ORIGINAL RESEARCH ARTICLE

Understanding the sexual and reproductive health rights and experiences of very young adolescents in rural Uganda from the perspectives of emerging adults

DOI: 10.29063/ajrh2023/v27i9.2

Yolande B. Pokam Tchuisseu^{1,2*}, Susan Kools³, Ruth Kaziga⁴, Dorcus Achen⁴, Mark Rumanzi⁴, Christine Karungi⁴, Tyler Hicklin², Rachel McGlone Burnette⁵ and Viola Nyakato⁴

University of Virginia¹, Duke University², University of Virginia School of Nursing³, Faculty of Interdisciplinary Studies, Mbarara University of Science and Technology (MUST)⁴, University of Virginia at Wise⁵

*For Correspondence: Email: poyolande@gmail.com

Abstract

We investigated the sexual and reproductive health rights and experiences of very young adolescents (VYAs), 10-14 years old, from the perspective of emerging adults (18-25 years old). Data collection and analysis were guided by the socio-ecological and positive youth development frameworks. Data were collected through naturalistic observation of the community, photovoice, key informant interviews (n=5), and focus group discussions with emerging adults (n=20). Key emerging themes included: limited economic resources, sex education, and gender expectations. While limited economic resources and certain gender expectations play a role in increasing VYAs' exposure to risky settings and behaviours, sex education in schools and parental support play an important role in protecting VYAs from poor sexual and reproductive health outcomes. Identifying ways to minimize exposure to risky settings and behaviours while strengthening existing protective factors found in the community need to be considered when designing future strength-based, community tailored, and culturally sensitive interventions. (*Afr J Reprod Health 2023; 27 [9]: 13-21*).

Keywords: Sexual health, adolescence, protective behaviours, and risky behaviours

Résumé

Nous avons étudié les droits et les expériences liés à la santé sexuelle et reproductive des très jeunes adolescents (VYAs), âgés de 10 à 14 ans, du point de vue des adultes émergents (18 à 25 ans). La collecte et l'analyse des données ont été guidées par les cadres socio-écologiques et du développement positif de la jeunesse. Les données ont été collectées à travers l'observation naturaliste de la communauté, la méthode photovoix, les entretiens avec des informateurs clés (n = 5), et des discussions de groupe avec des adultes émergents (n = 20). Les principaux thèmes émergents comprenaient : les ressources économiques limitées, l'éducation sexuelle et les attentes liées au genre. Malgré le fait que les ressources économiques limitées et certaines attentes liées au genre contribuent à accroître l'exposition des VYA à des environnements et à des comportements à risque, l'éducation sexuelle dans les écoles et le soutien parental jouent un rôle important dans la protection des VYA contre de mauvais résultats liés à la santé sexuelle et reproductive. L'identification des moyens de minimiser l'exposition à des contextes et des comportements à risque tout en renforçant les facteurs de protection existants trouvés dans la communauté doit être prise en compte lors de la conception de futures interventions basées sur les atouts des jeunes adolescents, adaptées à leurs communauté et sensibles à leurs cultures. (*Afr J Reprod Health 2023*; 27 [9]: 13-21).

Mots-clés: Santé sexuelle, adolescence, comportements protecteurs et comportements à risque

Introduction

The sexual and reproductive health and rights (SRHR) and needs of adolescents (aged 10-19 years) in sub-Saharan African (SSA) require urgent attention. Compared to other regions of the world, adolescents in SSA bear a disproportionate burden of poor sexual and reproductive health (SRH) outcomes^{1,2}. The SSA region bears 71% of the

global burden of HIV and has a high prevalence of adolescent pregnancy, unsafe abortion, sexual and gender-based violence (SGBV), female genital mutilation and other sexually transmitted infections (STIs)^{1,3}. The prevalence of STIs is particularly higher among women⁴. In Uganda, in particular, adolescents face various SRHR challenges, including STIs⁵. Between 2015 and 2017, there were approximately 1.5 million cases

of self-reported STIs in Uganda⁶. Moreover, there is a high prevalence of early pregnancy among adolescents in Uganda, with approximately 33% of adolescents giving birth by the age of 18³.

