

Psychiatric disorders among war-abducted and non-abducted adolescents in Gulu district, Uganda: a comparative study

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Abstract

Objective: We aimed to assess the nature and patterns of psychiatric disorders among adolescents who had been war-abducted in the war in northern Uganda, compared to non-abducted adolescents living in Gulu district, Uganda. **Method:** A cross sectional study that used an unmatched case-control design compared 82 abducted and 71 non-abducted adolescents for scores on measures of psychological distress and for selected psychiatric diagnoses using the Strength and Difficulties Questionnaire (SDQ) and the Mini International Neural-Psychiatric Interview for Children and Adolescents English version 2.0 (M.I.N.I.-KID). **Results:** More than 90% of adolescents reported exposure to severe trauma, either through direct or indirect experiences. Significantly more war abducted adolescents reported PTSD (26.8%v.12.7%) ($p=0.03$) major depression (19.5%v.4.2%) ($p=0.004$), and generalised anxiety disorder (13.4v.4.2%) ($p=0.049$) than non abducted adolescents. By contrast, non-abducted adolescents reported more past suicidality ($p=0.004$, $\chi^2=8.2$) than adolescents who were abducted. However, despite high rates of psychiatric disorder, these adolescents had good psychosocial adjustment. **Conclusion:** Adolescents in war affected areas whether war-abducted or not have varied and clinically significant emotional responses to different kinds of traumatic exposure. In a war-affected area, the development of a sustainable service for adolescents that tries to address the full range of mental health problems may be more appropriate than a psychological trauma service that focuses on one diagnosis.

Key words: Psychiatric diagnosis; war; adolescents, Uganda

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Introduction

Living in war affected areas places children at high risk of developing various kinds of psychiatric disorders, particularly posttraumatic stress disorder (PTSD).¹⁻⁴ Among these children, adolescents are the most consistently affected and are at extreme risk of psychological trauma during armed conflict as they are targets for recruitment; sexual exploitation, and abuse. In Africa, there is a paucity of knowledge on the psychopathological impact of war on children.⁵⁻¹² However, studies in ongoing conflict areas outside Africa suggest PTSD rates ranging from 27% to 33%.¹³⁻²⁰ One study that assessed children's psychological functioning during conflict; the siege of Sarajevo; found the rate of PTSD was 32%, similar to rates found

by Saigh (1989) among children aged 9–13 years during and after the Beirut conflict.^{16,18} However, except for Thabet et al (2002)², these studies were limited by the lack of a comparison group of non exposed children. In contrast, these rates are lower than those established by other studies in conflict situations with rates ranging from 41% to 97%.^{4, 21,22} Chimienti et al (1989)¹⁹ in an earlier study estimated that the children exposed to the armed conflict in Lebanon had 1.7 times more symptoms of PTSD than the general population while more recently Thabet et al(2002)² found that exposed children were 2.4 times more likely to develop PTSD than non exposed children.

In the last 19 years, many children have been deeply affected by experiences of war in Uganda's north and east regions where 59% of the population are children under 18 years of age. Since the beginning of the rebel Lord's Resistance Army (LRA) conflict in 1986, more than 20,000 children have been abducted and less than 10,000 of these children have returned through reception centres.²³ The LRA targets children, who are ritually terrorised,

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sexually exploited and abused, forced to kill and watch beatings, maiming, rape and killing of friends and relatives.^{23,24} Experiences with the LRA rebel forces may have fundamentally altered the manner in which formerly abducted and non-abducted children function as members within a family or community.^{12,23} There is a lack of comparative data on the effects of ongoing exposure to violence on both directly and indirectly affected children. Specifically, the primary objective of this study was to determine whether there were differences in the nature and pattern of psychiatric disorders in war abducted adolescents relative to a comparison group of non abducted adolescents.

Method

Subjects and settings

This study was conducted in the northern Uganda district of Gulu, which has had the longest and most severe experience of the 18-year-old LRA insurgency. It has the largest number of camps, with a total of about 436,239 people living in internally displaced persons camps. The district has a total surface area of 11,732 square kilometers and 49.4% of the population is less 15 years of age.²⁵ During the period September 11th to 7th October 2004, 163 war affected adolescents were systematically recruited by the first author and his team of three research assistants (two final year medical students and a psychiatric nurse). For this study war abduction was defined as any child who had been forcefully taken away by armed forces, in this case the LRA. The study was undertaken at two sites, Gulu Support Children's Organization (GUSCO) reception centre and Gulu College in Gulu town. These town sites were chosen on the basis of security.

