

Forced Migration Issues and Post Traumatic Stress Disorder among Refugee Camps in Rwanda; A Case of Refugees Adolescents in the Emergency Transit Mechanism - Gashora, Bugesera

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# Forced Migration Issues and Post Traumatic Stress Disorder among Refugee Camps in Rwanda; A Case of Refugees Adolescents in the Emergency Transit Mechanism -Gashora, Bugesera

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# Abstract

It is widely recognized that forced migration and separation from loved ones can lead to mental health problems in teenagers, with Post Traumatic Stress Disorder (PTSD) being a common issue due to their limited cognitive resources. This study investigates the impact of forced migration on the mental health of adolescent refugees living in Emergency Transit Mechanism (ETM) Gashora, Rwanda. The 169 participants in this quantitative cross-sectional study, whose ages ranged from 10 to 17, had a mean age of 14.31 (SD = 2.25). While structured interviews were used to gather data, random sampling was used to choose study participants. Regression models, Chi square tests, and descriptive statistics were employed in the data analysis. SPSS was used to examine every statistical measurement, and for every test, the significance level was set to 0.05. Of the respondents, 85% were female, 36.1% were illiterate, and 63.9% had only completed elementary school. The distribution of living arrangements was as follows: 26.0% lived alone or with non-family members, 23.1% lived with relatives, and 50.9% lived with parents. Of those surveyed, 32.5 percent had lived in the camp for fewer than six months. According to the study, many of the participants had gone through traumatic experiences associated with migration, such as being subjected to racism and discrimination (86.7%), being separated from family (72.8%), being involved in armed conflicts (78.1%), being the victim of sexual, physical, or morally abusive harassment (65.7%, 66.9%, and 72.2%, respectively), being a victim of human trafficking (71.0%), and being arrested (72.8%). In addition, 78.1% did not have access to shelter, and 82.2% reported having trouble getting healthcare. The findings showed that while a



worrying 72.8% of respondents fit into the likely PTSD group, just 27.2% of respondents showed low trauma-related discomfort symptoms. Living in families with four or more people (AOR = 2.171, p 0.05, 95% CI = [1.029, 4.797]), experiencing moral violence (AOR = 2.084, p 0.05, 95% CI = [1.010, 4.297]), and being exposed to armed conflicts are all risk factors. These results highlight the critical need for psychosocial therapies and trauma-focused treatments in refugee camps, especially for recently arrived adolescent refugees who have gone through traumatic migration-related experiences.

### **1.Introduction**

People who have been forced to flee their countries due to persecution, war, conflict or violence often seek refuge or asylum (Baak et al., 2019). The migrant crisis in the Mediterranean has resulted in the loss of many lives, with over 3,200 deaths recorded in 2014 and at least 1,750 in the first four months of 2015 alone. As 2021 ended, the global displacement crisis had affected an estimated 89.3 million people. Among them, children under the age of 18 accounted for 41%, or 36.5 million (UNHCR, 2022). The UNHCR has been actively involved in assisting these refugees, including relocating them to safer locations. Rwanda is home to over 127,000 refugees, primarily from Burundi and DRC, with a significant proportion being women and children (UNHCR, 2022). In 2019, a pact was established between Rwanda's government, the UNHCR, and the African Union (AU) to aid in the transfer of asylum seekers and refugees from Libya to Rwanda. The Rwandan government has generously set out a transit facility in Gashora, Bugesera District, playing a crucial role in protecting many at-risk refugees and asylum-seekers across Africa (Linos & Chachko, 2022). At present, ETM Gashora in Bugesera district is home to approximately seven hundred refugees from various African nations such as Sudan, Eritrea, Somalia, Cameroun, Mali, Ethiopia, and South Sudan. These individuals have often endured conflicts, wars and losses in their home countries or during their migration process (Crepet et al., 2017). Currently, the Gashora transit facility is home to approximately 250 children and adolescents. Being a refugee is an extremely stressful condition as it involves numerous traumatic experiences such as abrupt environmental changes, poverty, social injustice, physical and sexual violence, diseases, and loss of friends and families (Bosqui, 2020). The traumatic situations that children and young people encounter during and after war and displacement are significant given their growing need for a safe and stable environment and their right to a safe and predictable childhood (Bürgin et al., 2022). Stressful events can impact children's long-term self-perception and worldview, including the quality of their relationships (Sriphachan and Praphan, 2019). There is evidence that adverse childhood experiences (ACEs), such as war and forced migration, increase the likelihood of developing PTSD (Bürgin et al., 2022; Franco, 2022). However, the latest from emergency departments shows that children's mental health remains unclear. This study aimed to explore the relationship between forced migration and PTSD among young refugees at the ETM in Gashora, Rwanda.

