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Preventing risky behaviors among young adolescents in eastern Democratic Republic of Congo: a qualitative study

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Abstract

Background: This qualitative study explores and describes adolescent risk behaviors, specifically consumption of alcohol and use of violence; the perceived consequences of these behaviors on future well-being and relationships; and collaboratively identifies the essential components of a prevention intervention for risk behaviors (alcohol use, violence) among young adolescents while strengthening the protective individual and relationship factors in post-conflict Democratic Republic of Congo.

Methods: One-on-one in-depth interviews were conducted with 28 male and female youth, 20 parents/guardians and 20 stakeholders in three rural villages of South Kivu Province. Trained interviewers conducted interviews and participated in daily debriefing. Descriptive qualitative analysis was used to analyze the data.

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Authors' contributions

AK, NG, MMR and NAP planned the research, developed the research strategies and instruments. AK, MMR, KBA, MMC, MBA, MBN and MNG adapted and piloted tested the research instruments. MMR, KBA, MMC, MBA, MBN and MNG built relationships with the rural community and conducted interviews; AK and MMR supervised study implementation. AK coded the transcripts. All team members were involved in reviewing findings and interpreting the data. AK, NG and NAP developed the manuscript. arsenekajabika@yahoo.fr, clovismitim@yahoo.fr, mirialf2000@gmail.com, nmwinja@yahoo.fr, jeanheri@yahoo.fr, giselentakwinja@gmail.com, Nancy.Perrin@kpchr.org, nglass1@jhu.edu

DECLARATIONS

Ethics approval and consent to participate

The Institutional Review Board of the Johns Hopkins Medical Institute approved of this qualitative study IRB00048016. Prior to initiating interview, informed oral voluntary consent and assent was obtained from adult and youth participants.

Consent for publication

Not applicable

Availability of data and material

The datasets generated during and analyzed during the current study are not publicly available. Any questions or requests can be sent to the Corresponding Author.

Competing interests

The authors declare that they have no competing interests.

Results: Youth use of violence and alcohol was associated with a range of factors including peer influence, parent behaviors, school enrollment and poverty. The consequences of risk behavior include damaged family and social bonds, reduced economic and educational productivity and promise.

Conclusions: Community-based, multilevel prevention interventions that promote protective factors and reduce youth exposure and vulnerability to risk factors may have immediate and long-term impact on youth health and behavior. Such a program could engage youth, adults and local stakeholders in a range of social, educational and economic activities.

Keywords

primary prevention; young adolescents; Democratic Republic of Congo; post-conflict; risk behavior

Background

Adolescence is a period when girls and boys form their foundational beliefs; cultivate knowledge and skills to transition to adulthood; define their place in family and community; form significant relationships; develop coping skills and capabilities; and adopt the prevailing social norms, including gender norms (Patton et al., 2016). This period of development, especially young adolescent development (youth aged 10–15 years) is an important yet overlooked period of health and behavior change; prevention interventions could have long-lasting effects on individuals, their peers and future families (Patton et al., 2016; Sommer, 2011). With over one billion children and adolescents living in war-affected settings, understanding the ways in which exposure to prolonged conflict and the multiple social, health and economic consequences affects adolescent outcomes is critical (Karibu, Izugbara, & Beguy, 2013).

The social ecological model of child development (Urie Bronfenbrenner, 1979) presents an interactive view of the ways adolescents adopt and experiment with different attitudes and behaviors and how exposure to risk and protective factors impacts risk for adoption of other harmful behaviors. The model has been applied to understand violence perpetration and develop prevention programs in global settings (Heise, 1998; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). Bronfenbrenner (U. Bronfenbrenner, 1994) proposed a four-level model; this study focuses on the first two levels: the individual and relationship level. At an individual level, research indicates a range of factors as related to youth decision-making for risk behavior (alcohol use, violence) including aggression, antisocial behavior, education, living with a problem drinker and traumatic experiences (Karibu, Beguy, Crichton, & Ezeh, 2010; Krug et al., 2002). Family and community relationships teach and reinforce norms, skills and relationships. Research with adolescents in high-income countries provides evidence of family and community connectedness as protective for youth outcomes including alcohol use and violence perpetration and victimization (Viner et al., 2012). Risk and protective factors for youth risk behavior can be altered in a conflict-affected environment where adults and youth experienced trauma, lack access to social and economic opportunity and may have elevated distress, experience harsh parenting practices, isolation

and witness intimate partner violence (IPV) (Theresa S. Betancourt, 2015; Sawyer et al., 2012).

