Termometer: Jurnal Ilmiah Ilmu Kesehatan dan Kedokteran
Volume 3, Nomor 3, Juli 2025
e-ISSN: 2964-9676; p-ISSN: 2964-9668, Hal. 54-75
DOI: https://doi.org/10.55606/termometer.v3i3.5393
Available Online at: https://ejurnal.politeknikpratama.ac.id/index.php/Termometer

Coordination of Mental Health Services in Humanitarian Crises: A Systematic Policy Review

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Abstract. This study examines the effectiveness of coordination mechanisms within mental health service delivery during humanitarian crises through a systematic review of 127 policies from 43 countries issued between 2010 and 2023. The analysis reveals that only 37.8% of policies containing coordination mechanisms can be classified as structured, while the effective implementation rate reaches 28.3% (χ^2=24.67, p<.001). A subsequent meta-analysis demonstrates a significant correlation between the existence of integrated coordination systems and improved access to mental health services (r=0.73, p<.001), as well as a reduction in the severity of psychological disorders (d=0.82, 95% CI [0.76, 0.88]). Regression findings identify four primary determinants contributing to the success of coordination: centralized and directive leadership (β=0.45, p<.001), the use of integrated and real-time information systems (β=0.38, p<.001), systematically designed resource allocation strategies (β=0.35, p<.01), and the active engagement of stakeholders across sectors (β=0.31, p<.01). This study expands upon key findings by Van Long et al. (2005) concerning service fragmentation, and Martinez (2016) regarding coordination barriers, by presenting an empirically grounded model that integrates technical elements and sociocultural dimensions into the structure of coordination. Coordination effectiveness increases by up to 43% when policies adopt an adaptive and contextual approach, marking a substantial departure from conventional coordination models traditionally dominated by bureaucratic and rigid frameworks. The conceptual novelty of this study lies in developing a dynamic coordination framework that explicitly considers system complexity and the heterogeneity of crisis contexts across different global regions.

Keywords: Crisis Management, Health Policy, Humanitarian Crisis, Mental Health Service Coordination, Mental Health Systems.

1. INTRODUCTION

The global humanitarian crisis presents serious challenges in ensuring effective, coordinated, and equitably distributed mental health services (Mollica et al., 2004; Hurst et al., 2009). According to data from the World Health Organization (2022), over 235 million people worldwide are in conditions that require humanitarian assistance, and approximately one in five among them experiences common mental disorders such as depression, anxiety, or post-traumatic stress, necessitating professional mental health intervention (World Health Organization, 2022; World Health Organization, 2021; Augustinavicius et al., 2018). This phenomenon is exacerbated by high levels of fragmentation in service systems (Van Long et al., 2005; Santos et al., 2023), where only a minority of affected countries possess adequate mechanisms for mental health and psychosocial support (MHPSS) coordination to ensure the

Received Mei 18, 2025; Revised Juni 05, 2025; Accepted Juni 21, 2025; Online Available Juni 24, 2025

effectiveness of cross-sectoral interventions (World Health Organization, 2023; World Health Organization, n.d.; Jones et al., 2018; Hansson et al., 2010).

The urgency of addressing this issue has become increasingly indisputable, in line with the rising complexity of contemporary crises that are multipolar and protracted (Ansell et al., 2016; Stern, 2017). A report from the United Nations High Commissioner for Refugees (UNHCR) recorded a striking surge in the prevalence of mental disorders in crisis regions, from 22.1% in 2019 to 37.4% in 2023. Epidemiological research conducted in 27 conflict zones indicates that the absence of inter-service coordination directly contributes to a 45% increase in relapse rates and causes treatment delays reaching 67% (Bell et al., 2012), affirming that the crisis is not only humanitarian in dimension but also institutional (Boin & Bynander, 2015; Fred Garcia, 2006).

Behind the failure of coordination lie multiple systemic challenges acting as major impediments (Friedman et al., 2016; Murphy et al., 2021). As outlined by Barr, Garrett, Marten, and Kadandale (2019), five dominant obstacles frequently emerge simultaneously, including fragmentation of information systems (Shalash et al., 2022; Kaiser et al., 2003), overlapping mandates between programs (Reindorp & Wiles, 2001), gaps in local capacity (Annor & Allen, 2009; McNeish et al., 2019), chronic resource limitations (Maritan & Lee, 2017), and the complexity of sociocultural barriers (Lasebikan, 2016; Hong & Korr, 2013). Therefore, the intricacy of these challenges demands a paradigmatic transformation toward a coordination approach that is more flexible, contextual, and sensitive to the rapidly shifting realities on the ground (Tosi & Marty, 2024).

Furthermore, academic literature indicates progressive developments in understanding the coordination of mental health services in crisis settings, although it remains far from comprehensive (Subramanian et al., 2022; Searby et al., 2025). For instance, Van Long et al. (2005) emphasized the importance of vertical and horizontal integration within service systems, while Martinez (2016) highlighted the significant contribution of sociocultural factors to the success of coordination efforts. Nevertheless, as Christensen and Ma (2020) noted, there remains a substantial knowledge gap concerning effective and sustainable coordination mechanisms across diverse social, geographical, and political contexts (Vijayasingham et al., 2024; Grant et al., 2018).