### 2.Materials and Methods

### Study population and sampling design

This study is of a cross-sectional design that used quantitative methodologies. This study was conducted at the Gashora Emergency Transit Mechanism which houses 700 refugees from Eritrea, Sudan, Somalia, Ethiopia, South Sudan, Cameroon, Mali, and Guinea. The camp is situated in the Gashora sector, Bugesera District, in the Eastern Province of Rwanda. The target https://doi.org/10.53819/81018102t2281



population of this study are 250 refugees and asylum seekers between 10 to 17 years old residing in ETM Gashora. Adolescent whose parents or guardian who did not provide the participation consent was excluded. The minimum sample size for this study was 154 respondents. it was obtained by using the Yamane formula (Yamane, 1967),  $(n=N)/(1+N\times e^2)$ ). With "N" the number of target population, "e" the margin of error of 0.005, and "n" the sample size, n=250/ [ 1+250\*(0.05)]  $^2 = 153.84$ . With the non-response rate of 10% the total sample size for this study is 169 respondents. A simple random sampling technique was used to select the study respondents of this study.

# **3. Data Collection and analysis**

The data collection instrument was a structured questionnaire with items about sociodemographic factors, Causes of related displacement issues, violence related issues, and CATS 7-17 (Adolescent version) scale. CATS stand for Child and Adolescent Trauma Screen. CATS was reported to have excellent internal consistency and strong convergent validity and have been used with youth and a child from sub-Saharan Africa. The reliability analysis from the data collected in the present study showed the Cronbach's alpha score of 0.93. The validity of the instrument was ensured by following the procedures and coding framework of CATS. Ethical disclaimers were obtained from Mount Kenya University Ethics Committee and Ministry in charge of disaster and emergency management (MINEMA) to conduct this research at ETM-Gashora. Approval was obtained from the selected youth's parents and guardians. All participants were informed about the study and asked to participate voluntarily. Participants were assured of their right to withdraw from the study at any time. They were also assured that their responses would be processed and kept confidential. During the data analysis, categorical data were presented as percentages and count in tables while continuous data were presented as mean and standards deviations. Chi-square tests and regression analysis were used to determine the relationship between independent variables and PTSD. The statistical significance was set as P > 0.05 for all tests.

# 4. Presentation of Findings

This part of the research presented the views and perceptions of the respondents according to their information with respective findings on the causes of forced migration, post-migration factors associated with PTSD as well as the association between social migration factors and PTSD.

## 4.1 Causes of forced migration

The results of research demonstrated that the causes of forced migration as tribalism and discrimination, exposure to armed conflict, insecurity, and war cause the Post traumatic stress disorders among the young adolescents living in ETM-Gashora.



### **Table 4.1: Causes of forced migration**

Statement regarding causes of forced migration	Frequency	Percentage	Mean	SD
Tribalism and discrimination	148	87.6	0.88	0.333
Exposure to armed conflict	132	78.1	0.78	0.415
Insecurity	123	72.8	0.73	0.446
War	113	66.9	0.67	0.472

### Source: Primary Data (2023)

The results in Table 4.1 demonstrate the mean of 0.88 and SD of 0.333, the frequency of 148 and percentage of 87.6 shows that these forced migration causes lead to PTSD to a very great extent. The mean of 0.78 and 0.415 of SD ,132 frequency and 78.1 percentage shows that these forced migration causes lead to PTSD to a very great extent. The mean of 0.73 and 0.446 of SD, the frequency of 123 to 72.8 as percentage shows that these forced migration causes lead to PTSD at great extent. The mean of 0.67 and SD of 0.472 on the frequency of 113 and percentage of 66.9 shows that these forced migration causes lead to PTSD as a great extent. Thus, since the overall big number of respondents asserted that forced migration causes lead to PTSD. The descriptive results of this research concerning the first objective have revealed that study that was conducted in Berlin found armed conflicts as the cause of forced migration among adolescents (Myles et al., 2018). Beginning in 2011, the political dissent against the Syrian administration escalated. The government's response to these demonstrations ignited a savage civil conflict, triggering a massive exodus. Over ten million Syrians found themselves compelled to abandon their homes, with six million relocating within Syria's borders and four million seeking refuge abroad. Among these displaced individuals, a third comprised women and children (Ceri et al., 2016). In Africa, civil wars and violent conflict have forced millions of adolescents and young adults from their homes into neighboring countries, often ill prepared to provide protection (Lori & Boyle, 2015)

