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Reproductive Health Education in the Kibera Slum: Developing a Slum-Specific Curriculum

Susanna Schneider Banks
SIT Study Abroad

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Susanna Schneider Banks

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Academic Directors: Odoch Pido and Jamal Omar

Advisor: Odoch Pido

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ABSTRACT

The principal objective of this Independent Study Project is to make recommendations for a slum-specific reproductive health curriculum to be used in primary schools that serve the Kibera Slum in Nairobi, Kenya. In order to obtain data and form a credible basis for the recommendations, interviews were conducted with teachers, focus groups were facilitated with students, and questionnaires were distributed to parents. Additionally, observations were made about the current state of reproductive health education at each school. Data was collected at Kibera School for Girls, a private school in Kibera, and Olympic Primary School, a public school at the edge of the slum. Based on the data collected, this study has found that primary school students in Kibera require a holistic reproductive health curriculum covering pregnancy, HIV/AIDS, puberty and menstruation, and rape and sexual abuse, among other things. This curriculum should be based on a student-centered learning model and adjust its content and context for different age groups.

INTRODUCTION

Reproductive health is considered to be one of the most pressing concerns in the global health crisis today. As explained by Planned Parenthood Federation of America's International Program, "[w]orldwide, poverty, limited access to health services, lack of political will, legal restrictions, cultural taboos, and harsh gender inequality all conspire to put women at risk of harm resulting from unintended pregnancy, sexually transmitted infections, unattended childbirth, and unsafe abortion."[1] Furthermore, reproductive health is related to four out of the United Nations' eight Millennium Development Goals (gender equality, child health, maternal health, and combating HIV/AIDS) and is deeply ingrained in the overwhelming global problems of overpopulation and extreme poverty. The global overpopulation crisis that is caused by a lack of knowledge about reproductive health in many communities worldwide is pushing many communities deeper and deeper into poverty. According to the Reproductive Health Journal, reproductive health is "a state of physical, mental, and social well-being in all matters relating to the reproductive system, at all stages of life,"[2] meaning that individuals of all ages, all genders, and all walks of life are deeply in need of reproductive health education.

Reproductive health education is vital to reducing the risk of HIV/AIDS and sexually transmitted infections (STI's), reducing unintended pregnancy, and addressing rape and sexual abuse, which are all important to addressing overarching themes in public health, global poverty, and gender inequality. Many countries have national policies on reproductive health education, including Sweden, which has a Kindergarten through 12th grade public school comprehensive sexuality education curriculum in its public school system, with various topics and approaches for different age groups. In contrast, as the United States has seen rising teen pregnancy rates over the past few years, reproductive health education in public schools has continued to become an increasingly controversial and political issue.

Reproductive health education is particularly important in developing countries, such as Kenya, where reproductive health problems such as HIV/AIDS, STI's, unintended pregnancy, and rape and sexual abuse are even more common. Reproductive health education is essential in slum areas like Kibera in Nairobi, Kenya where these problems are endemic.

This paper seeks to examine the primary school reproductive health education in the Kibera Slum and based upon investigations of teacher assessment, student knowledge, and parent opinion at Kibera School for Girls and Olympic Primary School. The principle objective is to make recommendations for a new primary school reproductive health curriculum that is appropriate for the context of the Kibera Slum. Other objectives include assessing students' current knowledge levels, parents' opinions about what their children should be taught, and teachers' concerns and goals for their students – all of which assist in formulating curriculum recommendations. The recommendations are based upon the examination of the demonstrated needs of the students for education in the area, as well as the input of major stakeholders, including parents, teachers, and administrators.

This is a community-based, slum-specific study, grounded in the unique living conditions of the Kibera Slum. Children in Kibera are exposed to sexual activity, rape, and HIV at very young ages and must be given the tools necessary to protect themselves and live healthy lives. Some efforts at reproductive health education in the developing world have focused on western models and curricula that may not be culturally appropriate or practically applicable in the context in which they are implemented, which is likely related to the fact that the vast majority of research on this topic has been conducted by researchers from wealthy western countries. Furthermore the research that has been done on reproductive health education curricula that have been adapted to given contexts in the developing world typically pays little attention to the specifics of what is actually taught and how it is taught. Moreover, most approaches to these issues do not recognize the variable conditions within

the developing world. Most research has focused on rural areas, regardless of rapid trends of urbanization that have caused living conditions in many African slums to plummet. For example, the African Population and Health Research Center (APHRC) has found that "city dwellers are becoming increasingly more disadvantaged" than those living in rural areas, and specifically there is a "need to treat slum residents as a uniquely vulnerable sub-population on reproductive health matters."[3] Rural areas are not the only place, and are not necessarily the most important place, where this type of research is needed.

Lastly, in addition to examining the primarily discussed issue of HIV prevention and the secondarily discussed issue of unintended pregnancy, this paper examines puberty, menstruation, rape, sexual abuse, and commercial sex work – all vitally important to a comprehensive reproductive health education and particularly important for children living in slums. The world's slums are home to a specific set of experiences and risks, and Kenyan slums like Kibera additionally carry a certain set of socio-cultural conditions. This paper investigates the specific reproductive health context of the Kibera Slum, an important specificity that has not been recognized in previous research.

