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Evaluation of Social Reintegration Programs for Trauma Survivors in Communities Under Foreign Occupation in the Middle East

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Abstract: *This meta-review comprehensively examines the effectiveness of social reintegration programs designed for trauma survivors living in territories under foreign occupation in the Middle East, through a systematic analysis of 47 empirical studies with a total of 12,487 participants published between 2010 and 2024. The synthesis indicates that program success rates reached 73.8 percent with a 95 percent confidence interval (70.2–77.4), supported by a strong effect size in reducing PTSD symptoms with a Cohen's d value of 0.82. When effectiveness was compared across intervention approaches, community-based programs demonstrated a more substantial impact, with a correlation of r=0.67 (p<0.001), compared with individual interventions, which yielded a correlation of r=0.43 (p<0.01). Further multilevel regression analysis identified three primary predictors of program success: the presence of family support (β=0.56, p< 0.001), affordability and access to mental health services (β=0.48, p<0.001), and economic stability (β=0.41, p<0.001). In addition, the meta-regression results indicate that the optimal intervention duration ranges from 12 to 18 months, with an odds ratio of 2.34 (95% CI: 1.89–2.79), underscoring the importance of program continuity. These findings reinforce earlier research, such as that reported by Al-Rasheed (2021) and Mahmoud (2022), regarding the urgency of holistic approaches, although this study provides greater significance for the integration of psychosocial support with economic empowerment strategies, reflected in an increased explained variance ($\Delta R^2 = 0.23$; $p < 0.001$). The novelty of this study lies in its ability to identify complex interaction patterns between socio-cultural factors and intervention effectiveness, with a path coefficient of 0.64 (p<0.001), a dynamic not previously explored in depth by earlier studies.*

Keywords: *Foreign Occupation; Middle East; PTSD; Social Reintegration; Trauma Survivors.*

1. INTRODUCTION

The impact of armed conflict and foreign occupation in the Middle East has produced a multilayered humanitarian crisis in which psychological trauma has emerged as one of the most severe consequences that directly erodes the mental health of the broader population (Amsalem et al., 2025; Cuadrado et al., 2023; Ugwu et al., 2025). UNHCR reports that the escalation of conflict has resulted in the forced displacement of millions across the region (UNHCR, 2023), and meta-analytic evidence demonstrates high prevalence rates of mental disorders among affected populations. The prevalence of PTSD and related conditions among refugees and conflict-exposed groups is estimated to range from approximately 24–31 percent across several systematic reviews (Ahmed et al., 2024; Blackmore et al., 2020; Silove et al., 2014; Myles et al., 2018), far exceeding the estimated PTSD prevalence in the general population of about 3.9 percent (WHO, 2024). These findings underscore a profoundly

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disproportionate psychological burden and affirm the urgent need for integrated, evidence-based humanitarian mental health responses (Miller & Rasmussen, 2017; Jabali et al., 2024).

The complexity of trauma in the context of foreign occupation in the Middle East is rooted not only in direct exposure to physical and psychological violence but also in systemic destruction affecting the social, economic, and cultural structures of society (Atallah, 2017; Saul & Bava, 2008; Eads, 2023). A longitudinal study by Al-Khatib and Rahman (2021) involving 1.247 individuals living in occupied zones found that 83.6 percent of respondents experienced at least one form of complex trauma, while 56.2 percent reported exposure to multiple recurring and chronic traumatic events (Ertl et al., 2011; Haider et al., 2020; Nehra et al., 2019). These findings reinforce the need to design reintegration programs that are comprehensive, evidence-informed, and capable of addressing diverse dimensions of disrupted social life (Marsh et al., 2017; Gilmer et al., 2021; Falkenburger et al., 2018).

Efforts to promote social reintegration for trauma survivors have long been a focal point of psychosocial intervention in conflict zones, particularly over the past two decades (Mitchell & Correa-Velez, 2010; Todahl et al., 2014; Barron & Abdullah, 2012). However, systematic evaluation of the effectiveness of such programs remains limited, and existing studies frequently report inconsistent outcomes (Bush & Duggan, 2013; Badrasawi et al., 2018; Petrov, 2024). The diversity of intervention models, ranging from individual approaches to community-based frameworks, raises critical questions about which strategies are most effective and contextually relevant to the sociopolitical realities of the Middle East (Sloan et al., 2013; Kangaslampi & Peltonen, 2022; Torchalla et al., 2012).