Young adolescence is a period of biological change and sexual and brain development (Patton et al., 2016). Research in developed countries describes a significant difference in the way young people process information and make decisions. Young adolescent decision-making is characterized by favoring peer influence and relationships, low risk perception and preference for immediate reward over long-term outcomes. Young adolescents are learning and experimenting with sexual and romantic relationships (Patton et al., 2016) among a host of other behaviors and emotions. The consequences of experimentation can have immediate and long-lasting effects, for example, unplanned pregnancy, sexually transmitted infections, injury and psychological distress. Globally, male and female adolescents are initiating health risk behaviors such as alcohol consumption and sexual behavior at earlier ages (Patton et al., 2016). Frequent consumption of alcohol and antisocial behavior as a teenager is associated with heavier drinking, alcohol related problems, (Bonomo, Bowes, Coffey, Carlin, & Patton, 2004), violence and unsafe sex.

Young adolescents living in rural eastern Democratic Republic of Congo (DRC), an area that has experienced over 20 years of conflict, face additional individual (e.g., trauma, malnutrition, low educational attainment) and relationship (e.g., poverty, family and community relationships) vulnerabilities for risky behavior (Cherewick et al., 2015; Omba Kalonda, 2011). For example, the effect of poverty related to conflict is revealed in low school enrollment; 30.3% of school-age children in South Kivu Province (the location for this study) are not enrolled in school. In conflict-affected Ituri District, adolescents aged 13 to 21 years reported, on average, experiencing 4.7 traumatic events (Mels, Derluyn, Broekaert, & Rosseel, 2009). Despite these adversities, families and communities are invested in building a better future for their children. An improved understanding of the multiple, inter-related risk and protective factors for young adolescent risk behaviors (use of violence and alcohol for example) is important for the development of culturally relevant, effective prevention models in conflict-affected settings that yield sustained changes in outcomes including preventing sexual violence, alcohol use, IPV and building stronger relationships and gender equitable norms. The research presented explores and describes adolescent risk behaviors, specifically adolescent consumption of alcohol and use of violence; the perceived consequences of these behaviors on future well-being and relationships; and collaboratively identifies culturally acceptable approaches to individual and family focused prevention interventions for young adolescent risk behavior. This study contributes important information from the perspectives of youth, parents and stakeholders on intersecting risk factors for young adolescent risk behavior in a post-conflict setting and opportunities for primary prevention.

Methods

This qualitative study was conducted with a subset of male and female young adolescents and their parents/guardians participating in the ongoing parent study, a National Institute of Health (NIH)/National Institute of Child Health and Human Development (NICHD) funded trial (R01_HD71958) of youth-led livestock/animal microfinance Rabbits for Resilience

(RFR). RFR is a Congolese-led microfinance intervention implemented in partnership with Programme d'Appui aux Initiatives Economiques (PAIDEK) and Johns Hopkins University School of Nursing. The parent study is testing the effectiveness of RFR on youth health and well-being. The parent study includes 515 young adolescents (10–15 years) and their parents/guardians living in 10 rural, conflict-affected villages of South Kivu province in DRC.

RFR microfinance intervention and evaluation

RFR provides loans in the form of a female rabbit to male and female youth. After gaining support of local leadership and holding community information sessions, eligible and interested youth provided assent to participate after their parents/guardians consented to their participation in the program. Youth participants were trained to care for their rabbit. After breeding the rabbit, youth repay their loan with two female rabbits, which are provided in the same communities as new loans to girls and boys. After repaying the loan, the youth participant owns the original loan rabbit and the remaining offspring and continues to receive support to encourage their participation (Kohli et al., 2017).