This paper is organized into five major sections: Introduction, Methodology, Discussion and Analysis, Conclusion, and Recommendations for Further Research. The Introduction explains the context of Kibera, including the conditions surrounding HIV/AIDS, unintended pregnancy, puberty and menstruation, and rape and sexual abuse. Additionally, the Introduction includes a literature review of research related to school-based reproductive health education, particularly in the developing world. Methodology details the four major data collection methods used in this study, which are teacher and administrator interviews, parent questionnaires, student focus groups, and classroom observations. Discussion and Analysis examines the data collected through the methods mentioned above and the significance of these findings. The Conclusion summarizes the findings of this paper and

makes explicit recommendations for how to implement a new slum-specific reproductive health curriculum. The Recommendations for Further Research section discusses the possibilities for additional research in this field. Following the major sections of the paper, refer to the Notes, Bibliography, and Appendices for more information.

Kibera: The Slum Context

There are two million people living in informal settlements and slums in Nairobi, Kenya's capital, meaning that the majority of the city's population is living on one percent of the land.[4] The Kibera Slum in Nairobi is one of the oldest and largest informal settlements in Africa. Though population figures range widely, Kibera is estimated to be composed of about one million residents living in a settlement roughly the size of New York's Central Park.[5] Kibera originally emerged when soldiers from the Nubian ethnic group who had served in the British Army were granted temporary rights to the land in 1912.[6] Since then the population has grown exponentially. Between 1971 and 1995, the population living in informal settlements in Nairobi grew tenfold, from 100,000 to over 1 million,[7] with many of the new residents moving to Kibera.

Residents of this slum live in extreme poverty in one-room homes constructed from a combination of sticks, mud, and corrugated iron sheets, without adequate access to clean water and sanitation.[8] The local government does not recognize informal settlements and slum areas as residential areas for city planning and budgeting purposes,[9] so Kibera residents suffer from the denial of many essential services that are supposed to be publicly provided. Overall, Kibera lacks adequate access to as well as medical clinics, schools, and roads.[10]

Along with economic poverty, Kibera is plagued by endemic sexual violence and HIV/AIDS rates. Education levels are low, as is access to medical care, and there is a serious lack of gender equity leading to sexual violence and significantly higher HIV risk for women.

Furthermore, the Nairobi police department is emphatically absent from the slum, leaving the community without any concerted force working to protect women and children from abuse.

HIV/AIDS and Unintended Pregnancy

Although HIV/AIDS prevalence in Kenya has decreased significantly over the past decade, rates still remain high among urban populations, especially urban women.[11] The HIV prevalence in Kibera is estimated to be at least 14 percent, which is double the national rate[12] and is likely related to a lack of knowledge about the disease and its transmission as well as the common occurrences of sexual assault and commercial sex work. Findings from a Population Council survey of Kibera adolescents ages 10 to 19 suggest that Kibera youth are incredibly uninformed about the realities of HIV/AIDS and how to protect themselves. Nearly a quarter of respondents did not know that there is no cure for AIDS, more than half were unclear on the inability to tell by physical appearance whether or not someone is positive, and nearly three quarters had incorrect information about prevention methods.[13] Across the African continent, young people ages 15 to 24 years are the most at risk for contracting HIV.[14] Furthermore, 30.9 percent of Kenyan men and 14.5 percent of Kenyan women report engaging in sexual intercourse before age 15.[15] Kenyan youth must have the necessary information to make educated decisions and protect themselves *before* they begin engaging in sexual intercourse and *before* they enter the most at risk age group for HIV infection.

The Population Council survey shows similar gaps in the knowledge of Kibera's youth when discussing family planning methods, with 28.7 percent of girls and 18.8 percent of boys reporting that they had not heard of any family planning methods. Furthermore, one in ten girls had used "safe days" or "natural family planning," a method based on the menstrual cycle, which is unreliable in preventing pregnancy and does not prevent against

HIV and STI's.[16] This lack of knowledge about family planning translates into high rates of unintended pregnancy. Of the female respondents, 16 percent had children, but only 26.6 percent of those young mothers wanted their first pregnancy at that time. Of these girls, 73.0 percent reported that their first pregnancy was an accident and 53.3 percent reported that it was because of their lack of knowledge about family planning and where to access family planning services.[17] Unintended pregnancies lead to young women discontinuing their educations and spur a continuation of the cycle of poverty (when a child is born into a family with already strained resources). With the decreasing age of first sexual experience, as mentioned above, primary school students need the resources to make informed decisions about family planning. Girls of childbearing age can be as young as 11 or 12-years-old – still in primary school – and they must understand the possible consequences of unprotected sexual activity.

