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Violence victimisation and aspirations–expectations disjunction among adolescent girls in urban Kenya

Caroline W. Kabiru^{a,b} , Joyce N. Mumah^a , Beatrice W. Maina^a  and Benta A. Abuya^a 

^aAfrican Population and Health Research Center, APHRC Campus, Nairobi, Kenya; ^bJohn C Caldwell Population, Health and Development Visiting Fellow, The National Centre for Epidemiology & Population Health (NCEPH) and School of Demography, Australian National University, Acton, Australia

ABSTRACT

Violence victimization is a key threat to adolescents' well-being in urban slums in sub-Saharan Africa. We examined the association between violence victimization and aspiration–expectations disjunction using cross-sectional data from 2360 girls aged 11–15 years in a slum settlement in Nairobi, Kenya. We conducted bivariate and multivariate analyses to assess the association between violence victimization and aspirations–expectations disjunction, a measure of the difference between aspirations and expectations for achieving them. One-third ($n = 798$) of girls had experienced at least one form of violence. At bivariate and multivariate level, violence victimization was significantly associated with higher aspirations–expectations disjunction but not with aspirations, suggesting that girls who had experienced violence had lower expectations for achieving aspirations. Results imply that girls who experience violence may lose hope in their future. Interventions to screen girls for violence victimization and enable positive coping may be critical.

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KEYWORDS

Early adolescence; violence victimization; aspirations; expectations; Kenya; informal settlements

Introduction

Violence is one of the leading causes of morbidity and mortality worldwide for people aged 15–44 years (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002) and young people aged 10–24 years (Mokdad et al., 2016). Being a victim of violence has been associated with a range of negative outcomes, including depression (Shukla, 2015) and hopelessness (DuRant, Getts, Cadenhead, Emans, & Woods, 1995). For example, Turner and colleagues (2006) in their study among a cohort of children aged 2–17 years in the United States showed that cumulative exposure to multiple forms of violence among younger adolescents represents a substantial source of mental health risk. Similarly, Holt and colleagues (2007) found three types of distinct victimization profiles among urban students in the United States: those with minimal victimization, those victimized primarily by their peers, and those experiencing multiple types of victimization. They found that young people who were faced with multiple victimizations were more likely to experience psychological distress and to have lower academic performance compared to their peers.

Violence victimization also has deleterious effects on health behaviours and outcomes for young adolescents (Boyes, Bowes, Cluver, Ward, & Badcock, 2014; Brown, Riley, Butchart, & Kann, 2008; Brown et al., 2009; Swahn, Dill, Palmier, & Kasirye, 2015). Brown and colleagues (2008) estimated the prevalence of exposure to bullying among students in eight African countries, including Kenya, and its effects on health during childhood. The estimated prevalence of bullying on at least one day during the 30 days

CONTACT Caroline W. Kabiru  carolinekabiru@gmail.com

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preceding the survey ranged from 25% to 63% across the different countries. They found that significantly greater proportions of young people reporting one or more days when they were bullied compared to those exposed to no bullying reported substance use, multiple sexual partnerships, and a history of sexually transmitted infections, with a graded association between number of days exposed to bullying and reported risk behaviours or health outcomes. In another study in five African countries, Brown and colleagues (2009) showed that not only was bullying common among girls and boys, but that it was also strongly associated with increased odds of adverse health behaviours including risky sexual behaviour, substance abuse, and poor mental health and suicidal thoughts.

