

Predictors of Physical Violence Against Children and Youth in Rwanda: Findings from a National Cross-Sectional Survey

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Abstract

Background

The prevention of violence against children and youth in Rwanda has often been challenged by the lack of data. To solve that challenge, a national survey on violence was done in 2015-2016 among female and male children and youth aged 13-24. Data from that national survey were used to assess prevalence and predictors of physical violence(PV) against children and youth in Rwanda.

Methods

A nationally representative sample of 2,159 respondents from the Rwanda survey was analyzed. Descriptive statistics assessed the prevalence of PV against children and youth; and logistic regression models investigated predictors of physical violence in that population.

Results

Over two in ten children and youth (23.4%, 95% CI [21.2-25.8]) reported experiences of any form of PV in the last twelve months before the survey. Reported PV was two times higher (15.7, 95% CI [13.7-17.9]) in children and youth attending school than in those not attending school (7.7%, 95% CI [6.4-9.2]); and the likelihoods of reporting PV were higher (aOR: 2.0, 95% CI [1.5-2.6]) among children and youth attending school than in those not attending school.

Conclusions

There is a need to increase efforts in preventing violence against children and youth happening around school in Rwanda.

Introduction

Physically violence is generally defined as the intentional use of physical force in a way that can lead to death, disability, injury or harm. It encompasses punching, kicking, whipping, beating with an object, choking, suffocating, attempted drowning, intentional burning, using or threatening with a knife, gun or other weapon(*Brazil, 2001, Maria (name changed), 6, hides her face in a pillow, in a room at CEDECA, the Centre for the Defense of Children and Adolescents, in a major city in Brazil. Maria was the victim of child abuse. Behind her is a six-year-old boy who is also be*, 2001). Globally, many children and youth are subjected to PV by parents, caregivers, peers, intimate partners, adult relatives or other adults in the neighborhoods(Center for Disease Control and Prevention (CDC), 2020). The 2014 global status report on violence prevention estimated that one in four children and youth experience physical abuse every year (World Health Organization, 2014). In Africa, surveys on violence against children and youth in some Sub-Saharan countries found higher trends of childhood PV. In Lesotho, one in three female youth and more than one in two male youth aged 18–24 years reported that they had experienced PV before age eighteen(Against, 2020). In Uganda, six in ten females and seven in ten males aged 18-24 years reported having experienced PV during their childhood(Ministry of Gender, 2015). Similar trends were reported in Ivory Coast, with nearly half of females and three in five males aged 18-24 reporting having experienced PV in their childhoods(Survey, 2020).

In Rwanda, till 2016, there was no national data on the prevalence of PV against children and youth. The first national population-based survey on violence against children and youth was done in 2015-2016 in children and youth aged 13-24 years. This survey found that thirty-seven percent of female youth and sixty percent of male youth aged 18-24 years had experienced PV prior to age 18. It also found that twenty-seven percent of females and forty-two percent of males aged 13-17 had experienced PV in the past 12 months before the survey(Republic of Rwanda Ministry of Health, 2015).

Like in other sub-Saharan African countries mentioned above, Rwanda's data shows that PV against children and youth is worrying; and it requires appropriate interventions and strategies to curb it down. According to the World Health Organization (WHO), the design and implementation of any interventions or programs to prevent violence against children and youth has to follow some steps: the problem definition, the identification of protective and risk factor, designing interventions and testing their implementation, the dissemination of information about the effectiveness of interventions, and the scale-up of interventions proven to be effective (Republic of Rwanda Ministry of Health, 2015). With the 2015-2016 survey, Rwanda had just started the definition of the problem and needed to go further to comply with the whole WHO recommended public health process for violence prevention. To contribute to Rwanda's efforts towards the prevention of violence against children and youth, this study used the 2015-2016 Rwanda survey to assess the prevalence of PV and investigate factors associated with it, by comparing in-school and out-of-school children and youth.

The move to examine PV by comparing children and youth attending school with those not attending school was simply motivated by findings of the 2015-2016 Rwanda survey on respondents' schooling status. The survey found that over 97 per cent of all survey participants (both male and female) reported that they had attended school. However, half of the respondents in this survey had not completed primary education, and only about a quarter had reached and/or completed secondary school. Moreover, slightly less than a quarter of respondents had not completed primary education (Health, 2016).

We did not expect this finding on children and youth education status given Rwanda's recent progress in promoting Universal Access to basic education. Rwanda's basic education includes a primary school cycle which lasts six years (for children aged 7-12), a lower secondary education cycle of three years (for the 13-15 age group), and three final years of upper secondary school (for 16-18-year-olds). With the introduction of free education by the government, Rwanda has achieved one of the highest net primary school enrolment rates in Africa. We suspected that high proportions of children and youth not attending school and those who have completed less than primary education were probably linked to school dropouts caused by child abuse happening in school. Some studies done in South Asia indicate that violence at school, notably corporal punishment, leads to students dropping out of school. A study in Nepal, where harsh corporal punishment is routine, found that 14% of school dropouts can be attributed to fear of teachers. A Save the Children Study in South Asian countries were unanimous in their opinion that corporal punishment is a major reason why children drop out of school. They also said that regular beatings result in a loss of interest in studies, and a drop in academic performance. We suspected that physical violence would be one of factors contributing to school dropout in Rwanda.

Study objectives

The main objective of this study was to contribute to efforts to fill existing data gaps on the patterns of the prevalence and factors associated with PV against children and youth in Rwanda. Additional knowledge about the prevalence and factors associated with PV will inform steps in the design and implementation of interventions for the primary prevention of PV against children and youth in Rwanda. Two specific objectives were also pursued:

- To describe patterns of the prevalence of PV in children and youth in Rwanda
- To investigate factors associated with PV in children and youth in Rwanda.

