

Original Research Article

Prevalence and Correlates of Post-Traumatic Stress Disorder (PTSD) among Afghan Refugee Children in Quetta, Pakistan: A Cross-Sectional Study

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INTRODUCTION

Forced migration and refugee displacement remain major global humanitarian concerns that have substantial consequences for physical, social, and

Abstract:

Background: Post-Traumatic Stress Disorder (PTSD) is a major mental health concern among refugee children exposed to war, forced displacement, violence, and prolonged psychosocial stressors. Afghan refugee children residing in Pakistan represent a vulnerable population because of continuous exposure to traumatic events, socioeconomic challenges, and disruptions in family and social environments. Despite increasing concern regarding refugee mental health, limited evidence exists regarding the prevalence and correlates of PTSD among Afghan refugee children in Pakistan.

Objective: To assess the prevalence and correlates of PTSD among Afghan refugee children residing in Quetta, Pakistan, and to identify demographic, socioeconomic, and trauma-related factors associated with PTSD symptoms.

Study Design: Quantitative cross-sectional study.

Place and Duration of Study: Design was conducted among 320 Afghan refugee children in Quetta, Pakistan.

Methodology: Participants were selected using a stratified random sampling technique. PTSD symptoms were measured using the PTSD Checklist for DSM-5 (PCL-5). Demographic characteristics, educational background, family-related variables, and trauma-related factors were collected using a structured questionnaire. Data were analyzed using SPSS version 26 through descriptive statistics, Pearson correlation analysis, and multiple regression analysis.

Results: The findings indicated a substantial prevalence of PTSD symptoms among Afghan refugee children. Significant positive correlations were observed between PTSD symptoms and trauma-related variables, including re-experiencing symptoms ($r = .740, p < .001$), avoidance and emotional regulation difficulties ($r = .785, p < .001$), negative self-perception and disconnection ($r = .834, p < .001$), and functional impairment ($r = .829, p < .001$). Regression analysis demonstrated that educational attainment was negatively associated with PTSD symptoms ($\beta = -0.164, p < .001$), whereas female gender and larger family size were positively associated with increased PTSD symptom severity. Female refugee children reported higher levels of PTSD symptoms compared with male children.

Conclusion: PTSD symptoms are highly prevalent among Afghan refugee children and are strongly influenced by trauma-related experiences, gender, and socioeconomic factors. The findings emphasize the need for culturally appropriate and trauma-informed Mental Health and Psychosocial Support (MHPSS) interventions that address educational, family, and gender-specific needs to improve psychological well-being among Afghan refugee children.

Keywords: PTSD, Afghan refugee children, mental health, trauma, psychosocial support, displacement, violence.

psychological well-being. According to recent international estimates, millions of individuals have been displaced due to armed conflicts, political instability, violence, and human rights violations, with children constituting a large proportion of the displaced

population. Refugee children are particularly vulnerable because exposure to war, migration, loss of family members, and social disruption occurs during critical stages of psychological and emotional development. Such experiences often contribute to adverse mental health outcomes that may persist throughout childhood and adulthood (United Nations High Commissioner for Refugees [UNHCR], 2023).

Afghanistan has experienced decades of armed conflict, political instability, and humanitarian crises that have resulted in one of the largest refugee populations worldwide. Pakistan has hosted Afghan refugees for more than four decades and remains among the largest host countries for displaced Afghan populations. Large numbers of Afghan refugee families currently reside in areas of Pakistan including Baluchistan and Khyber Pakhtunkhwa, where many continue to experience economic hardship, social marginalization, limited access to healthcare services, and educational barriers (UNHCR, 2023). Children within refugee communities frequently experience multiple forms of trauma before, during, and after migration, placing them at elevated risk for psychological distress.