### 5.2 Association between post migration factors and PTSD

The results of research demonstrated that the association between post migration factors and PTSD as separation from their families lack of shelter, sexual violence, physical violence, moral violence and human trafficking can led to Post traumatic stress disorders among the young adolescents living in ETM-Gashora.

Child and adolescent trauma screen (CATS) were used to assess Post-traumatic stress disorder (PTSD) among study respondents. The total symptom score was obtained by adding up the raw scores of 20 items, with a possible range of 0 to 60. In the present study CATS score ranged between 6 and 47 with the mean score of 27.96 (SD = 10.75). The cut-off value of 21 was used to categorize respondents into probable PTSD ( $\geq 21$ ) or low trauma-related distress categories (<21 score) (Nilsson et al., 2020).



**PTSD** 

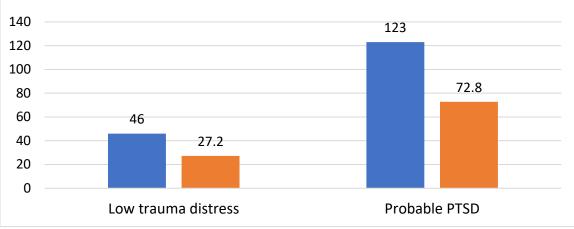


Figure 4.1: PTSD Assessment Scores Categories

Figure 4.1 shows the levels of post-traumatic stress symptoms categories. Respondents with low trauma-related distress symptoms were 46 (27.2%). Respondents within the probable PTSD category were 123 (72.8%). Chi-square test was used to detect the association between migration-related issues and probable PTSD.

Statement regarding association	Ū.	-traumatic st		rder		
between post migration factors	Low trau	ma distress	Probab	le PTSD	$\chi^2$	Р
and PTSD	Ν	%	Ν	%		
Separation from family					0.330	0.566
Disagree	14	30.4	32	69.6		
Agree	32	26.0	91	74.0		
Lack of shelter					4.244	0.039
Disagree	15	40.5	22	59.5		
Agree	31	23.5	101	76.5		
Sexual violence					0.649	0.420
Disagree	18	31.0	40	69.0		
Agree	28	25.2	83	74.8		
Physical violence					1.025	0.311
Disagree	18	32.1	38	67.9		
Agree	28	24.8	85	75.2		
Moral violence					4.034	0.045
Disagree	18	38.3	29	61.7		
Agree	28	23.0	94	77.0		
Human trafficking					1.029	0.310
Disagree	16	32.7	33	67.3		
Agree	30	25.0	90	75.0		



Table 4.2 demonstrates the Association between post migration factors and PTSD. It demonstrates that 74% from respondents agreed that separation from their family as post migration factor led to Post traumatic and stress disorder due to missing of their relatives, sisters, brother, parents and family members in general. Thus, this factor led to PTSD to a very great extent. Moreover, the research demonstrate that 76.5% from respondents agreed that lack of shelter as post migration factor led to post traumatic and stress disorder due to exposure to wind, heavy rain, sun, various animals. Thus this factor led to PTSD to a very great extent.

In addition, 76% from respondents agreed that violence whether sexual, physical and moral led to different psychic symptoms, which with their intensity and duration can reach the level of PTSD. . On the other hand, various psychiatric disorders, as well as of PTSD affected them to a very extent.

The last factor as Human trafficking among the respondents,75% agreed that they developed some symptoms of post traumatic and stress disorder due to this factor while human trafficking victims often experienced this situation with various smuggles from Libya and Soudan and have been triggered by their chronic, complex trauma. This cycle can include PTSD and related psychological effects like anxiety, hyperarousal, and insomnia, as well as emotional lability.