While the effects of violence victimization on mental health and behavioural outcomes are well-studied, relatively little is known about the pathways between violence victimization and the deleterious outcomes. In particular, exposure to violence may negatively impact on adolescents' aspirations and expectations for the future (DuRant et al., 1995) and ultimately, increase their likelihood of risk behaviours, including delinquency (Kabiru, Mojola, Beguy, & Okigbo, 2013). Stoddard, Heinze, Choe, and Zimmerman (2015), who examined the link between exposure to violence and educational aspirations, posit that exposure to violence may distort young people's future aspirations in three ways. First, by limiting their capacity to foresee and make plans for their future. Second, by detracting them from meaningful participation in school in order to pursue pleasurable activities with immediate gratification. And, finally, by making them fearful of contexts (including schools) in which violence occurs and thereby impacting on educational performance and subsequently future goals. In a meta-analytic review of extant literature on peer victimization and academic achievement, Nakamoto and Schwartz (2010) showed that over time, peer victimization impacts changes in academic performance through several mediators, including peer rejection, depression and decreases in students' sense of school belonging. According to Macmillan and Hagan (2004), irrespective of gender and family socio-economic status, violence victimization decreases educational self-efficacy, which is expressed through reduced attitudinal and behavioural investments in education (e.g. time and energy devoted to schoolwork), which in turn diminishes educational performance and attainment. Further to diminished academic performance, this study also showed that victimization in childhood and adolescence was linked to later socio-economic disadvantage, directly through disrupted educational trajectories – diminished labour force participation, occupational status and earnings in early adulthood (Macmillan & Hagan, 2004).

In this study, we examine the association between violence victimization and aspiration–expectations disjunction among early adolescent girls aged 11–15 years in an informal settlement in Nairobi, Kenya's capital city. We hypothesize that exposure to violence influences adolescents' general life aspirations and expectations by increasing feelings of hopelessness and limited life prospects. However, in line with Fergus and Zimmerman's (2005) definition of resilience as a process of successful coping in the face of risk or traumatic experience, we also expect that certain promotive factors including neighbourhood safety and high self-efficacy/self-perception will moderate the impact of violence on adolescents' aspirations and expectations.

We focus on adolescents growing up in an urban informal settlement in Kenya because previous studies have shown that adolescents living in these settlements grow up in challenging contexts that place considerable limits on their capacity to live healthy, safe and productive lives (Kabiru, Beguy, Undie, Zulu, & Ezeh, 2010; Kabiru et al., 2013; Mugisha, Arinaitwe-Mugisha, & Hagembe, 2003). In these settlements, one of the key threats to adolescents' immediate and future well-being is violence victimization (Austrian et al., 2015). However, despite the significant risk of violence victimization faced by adolescents in informal settlements, there has been minimal interrogation of the potential impacts of being exposed to violence on adolescent well-being (Brown et al., 2009; Swahn et al., 2015).

Method

Participants

This study draws on data collected from 2360 girls aged 11–15 years who were interviewed in the baseline survey for the Adolescent Girls Initiative – Kenya, a randomized control trial being implemented in two marginalized settings in Kenya – Kibera Slum and rural Wajir County (Austrian et al., 2016). Girls who

Table 1. Descriptive characteristics of adolescent girls ($N = 2360$).

	<i>n</i>	%
Age (years)		
11	437	18.5
12	689	29.2
13	596	25.3
14	505	21.4
15	133	5.6
Current schooling status		
Out of school	27	1.1
In school	2333	98.9
Age for grade		
On track or ahead	1664	70.5
1–2 grades behind	551	23.4
3 or more grades behind	145	6.1
Wealth tertile		
Poorest	798	33.8
Middle	786	33.3
Least poor	776	32.9
Locus of control		
1 (internal)	492	20.9
2	861	36.5
3	755	32.0
4 (external)	252	10.7
Gender attitudes		
Low equitability	340	14.4
Middle	769	32.6
High equitability	1251	53.0
Neighbourhood safety and ties		
High	652	27.6
Medium high	869	36.8
Medium low	624	26.4
Low	215	9.1

participated in the baseline survey were identified following a household listing exercise in the study areas. Out of 2606 eligible adolescents (aged 11–14 years at the time of the household listing and not in boarding school) from distinct households, 2402 (92%) were interviewed. Of these, 2360 (98%) had the requisite data for the analyses and comprise the analytical data sample. Detailed information on the selection of adolescent girls for the baseline survey is presented elsewhere (Austrian et al., 2015).

Descriptive characteristics of adolescent girls are summarized in Table 1. Although girls were expected to be aged 10–14 years at the time of the baseline survey, the sample included some girls who were 14 years at the time of recruitment but who were 15 years by the time they were interviewed. As shown in Table 1 almost all adolescents (99%) were in school. We therefore used age for grade rather than schooling status as an explanatory variable.