Among mental health conditions affecting refugee populations, Post-Traumatic Stress Disorder (PTSD) has emerged as one of the most common psychological disorders associated with traumatic exposure. PTSD is defined as a psychiatric condition that develops following exposure to traumatic events involving actual or threatened death, serious injury, or violence. Symptoms generally include intrusive memories, avoidance behaviors, negative alterations in cognition and mood, emotional dysregulation, and heightened physiological arousal (American Psychiatric Association [APA], 2013). PTSD can significantly impair social functioning, educational performance, emotional well-being, and overall quality of life among affected children.

Previous studies indicate that refugee children experience disproportionately higher rates of PTSD compared to non-refugee populations. Fazel et al. (2005) reported that refugee children exposed to war and displacement frequently demonstrate psychological symptoms including anxiety, depression, and PTSD. Similarly, Alemi et al. (2014) found that Afghan refugee populations experience substantial psychological distress associated with cumulative traumatic experiences and post-migration stressors.

Female children appear particularly vulnerable to developing PTSD symptoms after traumatic exposure. Previous research has reported that females often demonstrate higher PTSD prevalence rates than males because of biological, psychological, and sociocultural factors associated with trauma responses (Breslau et al., 1998; Foa et al., 2006). Likewise, educational opportunities and supportive family environments may act as protective factors that enhance resilience and reduce psychological distress among refugee children. Mental Health and Psychosocial Support (MHPSS) interventions have increasingly been implemented to

address psychological needs among displaced populations. Trauma-informed and culturally sensitive approaches, including arts-based interventions, have shown promising outcomes in promoting resilience, emotional expression, and psychological recovery among children exposed to trauma (Betancourt et al., 2013; Perry, 2009). Programs implemented by organizations such as the Peace of Mind Foundation and the Youth Association for Development (YAD) seek to improve psychosocial well-being among refugee children through supportive and creative therapeutic approaches.

Despite the increasing implementation of MHPSS interventions, limited research has examined the prevalence and determinants of PTSD among Afghan refugee children residing in Pakistan, particularly in Quetta. Understanding the factors associated with PTSD may help improve intervention strategies and inform evidence-based mental health programs designed specifically for refugee populations.

Objective

Therefore, the present study aimed to assess the prevalence and correlates of PTSD among Afghan refugee children residing in Quetta, Pakistan, and to identify demographic, socioeconomic, and trauma-related factors associated with PTSD symptoms.

LITERATURE REVIEW

Refugee children represent one of the most psychologically vulnerable populations because they are frequently exposed to multiple traumatic events before, during, and after migration. Exposure to war, violence, forced displacement, family separation, poverty, and uncertainty may create long-term psychological consequences that affect emotional, social, and cognitive development. Unlike adults, children often possess limited coping mechanisms and psychological resources to process traumatic experiences, increasing their susceptibility to mental health disorders, particularly Post-Traumatic Stress Disorder (PTSD) (Bronstein & Montgomery, 2011).

Mental Health Challenges among Refugee Children

The mental health consequences of forced migration among children have gained increasing attention in recent years. Refugee children experience cumulative stress resulting from repeated exposure to traumatic events and ongoing psychosocial difficulties associated with displacement. According to Rutter (1985, 1988), refugee children are more vulnerable to psychological disturbances than children in stable environments because of prolonged exposure to stressful experiences and disrupted social structures.

Studies have reported various mental health problems among displaced children, including anxiety, depression, emotional distress, behavioral problems, and PTSD symptoms. Hieu and Thao (2007) reported that traumatic experiences such as witnessing violence, loss of family members, and exposure to armed conflict contribute significantly to emotional and behavioral problems among refugee children. Internalizing

symptoms including fear, sadness, and anxiety frequently coexist with externalizing symptoms such as aggression, social withdrawal, and behavioral disturbances.

PTSD among Refugee Populations

Post-Traumatic Stress Disorder is among the most prevalent mental health conditions affecting refugee populations. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), PTSD develops following exposure to traumatic events involving actual or threatened death, injury, or violence and is characterized by symptoms including intrusive thoughts, avoidance behaviors, negative alterations in mood and cognition, and hyperarousal (American Psychiatric Association [APA], 2013).