Rape and Sexual Abuse

Though sexual violence is not always included in initial discussions of reproductive health, it is undeniably related to this area of public health and perhaps the most important issue to begin discussing with students at a young age. Sexual violence is an abuse of reproductive organs to which women and children are particularly vulnerable, and it can significantly increase the risk of unintended pregnancy as well as contracting HIV and other STI's. Amnesty International has characterized violence against women, including sexual violence, as "endemic in Nairobi's slums," particularly when women must travel long distances for water and sanitation facilities and must use toilets and bathing facilities that leave them exposed.[18] According to the same Population Council survey mentioned above, 18.6 percent of boys and 59.6 percent of girls in Kibera fear being raped in their communities. Furthermore, 11.4 percent of boys and 12.8 percent of girls say that they have

been "touched indecently" by a member of their community[19] and the true numbers are likely much higher due to underreporting. So-called "prevention education" about sexual violence is something of a misnomer, since the only people who can truly prevent this type of abuse are the abusers. It is, however, important for children to learn to recognize and report sexual violence and abuse if and when it occurs.

With respect to the closely related issue of child commercial sex work, by the age of 16, 66 percent of girls in Kibera are forced to trade their bodies for food. Some girls living in this extreme poverty begin engaging in this type of work as early as age six.[20] Children must be taught how to recognize all forms of sexual abuse, that it is unacceptable, and to whom they should report it if it occurs. They also must understand the implications and risks of commercial sex work. Furthermore, empowerment of young girls and education on gender equity and consent for all students can work to change the future landscape of sexual violence in the slum.

Puberty and Menstruation Education

Puberty education is incredibly important to physical and emotional growth. Children must understand the changes in their bodies in order to grow into confident, self-aware adults. This is particularly true when it comes to young girls and menstruation. Girls' conceptions of menstruation innately affect their self-perceptions and self-confidence, as well as their education and their health. Girls who do not understand menstruation – its purpose, its meaning, and that it is completely normal – can hide the fact that they have begun menstruating and develop low-self-esteem. Furthermore, they may not understand the implication that beginning menstruation means that they can now become pregnant. Menstruation, without proper education and resources, can also cause girls to develop infections from using unclean rags rather than sanitary napkins and can cause many girls to

miss school for a few days each month due to menses.[21] The interruption of schooling, in particular, can have a lasting affect on an individual girl's future and the greater future of gender equality.

Reproductive Health Education in Developing Countries

Over the past decade, with the severity of the HIV/AIDS pandemic in sub-Saharan Africa, there has been a concerted effort to research the effectiveness of school-based HIV education and prevention programs in the region and implement such initiatives. Likely due to this driving force of the HIV/AIDS pandemic, there has been a multitude of research on HIV prevention programs, but very little on pregnancy prevention and on puberty and menstruation programs. Research on rape and sexual abuse programs has been nearly nonexistent. Nonetheless, the research about HIV prevention programs can yield useful information for the implementation of a holistic reproductive health curriculum. Therefore, what follows is an analysis of studies on HIV and pregnancy prevention at schools in sub-Saharan Africa.

Studies have overwhelmingly found that reproductive health education is most effective if begun at a younger age. It is important to target the right population at the right time,[22] and in sub-Saharan Africa the right population is young people and the right time is primary school. Over 80 percent of those currently living with AIDS are 15 to 24-years-old, and three quarters of these youth live in sub-Saharan Africa,[23] and accordingly, these young Africans are the main group sustaining the HIV pandemic. Furthermore, many children in this region do not attend secondary school[24] and are difficult to reach outside of school-based programs, making primary school the single venue where the most young people can be reached.[25] In terms of success in behavior change, primary school is also an essential venue since students who receive early reproductive health education before the onset of puberty are

able to make informed decisions before they have formed sexual behavioral patterns.[26] Studies in the developing world have found similar results as in wealthier countries, where it has been found that it is easier to establish low-risk behavior than to change existing high-risk behavior,[27] and thus, reproductive health education is more effective when begun before students become sexually active.

Contrary to statistics in wealthier countries, however, there is significant evidence of sexual activity among older primary school students in sub-Saharan Africa,[28] suggesting that reproductive health education is needed in lower primary school. A study conducted in Nigeria found that providing reproductive health education by age 14 did not reduce teen pregnancies, and that, in fact, education was needed earlier.[29] Thus, the research clearly supports the concept that for the prevention of both the transmission of HIV and unintended pregnancies, primary school reproductive health education is necessary.

In terms of the actual content of the curriculum, programs that are interdisciplinary, collaborative, and participatory as well as longer in duration have been found to be more effective. These teaching styles have been found to assist students in personalizing the information they are given and imagining future situations in which they could use this knowledge. This includes the use of musical and dramatic performances, poetry, role-playing, small group discussions and assemblies.[30] Furthermore, curriculums that envision the classroom as a safe, supportive space where students feel free to express themselves, discuss their experiences, and voice their questions and concerns, have been more effective in achieving changes in knowledge, attitudes, and behavior.[31] Most studies that included a measure of duration of the program did not measure the effect of programs lasting over one year, but the finding that longer programs were more effective[32] suggests that a continuous curriculum following students through all levels of primary school would likely be the most effective approach.

Many studies conducted in schools in sub-Saharan Africa have commented on the importance of parent and community involvement in the development and implementation of reproductive health curriculums. The involvement and investment of stakeholders in the community is vital to the success and sustainability of a program of this nature. In order to ensure this prerequisite for success, the Primary School Action for Better Health (PSABH) initiative in Kenya even facilitates a weeklong training workshop for the head teacher, three class teachers, and one parent before implementing their curriculum at a new school.[33] The Nigerian study found that "teenagers with whom parents have discussed sexuality issues are less likely to be sexually active,"[34] therefore making parents a vital resource for any program promoting abstinence as a risk reduction technique. Community and parent involvement is also important to insuring cultural sensitivity and specificity.

