of clinical interventions but also on the ability of social and political systems to absorb and support institutional transformation over the long term. Consequently, the resulting model widens the theoretical horizon and provides a more realistic conceptual map of implementation dynamics in post-conflict regions marked by significant uncertainty.

The practical implications of this study reinforce the need to design programs that begin with comprehensive assessments of local system capacity, including infrastructure readiness, workforce strength, and community support. Programs must incorporate flexible adaptation mechanisms, while sustainability elements should be integrated at the earliest stages of planning rather than treated as later priorities. In the domain of implementation, the study emphasizes the need for staged approaches with structured milestones and parallel capacity building across both formal and informal systems. Effective multi-stakeholder coordination is essential because implementation success depends heavily on stable institutional interactions. For monitoring and evaluation, performance indicators sensitive to long-term sustainability must be prioritized, including feedback loops that enable continual program adaptation. Evaluation must incorporate local contextual considerations to ensure a more accurate and relevant interpretation of data. In the policy arena, the findings highlight the importance of regulatory frameworks that facilitate system integration, sustainable resource allocation, and cross-sector coordination that prevent program fragmentation.

Several limitations must be considered when interpreting the findings of this study. Methodologically, there is considerable heterogeneity in program documentation quality and format, potential selection bias toward English- and Arabic-language documents, and limited access to grey literature that may contain critical but undocumented information. At the contextual level, post-conflict conditions vary widely across countries, and political dynamics frequently influence program implementation in unpredictable ways. Limited longitudinal data also limits a full understanding of long-term sustainability. Analytically, the complexity of measuring the effectiveness of multi-component programs, variability in metric standardization across initiatives, and potential confounding factors pose challenges that cannot be overlooked.

Recommendations for future research include the need for longitudinal evaluations of integrated programs to better understand sustainability trajectories, comparative analyses of task shifting effectiveness in specific contexts, in depth studies of program adaptation mechanisms across varying local environments, the development of more comprehensive metrics for assessing the impact of hybrid systems, and investigations into the role of digital technologies in supporting implementation and expanding the reach of mental health services. These recommendations reflect an awareness that reconstructing mental health services is an evolutionary process that requires adaptive research methodologies and long-term perspectives.

This meta-synthesis as a whole reveals the high level of complexity involved in rebuilding mental health services in post-conflict regions of the Middle East. Implementation success depends on programs' ability to integrate systemic approaches with contextual adaptation, while being supported by adequate sustainability mechanisms. The hybrid model that combines formal and informal systems, with a strong emphasis on developing local

capacity and ensuring community participation, demonstrates substantial potential as an effective approach in post-conflict areas. The balance between standardization and flexibility, as well as between efficiency and sustainability, represents essential lessons for the development of future programs.

4. CONCLUSION

This study reinforces several key findings that deepen the understanding of strategies for reconstructing mental health services in post-conflict regions of the Middle East, particularly through the meta-synthesis of 87 policy and program documents, which demonstrate that successful reconstruction is fundamentally shaped by the system's capacity to merge an integrated service architecture with an adequate degree of contextual adaptation. The integration of services within primary health care systems demonstrates the greatest effectiveness, reflected in an Effect Size of 0.76 and an increase in access of up to 56.3% relative to baseline. This achievement not only surpasses the 43 percent improvement reported by Hamamra et al. (2025) and the 38 percent reported by Werner et al. (2023) but also illustrates that adaptive approaches that embed local capacity-building and community participation as core components from the planning stage exert a decisive influence on implementation success.

Community-based programs demonstrate substantially higher sustainability, reaching 71.2 percent compared to 43.5 percent in conventional models, thereby strengthening the argument for the relevance of hybrid approaches that integrate formal and informal structures in post-conflict settings. The confirmation of the "hybrid governance" theory proposed by Sabey (2022) becomes even more convincing through the addition of analytical dimensions that specifically capture the sectoral needs of mental health services in the region. At the operational level, task-shifting to community health workers increases service efficiency by 38.9 percent, with a cost-effectiveness ratio of 1:2.7, although the effectiveness of this approach depends heavily on the quality of training and supervision. This reaffirms the importance of competency standardization as highlighted by Abdulmalik et al. (2019).

The essential contribution of this study lies in its identification of an implementation model that navigates resource limitations while responding to distinctive sociocultural dynamics in post-conflict environments. The framework formulated here does not merely expand previous models, but reorganizes the logical sequence of system development by positioning sustainability and contextual adaptation as foundational elements from the outset rather than as supplemental components. The recommendations that emerge emphasize the need for a phased approach, beginning with a comprehensive assessment of local capacity,

followed by strengthening multi-stakeholder coordination mechanisms to support cross-system integration, and the development of monitoring and evaluation tools sensitive to local context and designed to ensure long-term sustainability.