Research consistently demonstrates elevated PTSD prevalence among refugee populations. Lindert et al. (2009) conducted a systematic review and found that refugees showed substantially higher levels of depression and PTSD than general populations. Similarly, Hameed et al. (2018) observed that repeated traumatic exposure significantly increased the likelihood of developing PTSD and depression among displaced individuals. Among Afghan refugees specifically, Alemi et al. (2014) reported substantial psychological distress resulting from exposure to war-related trauma, displacement experiences, and post-migration challenges. Their findings suggested that Afghan refugees commonly experienced PTSD symptoms, depression, and anxiety disorders. Furthermore, Slewa-Younan et al. (2017) reported high rates of PTSD among Afghan refugee populations resettled in different countries.

Risk Factors Associated with PTSD among Refugee Children

Multiple factors influence the development and severity of PTSD symptoms among refugee populations. Previous studies suggest that both pre-migration and post-migration stressors contribute significantly to psychological outcomes.

Pre-migration factors include:

- Exposure to armed conflict
- Physical violence
- Torture
- Family separation
- Death of loved ones
- Forced migration

Post-migration factors include:

- Poverty
- Social isolation
- Educational barriers
- Discrimination
- Lack of social support
- Difficult living conditions

According to Alemi and Stempel (2018), refugees exposed to discrimination and social stressors during resettlement experience increased psychological distress. Similarly, Bogic et al. (2015) identified social isolation and limited social support as important predictors of long-term mental health problems among displaced

individuals.

Educational status may also influence psychological outcomes among refugee children. Educational environments provide social support, structure, and opportunities for resilience-building. Porter and Haslam (2005) suggested that educational attainment can function as a protective factor by improving coping mechanisms and reducing psychological vulnerability. Gender differences have also been identified in PTSD research. Women and girls generally report higher levels of PTSD symptoms following traumatic exposure than males. Breslau et al. (1998) reported that females have approximately twice the risk of developing PTSD after traumatic experiences. Foa et al. (2006) further indicated that biological, emotional, and sociocultural factors may explain these gender differences.

Mental Health and Psychosocial Support (MHPSS) Interventions

Mental Health and Psychosocial Support (MHPSS) programs have become increasingly important for addressing psychological distress among refugee populations. Trauma-informed interventions seek to reduce emotional suffering while improving resilience and social functioning. Arts-based interventions have emerged as effective approaches in child mental health programs because they provide children with safe and non-threatening methods of expressing emotions and processing traumatic experiences. Creative activities including drawing, storytelling, music, and drama may improve emotional regulation and psychological well-being among children exposed to trauma (Perry, 2009). Betancourt et al. (2013) reported that culturally adapted interventions demonstrate greater effectiveness among refugee populations because they consider social beliefs, cultural values, and community needs. Programs implemented through organizations such as the Peace of Mind Foundation and the Youth Association for Development (YAD) utilize trauma-informed and arts-based approaches designed to enhance psychosocial well-being among refugee children in Pakistan.

Research Gap

Although substantial evidence exists regarding PTSD among refugee populations globally, limited studies have specifically examined the prevalence and correlates of PTSD among Afghan refugee children residing in Pakistan, particularly in Quetta. Additionally, insufficient evidence exists regarding the influence of demographic characteristics, educational status, socioeconomic factors, and trauma-related experiences on PTSD symptoms within this population. Therefore, this study aims to address this gap by investigating the prevalence and correlates of PTSD among Afghan refugee children and providing evidence that may contribute to the development of culturally appropriate mental health interventions and policies.

METHODOLOGY

Study Design

This study employed a quantitative cross-sectional study design to assess the prevalence and correlates of

Post-Traumatic Stress Disorder (PTSD) among Afghan refugee children residing in Quetta, Pakistan. A cross-sectional design was selected because it allows for the assessment of both the outcome variable (PTSD symptoms) and associated demographic and trauma-related factors at a single point in time. This design is widely used in mental health research to estimate prevalence and identify relationships between variables.