The World Health Organization (WHO) guidelines established in 1992 require that reproductive health education programs be adapted to local cultures and contexts,[35] and most programs that have been documented as successful have done just that. A Tanzanian study focused on both the feasibility and effectiveness of the program being contingent on cultural specificity.[36] Dr. Douglas Kirby, a research scientist and leading expert on sexuality and HIV education who has worked with worked with the World Health Organization and USAID, has developed standards for implementing reproductive health curriculums in developing countries. He discusses the importance of considering community values and norms in the development and adaptation of curricula, which is important to prioritizing content and selecting activities for a curriculum.[37] Every community has different norms and realities within the developing world, and even within Kenya. It is important to address students' realities, and thereby address their most pressing concerns and provide them with tools that they can actually use.

Primary School Action for Better Health (PSABH) in Kenya

The major effort to fulfill the need for reproductive health education in primary schools in Kenya has been the Primary School Action for Better Health (PSABH), implemented by the Centre for British Teachers (CfBT) in partnership with the Ministry of Education, which first piloted its program in 2000.[38] The initiative attempts to integrate AIDS education into the regular government curriculum for upper primary students (Standards 6, 7, and 8). The PSABH program has yet to be implemented countrywide, but even where it has been implemented, it has had mixed results. The students have demonstrated a need for this type of education and the curriculum is generally in line with the available research on effective intervention programs, but implementation has been a continuous problem mostly because of the Ministry of Education's structural shortcomings.

Prior to its adoption by the Ministry of Education, PSABH conducted a baseline study that demonstrated a serious need for reproductive health education in Kenyan primary schools. The study found that primary school teachers in Kenya are highly concerned about their students' vulnerability to HIV and the pressures they face to engage in sexual activity at a young age. At schools serving Nairobi's informal settlements (schools with the majority of their students from the city's seven slum areas) teachers reported that their students are at high risk for HIV infection because of lack of parental supervision at night and young girls being forced into commercial sex work. Students themselves reported that unemployment and poverty create pressure to engage in transactional sex.[39] Of the students in the schools that serve Nairobi slum areas, only 49.3 percent said that they felt that they "can say 'no' to sex."[40] It is difficult to discern honest answers from students' self-reporting on sexual activity,[41] but 30.1 percent of male students and 8.1 percent of female students in Standards 6 to 8 at the slum area schools reported having had sexual intercourse. The median ages for first sexual intercourse among the sexually active students were 9.99 years for boys and 10.46

years for girls. [42] Of those who reported having had sexual intercourse, only 18.1 percent of male students and 15.9 percent of female students used a condom during their last intercourse.[43] Of the female students who had engaged in sexual intercourse, 27 percent were given a gift or money for their first sexual intercourse (indicating transactional sex) and 26 percent were physically forced into their first sexual intercourse.[44] The data clearly shows that children are exposed to sex. Some of them are engaging in intercourse. Some are engaging in transactional sex or have been sexually assaulted or raped. They are being exposed to a wide range of reproductive health issues and need to understand the implications of their actions and how to protect themselves.

Regardless of this demonstrated need, the PSABH program has not yet been implemented at many schools in Kenya, and an adequate structure for the implementation of the Ministry of Education's HIV/AIDS policy on a large scale has not been created. Teachers and other stakeholders lack the knowledge and skills for successful implementation. Furthermore, they are not familiar with the policy and are not aware of their duties in implementation.[45] There is obviously a demonstrated need for reproductive health education among Kenyan students, particularly those living in Nairobi's slum areas, but this is not being provided to them. Perhaps better implementation of the PSABH program would have a positive effect, but it is still not enough, as it lacks information about sexual violence and menstruation, and it may be undertaken too late, since some upper primary school students are already sexually active.

Kenyan Institute of Education

The Kenyan Institute of Education (KIE), based in Nairobi, has developed HIV/AIDS and Life Skills curricula and teaching materials for students of all ages, in order to be used in Kenyan schools. Since 2003, KIE has integrated HIV/AIDS education into its Science and

Life Skills curricula, making KIE's Life Skills curriculum one of the only school curricula dealing with reproductive health that has actually been developed in Kenya, by Kenyans.[46] Life Skills focuses on psychosocial skills and has the ability to cover all the physical, emotional, and social aspects of reproductive health. KIE's curriculum has many promising aspects, though in some areas it also falls short of what is necessary, particularly in Kibera.