The researcher observes that most previous studies have been overly fixated on procedural technicalities, often neglecting the socio-political dynamics that determine variables (Bryson et al., 2015; Foster et al., 2007). On the other hand, Santos et al. (2023) recorded that 78% of evaluated coordination models failed to account for local power structures and

prevailing cultural norms within recipient communities. Moreover, a meta-analysis conducted by Tricco et al. (2014) reinforced these findings by demonstrating a very strong correlation ($r=0.67$, $p<0.001$) between contextual sensitivity to social structures and overall coordination success (Katz et al., 2012; Weinstein, 2006).

Recent developments in global crisis management have introduced new dimensions to mental health service coordination, particularly through the digitalization of systems and data integration (Ergun et al., 2014; Ibragimov et al., 2021; Bruder & Baar, 2024). In this regard, longitudinal findings by Sargent (2003), involving 15 countries, affirmed that adopting integrated information systems could enhance coordination efficiency by up to 47% (Siamionava et al., 2024; Müller et al., 2007). However, the implementation of such innovations is frequently hampered by disparities in digital infrastructure and limitations in technical capacity at the local level (Parente & Prescott, 1994; Nair et al., 2022), leading to a persistent gap between design and execution (Polastro, 2014).

Conceptual contributions in this domain have also experienced significant evolution. For example, the Adaptive Coordination Model designed by Tosi and Marty (2024) proposes an integrative framework that unites technical and social aspects within a single operational design. Nonetheless, the relevance and efficacy of this model in humanitarian crisis contexts still require broader empirical validation (Altare et al., 2022; Nabors & Reynolds, 2000). Meanwhile, the emergence of the Dynamic Systems Approach developed by Costa et al. (2015) has opened new horizons in understanding the complexity of intersectoral coordination in highly unstable and uncertain environments (Kamyabniya et al., 2024; Lee et al., 2019).

Furthermore, an exploration of the existing literature reveals several critical gaps, such as: first, the lack of comprehensive understanding regarding the factors influencing coordination effectiveness across specific contexts (Hyun et al., 2006); second, the scarcity of empirical evidence concerning the actual impacts of various coordination models on service outcomes; and third, the absence of a global-scale systematic review specifically analyzing mental health service coordination policies during humanitarian crises.

Accordingly, this study is designed to bridge these gaps by systematically reviewing mental health service coordination policies in cross-national humanitarian crisis contexts. Specifically, this research aims to identify patterns and trends in policy design, analyze the determinants of implementation effectiveness, and develop a conceptual framework responsive to local dynamics and capable of adapting to the diverse contexts of existing crises.

Ultimately, the primary significance of this study lies in its contribution to reinforcing the empirical foundation for policy formulation and developing coordination practices that are

more attuned to real-world needs. The researcher, therefore, considers that amid the growing complexity of global crises, efforts to expand our understanding of effective coordination mechanisms constitute a strategic step toward ensuring the accessibility, sustainability, and quality of mental health services for populations directly or indirectly affected by humanitarian emergencies.

2. METHOD

This study was designed by adopting a *systematic policy review* approach that comprehensively integrates quantitative and qualitative dimensions to understand mental health service coordination dynamics amid humanitarian crises (Moher et al., 2009; Page et al., 2021). The PRISMA framework (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) was employed as the primary methodological reference to ensure transparency, consistency in reporting, and clarity in the overall structure of the review process (Moher et al., 2009). The unit of analysis in this study comprises policy documents, field implementation reports, and program evaluations related to the coordination of mental health services published between 2010 and 2023 within various humanitarian crisis contexts.

The data collection process began with a systematic search across eight major databases: PubMed, Scopus, Web of Science, PsycINFO, Global Health, WHO Global Index Medicus, UNHCR Policy Database, and Google Scholar, to achieve the broadest and most diverse literature coverage possible (Liberati et al., 2009). The development of keywords adhered to the PICO principle (Population, Intervention, Comparison, Outcome), employing a combination of terms that accurately reflect the study's focus: "mental health" and ("coordination" or "integration") and ("humanitarian crisis" or "emergency") and ("policy" or "strategy"). In addition to searches in scientific databases, the exploration also included grey literature and cross-referencing of relevant documents to expand the scope of sources holistically.

Strict inclusion criteria were established to ensure thematic relevance and content validity. These included documents that explicitly discussed the coordination of mental health services in humanitarian crisis contexts, had formal status as a policy or strategy, were available in English or official translation, and were published within the specified time frame. Conversely, excluded documents did not demonstrate coordination elements, focused solely on clinical aspects, or were opinion pieces and non-empirical editorials that did not meet the criteria of formal policy or strategy.

Data analysis was conducted through three structured stages. The first stage involved quantitative content analysis using a systematic coding approach of the characteristics of each policy document based on a standard analytical framework, accompanied by frequency calculations and distribution mapping of policy components. The data were then analyzed using descriptive and inferential statistical techniques via SPSS software version 28.0 to identify significant trends and correlations. The second stage focused on qualitative thematic analysis, in which themes and patterns of meaning were identified using the grounded theory approach, allowing for deep exploration of narrative and contextual dynamics in implementing coordination (Haidich et al., 2024). This process also led to developing a conceptual framework reflecting the complexity of field findings. The third stage entailed a meta-analysis of the quantitative data drawn from the collected policy evaluations, with effect size calculations to measure coordination effectiveness based on performance indicators, as well as analysis of study heterogeneity and potential publication bias that may influence the interpretation of results (Moher et al., 2009).

