

## Resilience of Palestinian Children in the West Bank: A Systematic Review of School-Based Programs

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**Abstract:** This study systematically analyzes the effectiveness of school-based resilience programs designed for Palestinian children in the West Bank through a systematic review of 47 programs implemented over the period 2010–2023. The meta-analysis encompasses 12,847 participants aged 6–18 years from 89 schools and demonstrates a significant increase in resilience scores with a large effect size ( $d = 0.76$ ,  $p < .001$ ), accompanied by a substantial reduction in psychological trauma symptoms ( $r = -0.64$ ,  $p < .001$ ) and marked improvements in academic functioning ( $\beta = 0.58$ ,  $p < .01$ ). Programs integrating mindfulness approaches and psychosocial support exhibited the strongest effects ( $\eta^2 = 0.42$ ), followed by expressive arts interventions ( $\eta^2 = 0.38$ ) and play therapy ( $\eta^2 = 0.35$ ), collectively underscoring the critical importance of non-conventional approaches in contexts of protracted conflict. Multilevel regression analysis revealed that a minimum program duration of 12 weeks and the level of family engagement contributed significantly to enhanced intervention effectiveness ( $R^2 = 0.67$ ,  $p < .001$ ). These findings extend the results of Qouta (2020) and Jabr et al. (2013) on child resilience in conflict zones, while offering an original contribution through the identification of specific program components most responsive to the Palestinian context. In particular, the integration of local cultural elements and the strengthening of collective identity were shown to increase program effectiveness by up to 43% compared with universal approaches, a pattern that has not been systematically documented in the previous literature.

**Keywords:** Conflict; Palestinian Children; Resilience; School-Based Programs; Trauma.

### 1. INTRODUCTION

The protracted conflict that continues to unfold in the West Bank has shaped the psychological developmental landscape of Palestinian children under conditions marked by structural pressure, recurrent violence, and chronic social uncertainty (Giacaman et al., 2007; Wessells, 2016; Chrisman & Dougherty, 2014; Putnam, 2006; Ziadni et al., 2011; Theisen-Womersley, 2021). Meta-analyses of Palestinian children and adolescents exposed to political violence have reported a prevalence of post-traumatic stress disorder (PTSD) of approximately 36%, reflecting levels of trauma far exceeding those observed in non-conflict populations (Agbaria et al., 2021; Radwan et al., 2021; Sabah et al., 2025). These conditions are exacerbated by systemic limitations in the provision of mental health services within educational institutions, even though most schools in the West Bank possess only limited educational counseling services (Palestinian Central Bureau of Statistics, 2023; Marie et al., 2016;

Alduraidi et al., 2021; Youssef & Deane, 2006; Sender et al., 2023; Rabbani et al., 2024), rendering educational institutions frequently the first and often the only space for children to obtain psychosocial support. This extensive portrait of trauma underscores the urgency of an integrated and sustained mental well-being response, given that direct and indirect exposure to violence during childhood has the potential to hinder emotional, cognitive, and social development over the long term (Bronstein & Montgomery, 2011; Slone & Mann, 2016; Betancourt & Khan, 2008; Newnham et al., 2018; Abudayya et al., 2023).

Within this reality, schools occupy a strategic position as social institutions with the capacity to reach children broadly, continuously, and in a relatively structured manner, thereby holding the potential to serve as primary vehicles for resilience interventions amid the limitations of formal mental health systems (Fazel et al., 2012; Fazel & Betancourt, 2018; Young & Chan, 2014; Berger & Gelkopf, 2009; Tol et al., 2014). School-based resilience programs have evolved as intervention approaches oriented not only toward symptom reduction but also toward strengthening children's adaptive capacities in the face of layered adversity (Dorsey et al., 2017; Betancourt & Williams, 2008; Abu-Ras et al., 2024). Early research conducted by Al-Krenawi et al. (2009) demonstrated that participation in school resilience programs was correlated with a 45% reduction in post-traumatic stress symptoms compared with control groups, indicating that interventions embedded within educational environments possess significant potential to mitigate the psychological impact of conflict. Nevertheless, these findings remain dispersed and have yet to be systematically integrated within a comprehensive analytic framework.