Method

Study design and participants' selection

Data from the 2015-2016 Rwanda Violence Against Children and Youth Survey, a nationally representative that was done to produce estimates of the national prevalence of sexual, emotional, and physical violence among female and male children and youth in Rwanda, were used by this study.

The survey used a three-stage, split-sample design to obtain female and male samples. At the first stage, 250 enumeration areas (EAs) were selected from a list of 14,837 villages in Rwanda, using the probability proportional to size techniques. To account for the split-sample design, the 250 EAs were stratified by sex: 111 EAs for female participants and 139 EAs for male participants. At the second stage, a fixed number of 25 households were selected by equal probability systematic sampling in each EA. At the third stage, one eligible individual was randomly selected from the list of all eligible respondents in each selected household for interview. Eligible respondents included all female or male children and youth aged 13-24 who could speak Kinyarwanda or English. People with any difficult preventing them to participate in an oral face-to-face interview were excluded from the survey. The total overall response rate was 98% for males and 97% for females (Rwanda, 2015).

Survey Tools and Administration

Rwanda's survey adapted and applied tools and methods of the Violence Against Children Surveys (VACS) developed by the Centers for Disease Control and Prevention (CDC) and UNICEF to measure the prevalence of physical, sexual, and emotional violence against children and youth (Nguyen et al., 2018). The VACS design consists of two questionnaires.

The first questionnaire is called "Household Questionnaire" and is administered to the head of household or any available adult who can respond on behalf of the head of household. It collects data on basic household demographics and assesses whether there are any vulnerable children in the household. The second questionnaire is the "Respondent Questionnaire" and is administered to female or male eligible respondents selected in each sampled household. It covers a number of topics: demographics; parental relations; family, friends and community support; school experiences; PV; emotional violence; sexual violence; etc. Both questionnaires were adapted and utilized by the Rwanda survey. Before data collection, survey tools were translated from English to Kinyarwanda, taking into consideration the country context. Interviews were conducted either in Kinyarwanda or in English. The survey was administered through face-to-face interviews by trained data collectors. Female participants were interviewed by female interviewers and male participants were interviewed by male interviewers. Interviews were conducted in a private setting for confidentiality. Electronic netbooks with CSPro software were used in data collection to facilitate the management of many skip patterns and logic sequencing in the questionnaire during interviews. After field data collection, data were extracted from the netbooks, checked and cleaned for missing or incomplete data and outliers. STATA 13 was used for all data cleaning processes.

Ethical considerations

The survey protocol and data collection tools were independently reviewed and approved by the CDC's Institutional Review Board, and the Rwanda National Ethics Committee (RNEC). Before interviews, a permission to conduct the survey in the selected household and to speak to the selected respondents was obtained from the head of household. The informed consent was also obtained from each participant.

Data analysis

Outcome measure: PV

Self-reported PV was the outcome measure in this study. Four categories of PV were asked about, considering four types of PV potential perpetrators: (a) intimate partners; (b) peers; (c) parents, adult caregivers or other adult relatives; and (d) adults in the neighborhoods. For each potential perpetrator, three measures of PV were asked about: "Has (i) a romantic partner, boyfriend, or husband; (ii) a person of your own age; (iii) a parent, adult caregiver, or other adult relative; (iv) an adult in the neighborhood ever: (1) Punched, kicked, whipped or beaten you with an object, (2) Choked, suffocated, tried to drown you, or burned you intentionally? (3) Hurt or threatened you with a knife, gun or other weapon? Respondents who reported having ever experienced PV were asked

about the age at which it happened for the first time, and whether it occurred in the last 12 months before the survey. This study considered measures of PV that happened in the last 12 months before the survey.

Independent variables

The following sociodemographic variables were included in our analyses because we considered them perusable and, in addition, previous studies have also shown them to be associated with PV (Chiesa & Goldson, 2017):

- **Individual characteristics:** Age, gender, Orphanhood status (single or double orphan), schooling status (going or not going to school during the study time), education level (less than primary; primary; and vocational, secondary and higher).
- **Close relationship factors:** parental relations: living with parents (living with: both parents, neither parent, a single parent), closeness with mother (very close, close, not close with) closeness with mother (very close, close, not close with), closeness with biological parents (very close, close, not close with).
- **Households socioeconomic characteristics:** age of the head of household (aged less than 30 years, aged 31 years and above), gender of the head of household, household size, household wealth index, and household health insurance (has insurance, no insurance).
- **Community relationships:** Friendship (has no friend, has one friend and more), community safety (very safe, somewhat safe, not safe), community trust (trust much, some trust, no trust), and other forms of violence (emotional abuse, sexual abuse).