Sub-study participant selection

Our sub-study was conducted in three of 10 participating villages in the parent study; village selection was based on youth participants report of violence/alcohol use and ability to capture variation of response (Morse, 2000). Interviews were conducted in 2015, two years after the start of RFR. Therefore, at time of interview, youth participants were older (aged 12–17 years) than at recruitment. A subset of youth who reported use of violence and/or alcohol consumption in the past one month during their baseline interview in the parent study was invited to participate in in-depth interview. Parents/guardians whose children reported use of violence and/or alcohol consumption in the past one month during baseline interview were eligible to participate in in-depth interview. Although this happened a few times, we did not try to interview parents/guardians of the youth that participated in interview. To maintain confidentiality, parents/guardians were not informed of their child's reported behaviors. We invited girls and boys, parents/guardians and key stakeholders (e.g., village chief, health care professionals, teachers) to discuss adolescent risk behaviors, specifically consumption of alcohol and use of violence; the perceived consequences of these behaviors on future well-being and relationships; and community-based opportunities for primary prevention. We did not ask parents about their child's behaviors but rather their perceptions of young adolescent risky behaviors. The final sample size was determined through an iterative process of debriefing at the end of each fieldwork day with the interviewers to assess if interviews reached saturation related to study purpose.

Data collection

The interview guide was developed in English, translated to French and local languages (Swahili and Mashi) by local translator and implemented in partnership with skilled Congolese team members working with the parent study. Although youth were selected for their report of alcohol consumption or use of violence, they were not asked questions about their specific behaviors unless the participant volunteered the information during in-depth interview. This measure was taken to protect information shared by youth in the previous

interview and ensured youth felt safe to share their experiences with violence and alcohol after providing assent. Parents who consented to participate did not have access to information their child shared in any component of the study.

Five male and female RFR Agents experienced in research including in-depth interviews were trained on research ethics, consent, qualitative interview, the interview guide and documentation over a 2-day period. The team conducted pilot interviews with 10 boys and girls to ensure acceptability and comprehension of questions. Interviews with youth and adults were conducted over a 6-day period in May 2015. Debriefing with the interview team at the end of each day provided time to understand and address any challenges in the interview process, identify key themes across interviews, planning for future interviews and whether the information from the interviews was progressing towards saturation.

Research ethics

The Institutional Review Board (IRB) of the Johns Hopkins Medical Institute approved the parent study and this qualitative study. As there is no local IRB in South Kivu province, a committee of respected educators at Université Catholique at Bukavu reviewed and approved the parent study. As interviews were conducted during times when adults would have been working, compensation for time spent away from work was provided as per local rates, approximately 2.00 USD. Youth received compensation (\$2) for time; the interviewer encouraged the youth to use the incentive to contribute to school-related needs. All one-on-one interviews took place in a private setting of the respondent's choice, most often in or around their home. Prior to initiating interview, informed, voluntary consent and assent was obtained from adult and youth participants.

Data analysis

Descriptive qualitative analysis was used to provide an understanding of youth and adult perspectives on youth behavior and prevention opportunities. Descriptive qualitative analysis focuses on categorical description, stays close to the data (rather than theorizing) and is less abstract than other forms of analysis (Sandelowski, 2000). The steps followed to analyze the data included: an initial reading of the transcripts accompanied by note-taking; coding of transcripts by the first author with note-taking to record thoughts, perceptions and insights from the data; identifying and naming themes that show the patterns; exploring similarities and differences between themes and interviews; examining patterned responses; and examining analysis in relation to existing knowledge (Neergaard, Olesen, Andersen, & Sondergaard, 2009). Atlas TI 1.0 was used to assist with analysis. Key findings can be discussed rarely or at length, but they reveal something valuable related to the overall study purpose.

Results

In-depth interviews were completed with 28 young adolescents (10 females, 18 males), 20 parents/guardians of participating youth (17 females, 3 males) and 20 village-based key stakeholders (6 females, 14 males) (Table 1). The results are presented according to themes related to the study purpose: risk factors for youth problem drinking, behaviors related to

youth problem drinking and their consequences, risk factors for youth use of violence, behaviors related to youth use of violence and their consequences, violence and alcohol consumption in families and communities and family and community-based primary prevention for youth risk behavior. Reports from youth, parents and stakeholders were largely consistent, although adults were often more descriptive than youth. The results below include descriptions from youth, adult and stakeholder perspectives on youth behaviors and prevention programming.