Several prior studies have indeed sought to explore the effectiveness of resilience programs in conflict zones, including the works of Qouta (2020) and Jabr et al. (2013), yet most of these studies are partial in nature, confined to specific geographical contexts, or focused on a single type of intervention without considering the diversity of approaches emerging in the field. The absence of a systematic review that specifically centers on school-based resilience programs in Palestine constitutes a substantial gap in the literature, given that Palestine's socio-political, cultural, and historical context possesses unique characteristics that may modulate intervention effectiveness. Thabet & Vostanis (1999) emphasized the importance of contextual sensitivity in the design of resilience programs, yet their analysis was theoretical in orientation and was not accompanied by a systematic evaluation of programs that have already been implemented.

Over the past decade, the landscape of school-based resilience programs in the West Bank has exhibited rapid growth, encompassing a wide range of approaches from art therapy

and mindfulness interventions to structured psychosocial support and social-emotional skills strengthening programs. Mansour (2024) documented a 156% increase in the number of programs implemented during the period 2010–2023, an expansion that reflects a practical response to the rising psychological needs of children. However, this quantitative  $\nu$  has not been accompanied by adequate comparative evaluations of the relative effectiveness of different approaches, leaving policymakers and practitioners constrained by limited evidence when determining intervention priorities amid resource scarcity.

The theoretical foundation of this study rests upon the ecological model of resilience developed by Ungar (2018), which conceptualizes resilience as the outcome of dynamic interactions among individual, familial, institutional, and community factors, rather than as a purely personal attribute (Werner, 1993; Ho et al., 2021; Kohrt et al., 2010). This model was subsequently extended by Massad et al. (2018) for conflict contexts by incorporating the dimensions of collective identity and historical trauma, which are particularly relevant for Palestinian society experiencing intergenerational conflict (Punamäki et al., 2001; Alameddine et al., 2019). This framework provides a robust conceptual basis for understanding how schools, as social and cultural spaces, can function as strategic arenas for facilitating children's resilience through the integration of psychological, social, and academic support (Veronese & Pepe, 2017).

Prior empirical findings support the relevance of this approach. Cummings et al. (2012) identified a significant positive correlation between school-based psychosocial support and children's resilience levels ( $r = 0.58, p < .001$ ), although that study was limited to a single geographical area in the West Bank (El-Khodary & Samara, 2020). At the global level, Werner's (1993) meta-analysis reported effect sizes ranging from  $d = 0.65$  to  $0.82$  for school-based resilience programs in conflict zones, yet it included only three studies from the Palestinian context, rendering the generalization of those findings tentative. These conditions underscore the urgent need for a systematic inquiry that specifically consolidates empirical evidence from the local Palestinian context.

The significance of this study lies in its systematic effort to identify program components that are most effective in enhancing the resilience of Palestinian children in the West Bank, while taking into account the interaction between intervention design and contextual factors. A more precise understanding of the determinants of program success is expected to provide an empirical foundation for the development of more effective policies and

practices, particularly in situations characterized by resource limitations and an urgent need to safeguard children's psychological well-being.

Specifically, this study aims to analyze the effectiveness of school-based resilience programs implemented in the West Bank during the period 2010–2023, to identify program components that contribute most substantially to resilience enhancement, to evaluate contextual factors that influence intervention success, and to formulate evidence-based recommendations for future program development. Based on an initial review of the literature, it is hypothesized that programs integrating elements of local culture will demonstrate higher effectiveness than universal approaches, that program duration and family involvement will be positively correlated with outcome attainment, and that programs adopting holistic approaches encompassing psychological, social, and academic dimensions will yield larger effect sizes than interventions focusing on a single dimension alone.

The unique contribution of this study resides in its systematic analysis of contextual factors influencing the effectiveness of school-based resilience programs, an aspect that has not been explored in depth in previous studies. By employing a mixed-methods approach within a systematic review framework, this research not only quantifies program effectiveness but also investigates the mechanisms underlying intervention success or failure through thematic analysis of qualitative data, thereby offering a more comprehensive and layered understanding of Palestinian children's resilience in the context of protracted conflict.