Procedures

Data were collected via face-to-face interviews using structured instruments loaded onto tablet computers. Girls were interviewed using a survey that collected information on a wide range of variables including socio-demographic characteristics, education, general life aspirations and expectations, self-efficacy, and experience of physical and sexual harassment and violence. In addition, a short household survey was conducted with the head of household or other adult to assess household related variables including household assets and amenities.

Measures

The primary outcome variable, aspirations–expectations disjunction was generated by computing the difference between scores on continuous indices of aspirations and expectations. The aspiration

index was computed using standardized values (mean equal to zero and standard deviation equal to one) of individual items on a 10-item scale (Cronbach's $\alpha = .71$) that measured how important it was for the adolescent to achieve select life goals including having a good job and completing secondary school. Responses were given on a four-point scale: not important at all, not very important, somewhat important and very important. The expectations index was computed from standardized values of individual items on a 10-item scale (Cronbach's $\alpha = .85$) that measured adolescents' perceived chances of achieving select life goals. Responses on the expectations scales were recorded on a three-point scale: high, about 50–50 and low.

The primary explanatory variable – violence victimization – was assessed using a 15-item scale adapted from the Demographic and Health Surveys. The items interrogated whether girls had ever experienced different forms of physical, sexual or emotional violence perpetrated by a male. Each item was coded as 1 if the girl had ever experienced the form of violence and coded as 0 otherwise. We created a continuous violence index (Cronbach's $\alpha = .77$) derived from standardized values of the 15 items.

Other explanatory variables were self-efficacy, attitudes towards gender-based violence, locus of control, gender equitable attitudes, socio-economic status and age. Self-efficacy was assessed as continuous violence index (Cronbach's $\alpha = .54$) derived from standardized values of 10 items that assessed girls' perceived ability to handle different situations (e.g. I can always manage to solve difficult problems if I try hard enough). Each item was coded as 1 if the girl agreed with the statement and 0 if she disagreed.

Attitudes towards gender-based violence were assessed as a continuous index (Cronbach's $\alpha = .77$) derived from standardized values of five items that assessed whether girls agreed or disagreed that a husband was justified in hitting or beating his wife if the following situations occurred: if she goes out without telling him, if she neglects the children, if she argues with him, if she refuses to have sex with him, or if she burns the food. Items were scored as 1 if the girl agreed and 2 if she disagreed.

Locus of control – the extent to which girls perceive that outcomes result from factors that are external from themselves or from their own behaviours – was assessed using four items, each comprising two statements, drawn from Rotter's (1966) generalized belief in internal–external control scale. Statements that aligned with an external locus of control (life outcomes result from external factors) were scored as 1 and those that aligned with an internal locus of control (an individual's actions largely drive outcomes) were scored as 0. Scores on the four items were added up. Scores ranged from 0 to 4 with a low score indicating an internal control while a high score indicates external control.

Gender equitable attitudes were assessed as a categorical variable derived from five items assessing the extent to which adolescents believed in gender equity (e.g. It is as important for girls to complete secondary school as it is for boys). Items were scored such that a score of 1 reflected a gender equitable attitude and 0 if otherwise. Scores on the five items were added up and adolescents with a score between 0 and 3 were categorized as having low gender equitable attitudes, and those with a score of 5 as having high gender equitable attitudes.

Previous research among adolescents in the United States has shown that neighbourhood cohesion is associated with educational aspirations (Stewart, Stewart, & Simons, 2007). We therefore created a variable – neighbourhood safety and ties – that was derived from four items: I have many friends in my neighbourhood/community, I feel safe walking around in my neighbourhood/community during the day, I feel safe walking around in my neighbourhood/community after dark, and people in my neighbourhood/community trust one another. Items were coded 1 if the adolescents responded in the affirmative and 0 if otherwise. Scores were added up and a four-category variable created with the following categories: high, medium high, medium low and low.

The age for grade was computed assuming entry into grade one by age seven years. Three categories were created: on track or ahead, 1–2 grades behind and 3 or more grades behind. Socio-economic status was measured using a household asset and amenities index that assessed household ownership of various assets and amenities (e.g. television, watch, livestock and agricultural land), the number of sleeping rooms, and household food insecurity. Responses on each item were dichotomized and standardized weight scores were generated using principal components analysis as described by Filmer

and Pritchett (1999). The scores were then summed to generate household scores, which were then ranked to generate wealth tertiles.