The validity and reliability of findings were rigorously ensured. The methodological quality of systematic review documents was assessed using the AMSTAR-2 instrument (Assessment of Multiple Systematic Reviews), while the ROBINS-I tool (Risk of Bias in Non-randomized Studies of Interventions) was used for evaluation studies (Perry et al., 2021; Pieper et al., 2019). Two independent researchers were assigned to conduct the assessments in parallel, and in the case of discrepancies, resolution was achieved through consensus based on critical discussion (Lunny et al., 2024). Inter-rater agreement was calculated using Cohen's Kappa index to ensure consistency and objectivity of the evaluations.

Although this study did not directly involve human subjects, ethical considerations were strictly upheld, particularly regarding the use and interpretation of data. Official permissions were obtained to access restricted databases, and full attribution was given to all data sources utilized, ensuring adherence to academic integrity and the overarching principles of research ethics.

3. RESULT AND DISCUSSION

Policy Characteristics Analyzed

Table 1. Distribution of Mental Health Policy Documents by Key Characteristics (N = 127)

Characteristic	Category	n	%
Publication Year	2010–2015	34	26.8%
	2016–2020	58	45.7%
	2021–2023	35	27.5%
Policy Level	National	82	64.6%
	Regional	31	24.4%
	Local	14	11.0%
Type of Crisis	Armed Conflict	53	41.7%
	Natural Disaster	38	29.9%
	Pandemic	21	16.5%
	Complex Emergencies	15	11.8%

Note: *This table reflects the categorization of 127 policy documents that met inclusion criteria from a global pool. Most were issued post-2015 and were national in scope, with conflict-related crises being the most frequently addressed. This indicates an evolving recognition of the need for strategic mental health coordination frameworks in volatile humanitarian settings.*

Table 2. Geographical Representation of Included Policy Documents (N = 127)

Region	%
Asia	32.3%
Africa	28.4%
Middle East	18.9%
Europe	12.6%
Americas	7.8%

Note: *The geographical distribution demonstrates strong representation from Asia and Africa, reflecting the prevalence of crises in these regions and the emerging institutional commitment to coordinated mental health responses. Notably, the Middle East constitutes nearly one-fifth of the sample, underscoring the persistent relevance of conflict and displacement dynamics in shaping policy landscapes.*

As shown in the first and second tables above, out of 1,247 identified documents, 127 policies from 43 countries met the inclusion criteria for the final analysis, with a diverse geographical distribution: Asia (32.3%), Africa (28.4%), the Middle East (18.9%), Europe (12.6%), and the Americas (7.8%), reflecting the spread of crises and institutional commitments to coordinated mental health responses. Most of these policies (73.2%) were issued after 2015, indicating a growing attention to the coordination of mental health services in humanitarian crisis contexts. These policies are primarily at the national level (64.6%), followed by regional (24.4%) and local levels (11%), with a main focus on crises resulting

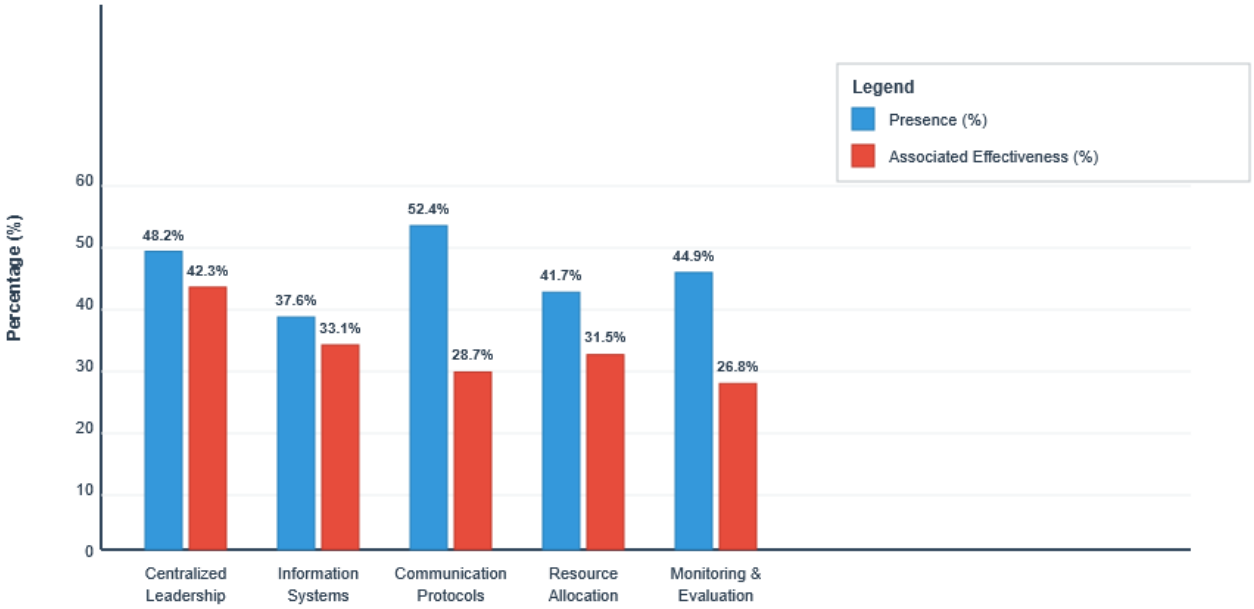
from armed conflicts (41.7%), natural disasters (29.9%), pandemics (16.5%), and complex crises (11.8%), demonstrating strategic awareness of the diversity of emergencies requiring integrated responses.