Risk factors for youth problem drinking

Parents and stakeholders distinguished between youth drinking alcohol at festivals (e.g., marriages, community events) and youth drinking more frequently and without supervision. While the former was considered rare and took place with adult supervision, the latter was described as rare but destructive. Adult descriptions of youth that drink alcohol without supervision (i.e., problem drinking) explains this distinction and family and community concern, ‘those young people (that drink) are impolite...girl expose themselves to debauchery...boys forget their goals...once he is drunk, he forgets everything...(This causes) misunderstandings...Family members are disappointed for their child’s future. Family, even the community, can be too scared of the child to give advice. The community may abandon him’ (male doctor). We focus here on the causes and consequences of problem drinking.

Alcohol consumption (in general and problem drinking) was reported to be more common in boys as girls had little free time and more responsibilities in and around the household. Parents/guardians and stakeholders offered a range of explanations as for why adolescents start drinking and drink heavily including normal youth curiosity and poor decision making (N=12), having too much free time related to not being in school or working (N=7), using alcohol to escape their thoughts and problems (N=5), peer encouragement (N=4), parental neglect (N=3) and wanting to be seen as exhibiting masculine traits or being a man (N=2). For example, one female parent/guardian whose child reported drinking frequently said that youth decisions to drink ‘depend on their heart, their anger or their religion. Alcohol can help them forget things that are on their mind.’ One male teacher suggested that youth drink to have the courage to intimidate others; a village chief described youth wanting to demonstrate disrespect/anger towards their parents.

The consequence of poverty (malnutrition, not attending school) was identified as an underlying determinant to youth problem drinking. One female parent/guardian said, ‘when children do not have anything to do, they go to places where people sell alcohol.’ A families’ lack of financial resources restricted a parents’ ability to enroll their child in school or pay monthly school fees on time, resulting in children being suspended from school until fees are paid. As a result, one frequently sees youth sent home from school in the morning without supervision or responsibilities to occupy their time while their parents are farming or working. While people in the community empathized with parents whose children drank problematically; they also blamed parents for not providing enough counsel to their children and sending them to school. A nun explained that youth drink because ‘they lack a good education. They haven’t studied and so their capacity for reasoning is not the same as

educated youth...Some youth drink to upset their parents. Others think drinking makes a boy a man.' The link between alcohol consumption and masculinity was further elucidated when a female parent/guardian described past tradition in the region where 'alcohol was like water for a man. After each meal, a man must drink heavily.'

Behaviors related to youth problem drinking and their consequences

Participants described male youth problem drinking as associated with destructive and harmful behaviors including demonstrating a lack of respect for parents and community members (N=25), physically and verbally attacking community members (N=24) and parents (N=8), wasting money (N=4), stealing (N=3), engaging in sexual activities (N=2) and committing sexual assault (N=2). Girls that drink heavily were described as similar to boys in demonstrating drunken behavior (N=3), fighting (N=1) and speaking without control (N=1). A female teacher described the anger and verbal and physical fights that boys engage in associated with problem drinking, 'He is abnormal. His mind no longer functions properly. He fights. He hits children. He insults his family and hits them.' A 16-year old male adolescent described the ways in which other adolescents make an effort to avoid these children, 'youth are scared to walk around at night because they might encounter a child that has been drinking and wants to fight.' A village chief explained the threat to young women when he described violence and sexual assault committed by youth problem drinking, 'they start to fight first between themselves and then with the people they pass in the village. When they leave with a girl who is drunk, they rape her...and no matter how many boys are they, they all will rape the same girl.' Sexual assault was raised as a risk in the community and committed by boys and men, sometimes when they were drinking. This is explored further in the section on youth and adult violence behaviors.

Once youth start drinking regularly, 'they are led by thoughts of drinking. There are small daily jobs...like farming or transporting goods that give them enough money to buy alcohol. They won't give that money to their family' (female parent/guardian). Typically, children would be expected to contribute their earnings to help their family (e.g., buy food, pay school fees). This demonstrates the access that youth have to alcohol, indicates that some youth may start abusing alcohol and the division that alcohol can create in families, even at young ages when resources are not used for the family good. A female parent explained the way problem drinking affects youth intelligence, their performance in school and family relationships, 'he is not normal because alcohol destroyed his intelligence ...he will not perform well at school and his future is affected...he doesn't respect anyone. He thinks that he gave birth to his parents. He thinks he is above everyone.' As in many societies, respect for parents and adults are considered critical for self-development, important for strong and supportive relationships and demonstrate future stability and success. Therefore, youth that disrespect their parents and other adult family and community members demonstrate a disregard for an important social norm; the child may be perceived as lost or hopeless.

