



Childhood trauma among adult patients with mental illness in south-western Uganda: A hospital-based study

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ABSTRACT

Introduction: Childhood trauma plays a central role in the long-term outcomes and quality of life of adults with mental disorders. Its burden among patients receiving mental health care in rural health facilities has not been established formally. This study determined the prevalence of childhood trauma among individuals receiving treatment at two mental health facilities in southwestern Uganda.

Methods: Two hundred forty-nine adult psychiatric patients were screened for childhood trauma using the Adverse Childhood Experience International Questionnaire. Descriptive analyses were performed to determine the information on prevalence rates, cumulative traumas and types of trauma experienced by individuals receiving treatment at Ugandan mental health facilities.

Results: Nine in ten mentally ill patients had experienced childhood adversities which were more significant greater among participants diagnosed with depression and substance use disorder compared to those with bipolar disorder and schizophrenia. 99.6% of participants with childhood trauma experienced multiple forms of adverse childhood adversities. The commonest adverse childhood experiences in our sample were witnessing violence against household members, physical neglect, bullying and emotional violence.

Conclusion: Our results highlight the extremely high rate of childhood trauma among patients with mental disorders and raise the global health policy issue revealing the need for a primary health level intervention to address its effects along the mainstream mental health care.

1. Introduction

Childhood trauma plays a central role in the occurrence, long-term outcomes and quality of life of adults with mental disorders (Spalletta et al., 2020). Its burden among patients receiving care in rural mental health facilities in Uganda has not been established formally, where community-based studies showed an association between childhood trauma and mental disorders in adults and adolescents (Ashaba et al., 2022; Okello et al., 2013; Satinsky et al., 2021). Mental illnesses associated with childhood trauma are related to poor self-esteem and lack of social support. They are also more challenging to treat (Spalletta et al., 2020), with high relapse rates and extended hospital stays (Vivalya et al., 2022).

Recent work demonstrated that the lack of baseline information on childhood trauma impairs the delivery of childhood trauma-informed health programs (Meyers et al., 2019; Vivalya et al., 2022). Additionally, few studies showed that maladaptive coping strategies for childhood

trauma are associated with anxiety and mood disorders later in life (Spalletta et al., 2020). One survey in Uganda showed that three in four young adults had experienced adverse experiences at an early age committed at the hands of parents, adult caregivers, or teachers (Merrill et al., 2017).

Factors associated with mental disorders in patients with a history of childhood trauma vary across studies. These factors include being single or divorced, lack of social support (Spalletta et al., 2020), unemployment and low socioeconomic status (Larson et al., 2017), and low self-esteem (Cansel et al., 2020). While Ugandan reports showed that 22.9% of children and 24.9% of adults in Uganda have mental health problems (Opio et al., 2022), to date, there has been no hospital-based study done associating childhood trauma and mental illness in Uganda. This study determined the prevalence of childhood trauma experienced by individuals receiving treatment at two mental health facilities in southwestern Uganda.

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2. Methods

2.1. Study settings

This cross-sectional study employed a quantitative method involving adult patients receiving mental healthcare services at two mental health facilities, namely Kampala International University Teaching Hospital (KIU-TH), located in Bushenyi-Ishaka Municipality, and Mbarara Regional Referral Hospital (MRRH), located in Mbarara city. The two hospitals are 60km apart and were selected as study sites since they are involved in managing people with mental illness in southwestern Uganda. KIU-TH is a private hospital where patients are usually admitted without their caregivers. It is located in Ishaka municipality, in Bushenyi district, one of the rural districts in southwestern Uganda with approximately 251,400 habitats. In this district, the economy depends mainly on agriculture, providing direct employment to about 86.7% of the population (Nuwatuhaire, 2012). MRRH is a public hospital located in Mbarara city, in southwestern Uganda, 270 km southwest of Kampala, the capital city of Uganda. Mbarara is the largest urban center in western Uganda, with nearly 97,500 people (Sengendo, 2011). Its economy is mainly based on small-scale businesses, social services, informal sector activities, trade, and industry (Sengendo, 2011). The mental health department of MRRH has 36 beds, while there are 60 beds at KIU-TH. The common mental illnesses at KIU-TH and MRRH are substance use-related problems, bipolar affective disorder, schizophrenia spectrum disorders, HIV-related mental disorders, epilepsy, and major depressive disorders.