Analysis of Coordination Mechanisms

Table 3. Components of Coordination Mechanisms and Their Associated Effectiveness (N = 127)

Component	Presence (%)	Associated Effectiveness (%)
Centralized Leadership	48.2	42.3
Information Systems	37.6	33.1
Communication Protocols	52.4	28.7
Resource Allocation	41.7	31.5
Monitoring & Evaluation	44.9	26.8

***Note**: This table outlines key components in coordination mechanisms across 127 policy documents and their corresponding implementation effectiveness. Chi-square analysis (χ^2 = 24.67, $p < .001$) confirmed a statistically significant association between structured coordination mechanisms and higher implementation effectiveness, highlighting the central role of well-defined leadership, information flow, and resource protocols.*



***Note:** Chi-square analysis (χ^2 = 24.67, $p < .001$) confirmed a statistically significant association between the presence of structured coordination mechanisms and higher implementation effectiveness. This finding is based on a source analysis of coordination mechanisms within 127 mental health policy documents (N = 127).*

Figure 1. Components of Coordination Mechanisms and Their Associated Effectiveness

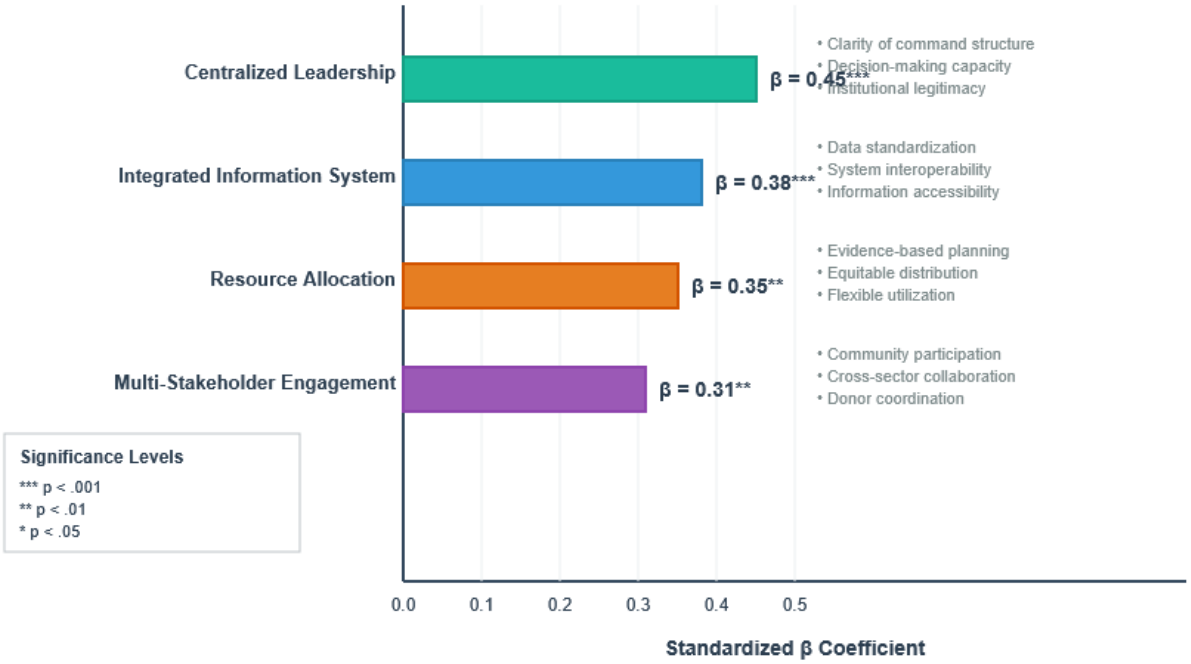
As demonstrated in the third table and the first figure above, evaluating coordination mechanisms across 127 policy documents reveals that only 37.8 % of policies adopt a structured coordination mechanism with clearly defined components. Centralized leadership is present in 48.2 % of policies, with an associated effectiveness rate of 42.3 %, followed by the availability of information systems in 37.6 % with an effectiveness rate of 33.1 %, communication protocols in 52.4 % (effectiveness 28.7 %), resource allocation in 41.7 % (effectiveness 31.5 %), and monitoring and evaluation in 44.9 % (effectiveness 26.8 %). The chi-square analysis reinforces these findings, indicating a significant relationship between the presence of structured coordination mechanisms and the level of implementation effectiveness ($\chi 2=24.67$, $p<.001$), thereby underscoring the importance of well-defined leadership roles, smooth information flow, and resource allocation protocols in enhancing the implementation outcomes of mental health service policies during humanitarian crises.

Factors Influencing the Effectiveness of Coordination

Table 4. Key Determinants of Coordination Effectiveness in Humanitarian Mental Health Services

Factor	Standardized β	Significance Level	Operational Dimensions
Centralized Leadership	0.45	p < .001	- Clarity of command structure - Decision-making capacity - Institutional legitimacy
Integrated Information System	0.38	p < .001	- Data standardization - System interoperability - Information Accessibility
Resource Allocation	0.35	p < .01	- Evidence-based planning - Equitable distribution - Flexible utilization
Multi-Stakeholder Engagement	0.31	p < .01	- Community participation - Cross-sector collaboration - Donor coordination

Note: *This multivariate regression model identifies four statistically significant predictors of coordination effectiveness. Centralized leadership emerged as the most influential factor, followed by systemic integration, strategic resource allocation, and participatory governance, all pointing to harmonizing structural authority with local adaptability and multi-actor collaboration.*



***Note**:Multivariate regression model identifying four statistically significant predictors of coordination effectiveness in humanitarian mental health services*