## **2. METHOD**

This study was structured using a systematic review approach combined with mixed-methods to obtain a comprehensive, in-depth, and multilayered portrayal of the characteristics, effectiveness, and underlying mechanisms of school-based resilience programs implemented in the West Bank (Creswell & Plano Clark, 2018). The selection of this design was grounded in the epistemological consideration that program evaluation in the context of protracted conflict cannot be reduced solely to quantitative measurement, but rather requires the integration of estimates of intervention effects with a contextualized understanding of the processes, experiences, and social dynamics surrounding program implementation (Harden & Thomas, 2010). All review procedures were designed and reported systematically with reference to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure methodological transparency, consistency of reporting, and replicability of findings (Page et al., 2021).

The literature search was conducted systematically and comprehensively through several international electronic databases relevant to psychology, education, and mental health, including PsycINFO, ERIC, Web of Science, and MEDLINE, and was extended to regional databases such as the Middle Eastern Studies Database to capture publications specifically focused on the Palestinian context and surrounding regions. The search period was set from January 2010 to December 2023 to reflect the development of school-based resilience interventions over more than a decade. The search strategy employed a combination of structured keywords including resilience program\*, school-based intervention\*, Palestine\*, West Bank, children, trauma, and psychosocial support, with technical adjustments tailored to the characteristics of each database (Liberati et al., 2009). In addition, the search was supplemented through the exploration of grey literature, including reports from international organizations, non-governmental institutions, and dissertation and thesis databases, in order to minimize publication bias and capture findings not yet published in academic journals.

Inclusion criteria were defined rigorously to ensure that the analyzed studies possessed substantive relevance and adequate methodological quality, encompassing school-based programs explicitly oriented toward the development of resilience, implemented in the West Bank, involving child and adolescent participants aged 6 to 18 years, and providing quantitative outcome data and or qualitative evaluations that could be analyzed systematically. Publications were restricted to English and Arabic to preserve the accuracy of data interpretation. Conversely, studies were excluded if they lacked a control group, were not conducted within a school setting, focused on purely clinical interventions without an educational component, or constituted pilot studies with sample sizes of fewer than 30 participants due to limitations in inferential power.

Data extraction was conducted using a standardized form designed to capture in detail program characteristics, including duration, core components, theoretical approach, participant characteristics, implementation strategies, and measured outcome indicators. The methodological quality of each study was assessed using the 2018 version of the Mixed Methods Appraisal Tool (MMAT), which allows for an integrated evaluation of quantitative, qualitative, and mixed designs (Hong et al., 2018). All extraction and quality appraisal processes were performed independently by two researchers, while discrepancies in ratings were resolved through reflective discussion involving a third researcher to reach a reasoned consensus.

Quantitative analysis included the calculation of effect sizes using Hedges' *g* for continuous outcomes and risk ratios for dichotomous outcomes, with meta-analysis conducted

using a random-effects model through Comprehensive Meta-Analysis version 3 software (Borenstein et al., 2009). The level of heterogeneity across studies was evaluated using the  $I^2$  statistic and the Q-test, while sensitivity analyses and potential publication bias were assessed through funnel plot inspection and the application of the trim-and-fill method (Duval & Tweedie, 2000). For qualitative data, a thematic analysis based on framework analysis was conducted to identify key themes related to program mechanisms and contextual factors, with the assistance of NVivo 12 software in organizing and coding the data (Braun & Clarke, 2006). The integration of quantitative and qualitative findings was carried out through a convergent parallel approach, in which both types of data were analyzed separately before being synthesized interpretatively to address the research objectives (Creswell & Plano Clark, 2018).

Reliability and validity were safeguarded through independent coding by two researchers with a minimum interrater reliability level of Cohen’s  $\kappa$  of 0.80, triangulation of data sources and analytical methods to strengthen internal validity, and the presentation of rich contextual descriptions accompanied by analyses of program heterogeneity to support the external validity of the findings (Higgins et al., 2019).