Data analysis

Quantitative data were analysed using Stata (Version 13.1). We computed univariate statistics to describe adolescents' social-demographic characteristics and other categorical explanatory variables. We also computed Pearson's correlations between the outcome variable and the continuous variables. To assess the association between the outcome variable and the primary explanatory variable – aspirations–expectations disjunction, we computed two linear regression models: one with only the primary explanatory variable and a second with all the explanatory variables. We also ran similar linear regression models with aspirations as the outcome variable. For all models, a *p*-value of less than .05 was considered statistically significant.

Ethical considerations

Ethical clearance was obtained from the Population Council Institutional Review Board and the AMREF Health Africa Ethical and Scientific Review Committee. Research clearance was granted by the Kenya National Commission for Science, Technology and Innovation. Written informed consent was obtained from parents and guardians of non-emancipated minors. All adolescents provided written assent. Interviews were conducted in places that offered auditory privacy.

Results

One-third ($n = 798$) of girls had experienced at least one form of violence perpetrated by a male (Table 2). Overall, 16% of girls ($n = 370$) had been insulted or made to feel bad about themselves, 11% ($n = 261$) had been slapped, and 10% ($n = 244$) had been pushed, shaken or had something thrown at them. Six per cent of girls ($n = 145$) had experienced at least one form of sexual violence (e.g. unwanted sexual touching or being forced to have sex) (not shown).

Table 2. Distribution of negative gender-related events experienced by adolescent girls ($N = 2360$).

	<i>n</i>	%
Has any male ever done any of the following things to you:		
Say or do something to humiliate you in front of others?	228	9.7
Threaten to hurt or harm you or someone close to you?	172	7.3
Insult you or make you feel bad about yourself?	370	15.7
Push you, shake you, or throw something at you	244	10.3
Slap you	261	11.1
Twist your arm or pull your hair	101	4.3
Punch you with his fist or something that could hurt you	141	6.0
Kick you, drag you, or beat you up	152	6.4
Try to choke you or burn you on purpose	23	1.0
Threatened to attack you with a knife or other weapon	27	1.1
Attacked you with a weapon	11	.5
Touched you in a sexual way (e.g. kissing, grabbing, or fondling), when you did not want them to	86	3.6
Try to have sexual intercourse with you when you did not want to but did not succeed	85	3.6
Physically forced you to have sexual intercourse even when you did not want to	43	1.8
Forced you to perform sexual acts when you did not want to	33	1.4
Number of different violent events reported		
None	1562	66.2
One	317	13.4
Two	183	7.8
Three or more	298	12.6

Table 3 shows the pairwise correlations between the continuous variables. The composite violence victimization index was not significantly correlated with aspirations but was negatively correlated with expectations, ($r(2360) = -.13, p < .05$). One-way analysis of variance tests (not shown) of scores on the aspirations, expectations and disjunction scales by the categorical violence victimization variable indicating the number of forms of violence girls had experienced showed no difference across the groups on aspirations. However, girls who had experienced three or more different violent events had lower expectations than the other three groups. The differences in expectations were statistically significant for the group reporting no violence victimization and for those reporting one event, and marginally significant ($p = .059$) for the group reporting two events. In other words, increasing violence victimization was associated with lower expectations of achieving aspirations.

To test the association between violence victimization and aspiration–expectations disjunction, we computed two linear regression models: one predicting aspirations and the second aspirations–expectations disjunction. As shown in Table 4, violence victimization had a negative but non-significant

Table 3. Pearson's correlation coefficients between violence and continuous variables ($N = 2360$).

	Violence	Aspirations	Expectations	Disjunction	Self-efficacy
Violence	1				
Aspirations	-.03	1			
Expectations	-.13*	.17*	1		
Disjunction	.08*	.55*	-.73*	1	
Self-efficacy	-.03	.12*	.13*	-.03	1
Attitudes toward gender violence	-.07*	.08*	.01	.05	.07*

* $p < .05$

Table 4. Linear regression predicting aspirations and aspiration–expectations disjunction.

