



**Citation:** Ayieko S, Nguku A, Kidula N (2023) It's not just about pads! Adolescent reproductive health views in Kenya: A qualitative secondary analysis. PLOS Glob Public Health 3(5): e0001285. https://doi.org/10.1371/journal.pgph.0001285

Editor: Laura Miniea Hoemeke, UNC Gillings School of Global Public Health: The University of North Carolina at Chapel Hill Gillings School of Global Public Health, UNITED STATES

Received: October 21, 2022 Accepted: April 20, 2023 Published: May 22, 2023

Copyright: © 2023 Ayieko et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Data Availability Statement: 1. Data from the main study can be obtained from the What Women Want interactive dashboard: https://whiteribbonalliance.org/resources/www-dashboard/ The dashboard was created by Fast

dashboard/ The dashboard was created by Fast Data science 2. Permission to conduct secondary analysis was requested by the authors, and granted by the What Women Want organizers - The White Ribbon Alliance. 3. Due to the nature of the sensitive information on certain schools that could impact privacy this specific data was restricted.

RESEARCH ARTICLE

# It's not just about pads! Adolescent reproductive health views in Kenya: A qualitative secondary analysis

Sylvia Ayieko 1\*, Angela Nguku², Nancy Kidula³

- 1 Department of Health Promotion and Behavioral Sciences, The University of Texas Health Science Center at Houston School of Public Health, Houston, Texas, United States of America, 2 White Ribbon Alliance -Kenya, Nairobi, Kenya, 3 Department of Reproductive Health and Research (RHR), World Health Organization, Genève, Switzerland
- \* sylvia.a.ayieko@uth.tmc.edu, saachieng127@gmail.com

## **Abstract**

Many adolescents face barriers to accessing reproductive health care even though quality reproductive health care is a fundamental human right. The objective of this study is to understand the requests of quality reproductive health among high school girls in Kenya. We conducted a secondary analysis of qualitative data from a sub-sample of adolescent girls in Kenya who participated in the What Women Want global campaign and analyzed interview data from key informants involved in the survey. We used pre-existing codes and current literature to design the coding framework and thematic analysis to describe emerging themes. Atlas. ti 8 was used to organize and analyze codes. Over 4,500 high school girls, ages 12 and 19 years, were included in the analysis, with 61.6% from all-girls boarding schools and 13.8% from mixed-day schools. Data from nine key informants complemented findings from the survey. Emerging themes included: 1) The need for improved menstrual health and hygiene: Sanitary towels and cleaner toilets; 2) Prevention of adolescent pregnancy: Access to contraception; 3) Respect and dignity: Participants want privacy and confidentiality; and 4) The need to address social determinants of health: Economic stability and a safe physical environment. This study indicated that adolescent high school girls have varied requests for reproductive health care and services. While menstrual health and hygiene are key issues, reproductive needs are beyond just sanitary products. The results suggest a need for targeted reproductive health interventions using a multi-sectoral approach.

#### Introduction

Access to health care, including sexual and reproductive health care, is a fundamental human right [1, 2]. However, many adolescents face barriers to accessing sexual and reproductive health services, which put them at risk for teenage pregnancy, unsafe abortions, reproductive tract cancers, and sexually transmitted infections, including Human Immunodeficiency Virus, Acquired Immunodeficiency Syndrome (HIV/AIDS) [3, 4]. In Sub-Saharan Africa, for example, due to limited and inequitable sexual and reproductive health care services, adolescent

However this information can be obtained by contacting the White Ribbon Alliance. https://whiteribbonalliance.org/resources/www-dashboard/.

**Funding:** The authors received no specific funding for this work.

**Competing interests:** The authors have declared that no competing interests exist.

girls and young women (15 to 24 years) bear a disproportionate burden (25%) of HIV infections, with new HIV infections occurring at a higher rate among 15–19-year-old females compared to their male counterparts [5].

Pregnancy-related complications are among the leading causes of death among adolescent girls in Sub-Saharan Africa [6] due to poor health care or non-utilization of health care services. Adolescent girls underutilize reproductive and maternal health services due to stigma, lack of information, weakened health systems, and poor implementation of health policies [7, 8]. In addition, poverty, low decision-making power, lack of negotiation skills, gender-based violence, and alcohol and drug abuse contribute to adolescents' adverse reproductive health outcomes [8, 9]. In low-to-middle-income countries, only about 10% of adolescent girls sought care from health facilities and received contraception counseling [1].

In 2015, all 193 United Nations member states adopted the sustainable development goals (SDGs). Within the health-related SDG 3, targets 3.7 and 3.8 seek to ensure universal access to sexual and reproductive health care services, including family planning, information, and education, while striving to achieve universal health coverage, including access to quality essential health care services by 2030 respectively [10, 11].