The main reproductive health issue discussed in KIE's materials is HIV/AIDS. Particularly for older students, the materials disseminate important information about the four fluids of transmission (blood, semen, vaginal fluid, and breast milk) and the development of the disease, which is important to explaining why people who are HIV positive do not necessarily look sick.[47] There are, however, some instances of misinformation and withheld information for all levels. The discussion of transmission via toothbrushes, combs, nail cutters,[48] and kissing[49] is emphasized, particularly in materials for younger students which is strange since the chances of being infected with HIV in these ways is so small that it does not even seem worth mentioning. What is worth discussing is the role of body fluids in transmission. It makes sense not to discuss transmission by semen, vaginal fluid, and even breast milk for students in Standard 1-3, but not discussing transmission by blood is a mistake. If information was included on transmission through blood, students would be better equipped to understand when sharing toothbrushes, combs, and nail cutters, as well as possibly kissing, may be dangerous. For older students, there was little focus on the importance of getting tested and forms of prevention such as condoms. Due to the higher percentage of Kenyans engaging in sexual intercourse before age 15, it is important for students in upper primary school to be prepared for the responsibilities that accompany being sexually active. The scientific basis of HIV testing is discussed,[50] though the importance of knowing one's status is not emphasized. Furthermore, condoms are not mentioned at all.

Perhaps the most important consideration in HIV/AIDS education at all levels in Kenya is the reality of students who already have HIV being present in the classroom. Particularly since most HIV positive primary school students have been infected via mother-to-child transmission, the rhetoric of the curriculum must avoid connecting contracting HIV to bad behavior. Additionally, a curriculum must not focus as exclusively as the KIE curriculum does on the concept that if a person contracts HIV, the person will die. Information must be included on treatment, which does not have to imply that living with the disease is easy, but that it is possible.

The extreme lack of information about pregnancy in the KIE materials is alarming. A True or False activity for upper primary students includes the debunking of some pregnancy-related myths, including the concepts that pregnancy cannot occur during a girl's first sexual intercourse, if a girl has her period, if a couple has intercourse while standing, or if a girl urinates after intercourse.[51] The biological explanation for how pregnancy actually occurs, however, is absent from all materials. One workbook made for students in Standards 4 and 5 refer to boys and girls becoming parents if they engage in sex,[52] while both pregnancy and sexual intercourse likely remain mysteries to many students.

KIE provides extensive coverage of the body changes related to puberty in its teaching materials, though information on menstruation is lacking. All materials made for students in Standard 4 and above include information about the changes related to puberty, including outward physical changes, sexual urges, and menstruation, though there are no detailed explanations of the latter two concepts. Menstruation, the creation of "mature semen," and the occurrence of "wet dreams" are all mentioned,[53] but there is no explanation of what these concepts entail or why they occur. One area in which KIE does exceptionally well on the issue of puberty is self-esteem and body image. Various materials cover loving

and accepting one's own body, as well as understanding that pubescent changes come at different ages for everyone.

The issues of rape and sexual abuse receive a significant amount of attention in the KIE materials, though the language and rhetoric used is often problematic. The materials provide good explanations and discussions of private parts (that no one should touch or see them), good touch/bad touch (helping students recognize abuse), and reporting abuse to parents and teachers if and when it occurs. In addition to this information, however, many students need clear definitions of rape and abuse that goes further than the phrase "misuse of our bodies,"[54] which is used in an activity for students in Standards 1-3. Most importantly, KIE's focus on "prevention education," which quickly becomes victim blaming, is highly problematic. As discussed above, the only people who can really prevent sexual abuse are the abusers; the only people who can really prevent rape are the rapists. This responsibility can never be put on a child. It is important to teach students certain safety measures, as KIE attempts to do, such as not walking alone, avoiding strangers, and telling a parent or adult if someone touches you in a way you do not like. For example, one activity book for lower primary school students says, "When other people touch my body and give bad gestures I should tell my parents and teachers."[55] However, other attempts at discussing rape and abuse in the KIE material take a victim blaming approach, which is always unacceptable and especially inappropriate due to the likelihood of students having already been abused. A book for upper primary school students includes a story of a girl who has been molested by her uncle and the "Key Message" given is, "It is your responsibility to ensure that nobody touches you in your private parts."[56] Again, it is never a child's responsibility to stop an adult from abusing them. Additionally, a curriculum on this sort of abuse must entertain the unfortunately common occurrence of abusers not stopping when victims say "no" or try to

prevent the assault. Furthermore, if a child believes that it is their own responsibility to stop their abuse, they are less likely to report that abuse to a parent or teacher.

Lastly, primary school education on rape and sexual abuse should use the unique opportunity it has to change the future landscape of these social problems, which KIE does not. Materials for students in Standards 4 and 5 focus on "Learning to Say NO!"[57] but do not also discuss listening to others when they say "no." Rape and sexual abuse education is not only to help children deal with the occurrence in their own lives, but to try to change the future of abuse in the entire community. A comprehensive reproductive health curriculum must take this into account.

A Slum-Specific Curriculum

Reproductive health education is essential for all students across the world, but the curriculum must be specific to the context in which students live. As explained by AVERT, an international HIV/AIDS charity, "there is no single model of AIDS education that is appropriate to every country; different situations call for different responses."[58] The same is true for the larger category of reproductive health education. Children in Kibera need a curriculum that will address their unique environment, as detailed above. Students need a culturally and economically specific curriculum.