2.2. Participants

We enrolled 249 patients aged 18 to 65 who had recovered and were fully aware of their illness with no active symptoms of mental illness and patients who attended the outpatient clinics for their regular monthly review and medication refills. We included adult patients attending the two mental health facilities diagnosed with major depressive disorder, bipolar disorder, substance use disorder and schizophrenia spectrum disorder. We excluded patients with active symptoms and those with cognitive impairment that would impair their ability to comprehend the contents of the consent form and the questionnaire. We also excluded those with other comorbidities besides those selected for this study. We determined the sample size using the modified Daniel's formula (Viechtbauer et al., 2015), with a 95% CI (1.96), 5% precision, and the prevalence of mental disorder associated with a history of childhood trauma of 29.8% of a study conducted in Northern Uganda by Kessler et al. (2010).

2.3. Enrolment procedures

A purposive sampling was performed to choose participants who were selected with an equal chance for participation in the study. Two research assistants, supervised by the first author, collected data using consecutive recruitment and face-to-face interviews conducted between January 2022 and June 2022. We recruited 161 participants from KIUTH and 88 participants from MRRH. The distribution was based on the fact that some patients admitted at KIU-TH had been previously admitted first at MRRH. Their caregivers preferred their readmission at KIU-TH, where they were admitted without caregivers. Participants who expressed willingness to participate were asked to provide written informed consent after the research assistants offered details about the study. After giving consent, participants were administered a questionnaire by trained research assistants fluent in both Runyankore (the local language) and English. Each interview took about 35–45 minutes. All data collection tools were written in English, translated into Runyankore and back-translated into English in an iterative process to ensure translation fidelity, accuracy and reliability. Depending on the participants' preferences, interviews were conducted in Runyankore or English.

2.4. Study measures

This survey was well-designed for socio-demographic and clinical information. We collected data on age, sex, marital status, level of education, occupation, social support, self-esteem, childhood trauma and mental disorders.

Regarding the diagnosis of mental disorders, we took the psychiatric diagnosis that the patients were treated from the medical records and were confirmed using the Mini International Neuropsychiatric Interview (MINI), 7.0 (Lecrubier et al., 1997), in line with the Diagnostic Statistical Manual for the diagnosis of mental disorders, 5th edition (DSM-V).

Childhood trauma was assessed using the Adverse Childhood Experience International Questionnaire (ACE-IQ) designed for administration to people aged 18 years and older. The ACE-IQ was developed for use across countries and cultures (World Health Organization, 2018) and has been validated and used among adolescents and adults in Uganda (Ashaba et al., 2022; Cluver et al., 2015; Galletly et al., 2016; Satinsky et al., 2021; Struck et al., 2020). The ACE-IQ consists of 29 items to establish the exposure to ACEs during the 18 years of early life. Participants were asked questions about 13 categories of ACEs, such as emotional abuse, physical abuse, and sexual abuse. These 29 items are consolidated into 13 domains of childhood trauma, including emotional abuse; physical abuse; sexual abuse; violence against household members; living with household members who were substance abusers; living with household members who were mentally ill or suicidal; living with household members who were imprisoned; one or no parents, parental separation or divorce; emotional neglect; physical neglect; bullying; community violence; and collective violence dysfunction. The absence of experience in a specific domain was scored 0, and any experience in a given domain was scored 1. Total ACE scores were obtained by summing up the number of events a participant was exposed to (World Health Organization, 2018).