Study Setting

The study was conducted in Quetta, Baluchistan, Pakistan, which hosts a substantial population of Afghan refugees. Quetta has historically served as one of the major settlement areas for Afghan refugees because of its geographical proximity to Afghanistan and established refugee communities. Refugee populations in Quetta frequently experience socioeconomic challenges, restricted access to healthcare services, educational barriers, and prolonged exposure to displacement-related stressors. Data collection was carried out through educational institutions and community settings involved in Mental Health and Psychosocial Support (MHPSS) programs facilitated by the Peace of Mind Foundation and the Youth Association for Development (YAD).

Study Population

The target population for this study consisted of Afghan refugee children residing in Quetta, Pakistan. Children enrolled in educational and psychosocial support programs and meeting the eligibility criteria were considered for participation.

Inclusion Criteria

Participants were included in the study if they met the following criteria:

- Afghan refugee children residing in Quetta, Pakistan
- Children enrolled in schools or community-based programs
- Participants aged below 18 years
- Children able to understand study questions
- Children whose parents or guardians provided consent for participation

Exclusion Criteria

Participants were excluded from the study if they:

- Had severe cognitive or communication difficulties affecting participation
- Were unwilling to participate in the study
- Had incomplete questionnaire responses

Sample Size

The study included a total sample of 320 Afghan refugee children. The sample size was considered adequate to estimate PTSD prevalence and identify statistically significant relationships between PTSD symptoms and associated variables.

Sampling Technique

A stratified random sampling technique was employed to select study participants. Stratification was used to ensure adequate representation of participants across demographic characteristics such as gender, educational level, and age categories. Participants were randomly selected from schools and community centers participating in MHPSS activities.

Data Collection Instrument

Data were collected using a structured questionnaire consisting of demographic information and standardized PTSD assessment measures.

The questionnaire contained the following sections:

Section I: Demographic Information

This section included:

- Gender, Ethnicity, Religion, Educational status, Occupation, Family income, Language spoken at home, Family educational background

Section II: Trauma-Related Characteristics

Questions assessed:

- Exposure to traumatic events, Time of traumatic experience, Trauma-related symptoms, Functional impairment

Section III: PTSD Assessment

PTSD symptoms were measured using the PTSD Checklist for DSM-5 (PCL-5), a standardized self-report instrument developed according to the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). The instrument evaluates symptom clusters including:

- Re-experiencing symptoms
- Avoidance symptoms
- Negative alterations in cognition and mood
- Hyperarousal symptoms

Higher scores indicate greater severity of PTSD symptoms.

Data Collection Procedure

Formal permission was obtained from relevant authorities and participating institutions before initiating data collection. Trained data collectors administered questionnaires through face-to-face interactions with participants in schools and community settings. Participants and guardians were informed regarding the purpose of the study, confidentiality procedures, voluntary participation, and their right to withdraw at any stage without consequences.

Data Analysis

Data were entered and analyzed using Statistical Package for Social Sciences (SPSS) version 26th. Several statistical procedures were performed:

Descriptive Statistics

Descriptive statistics including:

- Frequencies
- Percentages
- Means
- Standard deviations

Were used to summarize demographic characteristics and PTSD-related variables.

Inferential Statistics

The following analyses were conducted:

Pearson Correlation Analysis: To determine relationships between PTSD symptoms and trauma-related variables.

Multiple Regression Analysis: To identify predictors associated with PTSD symptom severity and evaluate the influence of demographic and trauma-related variables. A p-value of <0.05 was considered statistically significant.

Ethical Considerations

Ethical principles were strictly followed throughout the study process. Permission was obtained from relevant institutional authorities prior to data collection. Informed consent was obtained from parents or guardians, and assent was obtained from participating children where appropriate. Participants were informed regarding study objectives, confidentiality, anonymity, voluntary participation, and their right to withdraw from the study at any stage. No identifying information was recorded, and all collected data were stored securely and used solely for research purposes. Special consideration was given to participants' psychological well-being because the study involved sensitive topics related to traumatic experiences.