We selected 83 adolescents aged 11-19 years from Gulu support children's organization (GUSCO), a trauma reception centre for formerly abducted children from Gulu district. GUSCO is situated 2 km from Gulu town center and was started in 1994 by a group of mothers to provide care, rehabilitation, and reintegration of war-affected children in Gulu district. GUSCO provides long-term support for these children.

A comparison group of 80 adolescents aged 11-19 years was selected from Gulu College; a mixed boarding and day government aided secondary school that was opened in 1994. Gulu College is one of the 29 secondary schools in Gulu district.²⁵ Each adolescent selected for the study was given consent forms to take to their caregivers/parents and were asked to return completed consent forms. Nine adolescents did not participate in the study. The reasons for non participation by the non abducted group was due to the fact that their parents declined to give consent or did not return signed consent forms (without giving reasons) leaving a total of 71 adolescents. One child from GUSCO refused to participate in the study.

The rationale for choosing the two sites was to compare abducted and non-abducted adolescents in Gulu district living in relatively similar settings. GUSCO was chosen because it handles formerly abducted children, keeps them at the reception centre for a period of time before reintegration and follow up in their communities. Gulu College on the other hand was chosen because it is located in Gulu town and has many non abducted children. Adolescents at the two study sites were selected using systematic sampling method. At each study site a list of all adolescents aged 11-19 years was obtained and their names arranged in alphabetical order and every third name was

selected until the required number was reached. If a child chosen did not meet the study criteria, the next name on the list was chosen. Subjects were selected if they were adolescents, aged 11-19 years, gave assent and/or their caregivers/parents gave written informed consent for them to participate in the study, and were able to communicate in English or Luo, the local dialect. The protocol was reviewed and approved by the institutional review board of Faculty of Medicine, Makerere University.

Measures and procedures

Each subject selected for the study received a thorough assessment that included physical and structured psychiatric interviews. Subjects also completed a set of questionnaires administered by the research assistants that assessed psychological disturbance, socio-demographic factors and trauma events. Current and life-time Diagnostic and statistical manual version four (DSM-IV)²⁶ axis I diagnoses were assessed with the MINI-KID.²⁷ All psychiatric assessments were reviewed by the first author who confirmed the diagnoses clinically using DSM-IV criteria. Symptoms of psychological disturbance were evaluated using the "strength and difficulties questionnaire" (SDQ), a screening instrument, which is well validated and widely used in trauma studies.^{28,29} The SDQ version used is a brief 25-item instrument designed for use in 11-16 year old children and adolescents. It has five sub scales on emotional, conduct, hyperactivity, prosocial, and peer problems. With the exception of the prosocial scale, it gives total difficulties scores of 0-15 as normal, 16-19 as borderline and 20-40 as abnormal.³⁰ The scale uses a three point format, with 0 corresponding to 'not true', 1 'somewhat true' and 2 'definitely true'. For this study a score of 15 or more on SDQ was considered significant for psychological disturbance to ensure comparability.⁷ The MINIKID is the child and adolescent version of the Mini international Neuropsychiatry Interview (M.I.N.I.) which is based on DSM-IV.³¹ It is a structured diagnostic schedule with axis I diagnostic categories. Like the DSMIV it has been found to be a useful psychiatric diagnostic instrument. The use of the MINI-KID for screening purposes is less well established, in which case a cut-off score indicative of severity could be hard to adopt. It has been validated in various studies internationally and in various cultures including Africa but not in Uganda although it has been used extensively.³¹ It was administered to all children to determine the specific nature of psychiatric disorders. The MINIKID was not modified or translated into the local language as the researchers administered it. A modified trauma events checklist based on Thabet & Vostanis (1999)¹ was also administered to all the participants after ascertaining that the events were the most frightening or upsetting and included a list of DSM-IV qualifying traumas (e.g. being physically attacked or raped). The participants were asked to say 'yes' or 'no' to researchers if specific events had been war related and happened to them or their families in the past 1 year or so. Five children from GUSCO showed marked distress during the interview. The affected children were given supportive counseling and treatment by the first author.