	Aspirations				Aspirations–expectations disjunction			
	B	SE	B	SE	B	SE	B	SE
Violence	-.04	.02	-.03	.02	.13*	.03	.13*	.03
Age (ref: 11 years)								
12			.00	.03			.05	.05
13			.01	.03			.02	.05
14			.02	.04			.07	.05
15			-.02	.05			.09	.08
Age for grade (ref: on track or ahead)								
1–2 grades behind			.02	.03			.14*	.04
3 or more grades behind			-.14*	.05			.09	.07
Wealth tertile (ref: poorest)								
Middle			.02	.03			-.09*	.04
Least poor			.01	.03			-.13*	.04
Locus of control (ref: Internal locus)								
2			.03	.03			.01	.04
3			.01	.03			.02	.04
External locus			.03	.04			-.01	.06
Gender attitudes (ref: low equitability)								
Middle			.17*	.03			.12*	.05
High equitability			.20*	.03			.07	.05
Neighbourhood safety and ties (ref: high)								
Medium high			.05 [†]	.03			.06	.04
Medium low			.02	.03			.05	.04
Low			.08 [†]	.04			.28*	.06
Self-efficacy			.12*	.03			-.01	.04
Attitudes towards gender based violence			.04*	.02			.07*	.03
Constant	.00	.01	-.22*	.05	.00	.02	-.15*	.07
Adjusted R^2	.001		.037		.007		.028	
N	2360		2360		2360		2360	

* $p < .05$.

[†] $< .10$.

association with aspirations in both the bivariate and multivariate models. However, violence victimization was positively associated with aspirations–expectations disjunction. Taken together, these results indicate that girls reporting more victimization had similar aspirations to those reporting less or no victimization, however, the former’s expectations of achieving their aspirations were lower, as reflected by higher aspirations–expectations disjunction.

In the multivariate models, locus of control and age were not significantly associated with either aspirations or the aspirations–expectations disjunction measure. Compared to girls who were ahead or at the right grade of age, girls who were 3 or more grades behind had lower aspirations, while relative to the same referent group, girls who were 1–2 grades behind had higher scores on the disjunction index. Wealth was significantly associated with the disjunction measure; specifically, girls from the middle and least poor tertile had lower disjunction scores than girls in the poorest tertile. Gender equitability attitudes were associated with both the aspirations and disjunction measures. Specifically, girls with middle or high gender equitable attitudes also had higher aspirations than girls with low equitability. Relative to girls with low gender equitable attitudes, those with medium gender equitable attitudes had higher scores on the disjunction index. Although differences in aspirations among girls by neighbourhood safety and ties were only marginally significant, girls reporting low neighbourhood safety and ties had significantly higher disjunction scores than those reporting high neighbourhood safety and ties. Self-efficacy was positively associated with aspirations, but was not associated with the disjunction measure. Increasingly disapproving attitudes towards gender violence were associated with higher aspirations and disjunction.

Discussion

Previous research has documented the significant risk of violence victimization faced by adolescents in informal settlements in sub-Saharan Africa (Oduro, Swartz, & Arnot, 2012; Sinclair et al., 2013). However, relatively little is known about the potential impacts of exposure to violence on adolescent well-being. In this study, we found that one-third of adolescent girls aged 10–15 years had experienced at least one form of gender-based violence. Girls who reported violence victimization had similar aspirations to those reporting no victimization. However, their expectations for achieving aspirations were much lower than those reporting no victimization. Further, we found that the higher the number of violent episodes experienced by girls (usually three or more), the lower the expectations they had for achieving their aspirations. These results are in line with previous research that suggests that victims of violence may experience feelings of hopelessness (DuRant et al., 1995), which may limit their expectations of achieving aspirations and also expose them to deleterious health outcomes.

While we did not examine the association between aspirations–expectations disjunction and risk behaviour, previous studies have found that high levels of aspirations–expectations disjunction can increase the likelihood of risk behaviours, including delinquency (Kabiru et al., 2013; Wareham, Cochran, Dembo, & Sellers, 2005) as young people try to cope with the negative emotions associated with victimization and thus, explain associations between violence victimization and risk behaviours observed in previous studies (Brown et al., 2008, 2009).