RESULTS

A total of 320 Afghan refugee children participated in this study. Descriptive statistics were used to summarize participants' demographic characteristics, while Pearson correlation and multiple regression analyses were performed to identify relationships and predictors of PTSD symptoms. Findings are based on the study dataset and reported analyses. The demographic findings showed that female participants constituted the majority of the sample (61.9%) compared to males (38.1%). Nearly all respondents belonged to the Hazara ethnic group (99.7%) and identified as Muslims (99.1%). The majority of respondents (80.6%) were students, while 19.4% were categorized as working students. Regarding socioeconomic status, most participants belonged to low- and middle-income families, with only a small proportion (2.5%) belonging to higher-income households (Table 1).

Table 1. Demographic characteristics of respondents (N = 320)

Variables	Frequency (n)	Percentage (%)
Gender		
Male	122	38.1
Female	198	61.9
Ethnicity		
Hazara	319	99.7
Other	1	0.3
Religion		
Muslim	317	99.1
Christianity	3	0.9
Occupation		
Student	258	80.6
Working student	62	19.4
Parental income		
Low (<20,000 PKR)	142	44.4
Middle (20,000–50,000 PKR)	170	53.1

High PKR	(>50,000)	8	2.5
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The majority of respondents (99.1%) reported secondary-level education. Regarding educational background within families, approximately half (51.2%) indicated primary education as the highest educational level attained by family members, while only 7.2% reported tertiary or postgraduate education. These findings indicate relatively low educational attainment within the family environment (Table 2).

Table 2. Educational characteristics of respondents and family members

Variables	Frequency (n)	Percentage (%)
Respondent education level		
Primary	2	0.6
Secondary	317	99.1
Highest family education level		
Primary	164	51.2
Secondary	133	41.6
Tertiary	11	3.4
Postgraduate	12	3.8

More than half of respondents (55.6%) reported experiencing traumatic events within the previous 6–12 months, while 29.1% reported traumatic experiences occurring 1–5 years earlier. Only a small proportion indicated no traumatic experiences. These findings suggest relatively recent exposure to traumatic events among participants (Table 3).

Table 3. Timing of traumatic experiences among respondents

Time of traumatic experience	Frequency (n)	Percentage (%)
Less than 6 months ago	31	9.7
6–12 months ago	178	55.6
1–5 years ago	93	29.1
5–10 years ago	7	2.2
10–20 years ago	4	1.3
No traumatic experience reported	7	2.2

Pearson correlation analysis was performed to examine relationships between PTSD symptoms and trauma-related variables. Correlation analysis revealed statistically significant positive relationships between PTSD symptoms and all trauma-related variables ($p < 0.001$). The strongest association was observed between

PTSD symptoms and negative self-perception and disconnection ($r = 0.834$), followed by functional impairment ($r = 0.829$) and avoidance/emotional regulation ($r = 0.785$). These findings indicate that increases in trauma-related symptoms were associated with increased PTSD symptom severity (Table 4).

Table 4. Correlation analysis of PTSD and trauma-related symptoms

Variables	r-value	p-value
Re-experiencing symptoms (RES)	0.740	<0.001
Avoidance and emotional regulation (AER)	0.785	<0.001
Negative self-perception and disconnection (NSPD)	0.834	<0.001
Functional impairment (FI)	0.829	<0.001

Multiple regression analysis was performed to identify predictors of PTSD symptoms. Regression analysis demonstrated that educational level was negatively associated with PTSD symptoms ($\beta = -0.164$, $p < 0.001$), suggesting a protective effect of education. Conversely, family size showed a positive association with PTSD symptoms ($\beta = 0.125$, $p = 0.024$). Trauma-related variables, including negative self-perception, re-experiencing symptoms, and avoidance/emotional regulation difficulties, demonstrated significant positive relationships with PTSD severity. Female participants also reported significantly higher PTSD symptoms than male participants. Overall, the findings suggest that trauma-related experiences, educational status, family characteristics, and gender play important roles in determining PTSD symptom severity among Afghan refugee children in Quetta, Pakistan (Table 5).