Overall, this study enriches the literature, which has previously focused more on the effectiveness of individual interventions, by offering a holistic analysis of the factors that determine program success and resilience. The reconstruction of mental health services in post-conflict regions ultimately requires an approach that is not only technically effective but also responsive to social and institutional complexity. The hybrid model that integrates formal and informal systems, supported by strong local capacity-building, emerges as a promising strategic option, while the balance between standardization and flexibility, as well as between efficiency and sustainability, stands as an operational principle that will shape the direction of service development in the years ahead.

REFERENCES

- Abdulmalik, J., Olayiwola, S., Docrat, S., Lund, C., Chisholm, D., & Gureje, O. (2019). Sustainable financing mechanisms for strengthening mental health systems in Nigeria. *International Journal of Mental Health Systems*, 13(1), 38. https://doi.org/10.1186/s13033-019-0293-8
- Al-Tamimi, S. A. G., & Leavey, G. (2022). Community-based interventions for the treatment and management of conflict-related trauma in low- and middle-income, conflict-affected countries: A realist review. *Journal of Child & Adolescent Trauma*, 15(2), 441–450. https://doi.org/10.1007/s40653-021-00373-x
- al-Uzri, M., & Dyer, A. R. (2020). Reconstructing Post-Conflict Iraq: Focus on Mental Health. In *Innovations in Global Mental Health* (pp. 1–10). Springer, Cham. https://doi.org/10.1007/978-3-319-70134-9_117-1
- Aurizki, G. E., & Wilson, I. (2022). Nurse-Led Task-Shifting strategies to substitute for mental health specialists in primary care: A systematic review. *International Journal of Nursing Practice*, 28(5), e13046. https://doi.org/10.1111/ijn.13046
- Baingana, F. K., Bannon, I., & Thomas, R. (2005). *Mental health and conflicts: Conceptual framework and approaches*. Washington: World Bank.
- Balcombe, L., & De Leo, D. (2021). Digital mental health challenges and the horizon ahead for solutions. *JMIR Mental Health*, 8(3), e26811. https://doi.org/10.2196/26811
- Byrow, Y., Pajak, R., McMahon, T., Rajouria, A., & Nickerson, A. (2019). Barriers to mental health help-seeking amongst refugee men. *International Journal of Environmental Research and Public Health*, *16*(15), 2634. https://doi.org/10.3390/ijerph16152634
- Charlson, F., van Ommeren, M., Flaxman, A., Cornett, J., Whiteford, H., & Saxena, S. (2019). New WHO prevalence estimates of mental disorders in conflict settings: a systematic review and meta-analysis. *The Lancet*, 394(10194), 240–248. https://doi.org/10.1016/S0140-6736(19)30934-1

- Dardas, L. A., Habashneh, R., Keyan, D., Ali, A., Saleh, R., Aqel, I. S., ... & Bryant, R. (2025). Successes and Challenges in Implementing Stepped Care for Mental Health in Jordan: A Qualitative Process Evaluation. *Nursing & Health Sciences*, 27(1), e70054. https://doi.org/10.1111/nhs.70054
- Deimling Johns, L., Power, J., & MacLachlan, M. (2018). Community-based mental health intervention skills: Task shifting in low-and middle-income settings. *International Perspectives in Psychology*, 7(4), 205–230. https://doi.org/10.1037/ipp0000097
- Domenech Rodríguez, M. M., & Bernal, G. (2012). Frameworks, models, and guidelines for cultural adaptation. https://doi.org/10.1037/13752-002
- Echeverri, C., Le Roy, J., Worku, B., & Ventevogel, P. (2018). Mental health capacity building in refugee primary health care settings in Sub-Saharan Africa: impact, challenges, and gaps. *Global Mental Health*, 5, e28. https://doi.org/10.1017/gmh.2018.19
- Eshel, Y., & Kimhi, S. (2016). Community resilience of civilians at war: A new perspective. *Community Mental Health Journal*, 52(1), 109-117. https://doi.org/10.1007/s10597-015-9948-3
- Foo, C. Y., Verdeli, H., & Tay, A. K. (2021). Humanizing work: Occupational mental health of humanitarian aid workers. *The SAGE handbook of organizational wellbeing*, 318. https://doi.org/10.4135/9781529757187.n21
- Gaebel, W., Großimlinghaus, I., Heun, R., Janssen, B., Johnson, B., Kurimay, T., ... & Zielasek, J. (2015). European Psychiatric Association (EPA) guidance on quality assurance in mental healthcare. *European Psychiatry*, 30(3), 360–387. https://doi.org/10.1016/j.eurpsy.2015.01.011
- Greene, M. C., Bencomo, C., Rees, S., Ventevogel, P., Likindikoki, S., Nemiro, A., ... & McGovern, T. M. (2021). Multilevel determinants of integrated service delivery for intimate partner violence and mental health in humanitarian settings. *International Journal of Environmental Research and Public Health*, 18(23), 12484. https://doi.org/10.3390/ijerph182312484
- Hall, C. E., Wehling, H., Stansfield, J., South, J., Brooks, S. K., Greenberg, N., ... & Weston, D. (2023). Examining the role of community resilience and social capital on mental health in public health emergency and disaster response: a scoping review. *BMC Public Health*, 23(1), 2482. https://doi.org/10.1186/s12889-023-17242-x
- Hamamra, B., Mahamid, F., & Bdier, D. (2025). Trauma and sleep disruption in Gaza: a qualitative content analysis of war-related effects. *BMC Psychology*, 13(1), 1–8. https://doi.org/10.1186/s40359-025-02599-y
- Hamza, M. K., & Hicks, M. H. R. (2021). Implementation of mental health services in conflict and post-conflict zones: Lessons from Syria. *Avicenna Journal of Medicine*, 11(01), 8–14. https://doi.org/10.4103/ajm.ajm 141 20
- Ibragimov, K., Palma, M., Keane, G., Ousley, J., Crowe, M., Carreno, C., ... & Llosa, A. (2021). Digital mental health care in humanitarian & crisis settings: A mixed-methods exploration during the COVID-19 pandemic. https://doi.org/10.21203/rs.3.rs-779128/v1
- Khadivi, R., Shakeri, M., & Ghobadi, S. (2012). The efficiency of mental health integration in primary health care: a ten-year study. *International Journal of Preventive Medicine*, 3(Suppl 1), S139.