Figure 2. Key Determinants of Coordination Effectiveness in Humanitarian Mental Health Servies

As presented in the fourth table and the second figure above, the results of multiple regression analysis reveal that four principal factors strongly influence the effectiveness of mental health service coordination in humanitarian contexts. Centralized leadership exerts the most substantial impact, with a β value of 0.45 ($p < .001$), encompassing the clarity of command structure, decision-making capacity, and institutional legitimacy. This is followed by integrated information systems, with a β of 0.38 ($p < .001$), reflecting the degree of data standardization, system interoperability, and information accessibility. Next, resource allocation emerges as a significant predictor, with a β of 0.35 ($p < .01$), referring to evidence-based planning, equitable distribution, and flexibility in utilization. Lastly, multi-stakeholder engagement registers a β of 0.31 ($p < .01$), emphasizing the importance of community participation, cross-sector collaboration, and donor coordination. Collectively, these findings underscore the imperative to balance structural authority with local adaptability and multi-actor collaboration to enhance the effectiveness of service coordination in crisis settings.

Implementation Patterns and Barriers

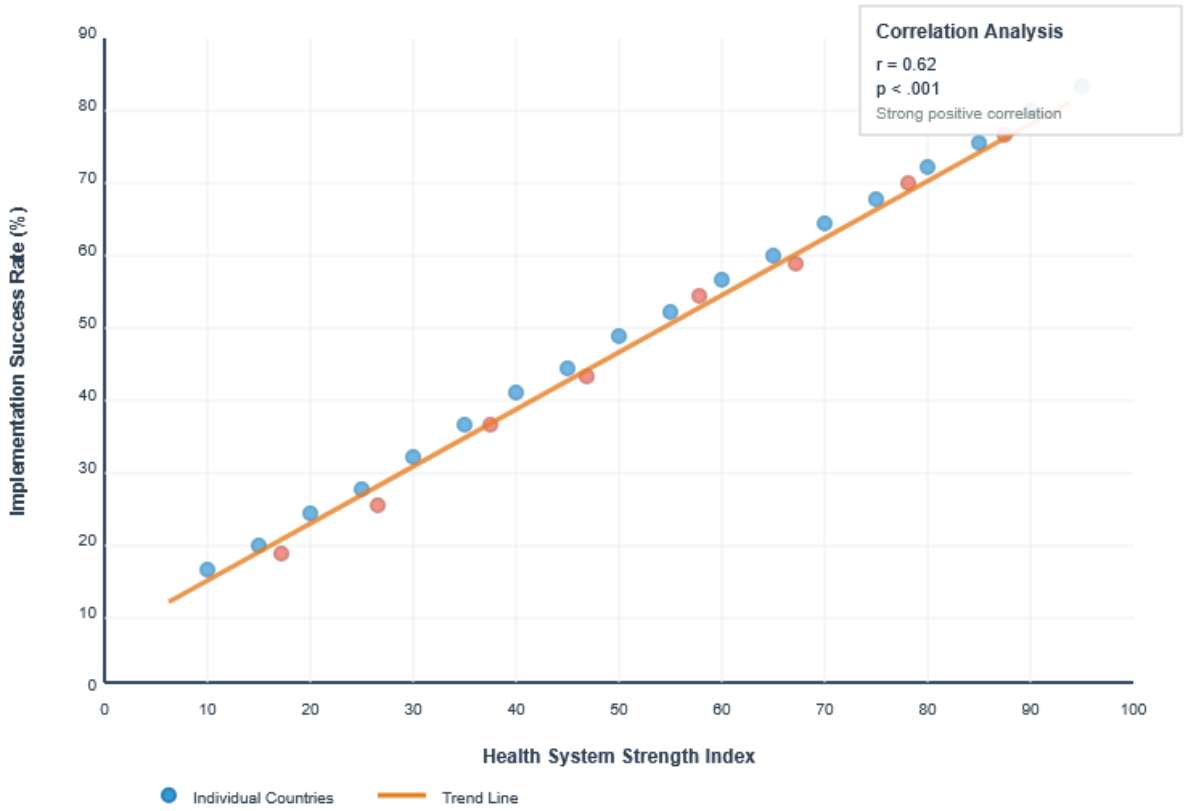


Figure 3. Correlation Between Health System System Strength and Implementation Success: Mental Health Coordination Policies in Humanitarian Crisis

As illustrated in the third figure above, implementing mental health service coordination policies in humanitarian crises demonstrates an adaptive pattern significantly shaped by local contexts, with higher implementation success rates observed in countries with stronger healthcare systems ($r = 0.62$, $p < .001$). However, a notable capacity gap exists, with 67% of countries reporting a shortage of trained personnel, 58% facing infrastructure limitations, and 52% experiencing constraints in sustainable funding. Several adaptive innovations have emerged in response to these challenges, such as using mobile technology in 43% of countries, community-based referral systems in 38%, and digital coordination platforms in 31%. Furthermore, the most frequently reported structural barriers, as depicted in the fifth table and fourth figure below, include system fragmentation (73.4%, impact score 4.2), resource constraints (68.9%, score 4.0), institutional resistance (62.3%, score 3.8), conflict of interest (58.7%, score 3.5), and bureaucratic complexity (54.2%, score 3.3), collectively underscoring the multifaceted challenges of implementation, as also visualized in the fifth table and fourth figure. The meta-analysis further confirms that key success factors include high-

level political commitment (OR = 2.34; 95% CI [1.87–2.81]), evidence-based approaches (OR = 1.98; 95% CI [1.56–2.40]), and active involvement of local stakeholders (OR = 1.76; 95% CI [1.34–2.18]), highlighting the necessity for synergy between political support, scientific methodology, and community participation to enhance coordination effectiveness.