Table 5. Regression analysis of predictors associated with PTSD symptoms

Predictor variables	Beta (β)	p-value
Educational level	-0.164	<0.001
Number of family members	0.125	0.024
Negative self-perception and disconnection	0.265	<0.001
Re-experiencing symptoms	0.349	<0.001
Avoidance and emotional regulation	0.283	<0.001
Gender	0.036	<0.001

DISCUSSION

The present study aimed to assess the prevalence and

correlates of Post-Traumatic Stress Disorder (PTSD) among Afghan refugee children residing in Quetta, Pakistan. The findings revealed a considerable burden of PTSD symptoms among the participants and demonstrated significant relationships between PTSD symptoms and demographic, socioeconomic, and trauma-related variables. The results highlight the psychological vulnerability of Afghan refugee children and emphasize the importance of targeted mental health interventions for displaced populations. The findings of the present study indicate that PTSD symptoms were highly associated with trauma-related experiences among Afghan refugee children. Significant positive relationships were observed between PTSD symptoms and re-experiencing symptoms, avoidance and emotional regulation difficulties, negative self-perception and disconnection, and functional impairment. Among these variables, negative self-perception and disconnection demonstrated the strongest relationship with PTSD symptom severity. These findings suggest that children who experience greater emotional distress and negative perceptions about themselves are more likely to report severe PTSD symptoms.

The findings are consistent with previous research demonstrating that exposure to cumulative traumatic experiences contributes significantly to psychological distress among refugee populations. Fazel et al. (2005) reported that refugee children exposed to violence, displacement, and traumatic experiences frequently develop PTSD symptoms and associated emotional problems. The study also demonstrated that educational attainment was negatively associated with PTSD symptoms, indicating that children with better educational backgrounds may possess greater psychological resilience. Educational environments often provide emotional support, social interaction, routine activities, and opportunities for personal development that may protect against psychological distress. Educational institutions can additionally provide access to psychosocial support systems and mental health resources for vulnerable children. Family characteristics were also found to influence PTSD symptoms. The results indicated that larger family size was positively associated with increased PTSD symptom severity. Larger families within refugee settings may experience greater financial burdens, limited access to resources, overcrowding, and increased caregiving responsibilities. Such conditions can contribute to psychological stress and negatively affect children's emotional well-being.

Gender differences were another important finding of this study. Female refugee children reported significantly higher PTSD symptom severity than male children. These findings align with existing literature indicating that females are generally more vulnerable to developing PTSD following traumatic experiences. Breslau et al. (1998) reported that females experience approximately twice the risk of developing PTSD compared with males. Similarly, Foa et al. (2006)

observed that biological, psychological, and sociocultural factors may explain greater PTSD vulnerability among females.

The present findings also have implications for Mental Health and Psychosocial Support (MHPSS) interventions targeting Afghan refugee children. Trauma-informed approaches that incorporate emotional support, resilience-building strategies, and culturally appropriate practices may be effective in reducing psychological distress. Programs involving creative and arts-based interventions have demonstrated positive effects in helping children express emotions and process traumatic experiences (Betancourt et al., 2013; Perry, 2009).

The findings of this study contribute to the existing body of literature by providing evidence regarding PTSD prevalence and associated factors among Afghan refugee children in Quetta, Pakistan. Despite growing concern regarding refugee mental health, relatively limited research has focused specifically on this population within Pakistan. Therefore, the current study offers valuable information for healthcare providers, policymakers, and organizations involved in refugee mental health services. However, certain limitations should be acknowledged. The use of a cross-sectional study design limits the ability to establish causal relationships between variables. Data were also collected using self-reported questionnaires, which may introduce reporting bias. Additionally, the findings primarily represent Afghan refugee children residing in Quetta and therefore may not be generalized to all refugee populations.