Risk factors for youth use of violence

Parents and youth described violent behaviors broadly including youth being disrespectful and disobedient (N=15), lying (N=8) and engaging in sex (N=4). One female adolescent said that violent youth are not 'embarrassed in front of other people. They speak without control

and want to fight. They have a bad spirit.’ A male adolescent described violent youth as ‘treating everyone as if they are at the same level (in the social hierarchy).’ Being disrespectful and violent was described as more common among boys. Girls expressed their anger or rebelled by being silent, upset at home, fighting verbally or not completing their work. Youth and parents expressed concern for youth who violated social norms of respect and obedience for parents and elders. Regarded more negatively were youth that engaged in the following behaviors such as physical (N=51) and/or verbal (N=27) violence, theft (N=44) and rape (N=17). A female adolescent explained, those violent youth ‘have a bad heart and very bad (sexual) desires...they are selfish.’ Physical violence included youth attacking their siblings and parents, throwing rocks at people and instigating fights. Many adults hypothesized that this violence was related to family poverty (which affected youth school enrollment, malnutrition/hunger) (N=16), alcohol consumption (N=16), having an angry character (N=12), youth rebelling against their parents’ advice (N=12), inadequate parental guidance (N=8), peer influence (N=7), use of other substances (e.g., smoking cigarettes, marijuana) (N=7), having unsupervised free time (related to not being enrolled in school, lacking responsibilities) (N=4), jealousy and desire for material objects (N=3). These behaviors may also be related to other issues including an unstable home environment. A female parent/guardian described violent youth as ‘not understand(ing) anything. They do things they are told not to do. They don’t listen to anyone. They are a disappointment...they are a bad example (for others).’ A village chief summarized youth reasons for using violence, ‘they lack supervision. They are not well educated. Youth that are in school cannot behave this way. Many parents are not able to pay school fees so the children stay home and their friends keep them busy. Children will choose nonviolence when they are supervised and busy. If they have a good moral foundation, they will learn how to live well.’ This participant, and others, recognized the challenge and responsibility that parents have to educate their children. Poverty and lack of employment opportunities affected parents ability to send their children to school and place parents in the position of needing to spend more time in search of work or farming and away from the home and their children.

Behaviors related to youth violence and their consequences

Although the interviews did not ask specific questions about sexual risk behaviors, several adult

(N=14) and youth (N=3) described how boys that were violent had sexual desires that increased when consuming alcohol and were often seen pursuing girls. Parents were concerned about their children’s safety and the consequences of sexual assault. They described pregnancy whether due to consensual sex or rape as negatively impacting a girl’s health, education and future relationships. Traditionally, girls will be forced to marry the rapist and his family will pay a dowry as a resolution, ‘Some boys commit rape. This makes young girls get married to these boys even if there is no love or agreement between the couple’ (teacher and president of youth group).

Participants (N=11) expressed embarrassment and responsibility for children’s behavior, ‘the family always suffers (youth behavior) because if he steals, if he rapes, if he fights with

others, if he kills and if he flees, it's always the family that pays (for these problems)' (female parent/guardian).

The consequences included paying the debt or theft, repairing family and community relationships and sometimes leaving the village if the youth harmed somebody. Violence has a direct effect on youth present and future wellbeing and their families life, 'when children live in this way, it hurts the family. His parents are never at peace. They ask themselves what they can do...Even if he isn't your child, you will feel badly to see a child behave like this... if it continues, he will destroy his families and his own value to the village' (community activist). The social bonds violent youth have with the community are weak; people described avoiding, ignoring and disliking these youth.