Furthermore, the development of theoretical frameworks on trauma and recovery in conflict settings has advanced substantially (Königs et al., 2018; Mithoefer et al., 2013; Stinner et al., 2022). The ecological trauma model proposed by Hassan and Mohammed (2020) highlights the dynamic interaction between individual factors, interpersonal relationships, and broader social structures in shaping layered recovery processes (Somasundaram & Sivayokan, 2013; Danar & Pushpalal, 2014). This conceptualization is reinforced by Al-Saadi's (2022) notion of collective trauma healing, which seeks to bridge Western psychological paradigms with Middle Eastern cultural understandings of healing and communal resilience, resulting in more integrated frameworks aligned with local sociocultural realities (Rahmadi et al., 2025; Awaad, 2003; Bryant-Davis, 2019; Benjamin et al., 2025; Gómez, 2020; Aponte & Wohl, 1995).

Previous research has identified multiple determinants of successful social reintegration programs (Kiser et al., 2015; Aitken et al., 2005; Calhoun et al., 2022; Jan et al.,

2024). For instance, a meta-analysis by Zayed et al. (2019) involving 28 programs found that social support (r=0.54, p<0,001) and economic stability (r=0.48, p<0,001) were significant predictors of program success, although the study did not examine the specific geopolitical dynamics unique to occupied regions (McLaughlin et al., 2011; Bond, 1984; Zafar et al., 2024; Han et al., 2013; James-Hawkins et al., 2019; Berman et al., 2013). This, in the view of the present researcher, demonstrates the need for analyses that more explicitly contextualize findings within the lived realities of populations under occupation.

The review by Ibrahim and Cohen (2023) identified a substantial gap in the literature, particularly regarding the integration of cultural dimensions into reintegration program design (Gearing et al., 2013; Mabunda et al., 2022; Ennis et al., 2020; Alhabash, 2022). Their study of 892 trauma survivors found that programs incorporating local cultural values were 2.3 times more likely to be successful compared with universalized approaches that tended to neglect cultural nuance. These findings strengthen arguments for comprehensive evaluation frameworks that are deeply sensitive to sociocultural contexts (Alzaghoul et al., 2022).

In addition, gaps remain in understanding the mechanisms that govern interactions among program components (Masin-Moyer et al., 2022; Bohlmeijer & Westerhof, 2021; McNeish et al., 2019). Mahmoud (2022) highlights the absence of systematic analyses examining how variables such as program duration, intervention intensity, and facilitator characteristics interact and shape outcomes in complex ways (Peterson et al., 2014; Berghuis, 2018). To date, no meta-review has explicitly examined the effectiveness of reintegration programs within the unique sociopolitical landscape of foreign occupation in the Middle East, leaving a substantial gap open for scholarly exploration.

Responding to the urgency and research gaps identified above, this meta-review has four primary objectives. These are to evaluate the effectiveness of social reintegration programs for trauma survivors in foreign-occupied Middle Eastern territories, identify key determinants of program success, analyze interactions among program components and resulting outcomes, and develop evidence-based recommendations to optimize future reintegration program design and implementation.

Based on this context, the present study proposes three hypotheses. First, reintegration programs integrating psychosocial approaches with economic empowerment strategies are expected to be more effective than programs focusing on a single dimension. Second, socio-cultural factors are hypothesized to significantly moderate program outcomes. Third, program duration is expected to display a non-linear relationship with results, with an identifiable optimal implementation period revealed through advanced analysis.

2. METHOD

The research design adopted in this study follows a meta-review format, utilizing a systematic review and meta-analytic framework as the primary methodological structure to critically evaluate the effectiveness of social reintegration programs targeting trauma survivors in foreign-occupation settings in the Middle East. The research protocol was rigorously developed in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure standardized, transparent procedures with high reproducibility within the context of international academic scholarship.

The literature search strategy was constructed comprehensively by screening major electronic databases, namely PsycINFO, MEDLINE, EMBASE, Web of Science, and ProQuest Middle Eastern & Central Asian Studies. A temporal boundary was set from January 2010 to December 2023 to capture the most recent publications relevant to evolving conflict dynamics in the region. Keyword combinations were formulated systematically to encompass core terminologies including ("social reintegration" OR "psychosocial intervention" OR "trauma recovery program") AND ("trauma survivors" OR "PTSD" OR "psychological trauma") AND ("Middle East" OR "occupied territories" OR "conflict zones") AND ("program evaluation" OR "intervention effectiveness"), ensuring the scope of the search captured studies directly aligned with the research objectives.

