

Prevalence, type, and correlates of trauma exposure among adolescent men and women in Soweto, South Africa: Implications for HIV prevention

Kalysha Closson^{1,2}, Janan Dietrich³, Busi Nkala^{3,4}, Addy Musuku¹, Zishan Cui², Jason Chia², Glenda Gray³, Nathan Lachowsky^{2,5}, Robert S. Hogg^{1,2}, Cari Miller¹, Angela Kaida¹

¹Faculty of Health Sciences, Simon Fraser University, Canada; ²BC Centre for Excellence in HIV/AIDS, Canada; ³Perinatal HIV Research Unit, South Africa ⁴Faculty of Humanities, University of the Witwatersrand, South Africa, ⁵Faculty of Medicine, University of British Columbia

Background

Youth exposure to traumatic experiences is associated with co-occurring and multiple-intersecting HIV risk.^{1,2}

This is particularly concerning among adolescents living in HIV hyper-endemic settings such as Soweto, South Africa who simultaneously cope with high levels of community violence, food insecurity, unstable housing, unemployment and other social and systemic violences.²

We measured lifetime prevalence, type, and correlates of trauma experiences by gender among adolescents living in the HIV hyper-endemic setting of Soweto, South Africa

Methods

Study participants aged 14-19 were recruited in the Botsha Bophelo Adolescent Health Survey (BBAHS) through targeted sampling within 41 formal and informal identified townships located in Soweto (see figure 1).

Prevalence of “ever” experiencing a traumatic event among adolescents was assessed using a South African adolescent modified 19-item Traumatic Event Screening Inventory-Child (TESI-C) scale² (see items in table 1).

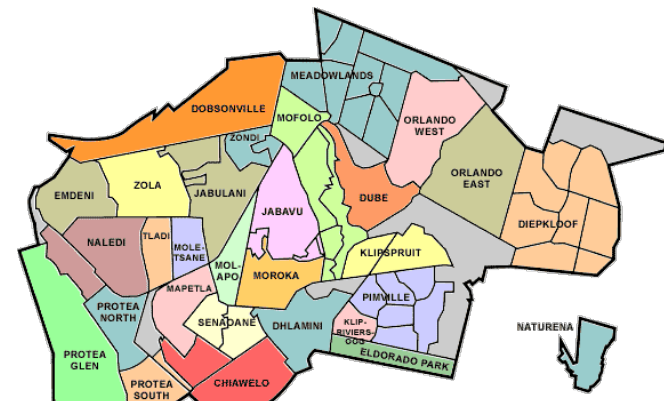


Table 1- List of 19-Items in the BBAHS adapted TESI-C Scale

BBAHS adapted TESI-C Items	
1. Separated from mom (e.g. lived with another relative or in foster care)	
2. Parents separated	
3. Parents argued frequently or more than usual	
4. Changed schools (not because of graduation) or moved to a new home	
5. Parent/guardian lost job	
6. Lost home or had no home	
7. Family member or someone close had HIV/AIDS	
8. Family member or someone close died of HIV/AIDS	
9. Family member or someone close died	
10. Family member or someone close was very sick or had a bad injury	
11. Experienced race/ethnicity discrimination	
12. Family struggled with money	
13. Seen an act of violence towards someone else (not in family)	
14. Experienced an act of violence by someone not in your family	
15. Seen an act of violence in the family	
16. Experienced an act of violence by someone in your family	
17. Deliberately inflicted harm on another person	
18. Experienced forced Sex	
19. Forced someone to have sex	

Study Cronbach alpha=0.63, range 0-19, with higher scores indicating higher experiences of potentially traumatic events (PTEs).

Gender-stratified multivariable logistic regression models assessed independent correlates such as of ‘high PTE score’ (≥7 PTEs).

Independent correlates were socio-demographics (e.g. Kendall’s 1995 food security scale,³ Cronbach alpha= 0.81), depression (Radloff’s 1977, CES-D Scale,⁴ study alpha=0.81), and HIV risk behaviour (e.g. inconsistent condom use and substance use).