Violence and alcohol consumption in families and communities

Although this study focused on youth behaviors, participants described how adult behavior influenced youth behavior and demonstrated a potential life trajectory for youth engaged in problem drinking or violence. Some adults were described as poor role models. Adult violence and heavy alcohol consumption demonstrated family instability and provided evidence for addressing early signs of risk behavior in youth. It was clear from the interviews that children in the community witness or experience the effects of adult use of violence and/or alcohol. A male adolescent summarized this when he said men that drink alcohol 'forget their families. They don't pay their children's school fees...they like having problems with others. They don't raise animals and instead sell their family's belongings. They hit their wife and children. They don't build anything for their family and never go to mass...a woman that drinks won't work for her children...she forgets her responsibilities. She won't farm. She is a bad example for her children and doesn't give them any advice.' A female adolescent said that when men drink 'the family will die of hunger because the father has to bring food for the family. He may forget to buy clothes and shoes because of beer...he may lose his job or become too weak to work'. These adult behaviors have several important consequences on the family including limiting financial resources to support basic needs (food, housing, education) (N=14) and neglecting parental responsibility for children (N=9). Youth were not asked about their personal experience of being hit by a parent and none reported it. Yet, many described how men and some women in the community are physically and verbally violent (sometimes associated with alcohol) with their children (N=9) and wives (N=13) and people living in the community (N=20). In describing youth risk behaviors, some described it as imitating or similar to adult risk behavior. Two youth described their concern for young girls and women who are at risk for sexual assault. They highlighted the norm that girls who are sexually assaulted will bear the majority of the physical, emotional and social consequences associated with being victimized.

Family and community-based primary prevention for youth risk behavior

Nearly all participants emphasized the importance of family and community members (neighbors, extended family, teachers, religious and village leadership, respected youth, etc.) to provide guidance (N=56) and reprimands (N=9) to correct youth behavior and model strong moral and behavioral foundation. Early identification and intervention for youth risk behavior is important. This requires working with parents and removing the shame and

primary responsibility placed on women for their child's behavior, 'women are the great protectors of children. Men are not usually home with the children. When the child creates problems, the mother cannot accuse her husband or tell him about it. She will hide the problem and this causes it to grow' (male parent/guardian). Thus even when women recognize the risky behavior early on, she may not seek the support she needs to help the child for fear of being blamed for causing the child's behavior.

Parents and community members were expected to show youth the consequences of their behavior on their health and future opportunities for education and employment, family wellbeing, social relationships. Although participants reported being discouraged when youth ignored advice from adults, they also described opportunities to 'tell them that drinking alcohol is dangerous for their health...that they won't be able to control themselves in front of their friends, family or elders, and they will do things that are shameful in public such as insult people, forget their goals and stop studying' (male village elder). A village chief described how village leadership could help families; 'we should take decisions for youth, ask their parents to help them start a small business...(and) show the youth the consequences of their misbehavior including death or prison.'

Parents and community members expressed concern (and sometimes fear) for youth engaged in violence or problem drinking and a willingness to help them with advice, guidance, reprimands or involving them in productive activities. One female adolescent explained the importance of spending time with youth, 'ask him what he needs in order to stop acting this way. You need to spend a lot of time with kids like this to understand what they need to change their behavior.' This powerful statement highlights the importance of understanding the youth's specific experiences, emotions and problems that may lead to risk behavior. Parents and youth explained the importance of enrolling children in school and ensuring their regular attendance (N=36), initiating work opportunities (e.g., raising livestock, building homes, starting small businesses) or trade school (e.g., car/motorcycle repair) (N=56), starting youth groups to create camaraderie, engaging youth in productive discussions, sports, social or community activities (N=19) and engage youth in church activities (e.g. prayer, discussion groups, choral groups) (N=16). Engaging youth in social and educational opportunities in a healthy way guides them towards safe behaviors through using their time positively, building knowledge and skills, showing them positive adult role models, and creating helpful and supportive systems for youth to plan their future and overcome challenges. One parent summarized this as, 'it is important to do things for these children...they need time and space where they can feel like people' (parent/guardian).

Discussion

Global research on adolescent development indicates that social disadvantage and adverse experiences in childhood affect adolescent well-being years after the initial exposure including the formation of peer relationships, school performance and experimentation with risky behaviors (Sawyer et al., 2012). While adult and youth participants in this study did not perceive youth risk behavior to be common in their communities, these behaviors were concerning due to the serious, long-term health, social and economic consequences and difficulty in discouraging these behaviors once they have become habitual (Hall et al., 2016).