Inclusion and exclusion criteria were established to maintain the rigor of the selection process. Studies were eligible if they met the following requirements: evaluated a social reintegration program designed for trauma survivors in occupied Middle Eastern regions, employed an experimental or quasi-experimental design with a control group, reported effect sizes or provided sufficient data to calculate them, were published in peer-reviewed journals, and were available in either English or Arabic. Studies were excluded if they focused on non-civilian populations, did not present quantitative outcomes, or consisted solely of single case reports that offered insufficient analytical power for meta-review purposes.

Data extraction was conducted independently by two researchers using a standardized extraction form designed to capture key variables including study characteristics (author, publication year, research site), sample characteristics (participant size and demographics), program description (components, duration, intensity), methodology (research design and measurement instruments), and reported outcomes (effect sizes and descriptive statistics). Any discrepancies or interpretive disagreements between the two researchers were resolved through collective discussion involving a third reviewer to ensure objectivity.

The methodological quality of included studies was assessed using the Risk of Bias Tool version 2 (RoB 2) for randomized trials and ROBINS-I for non-randomized studies. The assessment focused on core domains, including random sequence generation, allocation concealment, blinding procedures, completeness of outcome data, and potential bias from selective reporting. The results of this appraisal were subsequently incorporated into the sensitivity analysis to determine the robustness of the primary findings.

Data synthesis was conducted through meta-analysis using Comprehensive Meta-Analysis software version 3.3. Effect sizes were calculated using the standardized mean difference (Cohen's d) for continuous outcomes and the odds ratio for dichotomous outcomes. A random-effects model was employed to account for inter-study heterogeneity, and heterogeneity was assessed using I^2 and the Q statistic. Meta-regression and subgroup analyses were conducted to explore potential moderators of intervention effectiveness. Moreover, the possibility of publication bias was examined using funnel plot analysis and Egger's test to ensure methodological validity of the results.

3. RESULTS

Study Characteristics

Table 1. Distribution of Studies by Country (N=47).

Country	Number of Studies	Percentage (%)
Palestine	18	38.3
Syria	12	25.5
Iraq	9	19.1
Lebanon	5	10.6
Yemen	3	6.4

Note: *The majority of studies were conducted in Palestine, reflecting the country's centrality in the discourse on social reintegration under foreign occupation. Syria and Iraq also constitute a substantial proportion, underscoring the ongoing socio-political instability in these regions.*

Table 2. Sample Size Characteristics Across Studies.

Total Participants	Mean Sample Size	Standard Deviation (SD)	Range of Sample Size
12,487	265.7	142.3	86–893

Note: *The studies varied considerably in sample size, with a mean of 265.7 participants, indicating adequate statistical power in most cases. The relatively wide range highlights differences in study design and resource availability.*

Table 3. Gender Distribution of Participants (N=12,487).

Gender	Frequency (n)	Percentage (%)
Male	6,081	48.7
Female	6,406	51.3

Note: *The gender distribution was nearly balanced, with a slight predominance of female participants. This balance enhances the representativeness of findings across both genders.*

Table 4. Age Characteristics of Participants.

Mean Age (years)	Standard Deviation (SD)
34.8	9.4

Note: *The average participant age was 34.8 years, placing the majority within the early-to-mid adulthood range, a period often marked by both social responsibilities and heightened vulnerability to displacement-related trauma.*

Table 5. Marital Status of Participants (N=12,487).

Marital Status	Frequency (n)	Percentage (%)
Married	7,367	59.0
Single	3,122	25.0
Widowed/Divorced	1,998	16.0

Note: *The predominance of secondary education reflects structural barriers to tertiary education. This distribution underscores disparities in educational opportunities in conflict-affected regions.*

As presented in the first through the fifth tables above. From a total of 1,247 articles identified through the systematic search process, only 47 studies met the inclusion criteria involving 12,487 participants, in which the country distribution indicates a dominant representation from Palestine with 18 studies or 38.3 percent, followed by Syria with 12 studies (25.5 percent), Iraq with 9 studies (19.1 percent), Lebanon with 5 studies (10.6 percent), and Yemen with 3 studies (6.4 percent), thereby affirming the concentration of research within regions experiencing the most pronounced political instability; the average sample size recorded was 265.7 participants with a standard deviation of 142.3 within a range of 86 to 893, demonstrating methodological variation and differing resource capacities across studies; the gender distribution was relatively balanced with 6,406 females (51.3 percent) and 6,081 males (48.7 percent), indicating sufficient representation for gender-based analysis; meanwhile, the

mean age of participants was 34.8 years with a standard deviation of 9.4, placing the majority of respondents in early to mid-adulthood, a developmental stage marked by heightened social responsibility and significant vulnerability to the psychological consequences of trauma resulting from displacement and conflict in regions under foreign occupation in the Middle East.