Statistical Analyses

A total of 2,212 male and female children and youth varied for, only 2159 were varied for the analysis, 53 respondents were excluded because they had never attended school. Descriptive analyses were produced to describe the prevalence of PV against children and youth, as well as children and youth sociodemographic characteristics. Factors associated with PV were assessed using multivariate logistic regression models. Odds ratios (ORs) produced in both the unadjusted and the adjusted logistic regression models were considered statistically significant at an alpha <0.05. The goodness-of-fit for logistic regression models was tested with the F adjusted mean residual test using STATA command recommended for logistic regression analysis using complex survey samples. To obtain final logistic regression models, a manual backwards elimination model selection was conducted for children and youth attending school, children and youth not attending school, and for the total sample of all children and youth. All statistical analyses reported in this study were stratified by children and youth attending school and children and youth not attending school. Analyses were performed in Stata 14.2. All analyses were computed using the command "svy" to generate nationally representative estimates for the children and youth population aged 13-24 years in Rwanda

Results

Table 1 presents the prevalence of PV against children and youth in Rwanda, by sex and schooling status. Over two in ten children and youth (23.4%, 95% CI [21.2-25.8]) reported having experienced any PV in the last twelve months before the survey. Apart from PV by intimate partner, the prevalence of other forms of PV was significantly higher amongst children and youth in school than among children and youth out of school. The prevalence of PV against children and youth by adults in the community was four times higher among children and youth in school than in children and youth out of school: 7.6 (95% CI [6.1-9.3]) vs 1.8% (95% CI [1.3-2.4]). The prevalence of PV by parents or caregiver was three times higher in Children and youth attending school than in children and youth not attending school: 7.7 (95% CI [6.5-9.2]) vs 2.7% (95% CI [1.9-3.8]). The PV perpetrated by peers, its prevalence was also two times higher for the children and youth in school than those out of school: 6.5(95% CI [5.4-7.8]) vs 3.2% (95% CI [2.4-4.2]).

Table 2 presents demographic characteristics of children and youth who reported having experienced any form of PV in the last twelve months before the survey. Sixty percent (59.9%, 95% CI [51.7-67.7]) of children and youth who reported having experienced

any form of PV were males. Close to three fourth of children and youth (73.6%, 95% CI [68.9-77.8]) who experienced any form of PV were aged 13-17 years. The majority of children and youth who were physically abused lived with both parents (53.5%, 95% CI [48.4-58.5]). However, most of these children and youth did not feel close to their biological father (40.9%, 95% CI [35.9-46.1]), and to both biological parents (45.3%, 95% CI [40.3-50.5]). Of children and youth who were physically abused and reported not attending school during the survey date, three out of four children and youth had completed primary studies (76.0%, 95% CI [70.9-80.5]) and eighteen percent (17.9%, 95% CI [14.0-22.6]) had completed vocational, secondary or higher studies.

Three fourth (75.4%, 95% CI [71.2-79.1]) of children and youth who reported PV, experienced emotional violence. Almost the same proportion (73.6%, 95% CI [68.6-78.0]) of physically abused children and youth reported having been sexually abused.

Table 3 presents unadjusted (uOR) and adjusted odds ratios(aOR) of factors assessed for associations with PV in children and youth attending school, children and youth not attending and in the all children and youth sample. In the group of children and youth attending school (aOR: 0.4, 95% CI [0.3-0.6]), and in the total sample (aOR: 0.5, 95% CI [0.4-0.7]), being female was associated with the decrease of the likelihood of reporting any form of PV. The odds of reporting PV decreased with age in children and youth attending school (aOR: 0.4, 95% CI [0.3-0.7]), children and youth not attending school (aOR: 0.5, 95% CI [0.3-0.7]), and in all children and youth (aOR: 0.3, 95% CI [0.3-0.4]).

The head of household sex and the level of education are two other factors whose adjusted odds ratios were associated with the decrease of the likelihood of reporting any PV. In all children and youth sample, children and youth from female-headed households were less likely to experience PV(aOR: 0.7, 95% CI [0.6-0.9]) than those from male-headed households. The odds of experiencing PV decreased with increased level of education for both children and youth in and out of school. In children and youth attending school, those with vocational, secondary or higher level of education (aOR: 0.4, 95% CI [0.2-0.8]) were less likely to report any PV than those with less than primary education. The same trend was observed in children and youth not attending school: those with vocational, secondary or higher level of education (aOR: 0.1, 95% CI [0.0-0.3]) were less likely to experience any violence than their fellows with less than primary education.

In children and youth attending school, those who did not feel close to both biological parents were more likely to report PV than their peers who felt close to their both biological parents (aOR: 2.1, 95% CI [1.4-3.1]). In the all children and youth sample, the odds of reporting PV were higher (aOR: 1.6, 95% CI [1.2-2.3]) among children and youth from households in lower wealth index than in children and youth from the higher wealth index. Amongst children and youth not attending school, living in a household without a health insurance increase the odds of experiencing PV by 1.7(95% CI [1.1-2.6]), compared to living in a household with a health insurance. The number of people in a household was also associated with PV. In the all children and youth sample, those from households with five people and above were more likely to report PV than those from four and less people (aOR: 1.4, 95% CI [1.1-1.8]).

Having ever experienced emotional violence increased the risk for PV across the three samples compared. Compared to the children and youth who never experienced emotional violence, the odds of reporting PV for children and youth who ever experienced emotional violence increased by 2.5 (95% CI [1.6-3.9]) in children and youth attending school, by 2.3(95% CI [1.4-3.6]) in children and youth not attending school, and by 2.3(95% CI [1.6-3.2]) in all children and youth. In the same way, compared to children and youth who were never sexually abused, the odds of reporting PV for children and youth who were sexually abused increased by 2.0(95% CI [1.2-3.1]) amongst children and youth not attending school, and by 1.8(95% CI [1.3-2.5]) amongst all children and youth.

Discussion

This study assessed the prevalence of PV against children and youth in Rwanda; and investigated factors associated with it, by comparing the group of children and youth attending school with the group of children and youth not attending school. Overall, our

findings indicated that more than two in ten children and youth aged 13-24 years in Rwanda experienced any form of physical violence in the last twelve months prior to the survey date. This is an indication that PV against children and youth is a pervasive phenomenon in Rwanda and, hence, it requires appropriate prevention measures to reduce it.