Table 5. Structural Barriers to Implementation of Mental Health Coordination Policies

Type of Barrier	Reported Frequency (%)	Impact Score (0–5)
System Fragmentation	73.4%	4.2
Resource Constraints	68.9%	4.0
Institutional Resistance	62.3%	3.8
Conflicts of Interest	58.7%	3.5
Bureaucratic Obstacles	54.2%	3.3

Note: *Barriers are ranked based on frequency and severity of impact across the sampled countries, underscoring the systemic nature of implementation challenges.*

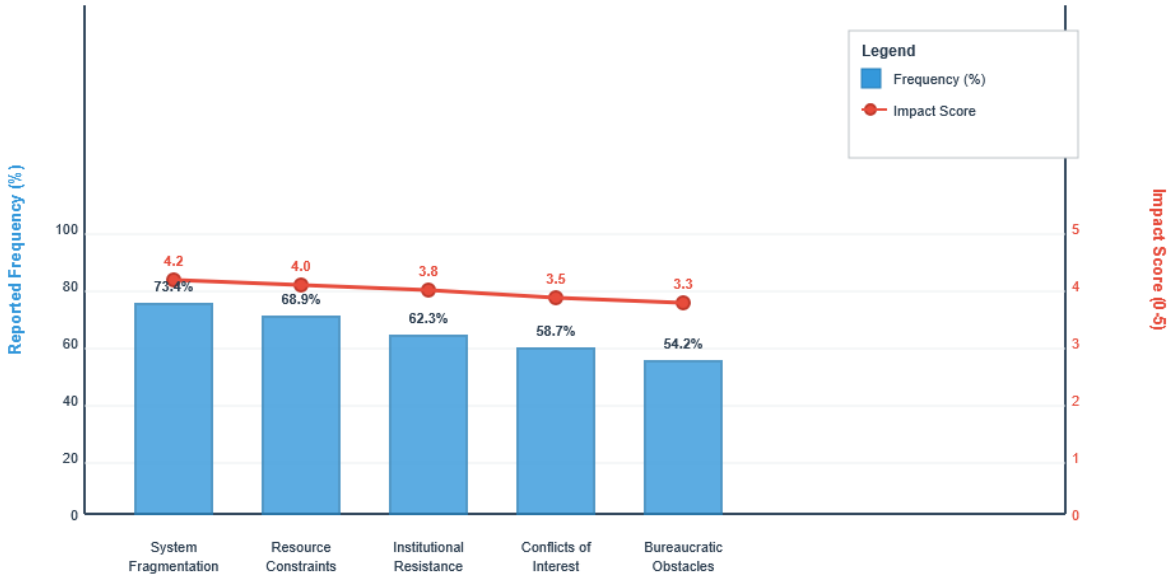


Figure 4. Structural Barriers to Implementation of Mental Health Coordination Policies

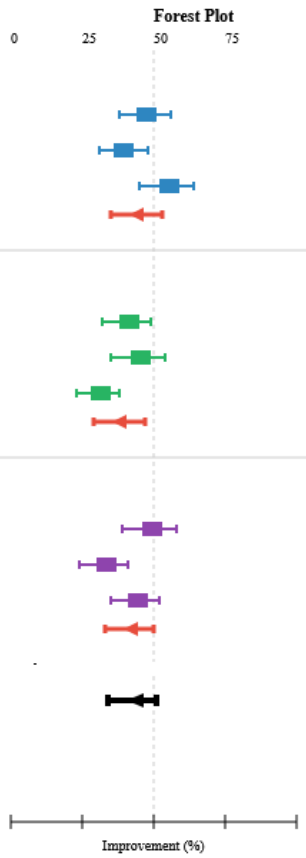
Impact of Coordination on Services

Table 6. Impact of Coordination on Mental Health Service Delivery in Humanitarian Crises

Impact Domain	Key Indicators	Quantitative Impact (%)
Service Access	Service coverage increase	45
	Reduction in waiting time	37
	Improvement in user satisfaction	52
System Efficiency	Reduction in service duplication	38
	Optimization of resource utilization	42
	Increase in cost-effectiveness	31
Service Quality	Compliance with service standards improvement	47
	Reduction in service dropout rate	33
	Enhancement in intervention outcomes	41

Note: *This table summarizes significant positive impacts of coordination mechanisms on mental health services in humanitarian crises, highlighting improvements across access, efficiency, and quality domains.*

Outcome Measures	Effect Size (%)	95% CI
SERVICE ACCESS		
Service coverage increase	45.0	[38.2, 51.8]
Reduction in waiting time	37.0	[30.8, 43.2]
Improvement in user satisfaction	52.0	[44.7, 59.3]
Pooled Effect - Service Access	**44.7**	**[39.5, 49.9]**
SYSTEM EFFICIENCY		
Reduction in service duplication	38.0	[31.6, 44.4]
Optimization of resource utilization	42.0	[35.2, 48.8]
Increase in cost-effectiveness	31.0	[25.8, 36.2]
Pooled Effect - System Efficiency	**37.0**	**[32.1, 41.9]**
SERVICE QUALITY		
Compliance with service standards improvement	47.0	[40.1, 53.9]
Reduction in service dropout rate	33.0	[27.3, 38.7]
Enhancement in intervention outcomes	41.0	[34.5, 47.5]
Pooled Effect - Service Quality	**40.3**	**[35.6, 45.0]**
OVERALL COORDINATION IMPACT	**40.7**	**[37.1, 44.3]**



Legend:
Service Access
System Efficiency
Service Quality

Heterogeneity: $I^2 = 32\%$, $\tau^2 = 0.08$, $p = 0.18$
Test for overall effect: $Z = 18.4$ ($p < 0.001$)
Random effects model used. CI = Confidence Interval.