Statistical analysis

Statistical analysis was carried out with SPSS version 11.5. The aim of the analysis was to find out the descriptive and

comparative data of the two study samples. The main outcome measures were 1) current major depression, 2) generalised anxiety disorder, 3) PTSD, 4) psychological distress, and 5) other depressive and anxiety disorders. We used descriptive statistics to present the characteristics of the adolescents. Chi-squared tests (and odds ratios) for categorical variables and student's t tests for numerical variables were used to explore the relationship between abduction status (war abducted or not) and gender, trauma exposure, general psychological distress, PTSD, major depression, and generalized anxiety disorder. Fisher's exact tests were used in place of χ^2 for independence when one or more cells in a 2 x 2 table had an expected count of less than 5. All tests were two tailed and significance was set at $p < 0.05$. We also did multivariate logistical regression analyses to investigate the association between independent (abduction status and sociodemographic variables) and dependent variables (PTSD, major depression, and generalized anxiety disorder).

Results

Overall, 153 adolescents participated in the study: 82(54%) who had been abducted and 71(46%) controls who had not. The boys were also proportionally older than the girls (boys: mean age=15.5 years, $SD \pm 1.60$; girls: mean age= 15.2 years $SD \pm 1.41$). We recorded significant differences in level of education and age (more non abducted children than abducted adolescents were in secondary school $p < 0.001$; and seventeen years of age or older $p < 0.001$); and a strong trend for more abducted children's parents to be subsistence farmers ($p = 0.054$). [Table 1]

More than 90% of 153 respondents reported both direct and indirect severe traumatic exposures to at least one DSM-IV based trauma (Table 2). Results of comparison of 15 possible exposures showed statistically significant differences for all trauma experiences except hearing about killing of friend or relative ($p = 0.406$), father killed during war ($p = 0.505$), and

Table 1: Socio-demographic variables

	Abducted group (n= 82)	Non-abducted group (n=71)
Gender		
Male	54(65.9%)	43(60.6%)
Female	28(34.1%)	28(39.4%)
Age		
10-13	20(24.4%)	-
14-16	50(61%)	40(56.3%)
≥ 17	12(14.6%)	31(43.7%)
Schooling		
No school	2(1.6%)	-
Primary school	70(85.4%)	-
Secondary school	10 (12.2%)	71(100%)
Tribe		
Acholi	75(91.5%)	68(95.8%)
Langi	7(8.5%)	-
Others	-	3 (4.2%)
Religion		
Catholic	59(72%)	45(63.4%)
Protestant	18(22%)	23(32.4%)
Others	5(6%)	3(4.2%)
Parents' occupation		
Subsistence farmer	52(78.8%)	34(72.4%)
Trader	6(9.1%)	9(19.1%)
Unemployed	2(3%)	4(8.5%)
Not known	6(9.1%)	-
Orphan status		
Not orphan	37(45.1%)	30(42.3%)
Paternal orphan	25(30.5%)	24(33.8%)
Maternal orphan	5(6.1%)	4(5.6%)
Double orphan	12(14.6%)	10(14.1%)
Unknown	3(3.7%)	3(4.2%)
Family history of mental illness	32(39%)	18(25.4%)

Values are numbers (%) unless otherwise indicated.

Table 2: Types and reported frequency of traumatic experiences

Traumatic event	Abducted N=82 n (%)	Non abducted N=71 n (%)	OR(95%CI)	χ^2	P value
Deprivation of food & water	38(63.3)	22(36.7%)	3.38(1.65-6.95)	10.7	<0.001
Beating and kicking	67(71.3%)	27(28.7%)	8.48(3.87-18.56)	30.8	<0.001
Destruction and looting of home and property	61(69.3%)	27(30.7%)	5.45(2.64-11.25)	22.5	<0.001
Forced to torture	50(89.3%)	6(10.7%)	21.18(8.03-55.85)	50.5	<0.001
Witnessed torture of relative or friend	53(71.6%)	21(28.4%)	4.75(2.36-9.56)	20	<0.001
Heard about killing of friend or relative	58(55.2%)	47(44.8%)	1.37(0.65-2.89)	0.7	0.406
Father killed during war	12(46.2%)	14(53.8%)	0.75(0.32-1.75)	0.5	0.505
Mother killed during war	7(77.8%)	2(22.2%)	3.56(0.71-17.74)	2.7	0.122
Forced to kill	37(92.5%)	3(7.5%)	21.42(6.18-74.2)	36.3	<0.001
Sibling killed during war	16(33.3%)	32(66.7%)	0.32(0.154-0.6610)	9.8	0.002
Suffered serious injuries	31(88.6%)	4(11.4%)	10.78(3.56-32.66)	23.3	<0.001
^a Forced to marry	17(94.4%)	1(5.6%)	19.59(2.53-151.7)	14.6	0.004
Forced to perform rituals	30(93.8%)	2(6.3%)	22.5(5.12-98.97)	28.7	<0.001
Forced to leave home and property	66(75%)	22(25%)	10.07(4.68-21.7)	39.3	<0.001
^a Sexual torture	17(100%)	-	-	19.1	-