## Reproductive health care for adolescents in Kenya

Kenya, a lower-middle-income country in Eastern Africa, is a signatory to the SDGs and is committed to ensuring Universal Health Coverage. While the country has expanded access to adolescent sexual and reproductive health and rights (SRHR), impactful implementation of the SRHR interventions recommended by the *Global Accelerated Action for the Health of Adolescents (AA-HA!)*: *Guidance to Support Country Implementation* [12] has been limited. In 2017, about 24% of adolescent women aged 15–19 years in Kenya had an unmet need for family planning, resulting in 63% of unintended pregnancies in this population [13]. Adolescent girls in Kenya are also more susceptible to HIV due to non-consensual, unprotected sexual intercourse and sexual violence [14] About 18% of teenage girls in Kenya between the ages of 15–19 are either pregnant or mothers [14]. Research suggests that factors associated with adolescent pregnancy in Kenya include lack of knowledge, unmet need for contraception, female genital mutilation (FGM) practices, and poverty [15]. Adolescent girls in Kenya who engage in transactional sex due to low socioeconomic conditions also face challenges navigating through conflicting societal constructs that condemn adolescent contraceptive use and stigmatize pregnant adolescents [16].

To reduce HIV infections and address unintended pregnancy in Kenya, the Kenyan government distributes free male condoms, targeting youth who may not afford or have access to condoms [17]. Moreover, in collaboration with policymakers and civil society organizations, the Ministry of Health in Kenya has encouraged the implementation of the National Adolescent Sexual and Reproductive Health policy at all levels of care [18]. The growing body of evidence suggests that delivering quality adolescent reproductive health care is linked to more positive health-seeking behaviors, increased adherence to birth control methods, and improved overall health outcomes among young people [19]. Other studies allude to inadequate coordination and policy implementation that fails to incorporate pregnancy, menstruation, and sanitation into reproductive health [20]. In addition, interventions on menstrual health hygiene programs in schools have not been well adopted because adolescents and young adults are not recognized as sources of information [21, 22]. Yet, they are the key stakeholders in their health.

Access to quality reproductive healthcare for adolescent girls in Kenya is a pressing public health issue warranting further investigation. To address this gap, this study utilizes qualitative

data from the *What Women Want* campaign survey and interviews to explore what adolescent girls in different schools across Kenya perceive as quality reproductive health care. This secondary analysis of qualitative surveys and interviews is expected to contribute to the current literature by discussing how adolescent girls conceptualize quality reproductive health and how to improve care.

## Materials and methods

## Parent study

The White Ribbon Alliance, a non-profit organization, conducted the global *What Women Want* campaign between April 2018 and March 2019 to understand what women and girls want for maternal and reproductive health care [23, 24]. The campaign utilized a qualitative survey with one open-ended question: *My one request for quality reproductive and maternal health care services is*?

Although the campaign initially administered the survey online, most countries, including Kenya, later distributed paper surveys and had different consenting procedures. In Kenya, data collection was via convenience sampling "citizen journalists," community members, and volunteers associated with the White Ribbon Alliance in Kenya. About 120,000 women and girls completed the survey, with 16% being adolescents aged 15–19 [24].

#### **Ethics statement**

De-identified data were obtained from the *What Women Want* dashboard [24]. The current study does not involve interactions with human subjects but uses existing data. Given the nature of the study, the authors did not seek Institutional Review Board approval since the data was publicly available. The campaign outlined the consent processes during data collection for each country [24]. In Kenya, verbal consent was obtained from girls and women who shared their survey responses but wished to remain anonymous. In addition, approvals and permission were obtained from school administrators before any data collection was done. Both verbal and written consent was obtained for adolescents aged 18 or older who had their pictures taken [24].

#### Sample data source

We received authorization from the White Ribbon Alliance to conduct a secondary qualitative survey analysis from a sub-sample of adolescent girls in Kenya. The current study restricted the analysis to a convenient sample of data collected from high school teenage girls in eight counties across the western, central, eastern, and Rift valley regions of Kenya. The schools, located in both rural and urban areas, were included based on the availability of mobilizers and data collectors in those specific counties in Kenya. Although some survey responses had missing information on age and /or school (due to the topic's sensitive nature), the qualitative survey responses were sufficient for this current study. The mobilizers confirmed data collection from the schools, thus minimizing the possibility of including responses from college students or other adolescents not enrolled in high schools. We accounted for undisclosed age by assuming majority of the high school respondents were adolescents, given the average age range (14–18 years) of high school students reported in prior studies [25]. The study also included interview reports from nine key informants (teachers, youth advocates, and mobilizers) involved in the *What Women Want* campaign in Kenya who work with high school girls.

## Type of schools

In Kenya, high schools are usually either day schools or boarding schools. Although few high (secondary) schools have some students enrolled as day scholars and others as boarders, this is not common. Moreover, boarding schools in Kenya are predominantly single-sex institutions. Thus, the survey responses from boarding schools reflected perspectives from mostly all-girls schools. Most day schools, by contrast, are co-ed/ mixed local schools, with many students making daily commutes from their homes.