Very young adolescents (VYAs), defined as those aged 10-14, constitute about half of the 1.2 billion adolescents worldwide^{7,8}. In Africa, the VYA population is projected to grow to about 34%, from 143 million to 193 million by 2030 ⁷. While adolescents are likely to face the greatest exposure to STIs, as well as the highest risk of unintended pregnancies, evidence shows that precursors to high-risk behaviours are often established during early adolescence⁸. During early adolescence, VYAs undergo a period of rapid development encompassing physical, social, emotional, and cognitive changes⁷. As these changes occur, VYAs interact with ecological factors present at the individual, interpersonal, community, and societal levels which ultimately shape their health, and more importantly their SRHR⁷.

Addressing challenges affecting SRHR of adolescents, particularly VYAs, is critical to achieving the United Nations Sustainable Development Goals (SDGs). For example, SDG Goal 3, target 3.7 states "By 2030, ensure universal access to SRH care services, including for family planning, information, and education, and the integration of reproductive health into national strategies and programmes"9. Such initiatives underscore the importance understanding and addressing challenges affecting SRHR as early in development as possible to prevent undue risk and negative outcomes. Besides achieving the SDGs, a healthy young population can contribute to the social and economic development of their very nation. Uganda has one of the youngest populations in the world, with adolescents making up nearly a quarter of the population¹⁰. Therefore, addressing the challenges affecting the SRHR of these adolescents in Uganda would not only help make progress on the SDG goals, they would also positively impact the country's social and economic development.

In order to address challenges affecting the SRHR and needs of VYAs in Uganda, this study sought to understand the experiences of VYAs, particularly through the perspective of emerging adults (18-25). Given their advanced cognitive capabilities and proximity to their adolescent years, emerging adults can more deeply reflect on their

experiences as VYAs and can provide additional insights into factors influencing the SRHR and experiences of VYAs. Using a qualitative research design, this study aimed to answer the following questions: 1) What are the individual and social factors that contribute to adolescent sexual development in rural Uganda? and 2) What are emerging adult perceptions of the context in which they grew up in rural Uganda and how do these perceptions relate to their SRHR and experiences?

Conceptual model

Our research used the socioecological framework to examine the interrelated individual, family, community, and societal factors affecting the SRHR and experiences of VYAs. This framework allowed us to go beyond the consideration of the impact of individual behaviours and perceptions on health by highlighting the importance of social influences on health¹¹. It also helped us recognize children and adolescents do not develop in a vacuum but are influenced by multiple people, contexts, and experiences in an ever-widening environment across time. socioecological framework depicts development with a series of concentric circles with the individual child at its centre.

Furthermore, most adolescent research has focused on adolescent risk behaviours and often fails to consider the individual, family, community, and structural strengths that can reduce one's risk of poor health outcomes. Such an approach has hindered development the of effective interventions that address the complex dynamics leading to poor adolescent health. Complementary to the socioecological framework, the theoretical perspective of positive youth development allowed us to gain a holistic understanding of the SRHR and experiences of VYAs by recognizing both adolescents' developmental and social risks and their developmental assets and protective factors¹². Understanding adolescents from a strengths-based perspective within their socioecological context provides the anchor for integrated interventions.

Methods

Design and study setting

Using community-based participatory research design (CBPR), we investigated the individual and

social factors affecting the sexual and reproductive development of VYAs in rural Uganda. As part of a multi-year research initiative, this paper provides insights on the SRHR and experiences of VYAs through the lens of emerging adults. Emerging adults refer to individuals between aged 18-25. In addition to engaging emerging adults, we engaged adults from the community who served as additional key informants. By supplementing findings from an earlier report that centred on VYA perceptions³, this research aims to inform culturally tailored and community-informed interventions to improve the health of VYAs.

The study was conducted in Muko village within Rwebishekye Parish, a rural community outside of Mbarara, Uganda. The research team was comprised of researchers from Ugandan and American institutions. After securing institutional review board approval from the US and Ugandan universities, the co-principal investigators approached village authorities/community leaders within Rwebishekye Parish and respectfully requested their input, guidance, and engagement. With the community's approval and support, a community advisory board (CAB) of 10 people from the village with expertise in various aspects of adolescent and community life was created. The CAB facilitated the growth of a trusting partnership between our research team and the Rwebishekye community and provided guidance throughout all aspects of the research study.