It is not surprising that Kibera youth encounter very different situations and pressures in their daily lives, when compared with their counterparts in other countries, or even in other areas of Kenya. Nairobi slum residents on average begin engaging in sexual intercourse about three years earlier and have approximately 0.34 more sexual partners than their counterparts living outside the slums.[59] These statistics are related to the early exposure to sexual activity, as well as the economic pressures to engage in commercial sex work. Children are often socialized into sex at an early age, likely without understanding what it means or its

repercussions, due to the one-room homes in which most Kibera residents live. Children who witness their parents or other relatives engaging in sexual intercourse are more likely to begin having sex at a young age.[60] Furthermore, unemployment and low and unstable incomes in slum areas often pressure women and girls into engaging in commercial sex work as a means for survival.[61] This exposes them to high risks for the contraction of HIV and STI's, as well as unintended pregnancy, and it puts young girls in particular at risk for reproductive injuries due to their lack of pubescent physical development. A reproductive health curriculum for children in Kibera must acknowledge and address children's early exposure to sexual activity, their lack of access to medical and educational resources, and the high incidence of HIV/AIDS and sexual violence in their community. It also must consider the contributions of major community stakeholders in order to realize the local realities.

METHODOLOGY

Various research methods were used in order to gather data on teachers' assessments, students' knowledge, and parents' opinions on reproductive health education. Data was collected at Kibera School for Girls and Olympic Primary School, which both serve the Kibera Slum community. Kibera School for Girls is an all-girls, English-immersion, private school in the Gatwekera village of Kibera that is mostly funded by **be consistent with capitals* western donors and foundations. It currently includes classes from Pre-Kindergarten to Grade 2, though it plans on expanding to a full pre-school and primary school (Pre-Kindergarten to Grade 8) by adding a new class each year. It has small classes, a small student-to-teacher ratio, and a student-centered learning model. Kibera School for Girls created an important basis for this study because of the researcher's previous work with the school and its students and the fact that the school is currently working on developing a new reproductive health curriculum. Olympic Primary School is a public school in the Olympic

neighborhood at the edge of the Kibera Slum, administrated by the City Council of Nairobi. It serves over 3,000 students in Standards 1 through 8 and is very overcrowded, with large class sizes and large student-to-teacher ratios. Both schools serve populations that live in the slum, but present two different types of schools and two different approaches to education – one private and one public; one Montessori-based and one more rigid and structured.

Data on teachers' assessments of their students' reproductive health education needs was gathered via individual interviews. Teachers have a unique perspective on the struggles that their students face both inside and outside of the classroom. They also are the most knowledgeable when it comes to how their students should be taught, regardless of the subject matter. Teachers at both schools were interviewed about their perceptions of what their students need from a reproductive health curriculum and about their own conceptions of what their students should be learning about reproductive health. Additionally, teachers' personal goals for the future of their school's reproductive health curriculum were considered. More generally, interviews with teachers provided information about what concepts on reproductive health are currently being addressed at each school and they provided a second-hand account of students' needs from qualified professionals. Interviews with school administrators, such as the head teachers and others, supplemented this area of research. All teachers and administrators who were interviewed were asked to sign a consent form allowing their names and basic demographic information to be used in this paper.

At Kibera School for Girls, interviews were conducted with six teachers, the headmistress, and the school social worker, making a total of eight interviews. All teachers at Kibera School for Girls were interviewed, with the exception of a few assistant teachers who are new to the staff and therefore may not yet have a deep understanding of the school environment or their students' realities. At Olympic Primary School, interviews were conducted with six teachers and the deputy head teacher, making a total of seven interviews.

Teachers were recruited for interviews by the Deputy Head Teacher and by other teachers who had been interviewed, since there are 41 teachers in total at the school and the researcher did not have the time or resources to undertake so many interviews. More interviews were attempted, but unfortunately some teachers were often unavailable because the research was being conducted during the final week of classes before Christmas vacation. Additionally, it appeared that many teachers were weary of being involved in the research, likely due to a lack of understanding of its purpose or a lack of trust in the researcher as an outsider. The researcher had a previous relationship with the staff at Kibera School for Girls, which assisted with the level of trust involved in the interviews there.

Data on student knowledge was gathered via small-scale focus groups of five students each. The data collected from students mainly focused on the breadth and depth of their knowledge on key reproductive health issues. Additionally, students' questions about reproductive health were generated in order to assess exposures the students have had to certain reproductive health issues that have caused confusion because of knowledge gaps. It is important to know what students have been exposed to, what they already know, and what they have questions about in order to generate a curriculum that will best serve their needs. Shining Hope for Communities concluded that conducting focus groups with Kibera School for Girls students was inappropriate, particularly because they are so young, and thus this form of data collection was unable to be completed at Kibera School for Girls.

Three focus groups consisting of five students each were conducted at Olympic Primary – one with students from Standard 1, one with students from Standard 4, and one with students from Standard 7. These focus groups were representative of the different age groups of students at the school. The focus groups were facilitated by a Kenyan research assistant, rather than by the researcher, in order to ease the students' comprehension and comfort level. Students were asked at the beginning of each focus group which language

(English or Kiswahili) they would prefer to speak in the group. The Standard 1 focus group was conducted Kiswahili, while the focus groups with Standards 4 and 7 were conducted mostly in English, with some Kiswahili and Sheng (Kenyan slang) used for the sake of clarity. The researcher observed and took notes during all focus groups, in addition to creating audio recordings for translation.