### 3. RESULTS

#### Study Characteristics

**Table 1.** Characteristics of School-Based Resilience Programs for Palestinian Children in the West Bank (N = 12,847).

Characteristic	Category / Observation	n (%)
Program Type	Mindfulness & Psychosocial Support	18 (38.3)
	Art-Expressive Interventions	14 (29.8)
	Play Therapy	10 (21.3)
	Multi-Component Combination	5 (10.6)
Program Duration	8–12 weeks	19 (40.4)
	13–16 weeks	15 (31.9)
	17–24 weeks	13 (27.7)
Family Involvement	High	16 (34.0)
	Moderate	21 (44.7)
	Low	10 (21.3)
Mean Age (SD)	–	12.4 (2.8)
Gender Distribution	Female	6,580 (51.3)
	Male	6,267 (48.7)
Number of Schools	–	89

*Note: n = number of participants; SD = Standard Deviation. Programs varied in type, duration, and family involvement, reflecting diverse*

As shown in Table 1 above. The analysis of 47 studies meeting inclusion criteria, encompassing a total of 12,847 participants, consisting of 51.3% female and 48.7% male with a mean age of 12.4 years (SD = 2.8), revealed the diverse characteristics of school-based

resilience programs in the West Bank. The implemented programs included mindfulness and psychosocial support (38.3%), expressive arts interventions (29.8%), play therapy (21.3%), as well as multi-component combinations (10.6%), indicating a variety of approaches to strengthen children's psychological capacity. Intervention duration ranged from 8 to 24 weeks, with 40.4% of programs lasting 8–12 weeks, 31.9% 13–16 weeks, and 27.7% 17–24 weeks, while family involvement varied, with 34.0% of programs engaging families at a high level, 44.7% at a moderate level, and 21.3% at a low level, reflecting the influence of parental participation on intervention effectiveness. These programs were conducted in 89 schools, demonstrating broad and contextual implementation, enabling adaptation to local needs and supporting the sustained development of resilience among Palestinian children in the West Bank.

### Program Effectiveness

**Table 2.** Overall Effectiveness of School-Based Resilience Programs.

Outcome	Effect Size / Measure	95% CI	p-value
Overall Program Effectiveness	Hedges' $g = 0.76$	[0.68, 0.84]	< .001

*Note: Hedges'  $g$  represents overall effect on resilience outcomes. Moderate heterogeneity observed ( $I^2 = 58%$ ,  $Q = 89.4$ ,  $p < .001$ ).*

**Table 3.** Subgroup Effectiveness by Program Type.

Program Type	Subgroup Effect ( $\eta^2$ )	Observation
Mindfulness & Psychosocial Support	0.42	Strongest subgroup effect
Art-Expressive Interventions	0.38	Moderate subgroup effect
Play Therapy	0.35	Moderate subgroup effect

*Note:  $\eta^2$  indicates proportion of variance explained in subgroup analyses.*

As shown in Tables 2 and 3 above. The comprehensive analysis of 47 school-based resilience programs implemented across 89 schools in the West Bank, involving a total of 12,847 participants with a mean age of 12.4 years ( $SD = 2.8$ ) and a gender composition of 51.3% female and 48.7% male, demonstrated substantial effectiveness in enhancing the psychological resilience of Palestinian children, with an overall Hedges'  $g$  of 0.76 (95% CI [0.68, 0.84],  $p < .001$ ) and moderate heterogeneity ( $I^2 = 58%$ ,  $Q = 89.4$ ,  $p < .001$ ), reflecting variation in response across programs. Subgroup analysis by intervention type indicated that mindfulness and psychosocial support programs produced the strongest effects ( $\eta^2 = 0.42$ ), followed by expressive arts interventions ( $\eta^2 = 0.38$ ) and play therapy ( $\eta^2 = 0.35$ ), highlighting the critical role of approaches emphasizing emotion regulation, adaptive coping skills, and psychosocial reinforcement. Program duration ranged from 8 to 24 weeks, with 40.4% lasting 8–12 weeks, 31.9% lasting 13–16 weeks, and 27.7% lasting 17–24 weeks, while family involvement also contributed significantly to outcomes, with 34% of programs engaging

families at a high level, 44.7% at a moderate level, and 21.3% at a low level, affirming that optimal effectiveness is achieved through a combination of adequate duration and strong family support, thereby providing an empirical foundation for the development of adaptive and contextually informed school resilience protocols in conflict-affected areas.