Self-esteem was assessed using the Rosenberg self-esteem scale (RSS), a one-dimensional tool that assesses global self-esteem based on the perceived feelings about self (Rosenberg, 1965). It uses a 4-point Likert scale format for all items, with answers ranging from strongly agree (3) to strongly disagree (0). A sample of questions of this scale includes: "I take a positive attitude towards myself." A cumulative self-esteem score was obtained by summing up the participant's responses. Scores above 15 indicated normal or higher self-esteem, whereas scores below 15 were interpreted as low self-esteem. The RSS has been validated across 53 nations (Schmitt and Allik, 2005) and used among adolescents in Uganda with a Cronbach's alpha of 0.61 (Odongo et al., 2021).

The Multidimensional Scale of PsychoSocial Support (MHPSS) was used to assess the perceptions of social support from three sources: family, significant person and friends. The MSPSS is a self-administered measurement tool that is comprised of 12 items representing 3 three subscales: family (items 3, 4, 8, and 11), friends (items 6, 7, 9, and 12), and significant others (items 1, 2, 5, and 10). Every item uses a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (very strongly agree). A higher score indicates an individual's perceived social support level. The MSPSS score ranges from 12 to 84 (Laksmi et al., 2020). The MSPSS demonstrated good internal consistency and was used in Uganda with a Cronbach's alpha of 0.83 (Nakigudde et al., 2009). In this study, MSPSS scores below 35 were taken as low level of perceived social support, whereas a score of 35 or above was defined as a high level of perceived social support.

2.5. Data analysis

Descriptive statistics were summarized as proportions/percentages for categorical variables and means/standard deviations or median/interquartile range for continuous variables. Inferential analyses were performed to determine the association between childhood trauma and respective mental illnesses while controlling for demographic factors. Statistical analyses were performed using STATA 14.0.

3. Results

A total of 230 participants (92.4%) experienced childhood trauma, among 229 (99.6%) experienced multiple forms of adverse childhood adversities. Thirty-nine participants (15.6%) had depression, 88 participants (35.3%) had bipolar disorder, and 152 participants (61%) had substance use disorder. While assessing social support, we found that the mean MSPSS score was 56.45 (SD = 15.91), while the mean RSS score was 16.0 (SD = 5.87). The sociodemographic characteristics of participants are shown in Table 1.

We found that our participant's most typical adverse childhood experiences are witnessing violence against household members, physical neglect, bullying and emotional violence. We also found that emotional, physical and sexual abuse were the commonest traumas in patients with depression. Among those with bipolar disorder, bullying, living with patients with mental disorders, emotional abuse and physical abuse. Among participants with substance use disorder, physical neglect and violence against members are the types of trauma. While among those with schizophrenia, violence against household and living with household members who were mentally ill or suicidal (Table 2). Our results showed statistically significant associations between childhood trauma and substance use disorder (aOR = 1.14; 95% CI: 1.02–1.26; p = 0.015) (Table 3).

4. Discussion

We found that 92.4% of adult patients attending mental clinics in southwestern Uganda experienced childhood trauma with a significant proportion of participants diagnosed with depression and substance use disorder compared to those with bipolar disorder and schizophrenia. To our knowledge, our study provides the first data-supported link between

exposure to childhood trauma and mental disorders in rural mental health facility settings in Uganda. We found that the commonest adverse childhood experiences are witnessing violence against household members, physical neglect, bullying and emotional violence.

The finding indicating the extremely high rate of childhood trauma among patients is divergent from the estimates of the World Health Organization survey that focused on childhood adversities in patients with mental disorders (Green et al., 2010). It was consistent with studies conducted in Democratic Republic of Congo (Vivalya et al., 2022). This finding is divergent from the study carried out in the general Ugandan population, which showed that three in four young adults had experienced adverse experiences early (Merrill et al., 2017).