^aNon abducted adolescents did not report sexual torture.
^bOnly females were forced to marry.

mother killed during war ($p=0.122$). All the other possible exposures were more common among the abducted group except a sibling being killed ($p=0.002$).

For both groups the most common traumatic events were hearing about killing of relative and friend (68.6%), beating and kicking (61.4%), destruction and looting of home and property (58.2%), and forced to leave home and property (57.5%). The least common events were mother killed (5.9%) and sexual torture (11.1%) and being forced to marry (11.8%). Of those who experienced sexual torture 11 (13.4%) were females and 6 (7.3%) were males. The most significant traumatic experiences were predominantly direct, i.e. being forced to kill ($p<0.001$, 95%CI=6.18-74.2), being forced to perform rituals ($p<0.001$, 95%CI=5.12-98.97), being forced to torture ($p<0.001$, 95%CI=8.03-55.85), and being forced to leave home and property ($p<0.001$, 95%CI=4.68-21.7).

Based on the 'strength and difficulties questionnaire' (SDQ) total scores, over 51.2% (42) of abducted and 18.3% (13) of non-abducted adolescents had clinically significant levels of distress [t test value=3.868; degree of freedom (df) =151; p-value<0.001 odds ratio=4.70; chi square=19.70; 95% CI =2.23-9.83] implying that more abducted adolescents than non abducted adolescents had poor emotional and behavioural adjustment. Among the abducted group 58 (70.7%) of the respondents met criteria for one or more psychiatric disorders based on the MINI KID compared to 31 (43.7%) of those who were not abducted ($\chi^2=11.5$, $p<0.001$, odds ratio=3.1, 95%CI=1.6-6.1). [Table 3]

War abducted adolescents compared to the non abducted reported higher rates of specific psychiatric disorders. In

contrast, more non abducted compared to abducted adolescents had past suicidality (45%v.23.2%) ($p=0.004$). Although more war abducted children had current suicidality the difference was not significant ($p=0.43$). Posttraumatic stress disorder and major depression were the most common co-morbid disorders and was more common among the abducted (8.5%vs1.4%) compared to non abducted ($p=0.38$). Major depression, PTSD, and generalized anxiety disorder co-occurring together were found only among 3 (3.7%) of the abducted and none of those who were not abducted. Co morbidity between current suicidality and the three disorders was more common among those who were abducted but these differences did not reach statistical significance.

Deprivation of food and water (odds ratio=3.2, 95%CI=1.2-8.8; $\chi^2=7.5$, $p=0.038$) and being forced to perform rituals (odds ratio=4.6, 95%CI=1.7-12.1; $p=0.006$) were the only events among the abducted group that were significantly associated with a specific diagnosis, i.e. PTSD. No trauma events showed any significant association with any diagnosis among the abducted group. In the Multivariate logistical regression model, no significant association was found for PTSD, major depression and generalised anxiety disorder.

Discussion

The study investigated self-reported exposure to traumatic events and psychiatric disorder among adolescents living in an area of ongoing-armed conflict. Interpreting these results in the context of reported work in this field is complicated by the paucity of published studies of psychiatric disorders among adolescents in conflict areas, the diverse demographic characteristics, the difficulties in comparing PTSD, depression

Table 3: Reported current psychiatric disorders based on MINIKID in abducted and non abducted adolescents (n=153)