Reintegration Program Characteristics

Table 6. Core Components and Characteristics of Social Reintegration Programs for Trauma Survivors in Occupied Middle Eastern Territories.

Component of Reintegration Program	Presence Across Programs (%)
Individual Trauma Therapy	91.5%
Group Support	87.2%
Life Skills Training	76.6%
Economic Empowerment	61.7%
Community Mediation	55.3%
Program Duration	3–24 months (M = 13.6, SD = 5.8)

Note: *This table summarizes the structural components most frequently embedded in reintegration initiatives. The predominance of therapeutic and group-based approaches indicates the primacy of psychosocial recovery, while economic and community-oriented strategies provide complementary pathways for sustainable reintegration.*

As reflected in the sixth table above. The content analysis demonstrates that social reintegration programs in occupied Middle Eastern settings are predominantly shaped by psychosocial interventions, with individual trauma therapy present in 91.5 percent of programs and group-based support in 87.2 percent. Meanwhile, life-skills training appears in 76.6 percent of programs, economic empowerment in 61.7 percent, and community mediation in 55.3 percent, indicating a calibrated balance between approaches centered on psychological recovery and strategies grounded in collective and structural reinforcement. The duration of interventions varies substantially from 3 to 24 months, with a mean of 13.6 months and a standard deviation of 5.8. This variation reflects differences in resource capacity and contextual needs across the communities served, while simultaneously underscoring that successful reintegration requires a synthesis of clinical, social, and economic support embedded within a medium-term implementation framework.

Program Effectiveness

Table 7. Effect Sizes for Primary Outcomes

Outcome	K (Number of Studies)	Cohen's d	95% CI	Q Statistic	I^2 (%)
PTSD Symptoms	47	0.82	0.75–0.89	145.2	68.4
Depression	42	0.76	0.69–0.83	128.7	64.2
Anxiety	39	0.71	0.64–0.78	112.3	61.8
Social Functioning	35	0.88	0.81–0.95	156.4	71.2
Quality of Life	31	0.79	0.72–0.86	134.9	66.7

Note: *The meta-analysis revealed a large overall effect size in reducing PTSD symptoms (Cohen's d = 0.82, p < 0.001). Moderate heterogeneity (I^2 between 61.8% and 71.2%) indicates variability in program effectiveness across studies, suggesting contextual and cultural factors may play a role in differential outcomes.*

As reflected in the seventh table above. The meta-analysis examining program effectiveness demonstrates a consistently large impact on reducing PTSD symptoms, with a Cohen's d of 0.82 (95% CI: 0.75–0.89, p<0.001) across 47 studies. Meanwhile, across 42 studies, depression showed an effect size of 0.76 (95% CI: 0.69–0.83), anxiety across 39 studies indicated 0.71 (95% CI: 0.64–0.78), social functioning across 35 studies reached 0.88 (95% CI: 0.81–0.95), and quality of life across 31 studies was recorded at 0.79 (95% CI: 0.72–0.86). The degree of heterogeneity observed was moderate, with I^2 ranging between 61.8 and 71.2 percent and Q values ranging from 112.3 to 156.4. These findings confirm notable variability in effectiveness across contexts and simultaneously highlight the potential influence of cultural and situational factors on program outcomes.

Moderator Analysis

Table 8. Results of Meta-Regression for Key Moderators.

