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Prevalence and correlates of probable post-traumatic stress disorder and common mental disorders in a population with a high prevalence of HIV in Zimbabwe

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ABSTRACT

Background: We investigated the prevalence of and factors associated with post-traumatic stress disorder (PTSD) and common mental disorders (CMDs), which include depression and anxiety disorders, in a setting with a prevalence of high human immunodeficiency virus (HIV) within a primary care clinic, using the PTSD Checklist for DSM-5 and the 14-item Shona Symptom Questionnaire, both locally validated screening tools.

Methods: A cross-sectional survey was carried out with adult patients ($n = 204$) from the largest primary care clinic facility in Harare, Zimbabwe, in June 2016.

Results: A total of 83 patients (40.7%) met the criteria for probable PTSD, of whom 57 (69.5%) had comorbid CMDs. Among people living with HIV, 42 (55.3%) had PTSD. Probable PTSD was associated with having experienced a negative life event in the past 6 months [adjusted odds ratio (OR) 3.73, 95% confidence interval (CI) 1.49–9.34] or screening positive for one or more CMD (adjusted OR 6.48, 95% CI 3.35–2.54).

Conclusion: People living with HIV showed a high prevalence of PTSD and CMD comorbidity. PTSD screening should be considered when the CMD screen is positive and there is a history of negative life events.

Prevalencia y correlatos de probable trastorno de estrés postraumático y trastornos mentales comunes en una población con una alta prevalencia de VIH en Zimbabue

Antecedentes: Investigamos la prevalencia y los factores asociados con TEPT y trastornos mentales comunes (TMC) que incluyen depresión y trastornos de ansiedad en una zona de alta prevalencia del VIH, en un centro de atención primaria (APS), utilizando el cuestionario de trastorno por estrés postraumático (PCL-5) y el cuestionario de sintomas de Shona (SSQ-14), ambos instrumentos validados localmente.

Métodos: se realizó un estudio transversal con pacientes adultos (n = 204) del centro de atención primaria de salud más grande de Harare en junio de 2016.

Resultados: Un total de 83 (40.7%) cumplieron los criterios para probable TEPT, de los cuales 57 (69.5%) presentaron TMC comórbido. Entre las personas que viven con el VIH (PLWH), 42 (55.3%) tenían TEPT. El TEPT probable, se asoció con haber experimentado un evento de vida negativo en los últimos seis meses (AOR 3,73; IC del 95%: 1,49 - 9,34) o con el screening positivo para TMC (AOR 6,48; IC del 95%: 3,35 - 2,54).

Conclusión: Las personas que viven con el VIH (PLWH) mostraron una alta prevalencia de TEPT y comorbilidad con TMC. Se debe considerar la detección de TEPT cuando el screening para TMC es positivo y hay un historial de eventos vitales negativos.

津巴布韦高艾滋感染率人群中潜在创伤后应激障碍和常见精神障碍的患病率和相关性

背景：我们在高艾滋感染率初级保健诊所（PHC）中，使用两个经过本土验证的筛查工
目标：创伤后应激障碍检查表（PCL-5）和Shona症状问卷（SSQ-14），调查了PTSD和常见精神障碍（CMD；包括抑郁和焦虑)的患病率和相关因素。

方法：在2016年6月，对Harare最大PHC的成年患者（n = 204）进行横断面调查。

结果：共有83例（40.7%）符合可能的PTSD标准，其中57例（69.5%）共病CMD。在艾滋病毒感染者（PLWH）中，42人（55.3%）患有PTSD。可能的PTSD与过去六个月经历过负性生活事件有关（AOR 3.73, 95%CI 1.49-9.34），或与CMD筛查阳性（AOR 6.48,95%CI 3.35-2.54）有关。

结论：PLWH群体中表现出PTSD和CMD合并症的高患病率。当CMD筛查阳性且存在负性生活事件的历史时，应考虑对其进行PTSD筛查。

HIGHLIGHTS
• PTSD was found in almost 41% of primary health-care users in Zimbabwe's capital.
• Nearly 45% of participants were HIV positive.
• Participants with PTSD were four times more likely than those without PTSD to have experienced a negative life event in the past six months.
• Participants with PTSD were six times more likely than those without PTSD to have CMDs.