MINIKID diagnosis or clinical symptom	Abducted N=82 n (%)	Non abducted N=71 n (%)	OR(95%CI)	χ^2	P value
Major depression	16(19.5%)	3(4.2%)	5.5(1.5-19.7)	8.2	0.004 ^c
Past suicidality	19(23.2%)	32(45.1%)	0.37(0.18-0.74)	8.2	0.006 ^c
Current suicidality	24(29.3%)	11(15.5%)	2.3(1.0-5.0)	4.1	0.43
Dysthymia current	11(13.4%)	5(7%)	2.1(0.68-6.2)	1.7	0.19
Panic disorder:					
Current without agoraphobia	5(6.1%)	3(4.2%)	1.5(6.4-0.34)	0.3	0.725 [*]
With agoraphobia	4(4.9%)	1(1.4%)	3.6(0.4-32.9)	1.5	0.37 [*]
Agoraphobia without history of panic disorder	7(8.5%)	2(2.8%)	3.2(0.65-16)	2.3	0.18 [*]
Social phobia	7(8.5%)	2(2.8%)	3.2(0.65-16)	2.3	0.18 [*]
Specific phobia	3(3.7%)	2(2.8%)	1.3(0.2-8.1)	0.1	1.0 [*]
PTSD current	22(26.8%)	9(12.7%)	2.5(1.1-5.9)	4.7	0.03 ^c
Alcohol dependency	2(2.4%)	4(5.6%)	0.42(0.1-2.4)	1	0.42 [*]
Conduct disorder	8(9.8%)	3(4.2%)	2.5(0.6-9.6)	1.7	0.19
Generalised anxiety disorder	11(13.4%)	3(4.2%)	3.5(0.94-13.1)	3.9	0.049 ^c
Co morbidity:					
PTSD & major depression	7(8.5%)	1(1.4%)	-	1.43	0.380
PTSD & generalised anxiety disorder	5(6.1%)	2(2.8%)	-	0.001	*1.000
MD & generalised anxiety disorder	3(3.7%)	-	-	-	-
Generalised anxiety & current suicidality	4(4.9%)	1(1.4%)	-	0.35	*1.000
Major depression & current suicidality	13(15.9%)	2(2.8%)	4.4(0.04-17.6)	3.9	*0.069
PTSD & current suicidality	6(7.3%)	3(4.2%)	-	0.02	*1.000
PTSD, Generalised anxiety disorder, & major depression	2(2.4%)	-	-	-	-

*Fisher's exact test
^cSignificant at $p<0.05$

and generalised anxiety disorders; the specific methodological issues in relation to the assessment methods and compromise in study design that is inevitable when carrying out research in a war zone.

We found a higher rate of psychiatric disorder (70.7%) and significant psychosocial disturbance (51.2%) among abducted adolescents. These rates are for at least one axis one psychiatric disorder and may not be comparable with studies that focus on one or two disorders^{2,4} and studies that were carried out in post conflict situations.³² Nevertheless, these findings are comparable to previous studies with children exposed to different levels of traumatisation.^{7,4,32} The finding of higher rates of psychosocial disturbance among the exposed group are comparable to those established in African^{7,12} and Western studies.^{33,34} Paaderkooper et al (1999) noted that Sudanese refugee children had higher levels of psychological distress compared to Ugandan children due to their lower levels of social support.⁷ Although our study did not specifically measure levels of social support, the tendency of traumatised children to report more psychological problems, diagnostic and otherwise has been found to be associated with the occurrence of more daily stressors and less perceived social support.^{7,20}

There was discrepancy between the higher rates of psychiatric disorder and the rates of general psychological distress, which were relatively lower for abducted and non-abducted groups. In accordance with previous literature, good social adaptation is possible even in the presence of psychopathology or following multiple traumas.^{7,34-37} Good adaptation, though unexpected, shows that diagnosis does not always suggest severe functional impairment, with demand for further investigation into the mechanisms that promote such adjustment.^{36,38}

Overall and in keeping with the literature PTSD was the commonest disorder. The rates of PTSD among the abducted group were more than twice that of the non-abducted group. This finding is comparable to that previously documented in comparative studies on trauma samples, with most studies showing higher rates of PTSD among those who are exposed to relatively prolonged or severe experiences of war or violence.^{2,13-15,18-20,32,39,40} However, except for Thabet et al (2002)², these studies were limited by the lack of a comparison group of non exposed children. In contrast, these rates are lower than those established by other studies in conflict situations with rates ranging from 41% to 97%.^{4,21,41} The high rate for PTSD of 97% reported by Goldstein et al (1997)²¹ are strikingly similar to Derluyn et al's (2004)⁴ finding in a sample of war abducted children in Uganda. The proportion of non-abducted children who had current PTSD was 12.7%, which is almost 13 times that established among adolescents in non conflict semi urban secondary schools in Mukono district.⁴²

We found a higher rate of current major depression among those who were abducted. There are few studies on the prevalence of depression among traumatized adolescents. However, these rates are lower than those established in other trauma samples.^{11,21,43} The rates of current major depression among the non-abducted is higher than that established by Nalugya⁴² among adolescents in secondary schools in Mukono district (2.7%) using the MINI-KID.