The commonest adverse childhood experiences were witnessing violence against household members, physical neglect, bullying and emotional violence. Childhood trauma is significantly linked to substance use disorders, especially among women commonly affected by sexual and emotional abuse than men who are mostly affected by physical abuse (Spalletta et al., 2020). Nearly all the participants in our sample experienced multiple forms of childhood trauma. These results are alarmingly high in low-income country contexts and highlight the need to be addressed in global health policy. Our findings about the prevalence of childhood trauma among patients with schizophrenia and bipolar disorder were higher than what was estimated in previous studies in sub-Saharan countries (Carr et al., 2013). The prevalence of childhood trauma among participants with substance use disorder was higher than that found in a study done in Brazil (Tucci et al., 2010). Childhood trauma is significantly linked to substance use disorders, especially among victims of sexual, emotional and physical abuse (Spalletta et al., 2020). Although not all stressful events are harmful, exposure to traumatic events during childhood increases the risk of mental disorders, with a high prevalence in cumulative ACEs (Vivalya et al., 2022).

Table 1
Characteristics of participants, stratified by diagnosis (n = 249).

Variable	Depression (n = 39)			Bipolar disorder (n = 88)			Substance use disorder (n = 152)			Schizophrenia (n = 57)			Participants (N = 249)					
	N	M/%	SD	N	M/%	SD	N	M/%	SD	N	M/%	SD	N	%	Mean	SD	Median	
<i>Age in years (median (IQR))</i>																		28 (23.4)
≤30	20	51.3		54	61.4		94	61.8		34	59.7		153	61.5				
>30	19	48.7		34	38.6		58	38.2		23	40.3		96	38.5				
<i>Sex</i>																		
Male	19	48.7		44	50		89	58.6		35	61.4		142	57.0				
Female	20	51.3		44	50		41	41.4		22	38.6		107	43				
<i>Educational level</i>																		
Illiterate	6	15.4			11.4		25	16.5		7	12.3		32	12.9				
Primary	4	10.2		10	25		32	21.0		15	26.3		60	24.1				
Secondary	23	59		22	48.9		75	49.4		27	47.4		120	48.2				
University	6	15.4		43	14.7		20	13.2		8	14.0		37	14.8				
<i>Employment status</i>																		
Unemployed	25	64.1		53	60.2		105	69.1		40	70.2		166	66.7				
Employed	14	35.9		35	39.8		47	30.9		17	29.8		83	33.3				
<i>Marital status</i>																		
Single	20	51.3		45	51.1		74	48.7		31	54.4		121	48.6				
Married/cohabiting	15	38.4		30	34.1		60	39.5		22	38.6		99	39.8				
Divorced/separated	4	10.3		13	14.8		18	11.8		4	7.0		29	11.6				
Total ACEs (out of 13)		7.10	2.36		6.58	3.09		7.22	2.53		6.46	2.86			6.85 (2.8)			
<i>Ever experienced ACEs</i>																		
Yes	38	97.4		78	88.6		145	95.4		52	91.2		230	92.4				
No	1	2.6		10	11.4		7	4.6		5	8.8		19	7.6				
<i>Number of ACEs experienced</i>																		
One	1	2.6		1	1.1		1	0.6		1	1.8		2	0.9				
Two and over	38	97.4		87	98.9		151	99.3		56	98.2		228	99.1				
MSPSS score		59.56	11.89		55.57	16.66		55.10	16.0		58.4	16.44			56.45 (15–9)			
<i>Perceived social support</i>																		
Yes	37	94.8		77	87.5		139	91.4		50	87.7		223	89.6				
No	2	5.2		11	12.5		13	8.6		7	12.3		26	10.4				
Self-esteem score		16.38	5.33		16.05	6.19		16.09	6.27		16.19	5.78			16.0 (5.9)			
<i>Self-esteem</i>																		
yes	27	69.2		51	58.0		91	59.9		35	61.4		151	60.6				
No	12	10.8		37	42		61	40.1		22	38.6		98	39.4				

Table 2
Distribution of participants according to adverse childhood experiences.