The descriptive results of this research concerning the second objective have revealed that study that was conducted in Ukraine by McEwen et al.'s study (2022) investigates whether moral injury appraisals moderated the relationships between trauma, postmigration living difficulties, resilience, and mental health outcomes in adolescent refugees. The study found that adolescents who had experienced high levels of discrimination combined with high levels of moral injury had poorer mental health. High levels of resilience appeared to buffer the association between moral injury and internalizing symptoms. Violence may contribute to perpetuating poor mental health in adolescent refugees with high levels of moral injury. Resilience may buffer some of the negative effects of moral injury (McEwen et al., 2022).

The statistically significant association between migration related issues and PTSD presented separation with families, human trafficking, difficulty to access health care, as well as sexual and physical violence ( $c^2$  (1, N = 169), p > 0.05). The statistically significant association was present with moral violence and harassment, and lack of shelter ( $c^2$  (1, N = 169), p < 0.05). These variables that showed statistical significance association in bivariate analysis were included in regression analysis to identify the magnitude and direction of the associations.

Model	-2 Log Likelihood	Cox & Snell R square	Nagelkerke R Square				
1	279.295ª	0.010	0.014				
Source: Pri	Source: Primary data (2023)						

Table 4.3 shows the summary of exposure to armed conflicts and PTSD model. The table shows that the -2 log likelihood was 279.295, Cox & Snell R Square was 0.010, and Negelkerke R square was 0.014. Accordingly, the model shows that the unit change of exposure to armed conflicts affect the progression to PTSD.



#### Table 4.4: Coefficients of exposure to armed conflicts and PTSD

Variable	В	SE	Wald	<b>Odds Ratio</b>	95% CI	Р
Exposure to armed						
conflict						
Disagree				Reference		
Agree	0.798	0.393	4.129	2.221	[1.029, 4.797]	0.042
Source: Primary dat	a (2023)					

Source: Primary data (2023)

Table 4.4 shows direction and magnitude of association between exposure to armed conflicts and PTSD. Respondents who were exposed to an armed conflicts had more than two times more likely to develop PTSD compared to their counterparts (AOR = 2.221, p < 0.05, 95% CI = [1.029, 4.797]).

Table 4.5: Model summary of racism and discrimination and PTSD

Model	-2 Log Likelihood	Cox & Snell R square	Nagelkerke R Square
2	278.531	0.013	0.019
Source: Prin	nary data (2023)		

Table 4.5 shows the summary of exposure to armed conflicts and PTSD model. The table shows that the -2 log likelihood was 278.531, Cox & Snell R Square was 0.013, and Negelkerke R square was 0.019. Accordingly, the model shows that the unit change of exposure to racism and discrimination affect the progression to PTSD.

### Table 4.6: Coefficients of moral violence and discriminations and PTSD

Variables	В	SE	Wald	Odds Ratio	95% CI	Р
Moral violence						
Disagree				Reference		
Agree	0.734	0.369	3.952	2.084	[1.010, 4.297]	0.047

Source: Primary Data (2023).

Table 4.6 shows direction and magnitude of association between exposure to moral violence and discrimination and PTSD. Respondents who were exposed experienced moral violence and discrimination were more than two times more likely to develop PTSD compared to their counterparts (AOR = 2.084, p < 0.05, 95% CI = [1.010, 4.297]).

#### Table 4.7: Model summary of lack of shelter and discrimination and PTSD

Model	-2 Log Likelihood	Cox & Snell R square	Nagelkerke R Square			
3	279.797	0.008	0.011			
Source: Primary data (2023)						

Table 4.7 shows the summary of lack of shelter and PTSD model. The table shows that the -2 log likelihood was 279.797, Cox & Snell R Square was 0.008, and Negelkerke R square was 0.011.

Accordingly, the model shows that the unit change in lack of shelter affect the progression to PTSD.

## Table 4.8: Coefficients of lack of shelter and PTSD

Variables	В	SE	Wald	Odds Ratio	95% CI	Р
Lack of shelter						
Disagree				Reference		
Agree	0.798	0.393	4.129	2.221	[1.029, 4.797]	0.042
Source: Primary Data (2023)						

Table 4.8 shows direction and magnitude of association between lack of shelter and PTSD. Respondents who were exposed to an armed conflicts experienced the lack of shelter had also more than two times more likely to develop PTSD compared to their counterparts (AOR = 2.22 p < 0.05, 95% CI = [1.010, 4.297]).