Higher rates of generalized anxiety disorder were found among the abducted group. Anxiety disorders are frequent accompaniments of PTSD.^{11,44,45,46} The higher rates of anxiety

disorders among the abducted group are in keeping with findings of most studies with children who are exposed to traumatic experiences compared to the general population.^{4,46,20} In contrast to the above studies, Thabet et al (2002) found higher rates of anxiety among those who were less exposed to trauma experiences. The authors speculated that this could have been due to anticipatory anxiety, which tends to be higher in those who are not directly exposed to the trauma and that PTSD emerged as the predominant anxiety disorder among the exposed group.² Except for alcohol dependency, other disorders were also higher among the abducted group although the differences were not significant. The relatively small number of these disorders is comparable to findings in other studies.^{20,46} Past suicidal ideation was more common among the non-abducted group whereas current suicidality was commoner among those who were abducted. Patients with current major depressive episode with a lifetime history of PTSD are more likely to have had a past history of suicide attempt whereas current suicidal ideation are heightened only while depressed patients are experiencing PTSD, with ideation lessening once PTSD remits.⁴⁷ In this study it is possible that suicidality could have been occurring in the context of other psychiatric disorders, commonly major depression and PTSD.^{47,26} Co-morbidity of PTSD and other disorders was also found with major depressive disorder the most common co-morbid condition, in keeping with the literature, and was more among the war-abducted group.^{3,11,44,45} The predominant explanation of co morbidity between PTSD and depression remains that both conditions develop in response to trauma.^{3,48} Simultaneous presence of all three disorders was also found, in keeping with previous research and show the multitude of responses to trauma that can present in one individual.^{44,45}

Trauma exposure and psychiatric disorders

In the abducted group, deprivation of food and water and being forced to perform rituals were the only events associated with a diagnosis i.e. PTSD. The unique nature of these experiences may have caused the high rates of psychiatric disorders.⁷ Although this study did not measure the severity or chronicity of trauma exposure or past PTSD, the differences between the two groups may be related to the difference in toxicity of exposure evidenced by the higher rates of exposure to traumatic events among the abducted group.⁴⁹

Several potential limitations of this study are recognized. The current study is limited by the reliance on western orientated questionnaires and lack of a locally developed traumatic events checklist and instrument to measure potentially confounding socio-demographic factors. It should be noted that non-abducted adolescents were still significantly exposed to the events of war through their relatives and the media.

Some children were not able to recall certain events being asked and the possibility that children with more severe clinical conditions remembered or reported (rather than experienced) more traumatic events and also the lack of corroboration from multi informant ratings.³

Only a cross sectional design, which could not establish a causal relationship between traumatic events of war and psychopathology, was undertaken.

Finally it should also be noted that this study was undertaken at an urban site trauma centre and secondary school and yet the majority of children live in camps where different conditions may prevail. This limits generalisability of the study findings to the wider population of war-traumatised children in Uganda.

Several strengths of this study should be noted. To our knowledge this is first study in Africa that has attempted to assess a wide range of psychiatric disorders among adolescents in a conflict area. The western oriented tools like the SDQ used in this study uses a three point scale that is easily understood and can detect mental illness in war affected children and its wider applicability in war areas show be explored.

Conclusion

The findings suggest that war-abducted children are significantly more affected psychologically and therefore should be screened and assessed for psychiatric problems. The majority of children and adolescents in war affected areas have multiple and clinically significant emotional responses to different kinds of traumatic exposure with a high incidence of major depression; generalised anxiety disorder; PTSD; and co-morbidity. These circumstances call for the promotion of sustainable mental health services that are tailored to the needs of adolescents affected by war. Further research is required to determine the factors associated with mental illness among adolescents in the context of war.

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