## Data analysis

We conducted a secondary analysis by re-examining survey responses from adolescent girls and analyzing transcripts from key informant interviews involved in the *What Women Want* campaign in Kenya. We conducted thematic content analysis based on emerging codes and existing quality-of-care frameworks to elucidate the phenomenon of quality reproductive care among adolescents. The initial coding system utilized categories and codes from the parent *What Women Want* study [24]. SA conducted the initial coding by reviewing previously assigned codes and identifying mismatched responses. Then, three investigators (SA, AN, and NK) reviewed merging and reassigning codes. All the authors discussed the inconsistencies in the coding assignments and categories until the team achieved consensus. The iterative process resulted in new codes and categories for the coding framework. Thematic analysis was conducted using Atlas.ti-8 computer software [26].

#### **Results**

The secondary analysis included 4,570 survey responses from adolescent girls between 12 and 19 years in eight counties. Although 20% did not report their ages, their information was included for analysis. Most adolescent girls were enrolled in all-girls boarding schools  $(61\cdot6\%)$  compared to those who attended mixed-day schools  $(13\cdot8\%)$ . Table 1 provides a summary of participant characteristics.

A few overarching themes emerged from the analysis of the findings from the qualitative survey and key informant interview data. The themes indicated the need for improved menstrual health and hygiene, adolescent pregnancy prevention, respect and dignity, and the need to address social determinants of health. Table 2 summarizes selected themes and examples of quotes from the qualitative survey.

## **Emerging themes**

1. Improved menstrual health and hygiene. Menstrual health care encompassed the physical, emotional, and psychological elements and environmental factors such as the availability of water and toilets. The issues related to menstruation, such as sanitary products, safe disposal, the need for underwear, risk factors for period poverty, and pain medication, emerged across different ages, schools, and regions. One key informant stated:

"I engaged [with] young school-going girls above 15 years of age. Their main request was menstrual hygiene management and the provision of sanitary towels. What breaks my heart is how these goods do not reach some of these schools, and girls are missing school." (Female Youth Advocate, Narok)

Adolescent girls also expressed the need for water and sanitation during menstruation. Adolescent girls perceived clean toilets, water availability, and safe disposal of used menstrual

Table 1. Demographic characteristics of study participants.

Characteristics	Number (n)	Percentage (%)	
Type of school	n		
All Girls' Boarding	2814	61.6%	
Mixed-Day	633	13.9%	
Not disclosed <sup>a</sup>	1123	24.6%	
Total	4570	100.0%	
County/ Region	n	%	
Busia-Western	437	9.6%	
Uasin Gishu- Rift Valley	1053	23.0%	
Elgeyo Marakwet -Rift Valley	489	10.7%	
Isiolo- Eastern	405	8.9%	
Kisumu-Western	280	6.1%	
Nairobi- Central	499	10.9%	
Narok- Rift Valley	980	21.4% 9.3% 100.0%	
Vihiga-Western	427		
Total	4570		
Age (years)	n	%	
12	26	0.6%	
13	127	2.8%	
14	269	5.9%	
15	580	12.7%	
16	769	16.8%	
17	732	16.0%	
18	681	14.9%	
19	464	10.2%	
Not disclosed <sup>b</sup>	922	20.2%	
Total	4570	100.0%	

#### Notes

a: Survey responses did not include school information

b: Survey responses did not indicate the age

https://doi.org/10.1371/journal.pgph.0001285.t001

products as quality reproductive healthcare. Responses ranged from needing more restrooms and accessible water sources to more sanitary toilets and bathrooms. A few girls described unsanitary conditions as risk factors for reproductive health infections. One adolescent girl had this to say:

"To provide a private place where one can change or bath in case of messing because of her periods, have other places to dispose of \*sanitary (sanitary towels) other than toilets (Adolescent girl, 17 yrs.-Mixed day school, Uasin Gishu).

In the analysis, the need for extra skirts, underwear, and other requests related to menstrual hygiene emerged as a significant ask among adolescent girls in mixed-day schools because they felt embarrassed when they stained their skirts during their period. A teacher in a mixed school in western Kenya further emphasized the theme of girls' unique needs in her school.

"I buy the sanitary towels from my pocket because I care for the girls, but it is not enough. I also have extra skirts and keep a supply of pain relief medication. I have to have all these

Table 2. Sample categorization of themes, categories, and codes used based on the survey responses.