Participant recruitment and sampling

Our research team sought guidance from the CAB to determine the best way to engage emerging adults and other key informants. The CAB nominated 20 emerging adults who could reflect on their adolescence. Research assistants (RA) then visited the nominated emerging adults. During this visit, RAs described the study's purpose, activities, benefits, and potential study risks and how they would be resolved, both in English and in Runyakore, the local dialect. Participants were invited to ask questions and raise concerns if they had any. The voluntary nature of the study was stressed. After describing the study and answering participants' questions, participants signed an informant consent, which included approval to engage in a photovoice activity followed by focus group discussions. RAs also interviewed five key informants nominated by the CAB.

Data collection and instruments

We used three complementary data collection strategies to understand the individual experiences and socioecological context of VYAs' SRHR and experiences from the perspective of these emerging adults. These strategies include naturalistic observation, photovoice accompanied by focus groups and key stakeholder interviews. Using this triangulated approach, we built on the strengths of each approach while minimizing its limitations. For example, photovoice is known to have issues of misinterpretation and misrepresentation¹³, so by having focus groups and key stakeholder interviews, our research team was able to identify and confirm emerging themes from various sources—thereby minimizing these limitations. Naturalistic Observation: Our research team visited Muko village on two different occasions to conduct a naturalistic observation of the public spaces of the community where young people interact and congregate to understand the sociocultural context in which VYAs develop and grow. RAs took field notes and thematically analysed them into themes, concepts, and their relationships. Photovoice and Focus Group: After providing their consent, emerging adult participants were given camera phones and were instructed to take photos of people, places and things that were important to them and were representative of how they spent their time as young adolescents, how they learned about their sexuality, and positive and negative things about being an adolescent as they remembered. Participants were also coached on ethical guidelines of taking photographs, including only taking pictures of people who have given consent and not sharing photographs with others. After a week, photos were downloaded and printed. Emerging adults who took photos (n = 20) were invited to participate in focus group discussions to narrate the stories of their photographs and discuss social and contextual factors they perceived had influenced their SRHR and development. Focus group discussions lasted about 1½ hours, were audio-recorded for data analysis, and were transcribed verbatim. Participants' names were deidentified to ensure confidentiality.

Key Informant Interviews: Our research team led key informant interviews with community experts (n = 5) in adolescents and community life. These key informant interviews lasted about 1 hour and

were held at the local primary school after school hours, for convenience. Interviews were led by trained, bilingual graduate student research assistants (RAs) from the Mbarara University of Science and Technology. Interviews were audiorecorded and transcribed verbatim.

Data analysis and interpretation

Data from observational field notes, focus group and key informant interviews were analysed using the thematic analysis approach described by Braun and Clarke 14. First, field notes, focus group and individual interviews were open coded by research team members with an eye to data expansion, thus ensuring the breadth of potential themes. Photos captured for this study were analysed during focus groups as participating emerging adults interpreted what those photos represented to them and their connection to their adolescence. Initial codes from field notes, focus groups and interviews were then merged by the team to form conceptual categories of related codes. In this data limitation phase, the aim was two-fold: to gain conceptual depth and to determine the relative salience of the categories. Categories were refined and those demonstrated both a prevalence across participants and a "keyness", that is, those that "...capture something important in relation to the overall research question",14 were elevated to the final salient themes of the study.

Thematic and methodological verification were undertaken using the following strategies. First, the multicultural team approach to coding and categorization allowed for constant comparison of the products of analysis, thus lending to the credibility of the findings. Second, a review of thematic findings with local experts on the CAB, as well as qualitative methods experts verified the team's analysis and interpretation. Finally, data triangulation established a rigorous process of analysis.

Ethical consideration

This research study received institutional review board (IRB) approval from the Ugandan and US universities with which the co-principal investigators were affiliated. All participants gave their informed consent for inclusion before they participated in the study. Research materials and research procedures also received IRB approval before the study was conducted.

Results

Sample characteristics

Twenty emerging adults provided their consent to participate in this study—9 were males and 11 were females. The average age of emerging adults engaged in this study is 21.2 years old (range = 18-25). While two emerging adults lived with their spouse and children, 18 emerging adults lived with their parent(s) or caregiver(s). Eighteen emerging adults had completed their primary school education and seven completed their secondary education. For those who dropped out of school, all reported lack of money or poverty as the main cause. All emerging adults reported attending church and reported receiving their health care from Bwizibwera Health Centre IV. Key informants included teachers and a school administrator.