In the same way, of the four forms of PV assessed by this study, three: PV by parents or caregiver, PV by peers, and PV by adult in the community, emerged as the leading forms of physical violence typically experienced by children and youth in Rwanda. The prevalence of each of these three forms of PV was almost the same and ranged between 9 and 10 percent. For any of these three forms of PV, male children and youth reported higher proportions of PV than female children and youth. The finding that male children and youth report more PV than their female fellows was also observed in many other sub-Saharan African countries which conducted similar surveys. For example, in Kenya, Malawi, and Zimbabwe, boys were more likely to report PV than girls. However, in Tanzania, girls reported more PV than boys (Chiang et al., 2016).

PV by intimate partner, the other form of PV assessed by this study was less prevalent than the other three forms of PV discussed above. However, its proportions were more than two times higher in girls than in boys; confirming gender differences documented by other studies in the manifestation of intimate physical violence. This finding is also consistent with previous similar studies which concluded that females are more likely to experience PV by intimate partner than males (Sundaram, 2007; World Health Organization, 2020). Specifically for Rwanda, a study conducted by Aline UMUBYEYI and her colleagues in 2014 found that women in Rwanda were significantly more exposed to intimate partner violence than men (Umubyeyi et al., 2014).

The analysis of the prevalence of PV by respondents' schooling status showed that those attending school reported more PV than those attending school. Except for PV by intimate partner, which was six times higher in children and youth not attending school than in those attending school, other three forms of PV assessed by this study were more likely to be reported in children and youth attending school than in those out of school: PV by peers was two times higher in children attending school than those in those out of school; PV by parents or caregiver was almost three times higher in children attending school than in those out of school, and PV by adult in the community was four times higher in in children attending school than those in those out of school. The prevalence of any form of PV was also two times higher for children attending school than those in those out of school.

One possible explanation of higher prevalence of PV observed in children and youth attending school than those out of school in Rwanda would be the effect of age. It has been evidenced that the risk for PV against children decreases with age, with younger children are most at risk of physical abuse (Id et al., 2019), with younger children facing higher risk (Extent et al., 2000; Mo, 2019; U.S. Department of Health and Human Services, 2004). To verify that evidence in this study, we compared the mean age in the sample of children and youth attending school and the mean age in the sample of children and youth not attending school. We found that the mean age for children and youth attending school was 15.6 years (2.7 Std. Dev.) and it was 19.8 years (3.0 Std. Dev.) for those out of school, suggesting consistency with findings from other studies which documented the effect of age on the decrease of the risk for PV against children and youth. Therefore, the finding that children and youth not attending school in Rwanda were less likely to report PV experiences is probably a result of age. In this study, children and youth out of school tended to be older than those in school and, hence, less prone to exposure to PV.

Factors found to be associated with PV against children and youth in Rwanda were classified into three categories: individual factors, relationship factors, and socioeconomic factors (World Health Organization, 2016). At the individual level, age, sex, history of violence, and education were significantly associated with PV against children and youth in Rwanda. Being a male was significantly associated with the likelihood of being physically abused; and people aged 18-24 years was less likely to experience PV, compared to younger ones aged 13-17 years. Regarding the history of violence, having ever experienced emotional violence or

sexual violence increased the odds of being physically abused. Along with the history of violence, the children and youth who did not feel safe in the community were more likely to be physically abused than those who felt safe. On education, children and youth who completed vocational, secondary and higher education, in both schooling and non-schooling children and youth samples, were less likely to experience PV compared to children and youth with primary and less than primary education levels.

These findings on individual factors associated with PV against children and youth in Rwanda are quite similar and consistent with findings documented by previous studies in other places. A number of studies have found that male children and youth tend to experience PV than female children and youth (Id et al., 2019); and there is also evidence that PV against children and youth decreases with age, with children and younger children and youth experiencing PV at higher rates than older children and youth (Extent et al., 2000; Mo, 2019). Low education level (U.S. Department of Health and Human Services, 2004), the history of children and youth abuse or maltreatment, and living in unsafe neighborhoods have also been identified as risk factors for PV (World Health Organization, n.d., 2016).

From the list of relationship factors assessed for association with PV against children and youth, closeness to biological parents, sex of the head of household, and the household size emerged as factors significantly associated with PV against children and youth in Rwanda. Children and youth attending school who reported not being close to both their biological parents were more likely to experience PV than those who were very close to both biological parents. This finding corroborates facts from other studies which showed that poor relationships between children and youth and their biological parent may lead them to social isolation and, hence, expose them to victimization (Turner et al., 2012). In most cases, the lack of close relationship between children and youth and biological parents can result from poor parenting practices or any other family stressors (Finkelhor et al., 2009). This study did not assess specific contexts that caused lack of close relationships between children and youth and parents. However, future studies on children and youth maltreatment in Rwanda can explore that aspect for more insights on that issue.

This study found that children and youth living in households headed by females were less likely to report PV than those in households headed by males. This finding confirmed the effects of gender roles in the perpetration of PV against children and children and youth (Bradshaw & Hooper, 2012), and could indicate the persistence of patriarchal social norms regarding parenting practices in the Rwandan society (NATIONAL GENDER POLICY, 2010). According to Rwanda's traditional and cultural norms, fathers are de facto heads of household and custodians of order in the household, including disciplining children for any misbehavior (Assessment et al., 2021).