Variable	Depression (n = 39)	Bipolar disorder (n = 88)	Substance use disorder (n = 152)	Schizophrenia (n = 57)
Violence against household members (N = 204)	12 (30.8%)	53 (60.2%)	104 (68.4%)	35 (61.4%)
Physical neglect (N = 202)	9 (23.7%)	44 (50%)	124 (81.6%)	27 (47.4%)
Community violence (N = 19)	4 (10.2%)	9 (10.3%)	5 (3.3%)	1 (1.7%)
Bullying (N = 178)	5 (12.8%)	80 (90.9%)	86 (56.6%)	7 (12.3%)
Emotional abuse (N = 174)	12 (30.8%)	75 (85.2%)	84 (55.2%)	3 (5.3%)
Physical abuse (N = 163)	19 (48.7%)	57 (64.5%)	69 (45.4%)	18 (31.6%)
Residency with household members who were mentally ill or suicidal (N = 152)	11 (28.2%)	61 (69.3%)	56 (36.8%)	24 (42.1%)
Parental separation (N = 152)	20 (51.2%)	54 (61.4%)	62 (40.8%)	16 (28.1%)
Sexual abuse (N = 136)	15 (38.4%)	49 (55.9%)	44 (28.9%)	24 (42.1%)
Residency with alcohol and/or drug abuser in the household (N = 121)	12 (30.7%)	47 (53.4%)	43 (28.2%)	19 (33.3%)
Residency with incarcerated household member (N = 112)	7 (17.9%)	38 (43.2%)	52 (34.2%)	24 (42.1%)
Emotional neglect (N = 77)	18 (46.1%)	28 (31.8%)	20 (13.5%)	21 (36.8%)

Table 3
Association between childhood trauma and respective mental disorders.

Variable	OR (95%CI)	p-value
Depression	1.04 (0.91–1.19)	0.598
Bipolar disorder	0.97 (0.87–1.08)	0.529
Substance use disorder	1.14 (1.02–1.26)	0.015
Schizophrenia	0.93 (0.83–1.05)	0.235

When interpreting our findings, the main limitations such as the cross-sectional design, hospital-based sample, and the lack of a healthy control group should be considered. Extensive studies involving both hospital and community settings should be conducted to allow the generalization of the findings to the general population. This study used the ACE-IQ cut-off of scores from a population study (Satinsky et al., 2021). Hence a study on the adaptation of data collection tools in mental hospitals in rural settings is recommended to ensure validity use of this tool in hospital settings in Uganda. Finally, the measurement of childhood trauma-based retrospective reporting is an additional limitation able to cause recall bias.

5. Conclusion

We found that childhood trauma was highly prevalent among people with mental health illnesses attending the two mental health facilities in southwestern Uganda who reported experiencing childhood trauma. Our results highlight the importance of systematically assessing childhood

trauma in adult patients with mental illness seeking care should be evaluated for childhood trauma so that the effects of trauma during childhood can be addressed along the mainstream mental health care.

Authors' contributions

Bives Mutume Nzanu Vivalya and Scholastic Ashaba conceived and designed the study. Bives Mutume Nzanu Vivalya collected, analyzed the data and drafted the manuscript. Benedict Akimana and Scholastic Ashaba supervised the research process for this study. Benedict Akimana and Scholastic Ashaba reviewed the manuscript for the accuracy of its technical and intellectual content. All authors approved the final version of the manuscript.

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Ethical considerations

Ethical approval to conduct this study was obtained from Kampala International University Research Ethics Committee. Permissions were received from the Chief Executive Officer of Kampala International University Teaching Hospital and the Hospital Director of Mbarara Regional Referral Hospital respectively. All procedures contributing to this work comply with the ethical standards of DRC and institutional committee on human experimentation and with the Helsinki Declaration of 1975, as revised by in 2008. Participants provided a written informed consent.

Data availability

Data are available from the corresponding author on reasonable request.

Declaration of competing interest

The authors declare no competing interest.

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