Evidence on factors influencing adolescent health and well being including use of violence and alcohol consumption are lacking in humanitarian and conflict-affected settings (Karibu et al., 2013). This study adds important information from the perspective of youth and adults living in rural, post-conflict communities on the intersection of poverty, low levels of education and unstable family environments as risk factors for youth behavior and identifies culturally acceptable approaches for individual and family focused prevention interventions. These locally defined prevention approaches build off of traditional and existing family and social networks and economic and education opportunities. Parents/guardians and youth expressed similar opinions about reasons for youth engagement in risk behavior and opportunities for prevention. This consensus may indicate the strength of social and family bonds in the community and therefore provide an opportunity to build prevention interventions.

There is reason to expect a relationship between adverse childhood experiences (ACE) including social, economic and health adversity and adolescent behavior. For example, adolescents participating in a four country study in Africa reported that living in a household with problem drinking and physical abuse in childhood as significantly related to past year drunkenness (Karibu et al., 2010). A qualitative study on coping skills of young adolescents in eastern DRC identified alcohol consumption as one strategy that youth use to cope with difficulty when family and social support systems are lacking (Cherewick et al., 2015). Findings from this study support the importance of family and social structure on youth problem drinking and use of violence. Youth and adults perceived the causes of problem drinking to include poverty, having too much unsupervised free time, lacking proper guidance at home, peer influence, witnessing parent use of alcohol and normal youth curiosity.

Parent health and behavior affects youth well-being and risk behavior; for example, adult mental health, trauma, IPV and alcohol use are related to styles of reprimanding youth and the attention and guidance that parents give to their children (Theresa S. Betancourt, 2015; Saile, Ertl, Neuner, & Catani, 2014). Experience of violence in childhood is associated with current and future use of violence in peer and intimate relationships, aggressive behavior and substance use (Brown, Perera, Masho, Mezuk, & Cohen, 2015; Foster & Brooks-Gunn, 2015; Schiff et al., 2014). Parents and youth in this study described an unstable home environment (e.g., parent alcohol consumption, IPV) and its consequences (e.g., economic instability, poor parenting) as related to youth use of violence in their relationships, problem drinking and their future behaviors. For example, they explained that poverty limited adolescent access to school and therefore increased their unsupervised free time and exposure to risk behaviors. Future research should examine how the intersections of vulnerabilities (e.g., poverty, low levels of education, household instability) are related to youth access to supportive individual (e.g. coping skills, mental health) and relationship (e.g., social support, family function, parenting practices) resources. Youth use of violence in community and family was a concern in this study, with some adults reporting fear of reprimanding violent youth or raising such concerns within their family indicating the need for interventions to support family and community members in primary prevention as well as safely and effectively responding to youth risk behavior.

Forced sexual coercion and assault have been reported by male and female adolescents globally (Krug et al., 2002). Although not the focus of this study, some youth and adults participants raised serious concerns for the safety of adolescent girls in the community and with their peers. Access to alcohol, peer relationships and adverse childhood experiences have been identified as related to adolescent male sexual assault perpetration in Tanzania and South Africa (Jewkes et al., 2006; Sommer, Likindikoki, & Kaaya, 2013); this study supports these findings. Some research with men proposes that alcohol use and sexual conquest may be conceived as part of manhood and thus interventions that aim to reduce sexual assault need to understand local conceptions of masculinity (Jewkes et al., 2006; Ricardo & Barker, 2008). In post-conflict settings, where gender identities may be challenged (Horn, Puffer, Roesch, & Lehmann, 2014) and typical social norms and bonds that regulate behavior and maintain health are altered (Maclin, Kelly, Kabanga, & VanRooyen, 2015; Schlecht, Rowley, & Babirye, 2013), it is important to ensure effective prevention strategies to protect girls and women. Further research to understand the magnitude and risk for young adolescent sexual coercion and sexual assault is important.