Overarching themes

Three main themes emerged from analysing field notes, photovoice data, focus group discussions and interviews: limited economic resources, sex education, and gender expectations.

Limited economic resources

During field visits, RAs engaged with community members and noted the challenges presented by limited economic resources and its influences on SRHR and development. For example, due to lack of school fees, VYAs may drop out of school and find other ways to support themselves and their families economically. Focus group discussions revealed that dropping out of school may lead VYAs to spend more time in risky settings such as the pool table area of the trading centre—an area known for gambling and an area where young girls can be lured into transactional sex (i.e., having sex in exchange for money or services). While the community experiences economic constraints and low of levels of formal employment, photos taken by emerging adults revealed the presence of

important community resources, such as the availability of a tailoring school and a community clinic.

Sex education

Sex education also emerged as a key theme, particularly during key informant interviews and focus group discussions. Sex education is important across all levels of VYAs' socioecological context. At the individual level, our findings reveal that VYAs' natural curiosity might push them to learn more about sex. A focus group participant highlighted this natural curiosity and stated that "...between the ages of 10-16, [adolescents] can be curious." At the family level, our findings also show that parents play an important role in sex education, but parents' engagement and interactions vary. Focus group participants from FG4_0307 noted some parents are overprotective, some parents provide sex education indirectly, and others do not share much related to sex education.

At the community level, research participants highlighted that school and peers serve as sources of sex education. In focus group FG4_0307, participants acknowledged receiving sex education in school. Key informants also shared there is some level of sex education in school. While in schools and in their community, VYAs are also influenced by their friends or peers. As VYAs are developing, peer groups serve as channels to diffuse information and can have both a positive and a negative influence on VYAs' SRHR and development. For example, in focus group FG1 3006, a participant noted that "We have positive friends who keep us in check and tell us positive stories, ...however, there are also negative friends who will teach you bad behaviours like taking spirits (alcohol), taking drugs and going to clubs...."A participant from FG2_3006 also noted that although she does not receive support from her family, she receives support and advice from her friends.

At the societal level, religion and the media serve as important sources for information for VYAs. In focus group FG1_3006, a participant noted that church plays an important role by providing advice. Key informant KSI_5F and key informant KSI_4F also noted the importance of religion and church in VYAs' SRHR and development. In addition to religion, the media also

play an important role in VYAs' development. In focus group FG3_0307, participants noted the importance of media, not only as a source of information, but as a tool that may fuel VYAs' curiosity and desire to engage in sexual activity.

Gender expectations

In addition to limited economic resources and sex education, gender expectations emerged as an important theme, particularly during key informant interviews and focus group discussions. Our findings reveal that different expectations placed on boys and girls can either increase or reduce their risks of experiencing negative SRH outcomes.

For example, girls are expected to avoid pregnancies and thus receive more warnings to avoid getting early pregnancies. Such expectations may protect girls from engaging in risky behaviours. Unlike girls, boys are not always expected to stay at home—an expectation which may increase their likelihood of engaging in risky behaviours.

While some gender expectations may exist to protect VYAs from engaging in risky behaviours, our findings reveal different gender expectations place girls more at risk of experiencing negative SRH outcomes compared to boys. Although both girls and boys are both susceptible to getting STIs through unprotected sex, girls are also more likely experience rape and transactional sex. Furthermore, unlike boys, girls endure more challenges resulting from early pregnancies and are often the victims of gender-based violence. For example, a participant from FG4_0307 noted that "Boys may not be greatly affected [after impregnating a girl] and can even continue with their studies, but a girl has to sit down and look after pregnancy until when she gives birth".

Discussion

Risk and protective factors influencing adolescent sexual and reproductive health

Using positive youth development as a guiding conceptual framework, we identified protective factors and risk factors that can impact VYAs' SRHR and development across these three overarching themes (limited economic resources, sex education and gender expectations). Using the socio-ecological framework as an additional