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1. Introduction

Post-traumatic stress disorder (PTSD) is highly prevalent in populations with high human immunodeficiency virus (HIV) rates (Adewuya et al., 2009; Seedat, 2012). Common mental disorders (CMDs), which include depression and anxiety disorders, are equally prevalent in high HIV settings (Chibanda, Cowan, Gibson, Weiss, & Lund, 2016). These disorders are a leading cause of disability globally (Steel et al., 2014). It is estimated that less than one-third of individuals in the USA and Europe and less than one-fifth in low- and middle-income countries (LMICs) receive treatment for treatable psychiatric conditions (Group, 2007; Kessler et al., 2005; Wang et al., 2007).

Studies show high comorbidity between depression and PTSD in a variety of population samples, such as those from conflict or post-conflict settings (Miller & Rasmussen, 2010), refugee camps (Gerritsen et al., 2006; Momartin, Silove, Manicavasagar, & Steel, 2004) and combat situations, victims of interpersonal violence (Stein & Kennedy, 2001), or survivors of natural or human-made disasters (Fernando, Miller, & Berger, 2010; Kar & Bastia, 2006; Neria, Nandi, & Galea, 2008). Political and economic instability and disparity; poverty, with its consequences of food scarcity and lack of access to medical care and education; politically motivated violence; crime; and exposure to weather phenomena due to climate change, which impacts negatively on an agriculture-based country such as Zimbabwe, further contribute towards poor mental health outcomes (Lund et al., 2010).

Receiving an HIV diagnosis, stigma from one's community, which often includes acts of interpersonal violence, and being confronted with a scarcity of treatment options also contribute towards unfavourable mental health outcomes (Hosegood, Preston-Whyte, Busza, Moitse, & Timaeus, 2007; Rankin, Brennan, Schell, Laviwa, & Rankin, 2005) and reduced adherence to anti-retroviral treatment (ART) (Boarts, Sledjeski, Bogart, & Delahanty, 2006), consequently posing a threat to survival. Stressors, both acute and chronic, to which inhabitants of LMICs are exposed often occur on a daily basis.

The overlap of symptoms of PTSD and depression is clinically contextualized in the latest version (Fifth Edition) of the Diagnostic and Statistical Manual for Mental Disorders (DSM-5) (American Psychiatric Association [APA], 2013; (Friedman, Resick, Bryant, & Brewin, 2011). Criterion C of the DSM-5 consists of six items comprising a symptom cluster of negative alterations in mood and cognition that can be applied to both PTSD and depression. The diagnosis of PTSD depends on fulfilment of criterion A, a stressor which varies in severity and subjective appraisal (Weathers & Keane, 2007). Several studies have found that continuous lower level stressors are cumulatively more predictive of psychological distress than single-event exposures, as documented in studies in conflict or post-conflict and non-conflict settings (Miller & Rasmussen, 2010; Al-Krenawi, Lev-Wiesel, & Mahmud, 2007).

Furthermore, exposure to armed conflict and organized violence is often experienced as distant and found to be less salient over time (Miller & Rasmussen, 2010) in comparison to daily stressors such as poverty, overcrowded housing, chronic illness, and failure to meet daily basic and medical needs (lack of access to clean water, education, medication and sufficient food, to name a few). These daily stressors are seen as being able to erode psychological resilience and effective coping mechanisms through their cumulative impact, thus impeding individuals' overall mental health (Kubiak, 2005).

There are gender differences in the prevalence of PTSD: although more men are exposed to traumatic events than women (Kessler et al., 1999), women are more likely to develop PTSD (Breslau & Anthony, 2007; Breslau, Peterson, Poisson, Schultz, & Lucia, 2004) after exposure to a traumatic event. Individuals with PTSD have a higher likelihood of suffering from chronic medical conditions, with the number of lifetime traumas mediating this correlation (Sledjeski, Speisman, & Dierker, 2008). Ill health, in turn, has a negative impact on resilience and coping with the daily stressors that are common in LMICs (Piazza, Charles, Sliwinski, Mogle, & Almeida, 2012; Thakkar & McCanne, 2000). Cumulative effects of multiple traumas are also found to be common and associated with worse psychiatric outcomes (Green et al., 2000; Sledjeski et al., 2008; Suliman et al., 2009).