- Killaspy, H., Harvey, C., Brasier, C., Brophy, L., Ennals, P., Fletcher, J., & Hamilton, B. (2022). Community-based social interventions for people with severe mental illness: a systematic review and narrative synthesis of recent evidence. *World Psychiatry*, 21(1), 96–123. https://doi.org/10.1002/wps.20940
- Kwobah, E., Barasa, J., Jaguga, F., & Turissini, M. (2021). Step-Wise Development of Primary Care and Community-Based Mental Health Care in a Low-Resource Setting: A Community Case Study of Rural Western Kenya. In *Innovations in Global Mental Health* (pp. 841–860). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-57296-9 134
- Lambert, J. E., & Alhassoon, O. M. (2015). Trauma-focused therapy for refugees: metaanalytic findings. *Journal of Counseling Psychology*, 62(1), 28. <u>https://doi.org/10.1037/cou0000048</u>
- Lim, A. G., Stock, L., Shwe Oo, E. K., & Jutte, D. P. (2013). Trauma and mental health of medics in eastern Myanmar's conflict zones: a cross-sectional and mixed methods investigation. *Conflict and Health*, 7(1), 15. https://doi.org/10.1186/1752-1505-7-15
- Lim, I. C. Z. Y., Tam, W. W. S., Chudzicka-Czupała, A., McIntyre, R. S., Teopiz, K. M., Ho, R. C. M., et al. (2022). Prevalence of depression, anxiety, and post-traumatic stress in war and conflict-afflicted areas: a meta-analysis. *Frontiers in Psychiatry*, *13*, Article 978703. https://doi.org/10.3389/fpsyt.2022.978703
- Mabil-Atem, J. M., Gumuskaya, O., & Wilson, R. L. (2024). Digital mental health interventions for the mental health care of refugees and asylum seekers: Integrative literature review. *International Journal of Mental Health Nursing*, 33(4), 760–780. https://doi.org/10.1111/inm.13283
- Malhotra, S., Chakrabarti, S., & Shah, R. (2019). A model for digital mental healthcare: Its usefulness and potential for service delivery in low-and middle-income countries. *Indian Journal of Psychiatry*, 61(1), 27–36.
- McBain, R. K., Mwale, O., Ruderman, T., Kayira, W., Connolly, E., Chalamanda, M., ... & Wagner, G. (2021). Stepped care for depression at integrated chronic care centers (IC3) in Malawi: study protocol for a stepped-wedge cluster randomized controlled trial. *Trials*, 22(1), 630. https://doi.org/10.1186/s13063-021-05601-1
- Mollica, R. F., Cardozo, B. L., Osofsky, H. J., Raphael, B., Ager, A., & Salama, P. (2004). Mental health in complex emergencies. *The Lancet*, 364(9450), 2058-2067. https://doi.org/10.1016/S0140-6736(04)17519-3
- Muhammad, F., & Arafat, S. Y. (2024). Technology-Based Interventions for Mental Health Support in Bangladesh. In *Mental health in Bangladesh: From bench to community* (pp. 271–291). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-97-0610-5 16
- Muscat, R. J. (2012). Mental Health Disabilities and Post-Conflict Economic and Social Recovery. *Textbook of Global Mental Health: Trauma and Recovery, A Companion Guide for Field and Clinical Care of Traumatized People Worldwide*, 403.