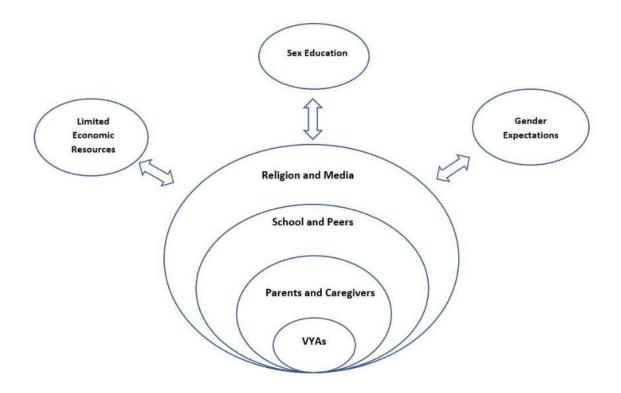


Figure 1: Emerging themes

guiding conceptual framework, we have also identified how those protective and risk factors manifest at the individual, family, community, and societal level. Figure 1 below illustrates our key themes and demonstrates the relationship between these emerging themes and the socio-ecological context within which they operate.

During field observations in the Muko village, RAs observed the following public spaces: the church area, the community's primary school, the trading centre, the community clinic, farms, and community boreholes where water is drawn. Of these public spaces, the trading centre particularly the area where young men play pool and community boreholes appeared to be unsupervised spaces that can increase exposure to risky activities or increase risk of negative outcomes such as being sexually attacked, particularly for young girls and women. On the other hand, the church and school, though not in session during our visits, appeared as safe spaces. This finding aligns with what VYAs reported in an earlier report which explored VYAs' perception of growing up in Muko village—the same community being explored in this study³.

Individual level: Limited economic resources, which is marked by poverty and high rates of unemployment, are known to increase risk of developing negative SRH outcomes⁷. Woog and Kagesten notes that poverty not only leads to poor SRH outcomes, but poor SRH outcomes also lead to poverty—an intergenerational relationship that maintains an impoverished society⁷. In rural Uganda, limited economic resources can lead VYAs to drop out of school and loiter in unsafe spaces. Although limited economic resources are an important contextual challenge, our findings show that using community resources, particularly those that can increase one's economic assets (e.g., attending school, vocational school) can mitigate challenges presented by limited economic resources and thereby may protect a VYA from negative SRH outcomes.

Family level: Our findings suggest that parents and caregivers play a critical role in VYAs' SRHR and development. Parental guidance and support can serve as an important protective factor in an adolescent's life, while the lack of parental guidance and support can serve as a risk factor and contribute to an adolescent's exposure to SRHR-

related issues¹⁵. Given their proximity to VYAs, parents or caregivers particularly play an important role in providing sex education (or sex-related information) to VYAs. However, despite that proximity, most emerging adults reported not receiving sex education from their parents or caregivers when they were VYAs. This finding, which is supported by other studies across the literature may result from the ongoing taboo nature of sexuality discussions, particularly between parents and young people^{16,17}.

Community level: School and peers play a critical role in VYAs' SRHR and development. As a key of source of education, schools equip students with the knowledge and skills needed for personal development. Within the context of SRHR and development, attending school can also reduce VYAs' exposure to risks with poor SRH outcomes¹⁸. For example, at school, VYAs can receive sex education and school staff members may also instil important character traits that might deter VYAs from engaging in risky behaviours. The importance of school is also supported in the literature: for example, attending particularly secondary school, has been associated with better SRH outcomes such as delayed age of marriage, fewer number of births and increased use of health services¹⁸. Furthermore, our findings show that peers also play a significant role in VYAs' SRHR and development. Similarly, a review article by Svanemyr et al. show peers play an important role in adolescents' development and socialization and can either have a positive or a negative influence¹⁸.

Societal level: Our findings highlight the importance of religion and media in SRHR and development. Emerging adults shared photos reflecting the impact of church and religion in their life, with most noting a positive impact. Therefore, interventions developed to support VYAs' SRHR and related needs should consider the role the church community can play in supporting VYA's SRHR and development. Besides church, our findings also reveal the importance of media as an important factor that can potentially increase adolescents' exposure to negative SRH outcomes. Emerging adults noted that VYAs today receive sex education or sex-related information from media (e.g., phones, radios), and added that content from these sources may entice VYAs to engage in risky behaviours and not all sources provide

accurate information. While some public health institutions in Uganda use media to spread accurate sex-related information, Kemigisha *et al.* further notes that it is often hard for adolescents to determine which sources are accurate. With easy access to inaccurate sex-related information through media sources, it is critical that VYAs receive accurate sex education from trusted sources such as schools and parents.