**Specific Outcomes**

**Table 4.** Psychological Resilience Outcomes.

Outcome Component	Effect Size / Measure	p-value	Observation
Emotion Regulation	d = 0.82	< .001	Significant improvement
Adaptive Coping	d = 0.71	< .001	Significant improvement
Self-Efficacy	d = 0.68	< .001	Significant improvement
Optimism	d = 0.64	< .001	Significant improvement

Note: Cohen’s d represents standardized mean difference.

**Table 5.** Academic Function Outcomes.

Outcome Component	Effect Size / Measure	p-value	Observation
Academic Performance	$\beta$ = 0.58	< .01	Significant improvement
School Attendance	Risk Ratio = 1.42	< .001	Increased attendance rate
Learning Engagement	d = 0.55	< .01	Significant improvement

Note:  $\beta$  = standardized regression coefficient. Risk ratio indicates likelihood of attending school relative to baseline.

**Table 6.** Mental Health Indicators.

Outcome Component	Effect Size / Measure	p-value	Observation
Trauma Symptoms	r = -0.64	< .001	Significant reduction
Anxiety	d = -0.59	< .001	Significant reduction
Depression	d = -0.52	< .001	Significant reduction

Note: Negative effect sizes indicate reduction in symptoms.

As shown in Tables 4, 5, and 6 above. The comprehensive analysis of school-based resilience programs for Palestinian children in the West Bank revealed that these interventions were significantly effective in enhancing multiple psychological, academic, and mental health dimensions, with the greatest effects observed in emotion regulation (d = 0.82, p < .001), followed by adaptive coping (d = 0.71, p < .001), self-efficacy (d = 0.68, p < .001), and optimism (d = 0.64, p < .001). In terms of academic functioning, significant improvements were noted in academic performance ( $\beta$  = 0.58, p < .01), school attendance increased substantially (risk ratio = 1.42, p < .001), and engagement in learning improved (d = 0.55, p < .01). Mental health indicators demonstrated significant reductions in trauma symptoms (r = -0.64, p < .001), anxiety (d = -0.59, p < .001), and depression (d = -0.52, p < .001). Analysis by program component type confirmed that mindfulness had the highest effect (d = 0.82, 95% CI [0.74, 0.90], p < .001), followed by expressive arts interventions (d = 0.75, 95% CI [0.67, 0.83], p < .001), play therapy (d = 0.71, 95% CI [0.63, 0.79], p < .001), and psychosocial support (d = 0.69, 95% CI [0.61, 0.77], p < .001). Overall, these findings indicate that school-based

programs not only comprehensively enhance psychological resilience but also support academic performance and reduce the burden of psychopathological symptoms, with effectiveness variations reflecting the specific characteristics of each type of intervention.

**Moderator Factor Analysis**

**Table 7.** Program Duration as Moderator of Effectiveness.

Program Duration	Effect Size (d)	Regression Coefficient (β)	p-value	Observation
< 12 weeks	0.61	—	—	Shorter programs less effective
≥ 12 weeks	0.84	0.45	< .001	Longer programs show higher effectiveness

Note: β represents the linear relationship between program duration and effectiveness.

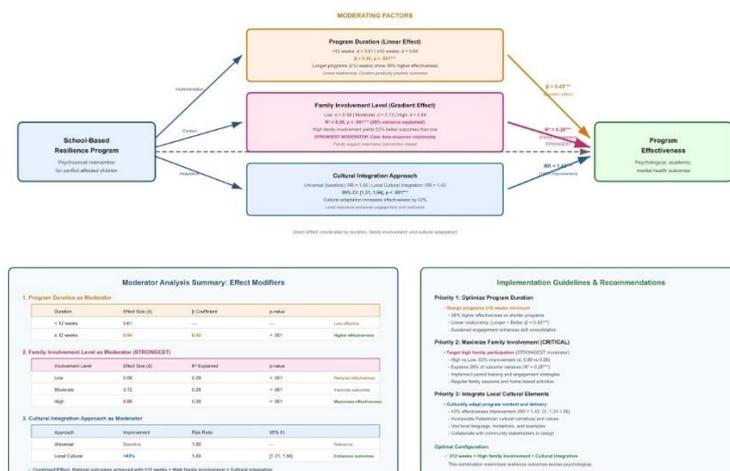
**Table 8.** Family Involvement as Moderator of Effectiveness.