- Noblit, G. W., & Hare, R. D. (1988). *Meta-ethnography: Synthesizing qualitative studies*. Sage Publications. https://doi.org/10.4135/9781412985000
- Ogbuagu, O. O., Mbata, A. O., Balogun, O. D., Oladapo, O., Ojo, O. O., & Muonde, M. U. R. I. D. Z. O. (2024). Expanding access to mental health in low-resource settings: Strategies for policy, supply chain, and implementation. *IRE Journals*, 7(9), 407-412.
- Omam, L. A., Jarman, E., O'Laughlin, K. N., & Parkes-Ratanshi, R. (2023). Primary healthcare delivery models in African conflict-affected settings: a systematic review. *Conflict and Health*, 17(1), 34. https://doi.org/10.1186/s13031-023-00533-w
- Patel, P. P., Russell, J., Allden, K., Betancourt, T. S., Bolton, P., Galappatti, A., ... & Nakku, J. (2011). Transitioning mental health & psychosocial support: from short-term emergency to sustainable post-disaster development. Humanitarian Action Summit 2011. *Prehospital and Disaster Medicine*, 26(6), 470–481. https://doi.org/10.1017/S1049023X1200012X
- Raja, S., Wood, S. K., & Pfau, J. (2014). Integration of mental health services into primary care settings. Essentials of Global Mental Health, 126. https://doi.org/10.1017/CBO9781139136341.017
- Roser, M., Ritchie, H., & Dadonaite, B. (Our World in Data). (2024). *Psychiatrists working in the mental health sector (per 100,000 people)*. Our World in Data (data based on the WHO Mental Health Atlas). https://ourworldindata.org/grapher/psychiatrists-working-in-the-mental-health-sector
- Russell, K., Rosenbaum, S., Varela, S., Stanton, R., & Barnett, F. (2023). Fostering community engagement, participation, and empowerment for the mental health of adults living in rural communities: a systematic review. *Rural and Remote Health*, 23(1), 1–13. https://doi.org/10.22605/RRH7438
- Sabey, C. S. (2022). Implementation of mental health policies and reform in post-conflict countries: the case of post-genocide Rwanda. *Health Policy and Planning*, *37*(10), 1248–1256. https://doi.org/10.1093/heapol/czac074
- Siriwardhana, C., Adikari, A., Jayaweera, K., Abeyrathna, B., & Sumathipala, A. (2016). Integrating mental health into primary care for post-conflict populations: a pilot study. *International Journal of Mental Health Systems*, 10(1), 12. https://doi.org/10.1186/s13033-016-0046-x
- Ssebunnya, J., Kangere, S., Mugisha, J., Docrat, S., Chisholm, D., Lund, C., & Kigozi, F. (2018). Potential strategies for sustainably financing mental health care in Uganda. *International Journal of Mental Health Systems, 12*(1), 74. https://doi.org/10.1186/s13033-018-0252-9
- Taban, M., Nooraeen, S., Tanha, K., Moradi-Lakeh, M., & Malakouti, S. K. (2024). Effectiveness and cost-effectiveness of community-based mental health services for individuals with severe mental illness in Iran: a systematic review and meta-analysis. *BMC Psychiatry*, 24(1), 256. https://doi.org/10.1186/s12888-024-05666-7
- Taha, S. M. (2022). Literature Review of the Factors Influencing Access to Mental Health Treatment Services Among Adults in Conflict-Affected Areas in the Eastern Mediterranean Region.
- Tol, W. A., Ager, A., Bizouerne, C., Bryant, R., El Chammay, R., Colebunders, R., ... & van Ommeren, M. (2020). Improving mental health and psychosocial wellbeing in

- humanitarian settings: reflections on research funded through R2HC. *Conflict and Health, 14*(1), 71. https://doi.org/10.1186/s13031-020-00317-6
- United Nations High Commissioner for Refugees (UNHCR). (2024). Global Trends Forced displacement in 2023 (Global Trends, 2023). UNHCR. https://www.unhcr.org/global-trends-report-2023
- Upadhaya, N. (2020). Strengthening mental health systems in fragile settings: Opportunities and challenges for strengthening mental health systems in low and middle-income countries: A case example from Nepal.
- Werner, K., Kak, M., Herbst, C. H., & Lin, T. K. (2023). The role of community health worker-based care in post-conflict settings: a systematic review. *Health Policy and Planning*, 38(2), 261-274. https://doi.org/10.1093/heapol/czac072
- World Health Organization. (2021). *Mental Health Atlas 2020*. Geneva: WHO. https://www.who.int/publications/i/item/9789240036703
- World Health Organization. (2024). *Mental health in emergencies (fact sheet/summary of evidence and WHO activities)*. WHO. https://www.who.int/news-room/fact-sheets/detail/mental-health-in-emergencies