Overall, the findings emphasize the need for comprehensive, culturally appropriate, and trauma-informed interventions aimed at addressing PTSD symptoms and improving psychosocial well-being among Afghan refugee children.

CONCLUSION

The present study assessed the prevalence and correlates of Post-Traumatic Stress Disorder (PTSD) among Afghan refugee children residing in Quetta, Pakistan. The findings revealed a considerable burden of PTSD symptoms among participants, indicating that psychological trauma remains a significant mental health concern within refugee populations. Exposure to traumatic experiences, displacement-related challenges, and socioeconomic difficulties appeared to contribute substantially to psychological distress among Afghan refugee children. The study identified significant relationships between PTSD symptoms and trauma-related factors including re-experiencing symptoms, avoidance and emotional regulation difficulties, negative self-perception and disconnection, and functional impairment. These findings indicate that children who experience greater trauma-related psychological difficulties are more likely to exhibit severe PTSD symptoms and reduced psychosocial functioning. Demographic and socioeconomic factors also played an important role in influencing PTSD

symptoms. Educational attainment demonstrated a protective relationship with PTSD severity, suggesting that education may strengthen resilience and provide supportive environments that reduce psychological distress. In contrast, larger family size and female gender were associated with higher PTSD symptom severity. Female refugee children, in particular, reported greater psychological vulnerability, emphasizing the importance of considering gender-specific needs in mental health interventions. The findings of this study highlight the need for comprehensive and culturally appropriate Mental Health and Psychosocial Support (MHPSS) interventions that address both psychological and social determinants of mental health among refugee children. Strengthening educational opportunities, improving psychosocial support systems, and implementing trauma-informed interventions may contribute to better mental health outcomes and improved quality of life among Afghan refugee children. Overall, this study contributes valuable evidence regarding PTSD among Afghan refugee children in Pakistan and provides information that may assist policymakers, healthcare professionals, and humanitarian organizations in developing targeted interventions for vulnerable refugee populations.

Recommendations

Based on the findings of the study, the following recommendations are proposed:

1. Strengthen trauma-informed MHPSS programs: Mental Health and Psychosocial Support programs should incorporate trauma-informed approaches specifically designed for refugee children to address PTSD symptoms and emotional distress.
2. Implement gender-sensitive interventions: As female refugee children demonstrated higher PTSD symptom severity, intervention programs should include gender-responsive strategies that address specific emotional and psychosocial needs.
3. Promote educational support programs: Educational institutions should provide supportive environments and psychosocial resources because educational engagement may function as a protective factor against PTSD symptoms.
4. Increase community awareness regarding mental health: Community-based awareness programs should be implemented to reduce stigma associated with mental health problems and encourage early identification and intervention.
5. Enhance family-centered support strategies: Programs involving family participation should be encouraged to improve social support and strengthen protective family environments.
6. Develop culturally appropriate interventions: Mental health services should consider cultural values, language preferences, and community characteristics to improve the effectiveness and acceptance of interventions.
7. Strengthen collaboration among stakeholders: Healthcare providers, non-governmental organizations, educational institutions, and policymakers should

collaborate to improve mental health services for refugee populations.

Strengths of the Study

- The study addressed an under-researched population of Afghan refugee children residing in Pakistan.
- A relatively large sample size (N = 320) improved the reliability of findings.
- Standardized PTSD assessment tools were utilized.
- Multiple statistical analyses were performed to identify important predictors and relationships.

Limitations of the Study

- The cross-sectional design limits the establishment of causal relationships.
- Self-reported responses may introduce reporting bias.
- Findings may not be generalized beyond Afghan refugee children residing in Quetta.
- Certain psychological and environmental factors, including social support and coping strategies, were not comprehensively explored.

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