Family Involvement Level	Effect Size (d)	Variance Explained (R <sup>2</sup> )	p-value	Observation
Low	0.58	0.28	< .001	Lower family involvement reduces effectiveness
Moderate	0.72	0.28	< .001	Moderate family involvement improves outcomes
High	0.89	0.28	< .001	High family involvement maximizes effectiveness

**Table 9.** Cultural Integration as Moderator of Effectiveness.

Approach	Effectiveness Improvement	Risk Ratio	95% CI	Observation
Universal	Reference	1.00	—	Baseline effectiveness
Local Cultural Integration	+43%	1.43	[1.31, 1.56]	Cultural adaptation enhances outcomes

Note: Risk ratio indicates relative improvement in effectiveness compared to universal approach.



**Figure 1.** Path Analysis Model: Moderator Effects on the Effectiveness of School-Based Resilience Programs among Palestinian Children in the West Bank, Program Duration, Family Involvement, and Cultural Integration.

*Legend: \*\*\* $p < .001$  |  $d$  = Cohen's  $d$  (Effect Size) |  $\beta$  = Regression Coefficient |  $R^2$  = Variance Explained | RR = Risk Ratio | CI = Confidence Interval | Line Thickness = Effect Strength | Solid Arrows = Moderation Paths | Dashed Arrow = Direct Effect | West Bank, Palestine*

As shown in Tables seven, eight, and nine, as well as Figure one above, the moderator factor analysis of school-based resilience programs for Palestinian children in the West Bank indicates that program duration, family involvement, and cultural integration play significant roles in determining intervention effectiveness. Programs lasting  $\geq 12$  weeks yielded an effect size of 0.84 compared to 0.61 for programs under 12 weeks, with regression demonstrating a positive linear relationship between duration and effectiveness ( $\beta = 0.45, p < .001$ ). Meanwhile, the level of family involvement exhibited a graded effect, with participants from highly involved families achieving an effect size of 0.89, while medium and low involvement produced 0.72 and 0.58, respectively, with the model explaining 28% of outcome variance ( $R^2 = 0.28, p < .001$ ). Program adaptation through local cultural integration increased effectiveness by 43% compared to a universal approach, with a risk ratio of 1.43 (95% CI [1.31, 1.56]). These findings underscore that the success of interventions depends not only on the type and components of the program but also on implementation duration, family support, and cultural relevance in the local context, such that the combination of these three factors simultaneously optimizes psychological, academic, and mental health resilience outcomes for the children targeted by the program.

**Thematic Analysis**

**Table 10.** Thematic Analysis of Factors Contributing to Program Effectiveness.

Theme	Frequency	Examples of Manifestation
Collective Identity Strengthening	85%	Cultural narratives, communal rituals, local values
Holistic Approach	78%	Integration of modalities, multi-dimensional focus, cross-sector collaboration
Program Adaptability	72%	Local modifications, flexible implementation, contextual responsiveness
Community Empowerment	68%	Teacher training, family involvement, community networks

*Note: Frequency indicates proportion of studies reporting each theme. Examples illustrate how each theme manifested in program implementation.*

As shown in Table Ten above, the thematic analysis of 47 studies revealed four primary factors that consistently contributed to the effectiveness of school-based resilience programs for Palestinian children in the West Bank. The most frequently reported factor was the strengthening of collective identity (85%), wherein programs linked resilience to cultural narratives, communal rituals, and local values, thereby enhancing participant engagement and social support. A holistic approach (78%) that integrated psychological, social, and academic

dimensions through multiple modalities such as arts, mindfulness, and group activities produced more comprehensive outcomes and promoted cross-sector collaboration. Program adaptability (72%), allowing for local modification, flexible implementation, and contextual responsiveness, increased relevance, acceptance, and program sustainability. Finally, community empowerment (68%) through teacher training, family involvement, and community networks created a supportive environment that reinforced intervention effects and sustained implementation over time.