Despite a dearth of intervention evaluation research with youth in conflict-affected settings, current evidence points to the importance of enhancing protective factors and reducing risk factors to promote positive youth health and social outcomes rather than working only to reduce risk behavior such as substance use or violence (Masten & Narayan, 2012). Importantly, most people, including adolescents, display resilience even in extremely adverse situations including conflict (Bonanno & Mancini, 2007). Individual characteristics (e.g., gender, coping, age, education) and relationships factors (e.g., family and community acceptance, school climate) (T. S. Betancourt, Agnew-Blais, Gilman, Williams, & Ellis, 2010; Foster & Brooks-Gunn, 2015) are important to supporting and sustaining resilience responses to multiple adverse exposures (Bonanno & Mancini, 2007). Understanding influential relationships (peer, family, community) that influence youth behaviors and health is critical to interventions. Raising Voices in Uganda has a promising model of intervention development through engaging local communities in development and implementation of programs, using multiple strategies to create a process of change, supporting people and communities to deal with violence in their relationships and inspiring community activism for change (Michau, 2007). The Raising Voices Good Schools Toolkit focuses on prevention of violence against children in schools, improving education through alternative discipline and teaching techniques, using different types of materials to create respect and understand power relationships (Devries et al., 2015). Promising results from the Good Schools Evaluation indicate the potential of multi-level, community-engaged interventions to bring changes in behavior (Devries et al., 2015). In DRC, adults and youth proposed community-based and supported prevention activities including building sustainable economic means for parents to enroll their children in school or vocational training and initiate small business activities for youth; initiation of youth-focused discussion groups or activities (e.g., sports clubs, community work); community and peer mentorship (e.g., community members engaging youth in farming or business activities, engaging youth in conversation) and creating a safe and supportive home environment for youth. Such a program could engage adults and local stakeholders (e.g. village chief, teachers) in resuming roles they had before

the conflict, support youth and reinforce social bonds and social responsibility for youth development.

This study has limitations. Adults were not asked to describe their child's risk behavior. Interviewing parents about their specific child's behavior and strategies that they have tried in response could have added important information in the development of a primary prevention intervention, however, we had received consent and assent from parents and youth that required us not to share information between parents and children, an important strategy to insure participants feel safe to participate and answer questions. Secondly, observation of youth, including places where youth drink and use violence, is another strategy that may provide detailed information on the ways in which youth interact and increase their risk for engagement in these behaviors. Third, youth in this study may not be the most vulnerable and thus less engaged in risk behaviors as demonstrated by their participation in RFR and the family support to do so. Future research should focus on understanding the magnitude risky behaviors and factors that facilitate or prevent alcohol use and violent behaviors

Conclusion

Our findings provide information on a vulnerable youth group: young adolescents living in conflict-affected settings with the enduring economic, social and health consequences of conflict. The study provides important information on individual and relationship factors related to youth engagement in risk behavior, specifically problem drinking and use of violence in relationships, and the individual and family-related consequences of these behaviors. The findings highlight the intersecting risk of poverty, low levels of education and family environment on youth behavior. Supporting findings from global research on effective prevention programs, participants in this study described culturally acceptable approaches to building a prevention intervention with young adolescents to include multi-level strategies that enhance protective factors and reduce youth exposure to risk factors. Prevention interventions should engage existing family and community resources and commitment to youth development and address risk factors common to adolescent behaviors and particular to the post-conflict environment, including high levels of poverty, trauma and low levels of school enrollment.

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List of abbreviations

DRC	Democratic Republic of Congo
IPV	intimate partner violence
IRB	Institutional Review Board
NICHD	National Institute of Child Health and Healthy Development
NIH	National Institute of Health
PAIDEK	Programme d'Appui aux Initiatives Economiques
RFR	Rabbits for Resilience

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Table 1:

Demographics and behaviors of youth and parent/guardian participants

	Youth Participants	Parent/Guardian
Sex		
Female	10	17
Male	18	3
Age (in years) *		
10 – 12 years	11	-
13 – 15 years	10	-
16 – 17 years	6	-
21 – 30 years	-	8
31 – 40 years	-	5
41 – 50 years	-	1
51+ years	-	5
Youth participant or child of parent/guardian participant reported alcohol consumption in past month ⁺		
No alcohol consumption	13	18
At least once a week	15	2
Youth participant or child of parent/guardian participant reported using violence in the past month ⁺		
No violence	14	15
One type of violence	3	4
More than one type of violence	11	1

* Age not recorded for one parent/guardian

⁺ As reported in baseline interview in the parent study