There is a debate on the effect of bigger households on the risk for PV (Andersson et al., 2007), but some other studies have revealed that bigger households can increase the risk for PV against children and children and youth in them (Almuneef et al., 2016). In Rwanda, we found that children and youth living in households with five and more household members were more likely to report PV experiences than children and youth from smaller households of four and less people.

On the side of socioeconomic factors assessed for association with PV, household health insurance coverage and household wealth index were the only socioeconomic factors significantly associated with PV against children and youth in Rwanda. Children and youth from households without a health insurance, and those from households in the lowest wealth index were more likely to report PV than those coming from households with a health insurance and those from households in the higher wealth index. Households' enrollment in a health insurance is mandatory in Rwanda, and around 87.3 percent of Rwanda households had a health insurance 2020. The majority of the population is to enroll in the community based health insurance on the basis of their socioeconomic categories referred to as "Ubudehe" in Rwanda (Nyandekwe et al., 2020). For households not enrolled in a health insurance, the common barrier is low levels of income or limited financial resources (Mukangendo et al., 2018). Not having a health

insurance and being in the lower wealth index suggest poverty for concerned households. Studies conducted in Nigeria and Uganda found that children and youth from poor and socioeconomically disadvantaged households have an increased risk of being victims of PV (Chen Yuxuan, 2019; Clarke et al., 2016). Several studies have demonstrated that children and youth from households with disadvantaged socioeconomic backgrounds tend to experience stress, depression, and conflict in their relationships, all of which compromise their behavior and increase the risk for violence and adverse childhood experiences (Prevention, 2019).

Conclusion

Findings in this study indicated that PV is widespread in Rwanda, especially in school settings. There is an urgent need to design and implement special national intervention to prevent and reduce the incidence of school violence in Rwanda. Factors associated with PV against in Rwanda include individual characteristics, relational factors and socioeconomic factors. To reverse the incidence of PV against children and youth in Rwanda, concerned relevant institutions in Rwanda should organize awareness raising campaigns to denounce PV and its consequences on against children and youth, promote positive relational behaviors in the society.

Declarations

Ethics approval and consent to participate

This study entailed secondary analysis of the data from the Violence Against Children and Youth Survey done in Rwanda in 2015-2016. Permission to analyze these data has been granted by the Principal Investigator who is also a co-author of the current study.

Ethical approval for the original survey was obtained from the CDC's Institutional Review Board, and the Rwanda National Ethics Committee (RNEC)/Ministry of Health. Before interviews, a permission to conduct the survey in the selected household and to speak to the selected respondents was obtained from the head of household. The informed consent was also obtained from each participant.

Consent for publication

Not applicable

Availability of data and materials

The datasets used and analyses performed for this study are available from the corresponding author (**Alypio Nyandwi**; Email: nalypio@gmail.com) and can be obtained on reasonable request.

Competing interests

Not applicable

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Authors' contributions

Alypio Nyandwi is the corresponding author. He did data analysis and drafted the manuscript. Namatovu Fredinah, Vincent Rusanganwa, and Marie-Gloriose Ingabire contributed to data analysis, interpretation of the data, and drafting of the manuscript. Cyprien Munyanshongore, Laetitia Nyirazinyoye, and Prata Ndola to the conceptualization and design of the manuscript. Jean Damascene Nshimiyimana, Anastasie Nyirabahinde, Kamukunzi Mecthilde, Hakomeza Emmanuel and Kayiteshonga Yvonne reviewed the manuscript and provided comments for its improvements. Natasha Salant Proofread the manuscript

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References

- Against, V. (2020). *Lesotho Violence Against Children and Youth Survey 2018. August*.
- Almuneef, M. A., Alghamdi, L. A., & Saleheen, H. N. (2016). Family profile of victims of child abuse and neglect in the Kingdom of Saudi Arabia. *Saudi Medical Journal*, *37*(8), 882–888. <https://doi.org/10.15537/smj.2016.8.14654>
- Andersson, N., Ho-Foster, A., Mitchell, S., Scheepers, E., & Goldstein, S. (2007). Risk factors for domestic physical violence: National cross-sectional household surveys in eight southern African countries. *BMC Women's Health*, *7*. <https://doi.org/10.1186/1472-6874-7-11>
- Assessment, A. N., Male, O. F., In, E., Early, I., & Development, C. (2021). *A FATHER ' S PLACE: AN ASSESSMENT OF MALE ENGAGEMENT IN INTEGRATED EARLY. January*.
- Bradshaw, J., & Hooper, C.-A. (2012). Child maltreatment. *The Well-Being of Children in the UK*, 191–211. <https://doi.org/10.1332/policypress/9781847428370.003.0010>
- Brazil, 2001, Maria (name changed), 6, hides her face in a pillow, in a room at CEDECA, the Centre for the Defense of Children and Adolescents, in a major city in Brazil. Maria was the victim of child abuse. Behind her is a six-year-old boy who is also be.* (2001).
- Center for Disease Control and Prevention (CDC). (2020). *Violence against Children Surveys: Our Methods*. 1–5. <https://www.cdc.gov/violenceprevention/childabuseandneglect/vacs/methods.html>
- chen yuxuan, zhang zhenyu. (2019). HHS Public Access. *Physiology & Behavior*, *176*(3), 139–148. <https://doi.org/10.1016/j.chiabu.2018.08.021>.Economics
- Chiang, L. F., Kress, H., Sumner, S. A., Gleckel, J., Kawemama, P., & Gordon, R. N. (2016). Violence against children surveys (VACS): Towards a global surveillance system. *Injury Prevention*, *22*, i17–i22. <https://doi.org/10.1136/injuryprev-2015-041820>
- Chiesa, A., & Goldson, E. (2017). Child sexual abuse. *Pediatrics in Review*, *38*(3), 105–118. <https://doi.org/10.1542/pir.2016-0113>
- Clarke, K., Patalay, P., Allen, E., Knight, L., Naker, D., & Devries, K. (2016). Patterns and predictors of violence against children in Uganda: A latent class analysis. *BMJ Open*, *6*(5), 1–9. <https://doi.org/10.1136/bmjopen-2015-010443>
- Extent, T. H. E., The, O. F., & Abuse, F. O. R. C. (2000). *Child abuse and neglect*.