Results

Table 2: Descriptive characteristics of BBAHS participants overall and by gender (n=767)

	Overall	Men	Women	Pvalue
		n%	n %	
Age at interview (years, median, Q1,Q3)	17 (16-18)	17(16,18)	18(16,18)	0.197
Years lived in Soweto				
< 5 years	71 (9.4)	27 (8.4)	44(10.0)	0.347
≥ 5 years	106(14.0)	51(15.9)	55(12.5)	
Since birth	582 (76.7)	242 (75.6)	340(77.5)	
Food Insecurity				
Low	169 (22.0)	59(18.2)	110(24.9)	0.078
Medium	203 (26.5)	88 (27.1)	115(26.0)	
High	395 (51.5)	178 (54.8)	217(49.1)	
Ever had sex				
No	338(44.1)	116(35.7)	222(50.2)	<.001
Yes	429(55.9)	209(64.3)	220(49.8)	
Condom use*				
Consistent condom use	189 (46.3)	93 (47.2)	96 (45.5)	0.729
Inconsistent condom use	219 (53.7)	104 (52.8)	115 (54.5)	
Probable Depression				
No	510 (66.5)	229(70.5)	281(63.6)	0.046
Yes (CES-D score ≥ 24)	257(33.5)	96(29.5)	161(26.4)	

*Only among (n=429) who have ever had sex

Of 830 participants, 767 answered all 19 TESI-C items and were included in this analysis of whom 442 (58%) were adolescent women.

Among those who had ever had sex (n=429), 54% reported inconsistent condom use (including 53% of adolescent men and 55% of adolescent women [p=0.729])

Nearly all (99.7%) of participants experienced at least 1 PTE. Median number of PTE experienced was 7 [Q1-Q3: 5-9], with no significant difference by gender (p=0.19)

Overall, 47% of adolescent men and 45% of adolescent women experienced high PTE score (≥ 7 events)

Results Continued

Trauma Experiences by gender

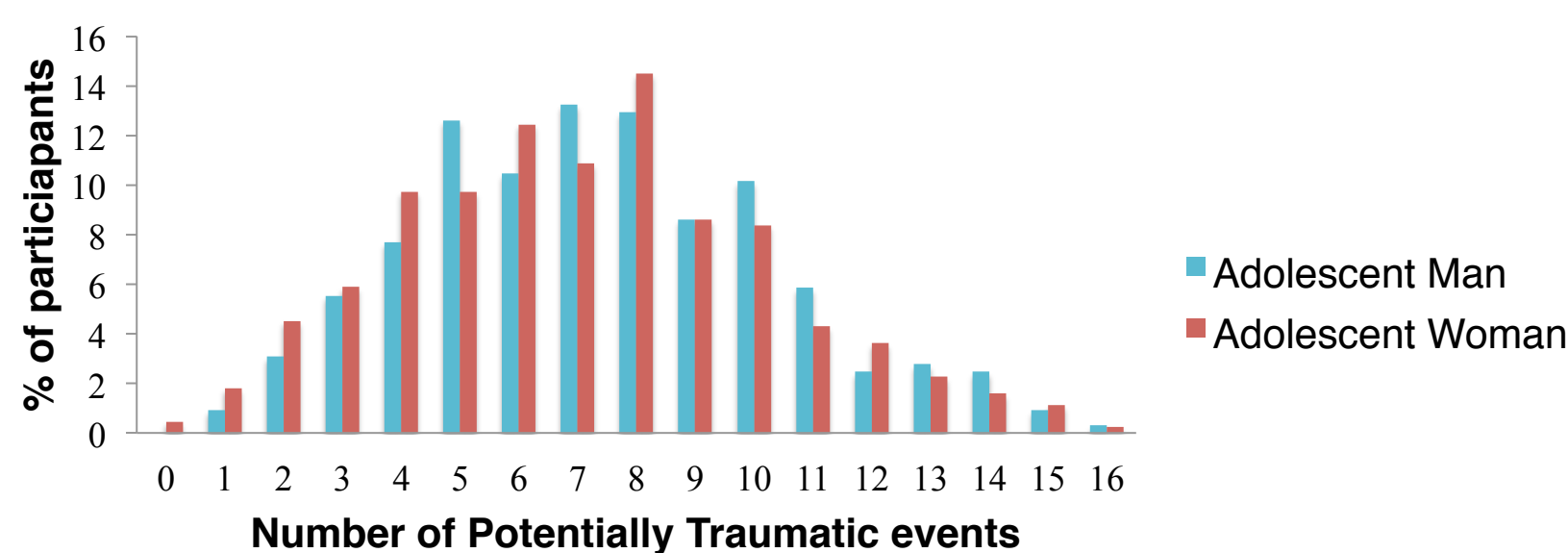


Figure 2- Number of PTEs experienced by gender

Adolescent men reported more violent PTEs (e.g. seen an act of violence in the community) whereas women reported more non-violent HIV/AIDS related PTEs (e.g. family member or someone close died of HIV/AIDS)