As revealed in our findings, different gender expectations can either increase or decrease VYAs' exposure to risky settings and behaviours. These gender expectations affect the lived experiences of VYAs at the individual level and are reinforced at the family, community, and societal level. These gender expectations which collectively form gender roles are an important aspect of community and reflect the importance of work in rural communities such as Muko village³. For example, girls are trained to take of household activities such as fetching and cooking, while boys are expected to provide monetary resources for their families. While these gender expectations play an important role in sustaining community, they are often accompanied by beliefs and behaviours which increase or decrease exposure to risk. Emerging adults noted that boys are more likely to be pressured to engage in risky activities, in part due to the expectation that boys (soon-to-be men) should be bold and strong. Girls, on the other hand, are expected to contribute to household chores, and thus may spend more time indoors and avoid exposure to unsafe spaces. While girls may spend more time indoors compared to boys, they are expected to fetch water from community boreholes, which were reported to be unsafe for VYAs. Our findings on gender expectations and exposure to risk are consistent with results found in our earlier report which explored VYAs experiences from the perspective of VYAs³.

Recommendations

According to Woog and Kagesten, very young adolescence is a "critical time to lay the foundation for positive sexual and reproductive health outcomes". Laying such foundation involves acknowledging both the risk factors and protective factors that impact VYAs' SRH outcomes, recognizing how those risk and protective manifest themselves at the individual, family, community, and societal level, and investing in strength-based,

community-tailored, culturally sensitive interventions. An example of such an intervention includes creating a school-based sexuality program with parents' involvement. Studies by Kemigisha et al. (2018) (2019) reveal that a contextually adapted and comprehensive sexuality education program can improve SRHR-related knowledge, increase perception of risks associated with SRHR and influence adolescents' intentions to delay sexual intercourse^{19,20}. Other interventions include promoting vocational schools where VYAs can learn skills which can help them build their economic assets and reduce their exposure to risky settings.

Limitations

Our findings about VYA development and SRHR may be applicable to adolescents in southwestern Uganda, however, further research is needed to determine if findings are applicable to other groups of Ugandan adolescents or those from other regions in SSA. Further, there is always the potential for social desirability in participant responses. The triangulation of data from observations of the village context for young people, emerging adult focus groups on the photovoice pictures, and key informant interviews minimized the impact of this limitation. Despite these limitations, this study was important because it sheds light on key protective and risk factors affecting VYAs and provides insights on how these factors can be leveraged to create community-based interventions that are strength-based and culturally sensitive.

References

- Ajayi AI, Otukpa EO, Mwoka M, Kabiru CW and Ushie BA. Adolescent sexual and reproductive health research in sub-Saharan Africa: a scoping review of substantive focus, research volume, geographic distribution and Africa-led inquiry. BMJ Global Health. 2021;6(2):e004129. doi:10.1136/bmjgh-2020-004129
- Chandra-Mouli V, Neal S and Moller AB. Adolescent sexual and reproductive health for all in sub-Saharan Africa: a spotlight on inequalities. *Reproductive Health*. 2021;18(1):118. doi:10.1186/s12978-021-01145-4
- Nyakato VN, chen C, Chambers D, Kaziga R, Ogunnaya Z, Wright M and Kools S. Very young adolescent perceptions of growing up in rural southwest Uganda: Influences on sexual development and behavior. African Journal of Reproductive Health. 2021;25(2):50-64. Accessed July 27, 2021.

- https://www.ajol.info/index.php/ajrh/article/view/2 07311
- 4. Francis SC, Mthiyane TN, Baisley K, Mchunu SL, Ferguson JB, Smit T, Crucitti T, Gareta D, Dlamini S, Mutevedzi T, Seeley J, Pillay D, McGrath N and Shahmanesh M. Prevalence of sexually transmitted infections among young people in South Africa: A nested survey in a health and demographic surveillance site. *PLoS Med.* 2018;15(2):e1002512. doi:10.1371/journal.pmed.1002512
- Addressing Adolescent Health challenges in Uganda. WHO