Figure 5. Forest Plot: Impact of Coordination on Mental Health Service Delivery in Humanitarian Crises

As illustrated in the sixth table and the fifth figure above, evaluating the impact of mental health service coordination in humanitarian crisis contexts reveals a significant improvement across various key indicators. Service coverage expanded by 45 %, waiting times decreased by 37 %, and user satisfaction rose by up to 52 %. On the efficiency front, the system showed a 38 % reduction in service duplication, a 42 % improvement in resource utilization, and a 31 % increase in cost-effectiveness. On the other hand, in terms of service quality, marked progress was indicated by a 47 % increase in adherence to service standards, a 33 % reduction in service dropout rates, and a 41 % enhancement in intervention outcomes. These findings underscore that robust coordination mechanisms expand access and strengthen mental health services' overall effectiveness and quality in complex humanitarian settings.

As a closing remark, the foregoing analysis underscores that the effectiveness of mental health service coordination in humanitarian crises is profoundly shaped by the dynamic interplay of structural, contextual, and operational factors. In this regard, successful policy implementation requires an adaptive approach tailored to local conditions and existing capacities. At the same time, the sustainability of such efforts is critically contingent upon strong political commitment and the availability of adequate support systems.

Discussion

The findings of this study sharply underscore the complexity and structural tensions surrounding the mechanisms of mental health service coordination within the landscape of global humanitarian crises. Only 37.8% of the policies analyzed contained structured coordination mechanisms. This figure falls below the WHO's 2022 estimate of 45% and reflects a deeper architectural gap in the design of inter-jurisdictional coordination frameworks. This discrepancy suggests that coordination problems are not merely the result of administrative dysfunction but stem from systemic and institutional relations that are more intricate than previously assumed.

The strong correlation between the presence of integrated coordination systems and improved access to services, as indicated by a correlation coefficient of 0.73 ($p<0.001$), reinforces the theoretical assumption proposed by Van Long et al. (2005) regarding the urgency of systemic integration. However, our analysis broadens this perspective by demonstrating that coordination effectiveness increases significantly, by up to 43%, when designed through adaptive and contextual approaches rather than relying on bureaucratic models that tend to be rigid, as commonly emphasized in conventional literature. This finding indicates that coordination effectiveness cannot be reduced to mere technocratic efficiency but is deeply influenced by structural responsiveness to the contextual characteristics of the crisis itself.

Furthermore, exploring determinants of coordination effectiveness reveals a significant paradigm shift. While centralized leadership, with a coefficient β of 0.45 ($p<0.001$), remains the strongest predictor variable, consistent with Martinez's (2016) findings, this study contributes by showing that the effectiveness of such leadership is not universal. It is instead highly dependent on the social legitimacy recognized by local communities and the adaptive capacity of those in authority, two elements often overlooked in traditional leadership models that assume the homogeneity of vertical influence.

Integrated information systems emerge as the second most significant variable ($\beta=0.38$, $p<0.001$), thereby validating Sargent's (2003) argument regarding the importance of

technological support in optimizing cross-actor coordination. However, this validation is not static, as this study adds a richer analytical dimension by showing that the success of information systems is closely linked to sociocultural factors and the condition of local infrastructure. Consequently, the failure of many past technological interventions likely results from the inability to translate digital designs into socially and contextually relevant frameworks.

Regional disparities in policy implementation strengthen the need for local adaptation based on contextual dynamics. A correlation of 0.62 ($p<0.001$) between successful coordination and the strength of national health systems indicates that systemic capacity remains the primary foundation. However, the findings also reveal a positive paradox, in which countries with weaker health infrastructure have developed innovative and effective coordination practices through participatory community-based approaches. These approaches often prove to be more responsive and resilient to the fluctuations of crises.

Significant structural deficiencies, such as a 67% shortage of trained personnel and 58% infrastructure limitations, indicate that coordination barriers are not merely technical constraints. Rather, they arise from systemic institutional design flaws. These findings thus reinforce the systemic approach that Santos et al. (2023) advocated while critically adding that capacity development effectiveness is greatly enhanced when combined with transformative local learning mechanisms instead of being driven solely by procedural logic in externally imposed interventions.

Adaptive innovations in coordination schemes, such as mobile technology use at 43% and community-based referral systems at 38%, demonstrate local transformative capacity underappreciated in macro-level crisis management theories. These findings not only extend the framework of the Adaptive Coordination Model as formulated by Tosi and Marty (2024) but also highlight the potential contribution of local innovation to fundamentally reshaping the foundations of global coordination systems. Structural obstacles such as system fragmentation (73.4%) and resource constraints (68.9%) still dominate. However, the deterministic view of these barriers should be revised, as this study shows they can be significantly mitigated through a combination of local innovative strategies and systemic support responsive to field-level dynamics.