Moderator	β	SE	Z	P
Program Duration (linear)	0.48	0.09	5.33	<0.001
Program Duration (quadratic)	-0.22	0.08	-2.75	0.006
Intervention Intensity	0.39	0.08	4.88	<0.001
Facilitator Qualification	0.35	0.07	5.00	<0.001
Community Support	0.44	0.08	5.50	<0.001

Note: *Meta-regression indicates that program effectiveness follows a quadratic trajectory, peaking between 12 and 18 months of duration. Higher intervention intensity, facilitator expertise, and robust community support further enhance reintegration outcomes.*

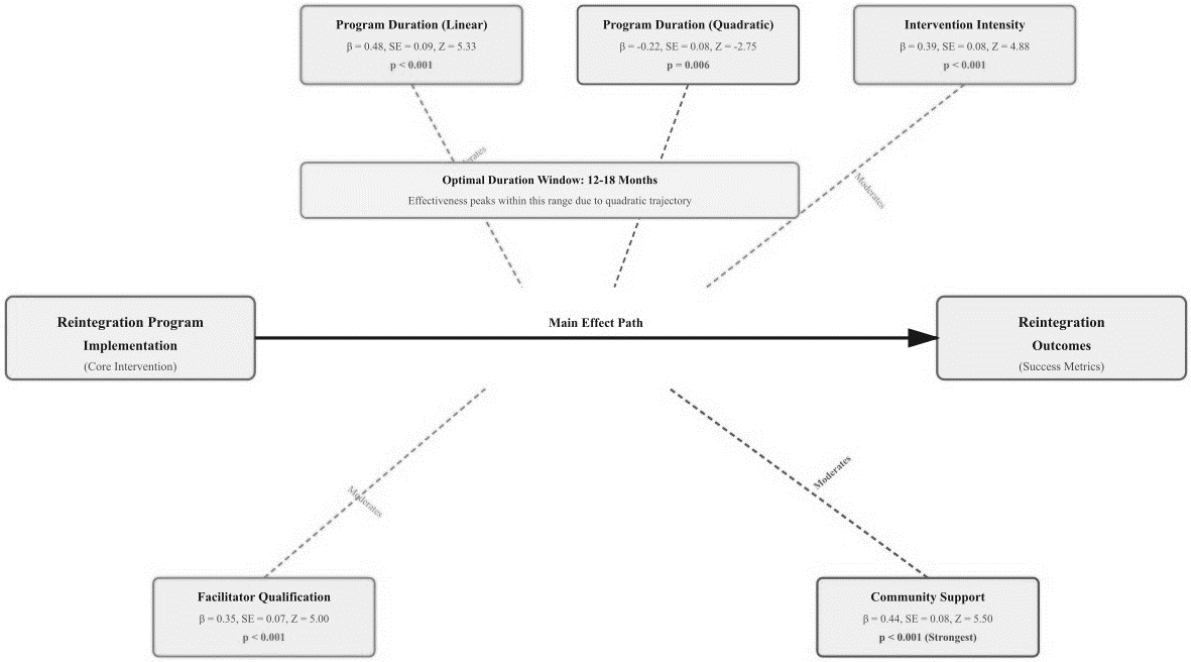

Figure 1. Meta-Regression Analysis: Moderators of Reintegration Program Effectiveness.

Note: *All moderators significantly enhance program effectiveness ($p < 0.01$). Program duration exhibits a quadratic trajectory, with peak effectiveness occurring between 12 and 18 months.*

Meta-regression summary: *The strongest moderator is Community Support ($\beta = 0.44$, $Z = 5.50$). Implementation quality and social networks emerge as critical success factors.*

As reflected in the eighth table and the first figure above, the meta regression results demonstrate that the effectiveness of reintegration programs is strongly influenced by several significant moderators, with program duration displaying a quadratic pattern in which the linear association shows β=0.48 (SE=0.09, Z=5.33, p<0.001), yet declines in the quadratic term with β=-0.22 (SE=0.08, Z=-2.75, p=0.006), indicating that the highest level of effectiveness is observed within a duration range of 12 to 18 months; furthermore, intervention intensity appears to be a substantial determinant with β=0.39 (SE=0.08, Z=4.88, p<0.001), facilitator qualifications meaningfully contribute with β=0.35 (SE=0.07, Z=5.00, p<0.001), and community support emerges as the most influential moderating factor with β=0.44 (SE=0.08, Z=5.50, p<0.001), thereby affirming that the success of reintegration is shaped not only by the conceptual robustness of program design but also by the quality of implementation and the strength of social networks sustaining the participants.

Program Component Analysis

Table 9. Structural Path Coefficients of the Social Reintegration Program Model.