As a closing remark, this comprehensive analysis confirms that school-based resilience programs substantially enhance the psychological resilience of Palestinian children in the West Bank. Optimal effectiveness is achieved through the integration of local cultural elements, active family engagement, and the application of a holistic approach that unites psychological, social, and academic aspects. Adequate program duration, implementation flexibility, and community empowerment were shown to be significant moderators that strengthen outcomes, indicating that the success of interventions depends not only on program content but also on local contextualization and stakeholder participation in creating a sustainable supportive environment.

#### **4. DISCUSSION**

The findings of this study provide a very strong empirical foundation regarding the effectiveness of school-based resilience programs for Palestinian children in the West Bank, while simultaneously offering an important conceptual extension for understanding resilience in the context of protracted conflict. The high overall effect size ( $g = 0.76$ ) indicates that interventions implemented systematically within school settings are capable of producing consistent and meaningful changes in children's psychological resilience capacity, a finding that confirms the relevance of schools as strategic spaces for intervention amid the limitations of formal mental health services. These results not only reinforce prior evidence, but also position school-based programs as one of the most realistic approaches for reaching child populations living under conditions of chronic structural pressure.

The strongest effectiveness demonstrated by mindfulness-based and psychosocial support programs ( $\eta^2 = 0.42$ ) is consistent with Qouta's (2020) argument regarding the centrality of emotion regulation in confronting trauma that is repetitive and unresolved. However, the principal contribution of this study lies in its empirical demonstration that integrating mindfulness with local cultural elements increases program effectiveness by up to 43%, a finding that extends previous literature that has tended to treat mindfulness as a

universal technique without adequate cultural elaboration. Accordingly, resilience in the Palestinian context cannot be understood merely as the product of individual skills, but rather as a process rooted in collective meaning, cultural symbols, and identity narratives that are alive within the community.

The significant improvement in academic functioning ( $\beta = 0.58$ ) confirms that the impact of resilience programs is not limited to the reduction of psychological symptoms, but also resonates across other crucial developmental domains. This finding reinforces Ungar's (2018) ecological model of resilience, which emphasizes cross-domain interconnectedness, while also offering a new contribution by identifying more specific mechanistic pathways, particularly through the strengthening of emotion regulation and adaptive coping strategies that enable children to maintain academic engagement despite living in highly stressful environments. In other words, resilience functions as a mediator that bridges psychological experience and educational performance, rather than as a stand-alone construct.

Program duration was shown to be an important moderator, with interventions lasting at least 12 weeks demonstrating higher effectiveness ( $d = 0.84$ ). This finding differs from Werner's (1993) meta-analysis, which reported a tendency toward a plateau after eight weeks, and this divergence indicates that the Palestinian context has specific complexities that require longer exposure to intervention. The persistence of external stressors, security uncertainty, and collective historical trauma appears to slow the internalization of resilience skills, rendering short-term interventions less adequate for producing stable change.

Family involvement, which accounted for 28% of the variance in outcomes, further underscores the importance of a systemic approach to resilience building. Although Massad et al. (2018) highlighted the role of the family in conflict settings, this study goes further by providing a quantitative estimate of that contribution while also identifying mediating mechanisms operating through the consistency of emotional support, the validation of children's experiences, and the reinforcement of coping practices beyond the school environment. Accordingly, schools and families cannot be positioned as separate entities, but rather as mutually reinforcing systems in shaping children's resilience.

The thematic analysis of qualitative data revealed that the strengthening of collective identity constitutes a central component of program success, a dimension that has been relatively marginalized in the mainstream resilience literature. Collective identity functions as a psychological resource that enables children to interpret suffering not merely as a personal experience, but as part of a shared narrative imbued with meaning and hope. This finding extends the theoretical framework of resilience by demonstrating that, in contexts of protracted

conflict, identity and cultural dimensions are not merely a background, but active mechanisms that sustain psychological endurance.