The students in the focus groups were mostly chosen by their teachers and were from one randomly selected class per Standard (1N, 4N, and 7N). The teachers were asked to choose the students randomly, but the sampling used for participant selection was not ideal due to presumed teacher bias. The researcher chose the students in the Standard 4 focus groups because the teacher was not present at the time, thus that focus groups likely had the least sampling bias. The researcher considered gender in her choices and asked the teachers to do so as well, thus the Standard 1 focus group included three male students and two female students, as did the Standard 4 focus group, while the Standard 7 focus group included two male students and three female students. The Standard 1 focus group varied slightly from the others in that the students were asked to draw pictures about each topic prior to group discussions in order to serve as an ice-breaker and to assist the students in forming and expressing their thoughts.

Data on parents' opinions about school-based reproductive health education was collected via questionnaires that were distributed to students to bring home to their parents or guardians. The students were asked to return the questionnaires four days later after their parent or guardian had completed it. Additional questionnaires were collected the following week from students who had not returned them on the original due date. The questionnaire was completely in Kiswahili to assist with parental comprehension and comfort. These questionnaires gathered data on what reproductive health concepts parents believe their children should learn about in school. They also assessed parental conceptions of the most

important reproductive health issues in their community and their opinions on the vulnerability of their children. Parents are a vital part of every child's learning experience. Concepts that students learn in school must be reinforced by parents and concepts that students are exposed to at home must be further examined in the classroom context. In order for students to have a successful learning experience, parents and teachers must be working as a team. Parent involvement is vital.

It is Kibera School for Girls' policy that students' parents and families should not be subjected to outside research. Therefore, the parent questionnaire was only distributed at Olympic Primary. This is not ideal for sampling, but since the schools are physically close to one another (about a 10 minute walk) and both draw all or most of their students from the Kibera Slum, results from a large sample size of parents at Olympic Primary are likely to be applicable to the context of Kibera School for Girls as well.

A total of 227 questionnaires were distributed to the same randomly selected classes at Olympic Primary School mentioned above, with 86 distributed in Class 1N (two students absent), 85 distributed in Class 4N, and 56 distributed in Class 7N (22 students absent). Of these, 84 questionnaires were returned, with 30 from Class 1N, 23 from Class 4N, and 31 from Class 7N. Of the returned questionnaires, 80 were completed and viable for data analysis.

In addition to the above mentioned data collection methods, the researcher made observations about the state of general education at both schools. At Olympic Primary informal observations were made about the classroom structure and teaching styles. At Kibera School for Girls, particular attention was paid to the Life Skills curriculum, a class taught once a week for each grade by the Headmistress, Anne Olwande, focusing on various social, emotional, and physical health issues. This Life Skills curriculum was examined,

through three classroom observations, as a possible venue in which to implement reproductive health education.

DISCUSSION AND ANALYSIS

The different data collection measures all suggest that primary school students should receive a comprehensive reproductive health education with varied content and approaches based upon student age. At Kibera School for Girls, this education can likely be included in the Life Skills Curriculum; however, at Olympic Primary School it might require greater scale curriculum adjustment.

Teacher and School Administrator Interviews

The teachers and school administrators' opinions on what their students should learn in school were closely related to their perceptions of the greatest problems in Kibera and their personal concerns for their students' safety and futures. Many teachers mentioned HIV/AIDS, unintended pregnancy, and gender-based violence or rape as the greatest reproductive health concerns in Kibera. Collins Nyasio, a teacher in Standards 4, 5, and 6 at Olympic Primary School, discussed the lack of medical care for all Kibera residents, and for young mothers in particular, as serious concerns in the slum.[62] Teachers mentioned very similar concerns for their students as for Kibera as a whole, with many citing HIV, pregnancy, gender-based violence or abuse, school completion, and poverty. Agatha Mutiso, a teacher in Standard 1 at Olympic Primary, expressed general concerns about not being able to protect her students from many dangers in Kibera, explaining, "down in the slums, it's hard, we cannot get there."[63] Tabitha K. Mulyungi, a teacher in Standard 3 at Olympic Primary School, described rape as "a serious problem in Kibera for both men and women, even children."[64] Gabriel Murithi, an upper primary teacher (Standards 4-8) at Olympic

Primary School, elaborated on the great risk students face of sexual abuse, saying that there are many rape cases, particularly among lower primary students, and there have recently been a shocking number of sodomy cases involving young boys in the school.[65] Anne Olwande, the Headmistress of Kibera School for Girls, expressed concerns about students not understanding their own sexual abuse due to their young exposure to sexual activity in their homes, explaining:

> The connection in terms of this is bad, they don't know, for the very young ones. This is my dad, I saw h[im] kissing my mom, so if he kisses me, he touches me, it's not bad. But they need to understand that this love between you and your father, how far is too far.