Themes	Categories	Codes	Examples
Improved Menstrual Health and Hygiene Management	Period poverty	Sanitary towels	"Sanitary towels"
		Pain relief	"Free sanitary towels for them to be comfortable during the periods and special treatment for those with cramps."
		Free sanitary products	"The government to distribute pads to both primary and high schools, free Education on maternal health in different schools and institutions."
	Water and sanitation	Toilets/ Latrines	"Improved toilets in schools that are hygienic"
		Water	"Water in the toilets"
		Proper disposal	"Teach women how to dispose of sanitary pads."
	Extra clothes and underwear	Extra skirts	"Be given an extra skirt in case of periods leaking, which can cause embarrassment." "I kindly request for underwear and bikers."
	Nutrition during menstruation		"Give a list of *nutritious foods, especially when it comes to monthly periods and cramps."
pregnancy	Risk Factors	Period poverty	"Provide sanitary pads to the needy to reduce teenage pregnancy."
	Access to contraception	Condom use	"Girls are becoming pregnant in our county at a young age; I would request the government to issue free condoms to the youth and *educate girls about teenage pregnancy and its consequences."
		Abstinence	"Teach the girls about abstinence from sex to avoid early pregnancy."
	Address cultural issues	Female genital mutilation	"To prevent female genital mutilation and early pregnancy among girls to avoid school dropouts."
	Abortion	Prevention/ Care	"Serious pregnancy tests to be conducted in institutions to prevent abortions."
Respect and Dignity	Friendly	Non-abusive language	"When young girls end up pregnant and go to a hospital to deliver, the nurses should be kind and stop using abusive languages since they lower self-esteem, most girls try to give birth on their own due to fear of bad treatment."
		Privacy/ confidentiality	"A private and confidential room available concerning personal healthcare issues, provision of enough sanitary pads for quality education."
Social determinants of health	Transportation		"Provision of good road transport to and from school"
	Infrastructure	Roads	"Government to improve local transport roads to enable easy access to the hospital."
	Poverty	Basic school needs	"Boarding fees and uniform."
		Resources	"Resources are targeted towards women with extreme poverty."

https://doi.org/10.1371/journal.pgph.0001285.t002

because we noticed that when the girls had their periods, they would skip school a few years back. Some were afraid of "spotting" their skirts and being laughed at by the boys, while others stated that they could not afford to buy sanitary pads." (Female teacher—Mixed-day school, Uasin Gishu)

Many adolescent girls requested free or reduced costs of sanitary products and improved quality sanitary pads while directing their requests to government and non-profit organizations. There was also an emphasis on clean, safe spaces, indicating that adolescent girls in Kenya had different wants for menstrual health and hygiene.

**2. Prevention of adolescent pregnancy.** Adolescents perceived prevention of adolescent/ teenage pregnancy as quality reproductive care. Some categories associated with reduced adolescent pregnancies included pregnancy prevention methods, risk factors for adolescent pregnancy, abortion, and post-abortion care, and proper care for pregnant teens and adolescent mothers. One mobilizer who interacted with teenagers reported that the girls were more concerned about contraception.

"For those who never had children, they were less concerned with what maternal health entails, but rather family planning affordability and accessibility" (Mobilizer, Nairobi)

While some requested condoms and contraception pills for pregnancy prevention, others felt abstinence should be emphasized in schools. Some girls also criticized healthcare providers who prescribed family planning methods, stating that they promoted sexual immorality. Although the need for birth control access was prevalent, a few condemned oral contraception prescriptions, citing that it led to reproductive health issues.

A few girls from marginalized areas (Narok and Isiolo) mentioned the association between female genital mutilation, child marriages, and teen pregnancies. Other responses noted that the lack of sanitary pads puts girls at risk of teenage pregnancy and that providing menstrual supplies helps reduce teen pregnancies. Adolescents also had differing opinions about abortion. A few girls believed conducting pregnancy tests in institutions could deter abortions, while others expressed the need for policies and legal processes around safe abortions. Some, however, felt that abortion was dangerous and should be condemned at all costs.

**3. Respect and dignity.** Consistent with domains in quality-of-care frameworks, the request for respect and dignity was a key demand from many adolescent girls. Responses indicated that adolescents want a safe space where their reproductive health needs are met without judgment. However, a few girls noted that healthcare workers treated pregnant teenagers and adolescent mothers disrespectfully as they sought care.

"When young girls end up pregnant and go to a hospital to deliver, the nurses should be kind and stop using abusive language since they lower self-esteem. Most girls try to give birth on their own due to fear of bad treatment" (Adolescent girl, 17 years- Boarding school, Vihiga)

Adolescents across counties perceived quality care as using appropriate language, with a few mentioning that they wanted doctors or nurses to be kind and polite and stop using abusive language. Some requested a change in attitude among providers and the elimination of harassment and criticisms that might lead to fear and low self-esteem among adolescent girls. A key informant, a teacher in an all-girls school, echoed the need for respectful care.

"Many girls quietly suffer because of reproductive health infections or sexually transmitted infections. Some who have contracted sexually transmitted infections rarely seek medical care for fear of being called out, especially when in line. Girls do not feel that the 'youth-friendly corners' meet their needs without prejudice." (Female teacher- Boarding school, Elgeyo Marakwetl)

Many key informants noted that some teenage girls are reluctant to seek care because of negative past experiences with nurses.

**4. Addressing social determinants of health.** Other themes emerged during the coding process that initially appeared unrelated to maternal or reproductive. In the parent study, some of these requests were classified as either "other asks" or "undeterminable asks." However, based on literature and further examination, the authors considered economic situations, the physical environment, and social contexts as critical determinants of health that impact adolescent reproductive health outcomes. A youth advocate's statement reinforces poverty's impact on reproductive health.