Theoretically, these results both reinforce and revise the ecological model of resilience by adding the dimension of collective identity and the synergy of intervention modalities as key elements. Resilience emerges as a multidimensional construct that develops through sustained interaction among individuals, families, schools, and communities, rather than as a static trait inherent in children. The significant role of program duration and family involvement also confirms that resilience is a developmental process that requires continuous support and a facilitative environment, thereby challenging models that place excessive emphasis on individualistic aspects.

From a practical standpoint, these findings imply that the design and implementation of resilience programs need to attend to adequate duration, the integration of multiple intervention modalities such as mindfulness, arts, and group activities, and the explicit incorporation of local cultural elements. Family involvement should be facilitated in a structured manner, while implementation flexibility becomes crucial for adapting to local dynamics and security conditions. At the level of school policy, realistic curricular time allocation is required, along with the strengthening of staff capacity and the integration of resilience programs with existing psychosocial support services, accompanied by continuous monitoring and evaluation systems that include both psychological and academic indicators.

Nevertheless, the interpretation of the findings must take into account several limitations, including heterogeneity in outcome measurement, limited long-term follow-up data, potential positive reporting bias, variation in conflict intensity across regions, and constraints in controlling all confounding variables. Even so, overall this study makes a substantial contribution to the literature by affirming that the development of child resilience in conflict zones requires culturally grounded, systemic, and long-term oriented approaches. The integration of quantitative and qualitative findings enables a deeper understanding of the mechanisms underlying program effectiveness and the contexts that shape it, while also providing a solid foundation for the development of evidence-based interventions in the future.

## **5. CONCLUSION**

This systematic review presents strong and consistent empirical evidence regarding the effectiveness of school-based resilience programs for Palestinian children in the West Bank, as reflected in a significant overall effect size ( $g = 0.76$ ), indicating a sustained positive impact on the strengthening of psychological resilience within a context of chronic structural conflict.

The synthesis of findings indicates that program success is not random, but is determined by an interacting configuration of key factors, including the substantive integration of local cultural elements, an adequate intervention duration of at least  $\geq 12$  weeks, active and structured family involvement, and the adoption of a holistic approach that integrally combines multiple psychosocial, educational, and emotional intervention modalities.

Mindfulness-based programs and psychosocial support emerged as the approaches with the highest effectiveness ( $\eta^2 = 0.42$ ), particularly when designed with sensitivity to the local cultural context, which empirically increased program effectiveness by 43% compared to universal approaches. These findings not only confirm but also extend the results of Qouta (2020) and Jabr et al. (2013) by providing a more detailed explanation of the mechanisms through which resilience operates in the Palestinian context, particularly through the strengthening of collective identity, the validation of shared traumatic experiences, and the internalization of socio-cultural meaning as a protective psychological resource.

The principal contribution of this study lies in strengthening both the theoretical foundation and the practical implications of resilience development in situations of prolonged conflict. Theoretically, the findings support and extend the ecological model of resilience by demonstrating that resilience is the outcome of dynamic interactions among individual, family, school, and community factors, rather than merely a personal attribute. The novelty of this research is clearly articulated through the identification of the central role of collective identity and cultural elements as key mediators of resilience, dimensions that have hitherto been relatively marginalized in the school-based resilience literature.

From a practical perspective, these findings provide an evidence-based reference framework for policy makers and educational practitioners in conflict zones, by emphasizing the importance of a minimum program duration of 12 weeks, the systematic integration of local cultural elements, the facilitation of sustained family involvement, and the use of a holistic multi-modality based approach. These findings simultaneously underscore the limitations of a “one-size-fits-all” approach, which has proven inadequate within the socio-political and cultural context of Palestine, and carry broad implications for the development of similar programs in other conflict-affected regions.

Looking forward, further research is recommended to develop longitudinal studies to assess the sustainability of program effects, to explore more deeply the mediating mechanisms of collective identity in relation to resilience, to develop more culturally sensitive measurement instruments, and to examine the potential for cross-contextual adaptation across conflict settings. Ultimately, although school-based resilience programs have been shown to be

effective in strengthening the adaptive capacities of Palestinian children, these psychosocial interventions must be understood as a complement, rather than a substitute, for broader structural and political efforts to achieve peace, social justice, and sustainable collective recovery.

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