- Finkelhor, D., Ormrod, R., Turner, H., & Holt, M. (2009). Pathways to poly-victimization. *Child Maltreatment, 14*(4), 316–329. <https://doi.org/10.1177/1077559509347012>
- Health, R. M. of. (2016). *Violence Against Children and Youth Survey Republic of Rwanda*. www.moh.gov.rw
- Id, L. S., Seff, I., Hoover, A., Gordon, R., Ligiero, D., & Massetti, G. (2019). *Sex and age effects in past-year experiences of violence amongst adolescents in five countries*. 1–13.
- Ministry of Gender, L. and S. D. (2015). *Uganda Violence Against Children Survey Findings From a National Survey 2015*. 1–190.
- Mo, T. (2019). *Child Maltreatment*.
- Mukangendo, M., Nzayirambaho, M., Hitimana, R., & Yamuragiye, A. (2018). *Factors Contributing to Low Adherence to Community-Based Health Insurance in Rural Nyanza District, Southern Rwanda. 2018*.
- Nguyen, K. H., Kress, H., Villaveces, A., & Massetti, G. M. (2018). Sampling design and methodology of the Violence Against Children and Youth Surveys. *Injury Prevention, 1*–7. <https://doi.org/10.1136/injuryprev-2018-042916>
- Nyandekwe, M., Nzayirambaho, M., & Kakoma, J. B. (2020). Universal health insurance in Rwanda: Major challenges and solutions for financial sustainability case study of Rwanda community-based health insurance part i. *Pan African Medical Journal, 37*(55), 1–12. <https://doi.org/10.11604/pamj.2020.37.55.20376>
- Prevention, C. for D. C. and. (2019). *Preventing Adverse Childhood Experiences (ACEs): Leveraging the Best Available Evidence*. 1–40.
- NATIONAL GENDER POLICY, (2010).
- Republic of Rwanda Ministry of Health. (2015). *Violence Against Children and Youth Survey_NEW VERSION* (Issue July).
- Rwanda, G. of. (2015). *Violence Against Children and Youth Survey_NEW VERSION*. July, 2015–2016.
- Sundaram, V. (2007). *Violence victimisation as a gender-specific process PhD Thesis as a gender-specific process*. February.
- Survey, Y. (2020). *VIOLENCE AGAINST AND YOUTH IN CÔTE D'IVOIRE Findings from a National survey*. March.
- Turner, H. A., Finkelhor, D., Hamby, S., Leeb, R. T., Mercy, J. A., & Holt, M. (2012). *Family Context, Victimization, and Child Trauma Symptoms: Variations in Safe, Stable, and Nurturing Relationships During Early and Middle Childhood*. *82*(2), 209–219. <https://doi.org/10.1111/j.1939-0025.2012.01147.x>
- U.S. Department of Health and Human Services. (2004). Risk and Protective Factors for Child Abuse and Neglect. *Emerging Practices in the Prevention of Child Abuse and Neglect, February*, 1–7. <https://www.childwelfare.gov/pubPDFs/riskprotectivefactors.pdf>
- Umubyeyi, A., Mogren, I., Ntaganira, J., & Krantz, G. (2014). Women are considerably more exposed to intimate partner violence than men in Rwanda: Results from a population-based, cross-sectional study. *BMC Women's Health, 14*(1), 1–12. <https://doi.org/10.1186/1472-6874-14-99>
- World Health Organization. (n.d.). *World report on violence*.
- World Health Organization. (2014). *Global Status Report on Violence Prevention 2014*. <https://doi.org/10.1007/s13398-014-0173-7.2>
- World Health Organization. (2016). INSPIRE: Seven strategies for ending violence against children. *World Health Organization, 108*. <http://www.who.int>

Tables

Table 1 Prevalence of PV against children and youth in Rwanda, by sex and schooling status

Types of PV	Respondent Sex						Respondent School Status					
	Males (1180)		Females (1031)		All children and youth		Children and youth in school(n=1,064)		Children and youth out school(1,095)		All Children and youth (2,159)	
	%	[95% CI]	%	[95% CI]	%	[95% CI]	%	[95 % CI]	%	[95 % CI]	%	[95 % CI]
Prevalence of PV	13.9	[11.6-16.6]	9.2	[7.5-11.3]	23.1	[21.0-25.5]	15.7	[13.7-17.9]	7.7	[6.4-9.2]	23.4	[21.2-25.8]
PV perpetrator												
PV by intimate partner	1.0	[0.6-1.8]	2.7	[1.8-4.1]	3.7	[2.7-5.2]	0.6	[0.3-1.3]	3	[2.0-4.5]	3.7	[2.6-5.2]
PV by peers	6.4	[4.9-8.1]	3.2	[2.5-4.1]	9.5	[8.0-11.3]	6.5	[5.4-7.8]	3.2	[2.4-4.2]	9.6	[8.1-11.4]
PV by parents or caregiver	6.3	[5.1-7.8]	3.9	[2.9-5.3]	10.2	[8.9-11.8]	7.7	[6.5-9.2]	2.7	[1.9-3.8]	10.4	[9.0-12.0]
PV by adult in the community	7.1	[5.6-8.8]	2.1	[1.5-2.9]	9.1	[7.6-10.9]	7.6	[6.1-9.3]	1.8	[1.3-2.4]	9.3	[7.8-11.1]