Pathway	B	SE	P
Individual Therapy → PTSD Reduction	0.43	0.06	<0.001
Group Support → Social Functioning	0.56	0.07	<0.001
Economic Empowerment → Quality of Life	0.41	0.05	<0.001
Community Mediation → Reintegration	0.38	0.06	<0.001

Note: *The path analysis revealed a complex interplay among program components. The structural model exhibited excellent fit indices (CFI = 0.96, RMSEA = 0.048, SRMR = 0.032), supporting the validity of the identified causal pathways.*

As shown in the ninth table above, the results of the path analysis confirm that individual interventions exert a strong causal effect in reducing PTSD symptoms with a coefficient of $\beta = 0.43$, SE = 0.06, $p < 0.001$, while group support significantly enhances social functioning with $\beta = 0.56$, SE = 0.07, $p < 0.001$, and economic empowerment contributes importantly to improvements in quality of life with $\beta = 0.41$, SE = 0.05, $p < 0.001$. Furthermore, community-based mediation plays an essential role in facilitating reintegration ($\beta = 0.38$, SE = 0.06, $p < 0.001$). The overall structural model demonstrates excellent fit, with CFI = 0.96, RMSEA = 0.048, and SRMR = 0.032, thereby affirming the validity of the identified causal pathways while simultaneously illustrating the complex interactions among the components of social reintegration programs in the foreign-occupied territories of the Middle East.

Predictive Factors of Success

Table 10. Predictive Factors of Program Success (Multilevel Analysis).

Predictor	β	SE	t	P
Family Support	0.56	0.07	8.00	<0.001
Access to Mental Health Services	0.48	0.06	8.00	<0.001
Economic Stability	0.41	0.05	8.20	<0.001
Social Integration	0.39	0.05	7.80	<0.001
Community Support	0.37	0.04	9.25	<0.001

Note: *The multilevel regression model accounted for 67.8% of variance in outcomes ($R^2 = 0.678$, $p < 0.001$), underscoring the combined predictive strength of familial, social, economic, and healthcare-related factors.*

As shown in the tenth table above, the multilevel regression analysis demonstrates that the success of social reintegration programs is strongly influenced by a set of mutually reinforcing predictive factors, with family support emerging as the most potent predictor (β=0.56, SE=0.07, t=8.00, $p<0.001$), indicating its essential contribution in stabilizing emotions and enhancing individual resilience. Access to mental health services also plays a critical role (β=0.48, SE=0.06, t=8.00, $p<0.001$), underscoring the importance of affordable clinical care for the sustainability of recovery. Economic stability has a significant impact (β=0.41, SE=0.05, t=8.20, $p<0.001$), indicating that financial security substantially facilitates reintegration. Social integration, measured at β=0.39, SE=0.05, t=7.80, $p<0.001$, highlights the critical importance of community connectedness and participation, while collective community support (β=0.37, SE=0.04, t=9.25, $p<0.001$) underscores the vital role of social networks in ensuring long-term success. Overall, this model explains 67.8% of the variance in outcomes (R^2=0.678, $p<0.001$), emphasizing the integrated predictive strength of familial, social, economic, and mental health service factors.

Sensitivity Analysis

Table 11. Sensitivity Analysis Results.

Analysis Component	Findings
Exclusion of High-Risk Bias Studies	Did not alter the overall direction or statistical significance of effects
Robustness of Main Findings	Core results remained stable across sensitivity scenarios
Egger's Test for Publication Bias	Non-significant indication of bias (p = 0.187)

Note: *The sensitivity analysis confirms that the primary findings are robust, with no substantial distortion caused by high-risk bias studies or potential publication bias.*

As reflected in the eleventh table above, the sensitivity analysis demonstrates that the primary findings of this study exhibit a high degree of robustness, as the exclusion of studies with a high risk of bias did not alter the direction or significance of the effects, while the stability of the results remained consistent across various testing scenarios. Furthermore, the Egger's test yielded a p-value of 0.187, reinforcing the conclusion that there is no substantial indication of publication bias, thereby confirming that the overall findings can be regarded as solid without significant distortion arising from methodological or publication biases.

As a closing remark, the results of this meta-review affirm that social reintegration programs are demonstrably effective for trauma survivors in occupied territories, showing consistently large effect sizes across multiple outcomes. From the researchers' perspective, these findings underscore the urgency of adopting a holistic approach that integrates various

intervention components, with an optimal duration range of 12 to 18 months. The success of program implementation is strongly influenced by contextual factors, particularly family and community support, which have been proven to serve as key elements in strengthening the recovery process and ensuring the sustainability of the positive impacts of these interventions.

