

Lifetime Poly-Victimization and Posttraumatic Stress Disorder among School-Going Adolescents in Durban, South Africa

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Abstract

In a cross-sectional survey of 719 South African secondary school students, 81% of respondents reported exposure to two or more types of childhood victimization (poly-victimization), with 29% qualifying for a diagnosis of posttraumatic stress disorder (PTSD). Risk factors for poly-victimization included poverty, an older age, and type of victimization, with the extent of poly-victimization being highest among respondents who reported an incident of childhood molestation. Respondents exposed to high levels of poly-victimization (5+types) were more than twice as likely as other respondents to qualify for a diagnosis of PTSD (OR=2.7); with there being a graded relationship between the extent of poly-victimization and the severity of PTSD.

Keywords: Adolescents; Poly-victimization; PTSD; South Africa

Introduction

Much of the available literature on childhood victimization has explored the dynamics and impact of single traumatizing events such as sexual abuse, exposure to community violence, school bullying, or witnessing domestic violence [1-4]. Although such studies provide detailed insights into the dynamic of specific forms of exposure, recent literature suggests that childhood victimization frequently involves a pattern of multiple forms of victimization [5-8]. As such, an exclusive focus on one form of victimizations likely to provide only a partial estimate of a child's victimization profile, and, as a consequence, provide a possibly exaggerated estimate of the traumagenic potential of specific types of victimization.

With respect to the notion of multiple victimization, research conducted in the United States indicates that 69% of children who report any victimization in the past year, report at last one additional, different form of victimization during the same period, and that victimized children report an average of 3 different types of victimization (range: 1-15 types) a year [6]. Finkelhor and his associates refer to such multiple victimization as poly-victimization (PV), with PV having been found to be associated with a variety of adverse behavioral and mental health outcomes, including posttraumatic stress disorder (PTSD) [9,10], suicidal ideation [11], anxiety and depression [6,11-14], risk of future re-victimization [15,16], lower levels of academic performance [11], and delinquent behavior [9].

Although comparative data are not available for developing countries, findings from South African studies indicate that South African adolescents face a high risk of exposure to interpersonal violence, with such exposure being associated with adverse behavioral and mental health outcomes in a significant proportion of cases [17-22]. To date, however, there has been only one systematic attempt to explore the extent of PV in samples of South African adolescents. Using an adapted version of the Juvenile Victimization Questionnaire

[23], McCormack surveyed victimization experiences in a sample of 91, Grade 8 to 10, adolescents in the Cape Province of South Africa. Study findings indicate that respondents reported an average of 6 different types of victimization, with 80% of respondents falling into the PV category employed in the study (5+ types), and 50% falling into the high PV category (8+ types). Although McCormack's findings suggest that South African adolescents may be exposed to relatively high rates of PV, the author fails to explore the dynamics and traumagenic potential of such exposure.

In this context, the aims of this exploratory analysis were threefold: first, to explore the extent, dynamics, and traumagenic potential of lifetime PV in a sample of South African school-going adolescents; second, to identify demographic, family background, and victimization characteristics associated with an increased risk of PV; and third, to explore the traumagenic potential of PV using a clinically validated measure of posttraumatic stress disorder.

Methods

Sample

The sampling frame for the study was all students attending a high school located in the city of Durban (KwaZulu-Natal, South Africa) during 2011. Of the 802 learners registered at the school, 752 (94%) consented to participate in the research and 719 (90%) submitted usable questionnaires. Respondents were predominantly male (66%) and Black African (95%), with a mean age of 15.5 years (SD: 2.43, range: 12-20 years). Additional sample characteristics are provided in Table 1.

Victimisation measures

Victimization data were collected using the Developmental Trauma Inventory (DTI), which is a 33-item, retrospective, self-administered screen for interpersonal childhood trauma experiences which has been found to have adequate levels of reliability and concurrent validity [24]. The DTI contains probes for nine forms of interpersonal violence

– emotional abuse, community assault, domestic assault, witnessing community violence, witnessing domestic violence, indecent assault, domestic neglect, rape, and domestic injury –as well as a measure of poverty in the home. In addition, the DTI contains follow-up questions designed to explore: chronicity of exposure, age at first victimization, identity of the perpetrator, and the nature and supportiveness of disclosure.