"Don't make this just a pad issue!" Girls did not want pamphlets, materials, or instructions on menstrual health either. What they want, what they need are income-generating opportunities. "Girls told us it's not just about whether they have sanitary napkins or not. It's about the difficult choices between basic needs. "....." If I'm comparing the price of sanitary towels or napkins to a packet of flour for dinner—I'm thinking I need to eat first." (Female mobilizer- Nairobi)

Access to food and nutrition was also linked to quality reproductive health care, with a few responses requesting balanced diets in schools and others demanding relief food in areas of famine. Some survey responses, such as requests for "tuition and school uniform," "need for books," or "school fees" from Isiolo and Kisumu, suggested that a few girls were from low socioeconomic households or families experiencing extreme poverty.

Participants expressed the need for economic empowerment and felt women should be actively involved in politics.

"Women should also participate actively in nation politics. This will help to fight for their rights freely and even come up with possible solutions to the problems that may be hindering them (17-year-old-Boarding school, Narok).

Adolescents also want improved physical environments for quality reproductive health care. For example, adolescents requested safe streets, proper lighting, security, and better roads to health facilities. Social inclusion emerged as a surprising sub-theme under social determinants of reproductive health. Adolescent girls, especially from Elgeyo Marakwet, Narok, and Nairobi counties, conveyed the need to empower and educate women and girls to enhance their decision-making power.

#### **Discussion**

Overall, the perceptions of quality reproductive care varied across adolescent high school girls in Kenya. Although the study results were similar to the overall *What Women Want* global survey findings, this analysis added value by highlighting unique themes among school-going adolescent females and those unique to girls from different regions in Kenya. Study findings acknowledge that while the survey question focused on maternal and reproductive healthcare services, the respondents also highlighted social determinants associated with the healthcare of women and girls. We identified issues high girls and key informants felt were essential for quality reproductive health care.

A few emerging cross-cutting themes are consistent with adolescent reproductive health literature. For example, reducing teenage pregnancy rates is a health goal for many countries [18, 27]. Engaging in transactional sex due to period poverty (lack of sanitary towels) is also a risk factor in other studies [15, 16]. Although the survey question was about requests for quality care rather than complaints, certain reproductive healthcare services, such as contraception, elicited negative feedback from some participants. Similar to other studies, there was evidence of stigma around adolescent use of contraception among a few respondents [16], although many others requested increased access and additional information on birth control methods.

The Adolescent Sexual and Reproductive Health policy in Kenya recognizes the need for a multi-sectoral approach in addressing teenage pregnancy [18], given the economic, sociocultural, and health system factors that impact adolescent girls [15]. Historically, sociocultural systems prepared adolescents for menstruation, marriage, and pregnancy, where uncles and aunts provided sexuality education informally or during initiation ceremonies [28]. However, given the societal shifts that emphasize nuclear families, and migration to cities for employment, adolescents have to rely on other sources for sexual and reproductive health education.

The need for improved menstrual health and hygiene was a common thread among female adolescents of all ages, schools, and counties in this sample. As such, we combined some categories (*water and sanitation* and *other determinants* "skirts") into one theme, "Improved Menstrual Health and Hygiene," based on the study findings. The request for additional skirts, including underwear, was more salient among girls in mixed-day schools probably because,

similar to other studies, menstruating girls are likely to face ridicule from boys or community members when they spot during their period [29]. Compared to girls in boarding schools who can go to their dorms during breaks and change, those in day schools are forced to continue classes the entire day with stained skirts or go home to change. It is also likely that some girls in day schools who come from poor households and cannot afford the cost of attending boarding schools also face challenges in obtaining sanitary products. Previous studies on menstruation report that absenteeism among adolescent girls was associated with menstruation due to a lack of sanitary towels, dysmenorrhea, embarrassment, or non-functional toilets [29, 30]. Although issues related to period poverty were significant requests for quality reproductive and maternal care, menstrual health management originated as an intervention related to education [29].

The enactment of the Kenya Menstrual Hygiene Management Policy was lauded as a step toward improving educational outcomes for adolescent girls attending public schools in Kenya. However, there have been gaps in proper implementation due to challenges in the narrow conceptualization of menstrual health hygiene as just "pad distribution" [31]. Studies in the United States and India also share similar findings on the need to frame Menstrual Health Hygiene as a comprehensive policy that impacts mental health, water and sanitation, education, and financial sectors [31]. As such implementation of menstrual health hygiene in schools not only addresses sustainable development goal (SDG) 3 of improving health and well-being but also SDG 4, in the provision of equitable and quality education especially for adolescent girls [13, 14].