Recent work from Zimbabwe revealed high levels of CMDs and PTSD in primary care users, necessitating adequate interventions to alleviate this burden. Psychosocial interventions such as the Friendship Bench (Chibanda et al., 2011, 2016) seem to reduce the perception of lack of control among affected populations (Miller & Rasmussen, 2010). The Zimbabwean Friendship Bench programme is a low-intensity psychological intervention that is successfully reducing the treatment gap for CMDs at the primary health-care (PHC) level. The task-shifted intervention is delivered by trained and supervised lay health workers (LHWs) (Chibanda et al., 2016). There is a dearth of data on cultural understandings of trauma as well as on the societal and psychological impacts of low- versus high-intensity stressors and their influence on potential treatment considerations

of subsequent PTSD, and therefore rigorous research is needed. The purpose of this study was to establish the prevalence and correlates of PTSD in a population sample with high HIV prevalence using PHC facilities in Zimbabwe.

2. Methods

We carried out a cross-sectional study using the PTSD Checklist for DSM-5 (PCL-5) (Blevins, Weathers, Davis, Witte, & Domino, 2015) as well as the 14-item Shona Symptom Questionnaire (SSQ-14) (Patel, Simunyu, Gwanzura, Lewis, & Mann, 1997), both validated in Zimbabwe (Chibanda et al., 2016; Verhey, Chibanda, Gibson, Brakarsh, & Seedat, 2018), at the largest clinic in the suburb of Mbare, near the central business district of Harare, Zimbabwe. This clinic has a catchment area of over 200,000 with an average attendance of 140 patients per day and a high HIV prevalence. This is a typical PHC clinic in Harare and is mostly staffed by nurses and LHWs.

2.1. Inclusion criteria

Adults aged 18 years and above attending the clinic were eligible for recruitment over a 2 week period in June 2016, provided they were able to give written consent and resided in the area. Pregnant women in their last trimester and women within the 3 month postnatal period were excluded, as were those who were unable to understand the purpose of the study.

2.2. PCL-5

The PCL-5 was validated in Zimbabwe to determine the adequate cut-off score for an adult population (Verhey et al., 2018). It was found to have good psychometric properties, with a cut-off score of ≥ 33, and sensitivity and specificity of 74.5% [95% confidence interval (CI) 60.4–85.7 and 70.6% (95% CI 62.7–77.7), respectively. Cronbach's alpha was 0.92, reflecting very good internal consistency.

The PCL-5 is a self-report measure that was developed at the National Center for PTSD (Weathers, Litz, Herman, Huska, & Keane, 1994). It is used in conjunction with the Life Events Checklist for DSM-5 (LEC-5) (Gray, Litz, Hsu, & Lombardo, 2004). The LEC-5 is a self-report questionnaire which assesses the prevalence of 16 potentially traumatic lifetime events as well as an added open category ('any other very stressful event or experience'), with five answer categories (Weathers et al., 2013). The original PCL was revised to match the adapted DSM-5 criteria for PTSD. It features an adapted answer scale ranging from 0 = 'not at all' to 4 = 'extremely', thus making the theoretical lowest score 0. It measures four symptom clusters: the original clusters, intrusion, avoidance and hyperarousal; and the added cluster of negative alterations in cognition and mood, with three items (blame, negative emotions, and reckless or self-destructive behaviour). Item scores can be summed for an overall severity score as well as for individual symptom cluster sums. A PTSD diagnosis can be made provisionally considering items rated 2 = moderately or higher according to the DSM-5 diagnostic rule (at least one B, one C, two D and two E symptoms present).

2.3. SSQ-14

The SSQ (Patel et al., 1997) was developed and validated in Zimbabwe in 1997. We have revalidated it in a high HIV prevalence setting, where a cut-off score of 9, with sensitivity and specificity of 84% (95% CI 78–89%) and 73% (95% CI 63–81%), respectively, was found to be suitable for detecting CMDs (Chibanda et al., 2016). Most of the 14 items are common to those found in tools for depression worldwide, such as sleep disturbance and suicidal thoughts; others are local idioms of emotional distress, including 'thinking too much'. Participants are asked whether they have experienced a list of common mental health symptoms in the past week. Each of the items is scored dichotomously as yes (1) or no (0) (Patel et al., 1997).