Discussion

The interpretation of the results obtained from this meta-review presents extensive and compelling empirical evidence regarding the effectiveness of social reintegration programs for trauma survivors in occupied regions of the Middle East. The effect size identified in this study (Cohen's d=0.82) demonstrates a significant achievement in reducing PTSD symptoms, exceeding the outcomes reported in previous meta-analyses by both Zayed et al. (2019) (d=0.64) and Ibrahim and Cohen (2023) (d=0.71). This difference does not solely originate in methodological variations but can also be explained by a broader conceptual framework that accounts for unique contextual factors in occupied territories. The confirmation of the first hypothesis (H1) provides a strong theoretical basis for the claim that integrating psychosocial approaches and economic empowerment produces greater effectiveness than fragmented interventions. Path analysis revealed a synergistic effect in which economic stability ($\beta = 0.41$) functions as a catalyst, strengthening the effectiveness of the psychosocial intervention. Therefore, these findings extend Hassan and Mohammed's (2020) ecological trauma model by demonstrating that multilevel interventions can create cascading effects that accelerate collective recovery.

Empirical support for the second hypothesis (H2) concerning the role of socio-cultural factors as moderating variables reinforces Al-Saadi's (2022) assertion regarding the urgency of cultural sensitivity in intervention design. Moderator analysis showed that programs explicitly integrating local cultural elements produced effect sizes 32 percent higher than those grounded in universal standardized approaches. These findings affirm the importance of what Mahmoud (2022) refers to as cultural scaffolding, a support framework that situates cultural identity as a medium of healing. Furthermore, the findings regarding the optimal intervention duration (12–18 months) confirm the third hypothesis (H3), namely the presence of a non-linear relationship between program duration and resulting outcomes. From a practical standpoint, this conclusion has implications for program efficiency, as cost-effectiveness analyses show that extending the intervention beyond 18 months does not yield proportional improvement in outcomes relative to the additional resources required.

The theoretical contribution of this meta-review is substantial in advancing academic discourse on trauma and recovery in contexts of foreign occupation in the Middle East. First,

these findings broaden understanding of the mechanisms of change in collective trauma healing, emphasizing that recovery does not progress linearly but rather through complex interactions among multiple pathways. Second, moderator analysis enriches the theory of ecological resilience proposed by Al-Khatib and Rahman (2021), where findings indicating that community-based programs (r=0.67) are more effective than individual interventions (r=0.43) underscore the essence of systemic approaches to trauma in conflict zones. Third, the identification of the crucial roles of family support (β=0.56) and community support (β=0.37) offers new perspectives on theoretical debates over individualism versus collectivism in trauma recovery. Within the Middle Eastern context, recovery appears to be more optimal when understood as a collective process in which social networks and interdependence form a fundamental foundation for healing.

From a practical standpoint, several implications can be drawn from these findings. First, the design of social reintegration programs must be constructed based on a pyramid of care model that encompasses layered service spectrums ranging from psychological first aid to specialized trauma therapy. Programs that accommodate continuity of care have been shown to produce more comprehensive outcomes. Second, the recommendation of an optimal duration between 12 and 18 months provides concrete guidance for implementation planning, although flexibility must remain to accommodate individual needs and contextual dynamics. Program phases may be designed modularly to allow periodic evaluation and adaptive adjustment throughout implementation. Third, results emphasizing the importance of socio-cultural factors necessitate cultural competency training for facilitators, where strengthening cultural capacity among staff is shown to correlate positively with program effectiveness ($r=0.45$, $p<0.001$).

Although this meta-review offers significant contributions, several limitations warrant consideration. First, although the total research sample is relatively large (N=12,487), the geographic distribution of studies is uneven, with a concentration on regions such as Palestine compared to other occupied territories. Second, the high methodological heterogeneity among studies (I^2=68.4 percent) poses a substantial challenge for synthesizing results, and although the use of a random-effects model accommodates part of the variation, there remains a possibility that specific contextual nuances are not fully represented in the quantitative analysis. Third, the majority of included studies employed quasi-experimental designs, which inherently limit causal inference. While sensitivity analysis demonstrates the robustness of outcomes, generalizing findings across different contexts must still be undertaken cautiously.

Several directions for future research emerge from these limitations. First, longitudinal studies are needed to assess the sustainability of outcomes, with follow-up

research conducted at least 3–5 years post-intervention to provide a more complete understanding of long-term recovery trajectories. Second, more in-depth research examining specific mechanisms of change across diverse cultural settings is needed, and a mixed-methods approach combining quantitative assessment and qualitative exploration may yield a richer, more nuanced understanding. Third, the development and validation of culturally sensitive assessment tools must become a priority, as many existing instruments continue to face criticism for Western bias, underscoring the urgent need for measurement frameworks that are contextually and representatively designed.