It is important to recognize that even though investments are made to increase reproductive health supplies and products, adolescent girls may not fully seek care or utilize services if they feel disrespected and undervalued. Healthcare providers and practitioners working with adolescents should seek to uphold the dignity of adolescents without discrimination. Although it may be challenging, health providers should incorporate respectful language, dignified care, enhanced privacy and confidentiality as a strategy for engaging adolescents seeking reproductive health care. The impact of economic and social determinants of health on reproductive health was explicitly evident in the responses from adolescent high schools from Isiolo, Narok, and Elgeyo Marakwet counties, which are considered semi-arid regions in Kenya. Teenage girls' responses in these regions centered on the provision of food, water, improved roads, education, and women's empowerment. In addition to the current Adolescent Sexual and Reproductive Health policy and programming efforts that focus on HIV/AIDS, adolescent pregnancy, contraception access, and gender -based violence [10], this study highlights the need to address other contextual issues that impact adolescent reproductive health. As such, reproductive health programs should consider collaborations with the ministries of Education, Finance, Food and Agriculture, Transport and Infrastructure, as well as those in the Sports, Culture & Heritage sectors.

Similar to previous research, teenage girls desire additional information on contraception and the prevention of teenage pregnancy [15]. While the incidence of HIV infections is increasing among 15–19-year-old females in Sub-Saharan Africa [5], the issue of HIV/AIDS did not emerge as a significant theme among teenage girls in this sample beyond the requests for more information. Our study findings suggest that Menstrual Health and Hygiene is a significant component of quality reproductive health issues. Prior studies have established a strong relationship between sexual and reproductive health (SRH) and menstrual health and hygiene (MHH) [32], and advocate for MHH as a key agenda in SRH towards achieving SDG 3.

Overall, quality reproductive healthcare should not only be examined from the perspective of healthcare providers or professionals in the adolescent reproductive healthcare space, but should additionally incorporate adolescents' requests, recognizing that adolescents are experts on their health [23].

## Strengths of the study

To our knowledge, this is the first study in Kenya on reproductive health that has asked women and girls what they want regarding quality reproductive health. The use of an openended survey question allowed participants to express their requests freely and indicate the issues they wanted to be implemented to improve their health. The large sample size elicited diverse responses on quality reproductive health care from the perspective of adolescent high school girls in Kenya. Along with these unique responses, our data highlighted the different demands by type of school and region, suggesting the need to target interventions unique to specific populations. The perspectives of key informants further reinforced the survey results. Reproductive health advocates are currently disseminating the findings from the study to policymakers and program implementers as evidence of demands from women and girls. Adolescent reproductive health care programs are likely to be more successful if they target the self-articulated needs of adolescents.

#### Limitations

This study has limitations. First, the qualitative survey asked for only <u>one request</u> for quality healthcare. Adolescents probably had more requests but had to pick only one. Second, while the study offered girls a chance to speak up, it did not explore the reason behind the "asks" and how to navigate the issues. Additionally, this sub-sample was not nationally representative of all adolescent girls in Kenya, as it only analyzed high-school student views from eight counties. Some girls in other areas of the country may have different perceptions of quality reproductive health care. Future studies should explore conducting in-depth studies such as focus groups on quality reproductive healthcare among adolescent girls.

# **Acknowledgments**

We would like to thank all the adolescent girls who completed the survey and their respective schools. We also appreciate the key informants, mobilizers, data collectors, and data entry personnel for their hard work and dedication. To our colleagues, thank you for your encouragement and support. We would also like to acknowledge the White Ribbon Alliance staff who analyzed the entire global *What Women Want* survey.

#### **Author Contributions**

Conceptualization: Sylvia Ayieko, Nancy Kidula.

**Data curation:** Sylvia Ayieko. **Formal analysis:** Sylvia Ayieko. **Investigation:** Sylvia Ayieko.

Methodology: Sylvia Ayieko, Angela Nguku, Nancy Kidula.

**Resources:** Angela Nguku. **Software:** Sylvia Ayieko.

Supervision: Sylvia Ayieko, Angela Nguku, Nancy Kidula.

Validation: Sylvia Ayieko, Angela Nguku, Nancy Kidula.

Writing – original draft: Sylvia Ayieko, Nancy Kidula.

Writing - review & editing: Sylvia Ayieko, Angela Nguku, Nancy Kidula.