For purposes of the study a number of measures of PV were created from DTI scores. First, a continuous measure of the total number of lifetime victimizations was obtained by summing the total number of DTI items endorsed. Second, quartile splits were used to provide a graded ordinal ranking of the extent of PV experiences: no PV (0-1 types), low PV (2-4 types), moderate PV (5-8 types), and High PV (9+ types). And third, for some analysis, median splits were used to derive two discrete risk categories: low risk (0-4 types) and high risk (5+types).

Posttraumatic stress measures

Posttraumatic Stress Disorder was assessed using the Davidson Trauma Scales (DTS), which is a 17-item scale designed to assess for the clinical presence and severity of PTSD symptoms [25] In the present study, Cronbach alphas for DTS scales were: Re-experiencing (.89), Avoidance (.88), Hyper-Arousal (.90), and Full-scale (.95). Following Davidson [24], the severity of symptoms for PTSD subscale scores (Re-experiencing, Avoidance, Hyper-arousal) were calculated by summing frequency and severity scores for each item in the subscale, with full scale severity scores being obtained by summing frequency and severity scores for all 17 items on the scale. With respect to the presence of PTSD, respondents were assumed to meet the criteria for a diagnosis of PTSD if they obtained a minimum frequency score of 2 (2-3 times a week) and a minimum severity score of 2 (somewhat upsetting) for at least: one re-experiencing symptom, 3 avoidance symptoms, and 2 hyper-arousal symptoms.

Characteristic	n	Extent of poly-victimization		Chi2 (df)	p-value
		Low risk (0-4 types) (%)	High risk (5+ types) (%)		
Poverty				21.06 (1)	.000
No	632	54	46		
Yes	87	28	72		
Age				8.57 (3)	.038
12-13	96	58	42		
14-15	259	53	47		
16-17	299	52	48		
≥18	65	35	65		
Grade				9.93 (4)	.047
8	150	56	44		
9	123	58	42		

	10	188	43	57		
	11	154	53	47		
	12	104	48	52		
Gender					2.92 (1)	.087
Male		476	49	51		
Female		243	56	43		
Caretakers					0.73 (2)	.695
Both parents		345	50	50		
One parent		252	52	48		
Guardian/other		122	54	46		
Ethnicity					0.16 (1)	.724
Black African		684	51	49		
Other		35	55	45		

Table 1: Demographic characteristics and extent of poly-victimization (n = 719)

Procedure

Ethical clearance for the research was obtained from the Humanities Ethics Committee at the University of KwaZulu-Natal, with parental consent, and respondent assent, being obtained from all participants. Research questionnaires were administered by the researchers to groups of consenting participants during Life Orientation lessons; with offers of free counseling support (from the school guidance teacher) and/or free psychological counseling/therapy (at a University Clinic) being made to all respondents.

Results

Prevalence of PTSD

Two hundred and twelve respondents (29.5%) met the DTS criteria for a diagnosis of PTSD, with PTSD outcomes being significantly more likely among female respondents (OR=2.2, 95% CI=1.6-3.1) and among respondents who reported poverty in the home (OR=2.7, 95% CI=1.7-4.2).

Extent of poly-victimisation

Six-hundred and forty-eight respondents (90%) reported life-time exposure to at least one form of victimization, with 90% of those who reported at least one type of victimization reporting one or more additional form of victimization. The median number of types of exposure reported by victimised respondents was 5(range: 1 to 24), with 36% of victimized respondents reporting low PV (2-4 types), 32% reporting moderate PV (5-8 types), and 22% reporting high PV (9+ types).

Risk of poly-victimisation

The risk of PV varied as a function of both respondent characteristics and type of victimization. High levels of PV (5+types) were significantly more likely to be reported by: respondents who grew

up in a home characterized by poverty, by older respondents, and by respondents in higher grades; with respondent's gender, ethnicity, and family structure being unrelated to risk of PV (Table 1).

The risk of PV also varied as a function of the type of victimization (Table 2). Respondents who reported the following types of victimization all had more than 80% of their members in the high risk PV category (i.e., 9+ types of victimization): molestation, domestic injury, neglect, rape, and emotional abuse.