Table 2 Sociodemographic characteristics of children and youth who experienced any form of PV, by the schooling status**

Sociodemographic characteristics	Children and youth in school(n= 358)		Children and youth out school(169)		All Children and youth (527)	
	%	[95 % CI]	%	[95 % CI]	%	[95 % CI]
Sex						
Male	43.4	[36.6-50.5]	16.5	[12.9-20.9]	59.9	[51.7-67.7]
Female	23.6	[18.4-29.8]	16.5	[11.9-22.4]	40.1	[32.3-48.3]
Age						
13-17	61.0	[55.5-66.2]	12.6	[9.6-16.4]	73.6	[68.9-77.8]
18-24	6.0	[4.3-8.5]	20.4	[16.3-25.2]	26.4	[22.2-31.1]
Orphan						
Not an orphan	55.7	[50.4-60.8]	22.3	[17.7-27.8]	78.0	[74.0-81.5]
Orphan single or double	11.2	[8.5-14.6]	10.8	[8.3-14.0]	22.0	[18.5-26.0]
Living with parents						
Lives with both parents	42.5	[37.4-47.7]	11	[8.2-14.6]	53.5	[48.4-58.5]
Live with neither parent	8.8	[6.5-11.8]	11.8	[9.0-15.3]	20.6	[16.9-24.9]
Live with mother only	13.1	[10.3-16.4]	7.2	[5.0-10.2]	20.3	[17.0-24.0]
Live with father only	2.8	[1.7-4.6]	2.9	[0.9-8.7]	5.7	[3.0-10.4]
Closeness with father						
Very close with father	24.5	[20.7-28.9]	7.9	[5.5-11.2]	32.4	[28.3-36.9]
Close with father	19.9	[16.6-23.8]	6.8	[4.7-9.6]	26.7	[22.8-30.9]
Not close with father	22.6	[18.5-27.3]	18.3	[14.2-23.3]	40.9	[35.9-46.1]
Closeness with mother						
Very close with mother	45.9	[40.6-51.4]	18.2	[14.2-23.1]	64.2	[59.2-68.8]
Close with mother	12.8	[10.1-16.0]	8.2	[5.9-11.3]	21	[17.5-25.0]
Not close with mother	8.3	[6.0-11.4]	6.5	[4.7-9.1]	14.9	[11.9-18.4]
Closeness with biological parents						
Very close with BP	19.4	[15.9-23.4]	6.5	[4.4-9.5]	25.8	[22.0-30.1]
Close with BP	22.6	[19.1-26.4]	6.3	[4.3-9.1]	28.8	[24.9-33.1]
Not close with BP	25.1	[20.8-29.9]	20.3	[16.0-25.3]	45.3	[40.3-50.5]
Head of Household Gender						
Male	51.3	[45.9-56.6]	24.4	[19.7-29.7]	75.7	[71.4-79.5]
Female	15.7	[12.3-19.9]	8.6	[6.2-11.8]	24.3	[20.5-28.6]
Household size						
1-4 people	14.5	[11.3-18.3]	15.1	[12.0-18.9]	29.6	[25.5-34.0]
5 people and more	52.5	[47.4-57.7]	17.9	[13.8-22.9]	70.4	[66.0-74.5]
Household wealth index						
Higher wealth quintile	23.6	[19.5-28.2]	6.2	[3.4-10.9]	29.7	[24.9-35.0]
Middle wealth quintile	24.8	[20.7-29.4]	11.7	[9.1-14.9]	36.5	[31.9-41.3]
Lower wealth quintile	18.9	[15.3-23.3]	14.9	[11.8-18.6]	33.8	[29.3-38.6]
Health Insurance						
Has a health insurance	52.4	[47.3-57.4]	20.8	[16.6-25.9]	73.2	[68.9-77.1]
No health insurance	14.7	[11.6-18.4]	12.2	[9.2-15.8]	26.8	[22.9-31.1]
Friendship						
One friend and more	62.5	[57.1-67.6]	29.7	[24.9-35.0]	92.2	[89.3-94.4]
No friends	4.5	[3.1-6.6]	3.3	[1.8-6.0]	7.8	[5.6-10.7]
Community safety						
Very safe	32.5	[27.7-37.6]	11.9	[8.2-16.8]	44.3	[38.9-49.8]
Somewhat safe	31.1	[26.9-35.6]	18.2	[14.8-22.3]	49.3	[44.1-54.5]
Not safe	3.5	[2.1-5.7]	2.9	[1.7-5.0]	6.4	[4.4-9.2]
Emotional violence						
No emotional abuse	13.4	[10.5-16.9]	11.2	[8.6-14.5]	24.6	[20.9-28.8]
Reported emotional abuse	53.6	[48.2-58.9]	21.8	[17.6-26.6]	75.4	[71.2-79.1]
Sexual violence						
No Sexual violence	11.2	[8.5-14.6]	15.3	[11.4-20.1]	26.4	[22.0-31.4]
Reported Sexual violence	55.9	[50.3-61.3]	17.7	[14.2-22.0]	73.6	[68.6-78.0]
Education level						
Less than primary	54.1	[43.5-64.3]	6.1	[3.6-10.1]	na	na
Primary	43.6	[33.3-54.4]	76.0	[70.9-80.5]	na	na
Vocational, Secondary and higher	2.3	[0.8-6.3]	17.9	[14.0-22.6]	na	na