Table 4.9: Model summary of lack of shelter and PTSD							
Madal		Cox & Spall D aquana	Nagall				

Model	-2 Log Likelihood	Cox & Snell R square	Nagelkerke R Square
3	279.859	0.007	0.011
Source: Prin	mary data (2023)		

Table 4.9 shows the summary of lack of shelter and PTSD model. The table shows that the -2 log likelihood was 279.859, Cox & Snell R Square was 0.007, and Negelkerke R square was 0.011. Accordingly, the model shows that the unit change in household size affect the progression to PTSD.

## 4.2.3 Social migration factors associated with PTSD

Statement regarding social	Post-traumatic stress Disorder					
migration factors associated	Low trauma distress		<b>Probable PTSD</b>		<b>c</b> <sup>2</sup>	Р
with PTSD variables	n	%	n	%		
Age					0.640	0.726
10 - 12	14	31.8	30	68.2		
13 – 15	14	25.9	40	74.1		
16 – 17	18	25.4	53	74.6		
Sex					1.175	0.278
Female	20	23.5	65	76.5		
Male	26	31.0	58	69.0		
Education					0.47	0.828
Illiterate	16	26.2	45	73.8		
Primary school	30	27.8	78	72.2		
<b>Biological parents</b>					1.551	0.460
None living	9	25.0	27	75.0		

# Table 4.10: Social migration factors associated with PTSD

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J <b>J 8</b>						
One living	25	31.6	54	68.4		
Both living	12	22.2	42	77.8		
Housemates					0.717 0.69	99
Parents	24	27.9	62	72.1		
Relatives	12	30.8	27	69.2		
Others	10	22.7	34	77.3		
Household size					4.776 0.02	29
Less than four	16	19.5	66	80.5		
Four and more	30	34.5	57	65.5		
Camp living period					1.559 0.4	59
Less than six months	18	32.7	37	67.3		
Six to 12 months	18	26.5	50	73.5		
More than 12 months	10	21.7	123	72.8		
Sauman Drimary Data (2022)						

#### Source: Primary Data (2023)

Table 4.10 shows associations between social migration factors and PTSD. Sex and education level (c2 (1, N = 169), p > 0.05), as well as Biological parents, housemates, and time of period in the camp ( $c^2$  (1, N = 169), p > 0.05) were not significantly associated with PTSD. However, the household size was significantly associated with PTSD ( $c^2$  (1, N = 169), p < 0.05). Household size was therefore included in regression analysis.

The results from the table 4.10 demonstrate that 74% respondents of age as social migration factor to PTSD between the range of 16-17 years old tend to probable post traumatic and stress disorder. The female sex as social migration factor of PTSD equal to 76.5% respondents shown that have probable diagnosed for PTSD among the young adolescents living in ETM Gashora. The illiterate refugees' respondents shown that 73.8% of them as probable diagnosed for PTSD as education social factor of PTSD, Biological parents where those who are not living together are tended to be affected by PTSD at 77.8% from respondents. Household size as factor of social migration ,80.5% shown that the adolescents who living tother less than four are likely to develop PTSD more than others who are living in more than four members in the same house.

Camp living period as social migration factor ,73.5% from respondents shown that they are likely to develop PTSD while they spend their time between six and one year in the host country. The descriptive results of this research concerning the third objective have revealed that study that was conducted in Australia by Veeser et al.'s study (2023) assesses the prevalence of post-traumatic stress disorder (PTSD) in a clinical outpatient sample of refugee minors, and evaluates the association of different risk factors with a PTSD diagnosis. The study found that the prevalence of PTSD among the young refugee patients was 61.6%. Significant predictors of a PTSD diagnosis were the number of interpersonal traumatic life events, age, education, residence status, and time since arrival in the host country (Veeser et al., 2023).