Type of victimization	n	Poly-victimization (%)		Mean number of types
		Low risk (0-4 types)	High risk (5+ types)	
Any molestation	446	13	87	12.0
Any domestic injury	43	14	86	10.7
Any rape	43	20	80	9.5
Any emotional abuse	187	20	80	9.4
Any witness (domestic)	230	22	78	8.8
Any community assault	288	26	74	8.0
Any domestic assault	352	27	73	7.8
Any witness (community)	446	32	68	7.1

Table 2: Extent of poly-victimization by type of victimization (n = 719)

Relationship between poly-victimisation and PTSD

Poly-victimization was strongly predictive of PTSD with respondents who reported high levels of PV (5+ types) being more than twice as likely as other respondents to meet the criteria for a diagnosis of PTSD (OR=2.72, 95% CI=1.903.8). A more fine-grained analysis of the relationship between PV and PTSD was provided by an exploration of the relationship between PV and PTSD severity scores. From Figure 1 it is evident that increased exposure to PV was associated with a graded increase in symptom severity on each DTS sub-scale (Re-experiencing, Avoidance, and Arousal) and on full-scale scores.

Finally, a series of multiple logistic regression analyses were conducted in order to explore the incremental validity of considering poly-victimization as a risk factor for PTSD, with two models being tested. In Model 1, the impact of different types of traumatic exposure on PTSD outcomes was explored after controlling for the effects of demographic variables (age, gender, grade, ethnicity, SES, and family structure). These analyses (Table 3) indicated that, with the notable exception of exposure to community violence, all types of victimization assessed by the DTI were significantly predictive of PTSD.

The analysis for Model 2 was identical to that for Model 1 except for the fact that PV was added as an additional predictor variable. Findings for Model 2 (Table 3) indicated that: (a) PV accounted for a significant proportion of the explained variance in PTSD outcomes across all types of victimization, (b) when PV was taken into account it

greatly reduced or eliminated the relationship between type of victimization and PTSD, and (c) when compared to type of abuse, PV posed a greater risk for PTSD across all types of victimization excepting for emotional abuse, rape, and neglect.

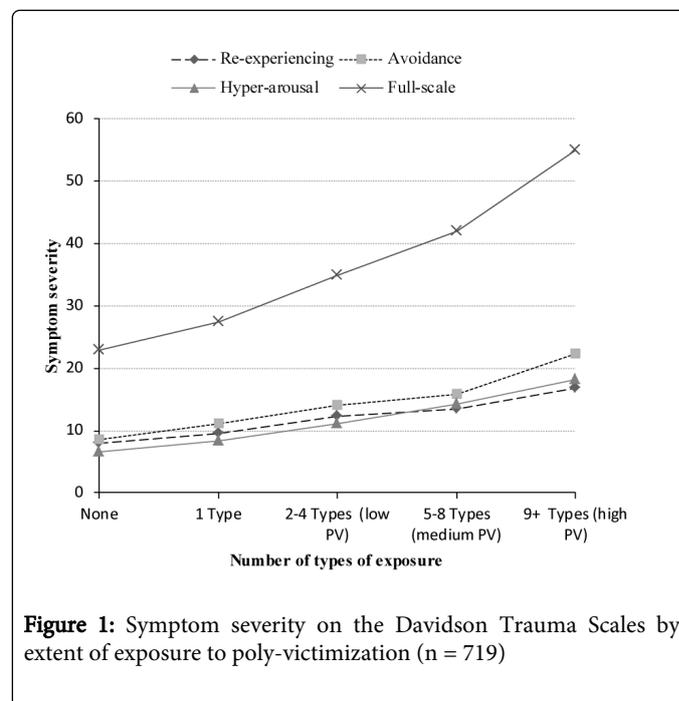


Figure 1: Symptom severity on the Davidson Trauma Scales by extent of exposure to poly-victimization (n = 719)

	Model 1: type of exposure	Model 2: type of exposure + PV	
	Type	Type	PV
Any emotional abuse	2.91**	2.25**	1.84**
Any rape	2.82**	2.35**	2.24**
Any neglect	2.52**	1.83**	2.07**
Any witnessing (domestic)	2.12**	1.68*	2.01**
Any domestic assault	1.99**	1.43	2.02**
Any domestic injury	1.75*	1.56	2.29**
Any witnessing (community)	1.60*	1.10	2.48**
Any molestation	1.32	1.12	2.34**
Any community assault	1.32	1.05	2.53**

Table 3: Type of exposure and poly-victimization as risk factors for PTSD, Note.n = 719. PV = poly-victimization. All analyses controlled for age, gender, grade, ethnicity, SES, and family structure. *p<.05.**p<.01.