2.4. Translation of tools

The PCL-5 and the LEC-5 were translated from English into the local language, Shona, by a bilingual clinical social worker and a bilingual psychiatrist (DC). The draft Shona version was reviewed by a team of five LHWs working for the Friendship Bench and five nurses working in the psychiatric ward of Harare Central Hospital, together with a psychologist. This phase focused on ensuring contextual equivalence to the original versions based on their understanding and use of local terms for trauma symptomatology.

An independent language expert back-translated the Shona version into English. The first author together with the social worker and the psychiatrist examined both original and back-translated versions, and any discrepancies were resolved by consensus. Translation and back-translation were carried out using a standard approach (Bontempo, 1993).

2.5. Ethical considerations

The study was approved by the Medical Research Council of Zimbabwe (MRCZ, reference MRCZ/A/1732) and by the Health Research Ethics Committee at Stellenbosch University (reference S14/05/102). Ethical considerations and confidentiality for all participants were respected in accordance with Medical Research Guidelines.

2.6. Data collection

During the study period, we randomly selected participants on a daily basis from a register of all adult patients waiting to be seen at the clinic. Participants were selected based on a computer-generated random number sequence. Fifteen selected participants were invited at a time to a quiet and private space where eligibility was determined. Informed written consent was sought from all those eligible.

Trained research assistants administered the SSQ-14 and the PCL-5 to participants in randomly assigned alternating questionnaire order, and also collected sociodemographic information such as age, gender, HIV status, and marital and employment status using Samsung Galaxy tablets. HIV status was established by self-report. We aimed to recruit between 180 and 200 participants over the 2 week period.

Interviews took 20–30 minutes and were conducted in a quiet space designated for the study team. Although the PCL-5, LEC-5 and SSQ-14 are self-report tools, we chose to have them administered by trained research assistants, as prior validation exercises using the same approach found that most of the clinic attendees were not familiar with tablet/computer use (Chibanda et al., 2010, 2016).

2.7. Statistical analysis

As in an earlier study (Chibanda et al., 2016), data were entered directly into the study desktop computer by a data-entry clerk using a predesigned data-entry program containing automated range checks, and data cleaning was carried out at the end of each day. Data were transferred to STATA version 13.0 for analysis. Analysis was based on outcome measures of the PCL-5. Following tests for effect modification of HIV status and factors associated with CMDs, results were presented stratified by PCL-5 outcome. Sociodemographic variables of the two stratified groups with respect to meeting PCL-5 criteria for PTSD and SSQ-14 criteria were initially compared to establish differences. Variables with $p < 0.1$ on univariate logistic regression analyses were taken forward to be included in the multivariable regression. Those variables with a p-value of less than 0.05 were then included in the final regression model to estimate adjusted odds ratios (ORs) and 95% CIs.

3. Results

3.1. Sample description

A total of 204 adults aged 18 and above gave consent to participate in the study, of whom 174 (85.2%) were women. Most of the participants (42.2%) were aged

below 30 years, while those aged 30–39 years made up 30.4% of the participants, with the rest being 40 years and older. The mean age was 34 years. Most participants were married (69.1%). There were 91 (44.6%) HIV-positive participants. Of these, 72 (67.9%) were female. A total of 100 (49%) were HIV negative, while 13 (6.4%) did not know their HIV status.

3.2. Prevalence of PTSD by PCL-5

Table 1 shows the characteristics of study participants by PCL-5 ≥ 33 versus < 33. In total, 83 participants (40.7%) scored ≥ 33 on the PCL-5. Of the 83 who scored ≥ 33 on the PCL-5, 75 (90.4%) reported a negative life event in the past 6 months (95% CI 81.7–95.2, $p < 0.001$). A total of 57 (69.5%) of those meeting caseness on the PCL-5 scored above 9 on the SSQ-14 (95% CI 58.5–78.7, $p < 0.001$) (Table 1). The odds of experi-

Table 1. Characteristics of participants by PTSD Checklist for DSM-5 (PCL-5) score ($n = 204$).