#### References

- Woog V, Alyssa B, Jesse P. Adolescent Women's Need for and Use of Sexual and Reproductive Health Services in Developing Countries. New York: Guttmacher Institute. 2015 Aug 1[Cited 2022 August 9]. Available from: https://www.guttmacher.org/report/adolescent-womens-need-and-use-sexual-and-reproductive-health-services-developing-countries
- World Health Organization: WHO recommendations on adolescent sexual and reproductive health and rights.2018 Oct 10 [Cited 2022 August 9]. Available from: <a href="https://www.who.int/publications/i/item/9789241514606">https://www.who.int/publications/i/item/9789241514606</a>
- Liang M, Simelane S, Fortuny Fillo G, Chalasani S, Weny K, Salazar Canelos P, et al. The State of Adolescent Sexual and Reproductive Health. J Adolesc Health. 2019 Dec; 65(6S): S3–S15. <a href="https://doi.org/10.1016/j.jadohealth.2019.09.015">https://doi.org/10.1016/j.jadohealth.2019.09.015</a> PMID: 31761002
- Ravindran TKS, Govender V. Sexual and reproductive health services in universal health coverage: a review of recent evidence from low- and middle-income countries. Sex Reprod Health Matters. 2020 Dec; 28(2):1779632. https://doi.org/10.1080/26410397.2020.1779632 PMID: 32530387
- Murewanhema G. Adolescent girls, a forgotten population in resource-limited settings in the COVID-19 pandemic: implications for sexual and reproductive health outcomes. Pan Afr Med J. 2020 Nov 25; 37 (Suppl 1):41. https://doi.org/10.11604/pamj.supp.2020.37.41.26970 PMID: 33552369
- Grønvik T, Fossgard Sandøy I. Complications associated with adolescent childbearing in Sub-Saharan Africa: A systematic literature review and meta-analysis. PLoS One. 2018 Sep 26; 13(9):e0204327. https://doi.org/10.1371/journal.pone.0204327 PMID: 30256821
- Hackett K, Lenters L, Vandermorris A, LaFleur C, Newton S, Ndeki S, et al. How can engagement of adolescents in antenatal care be enhanced? Learning from the perspectives of young mothers in Ghana and Tanzania. BMC Pregnancy Childbirth. 2019 May 23; 19(1):184. https://doi.org/10.1186/ s12884-019-2326-3 PMID: 31122199
- 8. Melesse DY, Mutua MK, Choudhury A, Melesse DY, Mutua MK, Choudhury A, et al. Adolescent sexual and reproductive health in sub-Saharan Africa: who is left behind?. BMJ Glob Health. 2020 Jan 26; 5(1): e002231. https://doi.org/10.1136/bmjgh-2019-002231 PMID: 32133182
- Birdthistle IJ, Floyd S, Machingura A, Mudziwapasi N, Gregson S, Glynn JR. From affected to infected? Orphanhood and HIV risk among female adolescents in urban Zimbabwe. AIDS. 2008 Mar 30; 22 (6):759–766. https://doi.org/10.1097/QAD.0b013e3282f4cac7 PMID: 18356606
- 10. United Nations: Transforming our world: The 2030 agenda for sustainable development, United Nations A/RES/70/1, New York, 2015 October 21. [Cited 2022 August 9]. Available from: https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A\_RES\_70\_1\_E.pdf
- Waage J, Yap C, Bell S, Levy C, Mace G, Pegram T, et al. Governing the UN sustainable development goals: interactions, infrastructures, and institutions. Lancet Glob Health. 2015 May; 3(5):e251–e252. https://doi.org/10.1016/S2214-109X(15)70112-9 PMID: 25833663
- 12. World Health Organization. Global accelerated action for the health of adolescents (AA-HA!): guidance to support country implementation. Global Accelerated Action for the Health of Adolescents (AA-HA!) Guidance to Support Country Implementation. 2017 Jan 1. [Cited 2022 August 20]. Available from: https://www.who.int/publications/i/item/9789241512343
- Darroch JE, Adding It Up: Investing in Contraception and Maternal and Newborn Health, 2017—Estimation Methodology, New York: Guttmacher Institute, 2018. [Cited 2022 August 20]. Available from: https://www.guttmacher.org/report/adding-it-up-investing-in-contraception-maternal-newborn-health-2017-methodology.
- Kenya National Bureau of Statistics: Kenya Demographic Health Survey 2014. Nairobi, Kenya: Ministry of Health Kenya and ICF international. 2015 Dec. [Cited 2022 August 20]. Available from: <a href="https://dhsprogram.com/pubs/pdf/FR308/FR308.pdf">https://dhsprogram.com/pubs/pdf/FR308/FR308.pdf</a>.
- 15. Olenja J, Krugu JK, Kwaak v.d A, Kawai D, Karanja S, Apanja M, et al., Factors influencing teenage pregnancy among Maasai girls in Kajiado West Sub-County, Kenya. An operational qualitative study report as part of the YES I DO programme implemented from 2016 to 2020. 2020 Nov. [Cited 2022 August 20]. Available from: <a href="https://www.kit.nl/wp-content/uploads/2021/01/YID-Kenya-Report-Teenage-pregnancy-final.pdf">https://www.kit.nl/wp-content/uploads/2021/01/YID-Kenya-Report-Teenage-pregnancy-final.pdf</a>
- 16. Harrington EK, Casmir E, Kithao P, Kinuthia J, John-Stewart G, Drake AL, 12et al. "Spoiled" girls: Understanding social influences on adolescent contraceptive decision-making in Kenya. PLoS One. 2021 Aug; 16(8):e0255954. https://doi.org/10.1371/journal.pone.0255954 PMID: 34383836
- Mburu A, Itsura P, Mabeya H, Kaaria A, Brown DR. Knowledge of Cervical Cancer and Acceptability of Prevention Strategies Among Human Papillomavirus-Vaccinated and Human Papillomavirus-Unvaccinated Adolescent Women in Eldoret, Kenya. Biores Open Access. 2019 Aug 20; 8(1):139–145. https:// doi.org/10.1089/biores.2019.0007 PMID: 31475078