Discussion

Prevalence rates for victimization observed in the present study are consistent with the view that South African children face a high risk of exposure to victimization. Nine out of 10 respondents (90%) reported some form of lifetime victimization with 90% of victimized respondents reporting exposure to multiple forms of victimization. The median number of exposures was 5, which is almost double the median of 2.6 reported for national samples of children in the United States [12].

With respect to risk factors for PV, the present findings suggest that some children are more likely to become poly-victims than others, with the presence of poverty in the home emerging as one of the strongest predictors of PV. This finding is consistent with, and extends, the view that poverty constitutes a risk factor for traumatic exposure [26,27], with the extension lying in the finding that poverty is also strongly associated with the risk of PV. In the present study, the extent of PV was also significantly, and positively, predicted by respondent's age and grade level, a finding which possibly reflects a combination of high multi collinearity between the two variables and increased opportunity for lifetime exposure to PV among older respondents.

Exposure to PV also varied as a function of exposure to specific types of victimization with some forms of victimization (sexual abuse, neglect, emotional abuse, and intentional physical injury) having more than 80% of their members in the high risk PV (5+ types) category. A common feature of these high risk forms of exposure is that they all involve direct exposure (as opposed to witnessing) of forms of victimization that occur predominantly in the home, suggesting that the extent of PV is related to both the locus (domestic versus community) and mode (direct versus vicarious exposure) of victimization types [2].

Consistent with findings from previous research [9,10], the present findings indicate that exposure to high levels of PV (5+ types) more than doubled the risk for PTSD, with the extent of PV exposure being associated with a graded increase in the severity of PTSD symptoms across all symptom categories (Re-experiencing, Avoidance, and Hyper-arousal, and full-scale scores). These results are strikingly similar to findings obtained for lifetime exposure to PV in previous studies [12], which suggest a linear, no-threshold, dose-relationship between PV and adverse mental health outcomes (i.e., greater exposure to PV corresponding to increased adverse outcomes, with there being no evident threshold to this relationship).

Findings regarding the incremental validity of considering PV as a risk factor for PTSD are consistent with previous findings in indicating that PV accounts for a significant proportion of the variance in PTSD outcomes across all forms of victimization considered in the study [9-11], and that when PV was taken into account it greatly reduced or eliminated the relationship between type of victimization and PTSD [6]. Taken together these findings suggest that (a) studies of the impact of victimization which focus on only a narrow range of victimization experiences may overestimate the association between such forms of victimization and traumatic outcomes, and (b) that practitioners working with traumatized children need to assess for a history of PV in order to identify children who are at greater risk for experiencing more extreme posttraumatic reactions.

Conclusion

The present findings indicate that the concept of PV has heuristic value in a developing country such as South Africa. High levels of PV observed in the present study suggest that future research and practice on childhood victimization would benefit from a more holistic approach to the assessment and conceptualization of child victimization which more adequately acknowledges, and addresses, children's full victimization profiles. From the perspective of clinical intervention, such a broader perspective could be used to not only triage traumatized children in terms of the likelihood of potentially adverse outcomes but also to inform targeted interventions designed to comprehensively address the full range of victimization experiences.

At the level of research, the concept of PV would appear to hold promise as a heuristic tool for providing a more comprehensive understanding of the extent, nature, and impact of child victimization in the South African context. Findings obtained in the present study, are remarkably similar to findings obtained from samples of children in the United States [6,12], suggesting that PV is a rigorous construct which is likely to be relevant to our understanding of posttraumatic symptomatology among victimized children in developing countries. As such, further research would appear to be strongly indicated in order to not only replicate the present findings but also to extend the present findings using more representative samples drawn from the South African population.

Finally, several limitations need to be acknowledged in interpreting these findings. First, the present findings were obtained from an urban sample of school-going adolescents in one particular school district, and may not generalize to adolescents in other districts, or to samples of out-of-school youth in South Africa. Second, the cross-sectional nature of the present research would caution against any strong causal inferences. And third, a reliance on self-reports of lifetime victimizations likely to have led to some degree of recall bias.

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