Table 4.11: Regression Analysis of social migration factors and PTSD							
Variables	B	SE	Wald	<b>Odds Ratio</b>	95% CI	Р	
Household size							
Four and more				Reference			
Less than four	-0.775	0.359	4.676	2.171	[1.075, 4.384]	0.031	

## Source: Primary Data (2023).

Table 4.11 present the regression analysis of household size with PTSD. Respondents who had the household size of less than four people were 2 times more likely of developing PTSD than those who were living in households of four or more people (AOR = 2.171 p < 0.05, 95% CI = [1.075, 4.384]).

## **5.3 Discussion**

Adolescent refugees worldwide witness traumatic events before and during their migration journey. A study among adolescent in war-torn Donetsk region, Ukraine reported that 60% of the respondents witnessed armed attacks, while 13.9% were victims of violence, 12.2% were forcibly separated with their parents and family members and 26.7 lacked proper shelters (Osokina et al., 2023). Traumatic events such as near-death experiences, witnessing murder of family members, and physical, moral, and sexual violence were also experienced by Rohingya adolescents residing in refugee camps in Bangladesh (O'connor & Seager, 2021). The same events were also experienced or witnessed by respondents in this study. Adolescence is a time of development of self-identity, independence. Exposure to traumatic events therefore put adolescent under high risk of developing mental disorders that are likely to persist into adulthood (Bennouna et al., 2019).

The present study found that 72.8% of respondents fall in the category of probable PTSD. These findings were higher than 22.7% of the pooled prevalence of self-reported PTSD from a systematic review among adolescent refugees and asylum seekers (Blackmore et al., 2020). The prevalence of moderate to severe PTSD among schoolchildren refugees was found to be 31% (Yonis et al., 2020). The difference with the present research might be lying in the location and population differences as well as other factors. One factor would be the fact that respondents in the present study were living in the camp. Evidences shows that *living in institutional refugee camps is one more disruptive than living temporarily with family, friends, or in private accommodation* (Bedaso & Duko, 2022). Nevertheless, about third of adolescents in both low- and high-income countries who have experienced traumatic events may exhibit some symptoms of PTSD, while approximately 10% may meet the criteria for a full PTSD diagnosis according to the DSM-5 (Stupar et al., 2021).

Research has shown that both pre- and post-migration stressors can affect the mental health and PTSD of migrants and refugees. Migration related issues such as moral violence and harassment, exposure to armed conflict, and lack of shelter during migration were associated with elevated probability of PTSD among respondents of this study. A study among adolescent in low- and middle-income countries found that sexual violence and exposure to war was significant predictors of fulfilling full PTSD symptoms criteria (Stupar et al., 2021). Moral violence or psychological abuse has a significant effect on mental health of adolescents. This may include verbal abuse, humiliation, isolation, and other forms of emotional manipulation. This can cause feelings of fear, helplessness, and worthlessness and can lead to the development of mental health issues such as



PTSD. Similar to the findings of the present study, moral injury was found to be a potential predictor of PTSD among adolescent refugee (McEwen et al., 2022).

Other factors such as sociodemographic factors have also showed to predict PTSD among adolescent's refugees. Female compared with males and orphans to either one or both parents with those who's both parents are still living, were more likely to have higher likelihood of PTSD, according to a study among Syrian refugee adolescents in Jordan (Yonis et al., 2020). The significant predictors of PTSD among minor refugees in Hamburg, Germany, were age, resident status, and the time since the arrival in the host country (Veeser et al., 2023). In the present study, adolescent with households of less than four people tended to have higher PTSD likelihood than those with more than four household size. This may be due to the fact that larger household size may be associated with increased social support, which can help to buffer against the development of PTSD following a traumatic event. It is important to consider other factors that may influence the development of PTSD in adolescents, such as the nature of the traumatic event, the availability of social support, and individual differences in resilience and coping. These may explain the difference between findings obtained in this study and those obtained by various studies in reviewed literature.

This study provides valuable insights into the prevalence of PTSD among adolescent refugees in ETM Gashora and the factors associated with it, particularly migration-related factors. However, it also has some limitations. One limitation of this study is that it only included adolescent refugees in ETM Gashora. Therefore, the findings may not be generalizable to other populations or settings. Additionally, the study relied on self-reported data, which may be subject to recall bias or social desirability bias. Nevertheless, findings form this study have important implications for the development of interventions to support adolescent refugees and reduce their risk of developing PTSD. Further studies are needed to better understand the complex relationship between migration-related factors and PTSD among adolescent refugees.



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