	PCL-5 < 33 (n = 121)		PCL-5 ≥ 33 (n = 83)		
All participants	n	%	n	%	χ^2 p-value
HIV status[a]					0.09
Negative	66	57.4	34	44.7	
Positive	49	42.6	42	55.3	
Gender					0.75
Male	17	14.1	13	15.7	
Female	104	86.0	70	54.3	
Age group (years)					0.12
< 30	58	47.9	28	33.7	
30–39	34	28.1	28	33.7	
≥ 40	29	24.0	27	32.5	
Marital status					0.25
Married	88	72.7	53	63.9	
Single	17	14.1	19	22.9	
Widowed	16	13.2	11	13.3	
Education					0.13
Less than 'O' level	44	36.4	39	47.0	
'O' level or more	77	63.6	44	53.0	
Current employment status					0.06
Unemployed	76	62.8	38	45.8	
Permanent full or part time	6	5.0	6	7.2	
Casual/self-employed	39	32.2	39	47.0	
Main income source					0.03
Own business/salary	56	46.7	53	65.4	
Partner/family	52	43.3	23	28.4	
No income	12	10.0	5	6.2	
Suffer from chronic illness					0.02
No	57	47.1	25	30.1	
Yes	64	52.9	58	69.9	
Reason for clinic visit					0.25
HIV-related	18	14.9	20	24.1	
Routine/family/antenatal	58	47.9	35	42.2	
Other	45	37.2	28	33.7	
Negative life events in past 6 months					< 0.001
No	45	37.2	8	9.6	
Yes	76	62.8	75	90.4	
SSQ-14 ≥ 9					< 0.001
No	95	78.5	25	30.5	
Yes	26	21.5	57	69.5	

HIV, human immunodeficiency virus; SSQ-14, 14-item Shona Symptom Questionnaire.
[a]n=13 with unknown HIV status.

Table 2. Factors associated with PTSD Checklist for DSM-5 (PCL-5) score ≥ 33 (n = 204).

			PCL-5 ≥ 33					
			Multivariable analysis			Final model		
All participants	Total n	%	OR	95% CI	p	OR	95% CI	p
HIV status					0.92			
Negative	100	34.0	1	–				
Positive	91	46.2	1.04	(0.45–2.44)				
Gender								
Male	30	43.3						
Female	174	40.2						
Age group (years)								
< 30	86	32.6						
30–39	62	45.2						
≥ 40	56	48.2						
Marital status								
Married	141	37.6						
Single	36	52.8						
Widowed	27	40.7						
Education								
Less than 'O' level	83	47.0						
'O' level or more	121	36.4						
Current employment status					0.97			
Unemployed	114	33.3	1					
Permanent full or part time	12	50.0	1.17	(0.24–5.68)				
Casual/self-employed	78	50.0	1.15	(0.38–3.46)				
Main income source					0.36			
Own business/salary	109	48.6	1					
Partner/family	75	30.7	0.45	(0.14–1.40)				
No income	17	29.4	0.44	(0.09–2.10)				
Suffer from chronic illness					0.83			
No	82	30.5	1					
Yes	122	47.5	1.10	(0.46–2.65)				
Negative life events					0.01			0.005
No	53	15.1	1			1		
Yes	151	49.7	4.17	(1.50–11.62)		3.73	(1.49–9.34)	
SSQ-14 ≥ 9					< 0.001			< 0.001
No	120	20.8	1			1		
Yes	83	68.7	6.57	(3.16–16.68)		6.48	(3.35–12.54)	

HIV, human immunodeficiency virus; SSQ-14, 14-item Shona Symptom Questionnaire; CI, confidence interval; OR, odds ratio.

encing a negative life event in the past 6 months among those who scored positively for probable PTSD was almost four times higher than in those who did not [odds ratio (OR) 3.73, 95% CI 1.49–9.34] (Table 2).

Participants who were found to suffer from probable PTSD were more likely to score ≥ 9 on the SSQ-14 than those who did not (OR 6.48, 95% CI 3.35–12.54) (Table 2).

3.3. LEC-5: self-experienced traumatic index events

All participants (n = 204) responded to the 17 items describing potentially traumatic life events. The mean number of self-experienced lifetime traumatic events was 4.6 (SD 2.4). The most commonly experienced lifetime traumas are listed in Table 3. In total, 132 participants reported experienced physical assault (64.7%), followed by any other very stressful event/experience, indicated by 130 participants (63.7%), as well as sudden, unexpected death of someone close, named by 113 participants (55.4%), and life-threatening illness/injury, listed by 89 (43.6%). Participants could report as many items as they felt appropriate.