Our results also demonstrate the potential importance of neighbourhood safety and ties in mediating the violence victimization–aspiration–expectations–disjunction nexus. For instance, the association between low neighbourhood safety and ties and higher disjunction scores reported by girls implies that in a more violent environment, there is higher discrepancy between aspirations and the expectations to achieve them. We suggest that the higher levels of disjunction exhibited by those perceiving low neighbourhood safety and ties may stem from greater uncertainty about the future in contexts characterized by low social cohesion and violence.

Interestingly, we found that girls who held more disapproving attitudes towards gender-based violence were more likely to report higher aspirations and to have higher disjunction scores than those holding less disapproving attitudes. We posit that girls who disapprove violence are empowered enough to have higher aspirations. However, the disapproval of the violence may not insulate them from having

low expectations of achieving aspirations because of the context in which they live. Similarly, in the United States, Hanson (1994) found that mismatched educational aspirations and expectations were significantly higher among young people from low socio-economic groups than those from more socio-economically well-off groups.

Although we did not find a significant association between locus of control and the aspirations or aspirations–disjunction measures, previous studies conducted among young people in the United States have reported a significant association between locus of control and educational aspirations (DuCette & Wolk, 1972; Flowers, Milner, & Moore, 2003). Flowers et al. (2003), for example, found that controlling for socio-economic status and other sociodemographic and individual characteristics, African-American students with an internal locus of control reported higher educational aspirations compared with those with an external locus of control. DuCette and Wolk (1972), on the other hand, found contrasting associations between locus of control and occupational aspirations for students in a predominantly African-American school in a low socio-economic community compared with those in a predominantly Caucasian school in a middle class community. Specifically, an internal locus of control was associated with lower job aspirations among students in the school in the low socio-economic community while an internal locus of control was associated with higher job aspirations among students in the school in the middle-class community. DuCette and Wolk (1972) argue that in both settings, the locus of control variable works in the same way, with an internal locus of control allowing one to make a rational assessment of the environment and the possibilities for one's future. In our case, our ability to observe an association between locus of control and our outcome measure may have been limited by the narrow range of items (four) used to evaluate locus of control. Further research is warranted given previous studies showing that an internal locus of control may be associated with greater likelihood of avoiding violent relationships (Kim & Gray, 2008).

Study findings should be interpreted in light of several limitations. First, we were unable to account for other factors that may influence aspirations and expectations such as religiosity (Kabiru et al., 2013). Second, since the data used in this paper are cross-sectional, we are unable to speak to how some of the factors that are used to predict aspirations and expectations may vary over time. Nonetheless, our findings demonstrate that screening girls for violence victimization and helping them cope positively may be critical for those working with adolescent populations in urban slums. However, further research that tests different approaches to help adolescent girls overcome the negative effects of violence victimization is warranted. Overall, the study findings suggest that if violence experienced by girls is not checked, the ramifications on girls may last a lifetime.

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Notes on contributors

Caroline W. Kabiru is a research scientist in the Population Dynamics and Sexual and Reproductive Health and Rights Unit at the African Population and Health Research Center, Kenya. Her research interests include resilience, positive youth development, and young people's sexual and reproductive health.

Joyce N. Mumah is an associate research scientist in the Population Dynamics and Sexual and Reproductive Health and Rights Unit at the African Population and Health Research Center, Kenya. Her research interests include gender, reproductive health, HIV/AIDS, adolescents, marriage, socioeconomic determinants of health and African development.

Beatrice W. Maina is currently a PhD student in the School of Public Health, University of Witwatersrand, South Africa and a research officer at the African Population and Health Research Center, Kenya. Her research interests include gender, sexuality, and the sexual and reproductive health of very young adolescents.

Benta A. Abuya is a research scientist in the Education and Youth Empowerment Unit at the African Population and Health Research Center, Kenya. Her research interests include education access, equity and quality; the linkages between education and health outcomes for adolescents; as well as gender issues in education.

ORCID

Caroline W. Kabiru  <http://orcid.org/0000-0002-0735-9839>

Joyce N. Mumah  <http://orcid.org/0000-0001-6181-6837>

Beatrice W. Maina  <http://orcid.org/0000-0001-6205-3296>

Benta A. Abuya  <http://orcid.org/0000-0003-2465-0967>

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