 Regional Office for Africa. Accessed August 1,
 2021. https://www.afro.who.int/news/addressing-adolescent-health-challenges-uganda
- 6. Masanja V, Wafula ST, Ssekamatte T, Isunju JB, Mugambe RK and Van Hal G. Trends and correlates of sexually transmitted infections among sexually active Ugandan female youths: evidence from three demographic and health surveys, 2006–2016. *BMC Infectious Diseases*. 2021;21(1):59. doi:10.1186/s12879-020-05732-x
- 7. Woog V and Kågesten A. The Sexual and Reproductive Health Needs of Very Young Adolescents Aged 10– 14 in Developing Countries: What Does the Evidence Show? Published online May 24, 2017. Accessed July 26, 2021. https://www.guttmacher.org/report/srh-needs-very-young-adolescents-in-developing-countries
- Ortiz-Echevarria L, Greeley M, Bawoke T, Zimmerman L, Robinson C and Schlecht J. Understanding the unique experiences, perspectives and sexual and reproductive health needs of very young adolescents: Somali refugees in Ethiopia. Confl Health. 2017;11(1):26. doi:10.1186/s13031-017-0129-6
- 9. Fang J, Tang S, Tan X and Tolhurst R. Achieving SDG related sexual and reproductive health targets in China: what are appropriate indicators and how we interpret them? *Reprod Health*. 2020;17(1):84. doi:10.1186/s12978-020-00924-9
- World Population Dashboard -Uganda. United Nations Population Fund. Accessed August 14, 2023. https://www.unfpa.org/data/world-population/UG
- 11. McLeroy KR, Bibeau D, Steckler A and Glanz K. An ecological perspective on health promotion programs. *Health Educ Q.* 1988;15(4):351-377. doi:10.1177/109019818801500401
- 12. Benson PL, Scales PC and Syvertsen AK. Chapter 8 The contribution of the developmental assets framework to positive youth development theory and practice. In: Lerner RM, Lerner JV, Benson JB, eds. Advances in Child Development and Behavior. Vol 41. Positive Youth Development. JAI; 2011:197-230. doi:10.1016/B978-0-12-386492-5.00008-7
- Nykiforuk CIJ, Vallianatos H and Nieuwendyk LM.
 Photovoice as a Method for Revealing Community Perceptions of the Built and Social Environment. Int J Qual Methods. 2011;10(2):103-124. Accessed November 7, 2021. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC49 33584/
- Braun V and Clarke V. Using thematic analysis in psychology: Qualitative Research in Psychology:

- Vol 3, No 2. Accessed November 7, 2021. https://www.tandfonline.com/doi/abs/10.1191/1478 088706qp063oa
- 15. Biddlecom A, Awusabo-Asare K and Bankole A. Role of Parents in Adolescent Sexual Activity and Contraceptive Use in Four African Countries. International Perspectives on Sexual and Reproductive Health. 2009;35(2):72-81. Accessed February 10, 2022. https://www.jstor.org/stable/40233807
- Bastien S, Kajula LJ and Muhwezi WW. A review of studies of parent-child communication about sexuality and HIV/AIDS in sub-Saharan Africa. Reprod Health. 2011;8:25. doi:10.1186/1742-4755-8-25
- Usonwu I, Ahmad R and Curtis-Tyler K. Parent–adolescent communication on adolescent sexual and reproductive health in sub-Saharan Africa: a qualitative review and thematic synthesis. *Reprod Health*. 2021;18:202. doi:10.1186/s12978-021-01246-0

- 18. Svanemyr J, Amin A, Robles OJ and Greene ME. Creating an Enabling Environment for Adolescent Sexual and Reproductive Health: A Framework and Promising Approaches. *Journal of Adolescent Health*. 2015;56(1, Supplement):S7-S14. doi:10.1016/j.jadohealth.2014.09.011
- Kemigisha E, Bruce K, Nyakato VN, Ruzaaza GN, Ninsiima AB, Mlahagwa W, Leye E, Coene G and Michielsen K. Sexual health of very young adolescents in South Western Uganda: a crosssectional assessment of sexual knowledge and behavior. Reproductive Health. 2018;15(1):148. doi:10.1186/s12978-018-0595-3
- Kemigisha E, Ivanova O, Ruzaaza GN, Ninsiima AB, Kaziga R, Bruce K, Leye E, Coene G, Nyakato VN and Michielsen K. Process evaluation of a comprehensive sexuality education intervention in primary schools in South Western Uganda. SEXUAL & REPRODUCTIVE HEALTHCARE. 2019;21:51-59. doi:10.1016/j.srhc.2019.06.006.