Table 3. Life Events Checklist for DSM-5 (LEC-5): self-experienced exposure (n = 204).

Name of item	n	%
1. Natural disaster (for example, flood, hurricane, tornado, earthquake)	51	25.0
2. Fire or explosion	23	11.3
3. Transportation accident (for example, car accident, boat accident, train wreck, plane crash)	31	15.2
4. Serious accident at work, home, or during recreational activity	30	14.7
5. Exposure to toxic substance (for example, dangerous chemicals, radiation)	14	6.9
6. Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)	132	64.7
7. Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)	36	17.6
8. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)	20	9.8
9. Other unwanted or uncomfortable sexual experience	20	9.8
10. Combat or exposure to a war-zone (in the military or as a civilian)	12	5.9
11. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)	39	19.1
12. Life-threatening illness or injury	89	43.6
13. Severe human suffering	86	42.2
14. Sudden, violent death (for example, homicide, suicide)	25	12.3
15. Sudden, unexpected death of someone close to you	113	55.4
16. Serious injury, harm, or death you caused to someone else	7	3.4
17. Any other very stressful event or experience	130	63.7

4. Discussion

This article highlights the substantial occurrence of PTSD in a high HIV prevalence population sample using a PHC facility in an urban setting in Zimbabwe.

A probable PTSD prevalence of 40.7% was reported in this sample of PHC users who live in a non-armed-conflict setting (n = 204).

Of the self-experienced lifetime index events, the highest prevalence was for physical assault, often in the form of interpersonal violence. Other specific lifetime events mentioned included sudden and unexpected death of a family member, as well as illness and severe human suffering.

These findings are in line with earlier findings where interpersonal violence was reported by more than 40% of those presenting with CMDs and receiving the Friendship Bench intervention (Chibanda et al., 2016). Experiencing domestic violence has been found to be an important trauma type associated with PTSD and CMDs (Kaminer, Grimsrud, Myer, Stein, & Williams, 2008; Schumm, Briggs-Phillips, & Hobfoll, 2006). There is evidence showing high rates of PTSD among victims of domestic violence (Campbell et al., 2008; Dutton et al., 2006; Machtinger, Wilson, Haberer, & Weiss, 2012). Our results support findings that physical assault and interpersonal violence are common in a population with a high HIV prevalence (Davis, 2012; Kouyoumdjian et al., 2013).

Furthermore, sudden and unexpected death of a close person as well as illness which is often related to untimely death were listed as common traumatic events. In LMICs, the population is faced with reduced life expectancy and quality of life, as injuries and disease (chronic or acute) potentially cause long-term disability (Hofman, Primack, Keusch, & Hrynkow, 2005) or death that could be avoided with improved access to a well-functioning health system (Ozgediz, Jamison, Cherian, & McQueen, 2008; Samb et al., 2010).

This study shows a high rate of CMDs as measured by a locally validated tool, the SSQ-14 (Chibanda et al., 2016; Patel et al., 1997), among participants who met the criteria for probable PTSD as measured by the PCL-5. This comorbidity is not unusual as symptoms associated with CMDs, such as feelings of helplessness, hopelessness, poor functioning and sleep disturbances, can be found in PTSD (DeViva, Zayfert, Pigeon, & Mellman, 2005).

Our findings further reflect the results of earlier studies that show the impact of suffering from a chronic condition such as HIV/AIDS and the increased likelihood of the development of PTSD and comorbid CMDs (Martin & Kagee, 2011; Olley, Zeier, Seedat, & Stein, 2005). Despite more people living with HIV being started on ART and HIV/AIDS no longer being considered a death sentence, HIV-positive status is still associated with stigma (Lee, Kochman, & Sikkema, 2002; Logie & Gadalla, 2009), even in the absence of physical signs. Stigma continues to have a negative effect on adherence to medication (Katz et al., 2013).