Table 3- Univariate and adjusted analysis of variables associated with high PTE scores among adolescent men (n= 325)

Variables	Low PTE n (%)	High PTE n (%)	OR (95%CI)	AOR (95%CI)
Socio-demographic characteristic				
Age at interview (per year, median Q1,Q3)	17(15,18)	18(16,18)	1.37(1.19-1.59)	1.40(1.21-1.63)
Years lived in Soweto				
Since birth	133 (76.9)	109 (74.2)	Ref	Ref
≥ 5 years	31 (17.9)	20 (13.6)	0.79 (0.42-1.46)	0.79 (0.42-1.46)
< 5 years	9 (5.2)	18 (12.2)	2.44 (1.05-5.65)	2.78 (1.14-6.76)
Food Insecurity				
Low	39 (22.4)	20 (13.3)	Ref	Ref
Medium	51 (29.3)	37 (24.5)	1.41 (0.71-2.81)	1.58 (0.76-3.29)
High	84 (48.3)	94 (62.3)	2.18 (1.18-4.03)	2.63 (1.36-5.09)
Inconsistent condom use				
Never had sex	77 (45.8)	39 (26.9)	Ref	Not Selected
No	44 (26.2)	49 (33.8)	2.20 (1.26-3.85)	
Yes	47 (28.0)	57 (29.3)	2.39 (1.39-4.13)	
Probable Depression				
No	129 (74.1)	100 (66.2)	Ref	Not selected
Yes (score ≥ 24)	45 (25.9)	51 (33.8)	1.46 (0.91-2.36)	
Drug use ever in L6M (excluding marijuana use)				
No	165 (94.8)	132 (87.4)	Ref	Not Selected
Yes	9 (5.2)	19 (12.6)	2.64 (1.16-6.02)	

For men (see table 3), high PTE score was also associated with older age (aOR=1.40/year, 95%CI=1.21-1.63); recently moving to Soweto (aOR=2.78, 95%CI=1.14-6.76). Furthermore, adolescent men with high PTEs were more likely to face high food insecurity (aOR=2.63, 95%CI=1.36-5.09), which was also significant among women (aOR=2.57, 95%CI=1.55-4.26).

Table 4- Univariate and adjusted analysis of variables associated with high PTE scores among adolescent women (n=442)

Variables	Low PTE S n (%)	High PTE N (%)	OR (95%CI)	AOR (95%CI)
Socio-demographic characteristic				
Age at interview (per year, median Q1,Q3)	17(16,18)	18(16,18)	1.10(0.97-1.24)	Not Selected
Food Insecurity				
Low	77 (31.4)	33 (16.8)	Ref	Ref
Medium	71 (29.0)	44 (22.3)	1.45 (0.83-2.52)	1.49 (0.84-2.65)
High	97 (39.6)	120 (60.9)	2.89 (1.77-4.70)	2.57 (1.55-4.26)
Inconsistent condom use				
Never had sex	142 (59.7)	80 (41.0)	Ref	Ref
No	52 (21.9)	44 (22.6)	1.50 (0.92-2.44)	1.59 (0.96-2.63)
Yes	44 (18.5)	71 (36.4)	2.86 (1.80-4.56)	2.69 (1.66-4.37)
Probable Depression				
No	176 (71.8)	105 (53.3)	Ref	Ref
Yes (score ≥ 24)	69 (28.2)	92 (46.7)	2.23 (1.51-3.32)	2.00 (1.31-3.03)

Among women (See table 4), high PTE score was associated with probable depression using the CES-D scale (aOR=2.00, 95%CI=1.31-3.03,) and inconsistent condom use vs. no sexual experience (aOR=2.69, 95%CI=1.66-4.37).

Conclusions

Nearly all adolescents in this study experienced trauma, with gendered differences in PTE types and correlates, but not prevalence.

Among adolescent women, trauma was associated with markers of HIV risk including inconsistent condom use.

For both adolescent men and women, trauma was associated with heightened vulnerability including food insecurity, recent arrival to Soweto for men and depression for women indicating the potential for trauma to be associated with further marginalization among youth.

HIV prevention interventions targeting particularly high-risk groups of adolescents must address the syndemics of trauma and HIV through the scale-up of youth-centred, trauma-informed integrated HIV and mental health services.⁶

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