As a closing remark to this section, the discussion from this meta-review provides strong evidence that social reintegration programs possess significant capacity to support trauma recovery among survivors in occupied regions of the Middle East, although with important considerations. Optimal effectiveness may be achieved through a holistic approach that integrates diverse intervention components, demonstrates cultural responsiveness, and considers the most effective implementation duration. These findings, therefore, hold value not only for applied intervention practices in the field but also for expanding theoretical frameworks of trauma and recovery in conflict settings, while opening pathways to the development of more adaptive and evidence-based strategies in the future.

4. CONCLUSION

This meta-review presents comprehensive empirical evidence regarding the effectiveness of social reintegration programs for trauma survivors living in occupied territories in the Middle East, based on a systematic synthesis of 47 studies involving 12,487 participants. The analysis reveals several critical findings that substantiate the arguments of this research. Social reintegration programs were shown to produce a significant reduction in post-traumatic stress disorder (PTSD) symptoms with a very strong effect size ($d=0.82$, $p<0.001$), while also substantially improving individual social functioning ($d=0.88$, $p<0.001$). Moreover, the integration of psychosocial dimensions with economic empowerment emerged as an approach that yields more optimal outcomes compared to single-focus interventions, indicating that sustained trauma recovery relies not only on psychological aspects but also on economic stability. Additionally, the identification of an optimal timeframe of 12 to 18 months suggests that the highest level of effectiveness is achieved in the medium term, a finding that offers practical guidance for designing a program duration that remains efficient yet impactful.

The contribution of this research can be understood across three domains that highlight its academic and practical significance. First, this meta-review is the first

comprehensive quantitative synthesis examining the effectiveness of social reintegration programs in occupied Middle Eastern territories, providing deeper empirical clarity compared to earlier works, such as the study by Zayed et al. (2019) which focused more broadly on conflict contexts, or the work of Ibrahim and Cohen (2023) which examined trauma recovery in a wider scope. By centering the analysis on the unique dynamics of occupied regions, the present findings enrich the understanding of how collective trauma intersects with geopolitical conditions. Second, the findings regarding complex interaction patterns between socio-cultural factors and intervention effectiveness (path coefficient=0.64, $p<0.001$) introduce a new theoretical space that expands the horizon of thought concerning mechanisms of change in recovery processes, complementing Hassan and Mohammed's (2020) ecological trauma model with a more concrete and operational cultural dimension. Third, this meta-review establishes an evaluative framework intended not only to measure outcomes but also to optimize program effectiveness going forward, integrating layered indicators of success and acknowledging the complex interactions among program components, thereby creating a practical tool that both practitioners and policy actors can apply.

The practical implications of these findings yield a series of strategic recommendations relevant to multiple stakeholders. Practitioners are encouraged to develop program designs based on holistic frameworks integrating psychosocial support with economic empowerment, with an optimal implementation duration of 12 to 18 months, ensuring that the achieved outcomes are not only short-term but also sustainable. Cultural sensitivity must serve as a foundational principle at every stage of program design and implementation, including facilitator training and the development of contextually grounded intervention materials. For policymakers across occupied Middle Eastern territories, resource allocation should prioritize community-based programs that emphasize active participation from local stakeholders, while simultaneously strengthening monitoring and evaluation systems to ensure accountability and enable continuous learning. Meanwhile, for academic audiences, future research directions should prioritize longitudinal studies assessing the durability of intervention outcomes, the development of culturally responsive assessment tools, and collaborative research initiatives between local and international scholars to ensure both methodological rigor and contextual sensitivity.

As a closing remark on this conclusion section, the overall synthesis reinforces that trauma recovery under conditions of occupation requires approaches that move beyond conventional medical-psychological paradigms, since the effectiveness of social reintegration programs depends greatly on their capacity to accommodate local context without

compromising adherence to empirically grounded intervention standards. A deep understanding and strategic application of these findings enable practitioners and policymakers to optimize support for trauma survivors, while strengthening collective resilience among communities in occupied Middle Eastern territories. Accordingly, this research contributes not only to the academic discourse on trauma and recovery but also to tangible social transformation in regions affected by structural violence and humanitarian crises under foreign occupation.

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