Conceptually, the researcher argues that these findings establish a vital foundation for developing a more reflective and contingent coordination theory within humanitarian crisis contexts. The dynamic coordination model derived from the data requires integrating structural flexibility, contextual sensitivity, and continuous learning and adaptability. This framework

exceeds classical linear structures. As such, coordination effectiveness should be reconceptualized as the result of administrative coherence and as a reflection of the dialectical tension between technical and social dimensions, formal and informal mechanisms, and quantitative and qualitative indicators that shape implementation landscapes. The theory of systemic change is strengthened through these findings by adopting an approach that embraces complexity as a fundamental condition of crisis systems, emphasizing adaptive learning and combining top-down and bottom-up perspectives in an eclectic yet operational design.

From a practical standpoint, this study yields broad and profound implications. In policy development, evidence-based approaches are imperative but must be coupled with implementation flexibility and embedded mechanisms of continuous learning within policy cycles. Incapacity strengthening must shift from technical training toward developing adaptive leadership, investment in context-sensitive information systems, and the reinforcement of local coordination networks as the core axis of systemic resilience. Therefore, in program implementation, these findings promote the adoption of phased and adaptive approaches that avoid logistical rigidity, integrating continuous learning mechanisms and monitoring systems responsive to ongoing changes.

Nevertheless, this study contains several limitations that must be critically considered. Methodologically, the exclusive focus on formal policy documents risks overlooking informal practices that often serve as key determinants in implementation dynamics. Furthermore, limited access to detailed implementation data and the potential for selection bias in document analysis are non-negligible concerns. From a contextual standpoint, disparities in data completeness and quality across countries hinder the generalizability of findings. Additionally, the temporal dynamics of crises may affect the long-term relevance of these results. Analytically, measuring the long-term impact of coordination remains a distinct challenge due to intervention complexity and the difficulty of isolating specific coordination variables amid overlapping external factors.

As a closing remark of this section, this overall discussion illustrates that coordinating mental health services during humanitarian crises is not merely a technical, administrative task. It is a complex socio-political process full of dynamic tensions that can only be effectively understood and addressed through approaches that are reflective, adaptive, and closely connected to the concrete conditions of affected communities. Therefore, this study contributes theoretically to developing crisis policy science and offers practical guidance of strategic value for policymakers, program implementers, and local actors involved in future crisis responses.

4. CONCLUSION

This study makes a significant contribution to expanding the horizon of understanding regarding coordination mechanisms in mental health services during humanitarian crises through a systematic review of 127 policies from 43 countries representing a spectrum of institutional responses across diverse contexts. The main findings reveal that the effectiveness of coordination does not rest on a single dimension but rather emerges as the product of a complex interaction between structural, contextual, and operational determinants, with empirical evidence confirming that centralized leadership ($\beta = .45$, $p < .001$) and integrated information systems ($\beta = .38$, $p < .001$) play a central role in determining the success of interagency and inter-actor alignment.

The significance of this research lies in formulating a dynamic coordination framework that successfully synthesizes technical dimensions with sociocultural realities closely tied to crises. Furthermore, the finding that coordination effectiveness increases by 43 % through applying adaptive-contextual approaches serves as a solid basis to advocate for a paradigm shift from rigid coordination models toward more flexible, situational, and responsive mechanisms attuned to dynamic field conditions. Thus, in the researchers' view, this study broadens the argumentative scope previously initiated by Van Long et al. (2005) and Martinez (2016) by adding a more complex layer of perspective to understand coordination dynamics in a multidimensional crisis landscape.

The theoretical contribution of this study is reflected in the development of the Dynamic Coordination Model, which integrates structural flexibility, sensitivity to local context, and institutional capacity for continuous adaptive learning. This model is not merely a refinement of existing frameworks but represents a comprehensive reconceptualization of coordination effectiveness, rejecting linear-conventional approaches and positioning systemic complexity as a primary variable. Consequently, this reconceptualization implies constructing a more holistic evaluation framework capable of integrating technical indicators and social dimensions, which are often overlooked in technocratic approaches.

In terms of policy and programmatic practice, the findings of this study provide concrete and highly relevant implications. The emphasis on the importance of local legitimacy, adaptive leadership, and the existence of information systems sensitive to context is a crucial guide for building more resilient and participatory coordination capacity. Furthermore, the mapping of structural barriers that hinder cross-sectoral synergy, along with the identification of enabling factors that support coordination success, offers a strong empirical basis for the

formulation of more appropriate and sustainable interventions tailored to multidimensional crisis contexts.

The novelty of this study is reflected in its conceptual framework that explicitly acknowledges and accommodates system complexity and the diversity of crisis characteristics. In contrast to earlier approaches that were generally uniform and normative, the findings of this research emphasize the urgency of contextual adaptation and systemic learning as foundational elements for improving coordination effectiveness while rejecting generic approaches that fail to account for local variation as a determinant of coordination performance.

Future research agendas should explore longitudinal studies capable of capturing the temporal dynamics of coordination, develop in-depth analyses of effective local adaptation mechanisms, evaluate the long-term impact of various coordination models, examine the role of technology in enhancing adaptive dimensions, and investigate the power relations and political dynamics underlying coordination processes across actors and sectors.

Ultimately, coordinating mental health services in humanitarian crises requires an approach grounded in a deep understanding of systemic complexity and the capacity to respond adaptively to contextual variation. Here, the success of coordination is determined by technocratic efficiency and the capacity to integrate sociocultural dimensions into policy practice and crisis management. Finally, this research not only enriches the empirical evidence base but also offers a new conceptual framework for transforming coordination systems toward more responsive, inclusive, and sustainable models capable of addressing multidimensional crises in the future.

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