- 18. Ministry of Health Kenya: Kenya Adolescent Sexual and Reproductive Health Policy. Nairobi, Kenya: Ministry of Health, Kenya, 2015. [Cited 2022 September 3]. Available from: https://knowledgecommons.popcouncil.org/cgi/viewcontent.cgi?article=1259&context=departments\_sbsr-rh
- Mazur A, Brindis CD, Decker MJ. Assessing youth-friendly sexual and reproductive health services: a systematic review. BMC Health Serv Res. 2018 Mar 27; 18(1):216. https://doi.org/10.1186/s12913-018-2982-4 PMID: 29587727
- Girod C, Ellis A, Andes KL, Freeman MC, Caruso BA. Physical, social, and political inequities constraining girls' menstrual management at schools in informal settlements of Nairobi, Kenya. Journal of Urban Health. 2017 Dec; 94(6):835–46. https://doi.org/10.1007/s11524-017-0189-3 PMID: 28875308
- 21. Phillips-Howard PA, Caruso B, Torondel B, Zulaika G, Sahin M, Sommer M. Menstrual hygiene management among adolescent schoolgirls in low-and middle-income countries: research priorities. Global health action. 2016 Dec 8; 9(1):33032. https://doi.org/10.3402/gha.v9.33032 PMID: 27938648
- 22. Pilgrim N, Jennings JM, Sanders R, Page KR, Loosier PS, Dittus PJ, et al. Understanding Quality of Care and Satisfaction With Sexual and Reproductive Healthcare Among Young Men. J Healthc Qual. 2018 Nov/Dec; 40(6):354–366. https://doi.org/10.1097/JHQ.000000000000149 PMID: 30399033
- 23. Ayieko S, Nguku A. Engaging Youth in Citizen-Led Advocacy and Accountability for Adolescent Sexual and Reproductive Health. East Afr Health Res J. 2019; 3(2):85–87. <a href="https://doi.org/10.24248/eahrj.v3i2.603">https://doi.org/10.24248/eahrj.v3i2.603</a> PMID: 34308200
- White Ribbon Alliance. What Women Want 2022. [Cited 2022 September 3]. Available from: <a href="https://whiteribbonalliance.org/resources/www-dashboard/">https://whiteribbonalliance.org/resources/www-dashboard/</a>
- Njue C, Voeten H, Ahlberg BM. 'Youth in a void': sexuality, HIV/AIDS and communication in Kenyan public schools. Sex Education. 2011 Aug 22; 11(4):459–470. https://doi.org/10.1080/14681811.2011. 595271
- ATLAS. ti Scientific Software Development GmbH. ATLAS.ti. 2019. [Cited 2022 September 3]. Available from: https://atlasti.com
- Lugo-Gil J, Lee A, Vohra D, Harding J, Ochoa L, Goesling B. Updated findings from the HHS teen pregnancy prevention evidence review: August 2015 through October 2016. US Department of Health and Human Services. 2018 Apr [Cited 2022 September 3]. Available from: <a href="https://tppevidencereview.youth.gov/pdfs/Summary\_of\_findings\_2016-2017.pdf">https://tppevidencereview.youth.gov/pdfs/Summary\_of\_findings\_2016-2017.pdf</a>
- De Haas B, Hutter I. Teachers' conflicting cultural schemas of teaching comprehensive school-based sexuality education in Kampala, Uganda. Cult Health Sex. 2019 Feb; 21(2):233–247. <a href="https://doi.org/10.1080/13691058.2018.1463455">https://doi.org/10.1080/13691058.2018.1463455</a> PMID: 29737926
- 29. Mohammed S, Larsen-Reindorf RE. Menstrual knowledge, sociocultural restrictions, and barriers to menstrual hygiene management in Ghana: Evidence from a multi-method survey among adolescent schoolgirls and schoolboys. PLoS One. 2020 Oct 22; 15(10): e0241106. https://doi.org/10.1371/journal.pone.0241106 PMID: 33091080
- Sommer M, Hirsch JS, Nathanson C, Parker RG. Comfortably, Safely, and Without Shame: Defining Menstrual Hygiene Management as a Public Health Issue. Am J Public Health. 2015 Jul; 105(7):1302– 1311. https://doi.org/10.2105/AJPH.2014.302525 PMID: 25973831
- Alhelou N, Kavattur PS, Rountree L, Winkler IT. 'We like things tangible:' A critical analysis of menstrual hygiene and health policy-making in India, Kenya, Senegal and the United States [published online ahead of print, 2021 Dec 9]. Glob Public Health. 2022 Nov 2; 17(11):2690–703. https://doi.org/10.1080/ 17441692.2021.2011945 PMID: 34882519
- Babbar K, Sivakami M. Promoting menstrual health: Towards sexual and reproductive health for all. Observer Research Foundation. 2023 Feb. 10(613):1–3.