**Nationally representative weighted percentages

Table 3 Unadjusted and Adjusted odds ratios of reported PV amongst children and youth in Rwanda

Survey: Logistic regression	Attend school				Do not attend school				All children and youth									
Characteristics	uOR	[95% CI]		aOR	[95% CI]		uOR	[95% CI]		aOR	[95% CI]		uOR	[95% CI]		aOR	[95% CI]	
Sex																		
Male	ref.			ref.			ref.			ref.			ref.			ref.		
Female	0.4	0.2	0.6	0.4	0.3	0.7	0.5	0.3	0.8	0.5	0.3	0.7	0.3	0.2	0.4	0.3	0.3	0.4
Age																		
13-17	ref.			ref.			ref.			ref.			ref.			ref.		
18-24	0.4	0.3	0.6	0.4	0.3	0.6	0.8	0.5	1.2				0.5	0.4	0.7	0.5	0.4	0.7
Orphan																		
Not an orphan	ref.						ref.						ref.					
Orphan single or double	1.3	0.8	2.2				0.8	0.5	1.3				1.0	0.7	1.4			
Living with parents																		
Lives with both parents	ref.						ref.						ref.					
Live with neither parent	1.2	0.6	2.2				1.0	0.6	2.0				1.2	0.8	1.8			
Live with a single parent	1.2	0.7	2.0				2.1	0.7	6.3				1.5	0.8	2.6			
Closeness with father																		
Very close with father	ref.						ref.						ref.					
Close with father	0.7	0.3	1.6				1.5	0.5	4.1				1.1	0.6	2.0			
Not close with father	1.3	0.4	4.2				0.8	0.3	2.4				1.0	0.5	2.3			
Closeness with mother																		
Very close with mother	ref.						ref.						ref.					
Close with mother	0.8	0.5	1.2				1.7	0.9	2.9				1.1	0.8	1.5			
Not close with mother	0.8	0.4	1.6				1.2	0.7	2.1				1.0	0.6	1.5			
Closeness with biological parents																		
Very close with BP	ref.			ref.			ref.						ref.					
Close with BP	3.0	1.3	7.0	1.9	1.3	2.8	0.5	0.1	1.5				1.3	0.7	2.5			
Not close with BP	1.8	0.5	6.4	2.1	1.4	3.1	1.4	0.4	4.7				1.7	0.7	3.9			
Head of Household																		
Gender																		
Male	ref.			ref.			ref.			ref.			ref.			ref.		
Female	0.5	0.3	0.9	0.7	0.4	1.0	0.4	0.2	0.9	0.7	0.4	1.1	0.5	0.3	0.8	0.7	0.6	0.9
Household size																		
1-4 people	ref.			ref.			ref.			ref.			ref.			ref.		
5 people and more	1.6	1.1	2.4	1.5	1.0	2.2	1.4	0.8	2.3				1.5	1.1	2.1	1.4	1.1	1.8
Household wealth index																		
Higher wealth quintile	ref.						ref.						ref.			ref.		
Middle	1.2	0.8	1.9				1.7	0.9	3.2				1.6	1.2	2.2	1.6	1.2	2.2

wealth quintile																			
Lower wealth quintile	1.0	0.7	1.6				1.6	0.9	3.0				1.7	1.2	2.3	1.6	1.2	2.3	
Health Insurance																			
Has a health insurance	ref.						1.0	.	.	1.0	.	.	1.0	.	.	1.0	.	.	
No health insurance	0.9	0.6	1.3				1.6	1.0	2.4	1.7	1.1	2.6	1.1	0.8	1.5	1.1	0.8	1.4	
Friendship																			
One friend and more	ref.						ref.						ref.			ref.			
No friends	1.2	0.6	2.4				1.0	0.5	2.1				1.3	0.8	2.0				
Community safety																			
Very safe	ref.						ref.			ref.			ref.			ref.			
Somewhat safe	0.9	0.6	1.2				0.9	0.5	1.6	0.9	0.5	1.5	0.8	0.6	1.1	0.8	0.6	1.1	
Not safe	1.2	0.5	2.7				2.3	1.0	5.3	2.6	1.2	5.7	1.6	0.9	2.9	1.8	1.0	3.2	
Education level																			
Less than primary	ref.			ref.			ref.			ref.									
Primary	1.3	0.7	2.6	1.3	0.6	2.7	0.7	0.4	1.1	0.7	0.4	1.1							
Vocational, Secondary and higher	0.4	0.2	0.8	0.4	0.2	0.8	0.1	0.0	0.4	0.1	0.0	0.3							
Emotional violence																			
No emotional abuse	ref.																		
Reported emotional abuse	2.4	1.5	3.8	2.5	1.6	3.9	2.1	1.3	3.4	2.3	1.4	3.6	2.1	1.5	3.0	2.3	1.6	3.2	
Sexual violence																			
No Sexual violence	ref.																		
Reported Sexual violence	1.6	1.0	2.6	1.5	1.0	2.4	2.0	1.3	3.1	2.0	1.2	3.1	1.7	1.2	2.4	1.8	1.3	2.5	
Schooling status																			
Attends school													ref.			ref.	.	.	
Does not attend school													0.5	0.4	0.7	2.0	1.5	2.6	