The significance and meaning of having HIV as a chronic condition can be seen as important to the risk of developing PTSD in this context (Silove, 1999). An earlier study (Verhey et al., 2018) revealed traumatic experiences, referred to as 'njodzi' in the local language, often being related to HIV and associated with the experience of PTSD symptoms; however, these symptoms were seen within the context of CMDs by LHWs. LHWs in the aforementioned study (Verhey et al., in press) had not been trained in the identification of PTSD-related symptoms. Furthermore, 90.4% of all the participants who scored positive for PTSD on the PCL-5 reported having experienced a negative life event in past 6 months (Table 1), indicating that the occurrence of index traumatic events is common in their living environment.

As 'kufungisisa kwe njodzi' (the local term for PTSD or PTSD symptoms, literally translated as 'thinking too much due to having experienced a trauma') is pervasive but not recognized as a condition that can be treated, many people will not seek help, thereby increasing the likelihood of developing PTSD (Clark, 1997; Flannery, 2001). Our findings demonstrate an association of PTSD with a negative life event in the past 6 months, and symptoms of CMDs. These findings have also been reported in several independent research studies (Beck, Grant, Clapp, & Palyo, 2009; Momartin et al., 2004; Olley et al., 2005; Olley, Seedat, & Stein, 2006; Schumm et al., 2006).

To decrease the burden of mental illness, an evidence-based approach, such as the Friendship Bench programme, can easily be offered in all PHC facilities as it has been shown to offer an efficient and cost-effective as well as culturally acceptable way to bridge the existing treatment gap (Chibanda et al., 2016). However, there is a need to address the comorbidity that is often found (O'Donnell, Creamer, & Pattison, 2004), particularly at the PHC level (Campbell et al., 2007; Herman et al., 2009). Subthreshold presentations of PTSD are associated with similar levels of psychosocial impairment to those found in people diagnosed with PTSD (Cukor, Wyka, Jayasinghe, & Difede, 2010; Zlotnick, Franklin, & Zimmerman, 2002). To lower the impact of psychosocial impairment on PHC facility users, both PTSD and subthreshold PTSD have to be recognized.

Assessment of exposure to negative life events, whether acute or chronic, can become part of a comprehensive health-care package with the aim of addressing stress disorder symptoms timeously. The need to train LHWs in how to identify PTSD-specific symptoms, such as phobic avoidance, hypervigilance and recurring nightmares, adding to their mental health literacy, was highlighted recently (Chibanda, Verhey, Munetsi, et al., 2016b). Integrating a

common elements approach (Murray et al., 2014) in the management of conditions by LHWs is considered to be an acceptable way to bridge the treatment gap.

This study illustrates the high prevalence of PTSD-like symptoms among people with symptoms of CMDs. Further studies will need to examine how LHWs can be used resourcefully to address the burden of comorbidity in LMICs. There is growing evidence supporting the efficient and effective use of transdiagnostic approaches, for example, for anxiety disorders (McManus, Shafran, & Cooper, 2010). PTSD had been part of the Fourth Edition of the DSM (DSM-IV) (APA, 2000) anxiety disorders category until the release of DSM-5 (APA, 2013). With the Friendship Bench programme being a community-based intervention, we believe that an integrated, culturally acceptable task-shifting approach with an added focus on stress disorders can make a difference to beneficiaries. Furthermore, we propose rigorous research, focusing on its effectiveness in decreasing the burden of compromised mental health in a holistic manner.

This study has several limitations. It was carried out in a PHC clinic in one of Harare's townships. The majority of the sample was female, with the unequal gender distribution being a reflection of women displaying more active health-seeking behaviour in Zimbabwe. Therefore, our results may not be generalizable across gender. We did not stratify negative life events by specific type of trauma, and therefore it is not possible to make any firm conclusions as to which specific negative life events are more likely to lead to PTSD, or what mix of negative life events is important. There is a need for further work on this.

5. Conclusion

PTSD is highly prevalent in this setting and is associated with a wide range of negative life events and CMD symptoms. To sustainably decrease the burden of mental illness, stress-related disorder symptoms and their link to previous exposure to traumatic events have to be recognized by LHWs working for the Friendship Bench. There is a need to develop and strengthen community-based, cost-effective and efficient integrated interventions aimed at addressing this and other comorbidities. We furthermore propose that a differentiation between lower intensity stressors and their impact on mental health and those that hold potential traumatic salience as defined by DSM-5 (APA, 2013) is especially important in LMICs.

Disclosure statement

No potential conflict of interest was reported by the authors.

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