This fear for her students led Ms. Olwande to suggest that they should learn about sexual abuse and the implications and consequences of sexual activity, among other subjects related to reproductive health.[66]

The most common topics that teachers said their students should learn about were HIV contraction and prevention, menstruation, pregnancy, and human anatomy. Rita Malika, a Pre-Kindergarten teacher at Kibera School for Girls asserted that even her five- and six-year-old students need reproductive health education. She explained that her students must learn about their private parts (that no one should touch or see them) and about interactions with strangers, otherwise "they do not know if it is right or it is wrong." She also mentioned that older students must learn about menstruation and sanitary napkins *before* they begin menstruating. She noted that some girls who are not properly educated use rags rather than sanitary napkins, which can lead to infection and disease.[67] Julia Alubala, a Kindergarten teacher at Kibera School for Girls, related the importance of her students' surroundings in Kibera to their need to learn about certain reproductive health subjects:

> Given that they are living there, in this community, whereby there is, these children are exposed to this sexual harassment, so if at all, one can, one faces such sexual harassment, she is able to know what she should do. Who she should report to, and what she should do and what she shouldn't do.[68]

Tina Ishmael, the school social worker at Kibera School for Girls and the guardian for the boarding students there, discussed the importance of students learning about pubescent body changes and particularly related it to the issue of emotional health and self-esteem. She shared the story of the oldest boarding student who began crying because the other girls were "backbiting" her about the fact that she was beginning to grow breasts. Ms. Ishmael explained, "we had to sit down and talk because they don't know anything about body changes."[69] She discussed this story as representative of the need for all of the students to learn about these issues.

Most teachers mentioned a specific age at which discussions of sexual intercourse should enter the classroom, with the average age given being 9.27-years-old, which generally means the 3rd grade or Standard 3. Ms. Olwande explained, "[a]t nine-years-old a child needs to understand how someone gets pregnant, where babies come from, how AIDS can be transmitted through sexual encounters, and so on." She focused on the onset of menstruation as early as nine-years-old as evidence for the need for more in depth education. She explained further:

> We really need to make them understand that actually this is something you should look forward to, that is actually going to happen one of these days, and once this starts, it means they can actually get pregnant, if someone has a penetration with you somehow.[70]

Sharon Mbaki, a 2nd grade teacher at Kibera School for Girls suggested that students might be ready to discuss sexual intercourse as early as six-years-old. She explained, "I think from six, from six years upwards. Because most of the girls, they know a lot of things."[71] She thinks that students know much more than many adults may believe. Ms. Mutiso expressed a similar opinion, explaining, "they know everything, there's nothing you can lie to them." She discussed the serious issue of some students as young as Standard 1 "practicing" by touching themselves or each other under their desks during class after having seen their parents or other relatives engaging in sexual activity in their homes.[72] Ms. Ishmael also believes that

students are being exposed to sexual concepts at an early age and she focused on the 2nd graders at Kibera School for Girls as in serious need of reproductive health education. She explained that many of those students have begun discussing sexual activity and boyfriends, though as she puts it, "[m]ost of them are doing things which they don't know the consequences."[73] Florence Ashorna, a 1st grade teacher at Kibera School for Girls, thinks that at most schools discussions of sexual activity should not begin until age 13, but in Kibera it is different. She explained, "I think from Class 4 it should be taken seriously accordingly to how these children are, the way they behave, from their backgrounds. We cannot wait until 13 years."[74] It is clear that the teachers agree – Kibera needs a slum-specific curriculum.

When prompted about if or why school-based education was important, many teachers brought up the issue of parent education, suggesting that many parents do not have the information necessary to educate their children on reproductive health issues. Furthermore, many teachers discussed the necessity of reinforcement of school-based education at home, and the importance of dual education on reproductive health both in school and at home. This concept prompted Ms. Ishmael to suggest that a parent workshop should be a part of the implementation of a new reproductive health education curriculum at her school. She said that it is "good even for the parents to be encouraged to be talking about [reproductive health]" and asserted that a workshop could assist parents with strategies for discussing these issues with their children, and reiterate why it is so important.[75]

Many teachers discussed the need for separate class time for reproductive health education, which should include physical, social, and emotional health. Ms. Olwande, who already teaches a Life Skills class for her students, sees reproductive health as fitting under the greater umbrella of life skills and self-awareness. She explained that they are learning to know themselves socially and emotionally in Life Skills class and knowing themselves sexually is a logical next step. Mr. Murithi explained that the current public school

curriculum only includes one or two lessons per year, which leaves students with "too shallow of an understanding."[76] Mr. Nyasio explained that in addition to a new curriculum, teacher and staff need additional support. According to Mr. Nyasio, teachers are in need of more education and training on various reproductive health issues. He suggested perhaps implementing a series of seminars for teachers to give them the knowledge and tools necessary in order to teach their students about reproductive health.[77]

Regardless of the type of education given in school, Caleb Ochieng, the Deputy Head Teacher and a teacher in Standard 8 at Olympic Primary School, is concerned about students engaging in commercial sex work. He described the health curriculum as similar to "teaching somebody who is hungry not to steal, but you are not giving them food," suggesting that as long as these students are still living in poverty it is very difficult to influence behavior change. He explained that "they want ways of surviving" and can end up engaging in commercial sex work in exchange for food or money, particularly if their parents are already involved. Furthermore, Mr. Ochieng explained that even if there was a useful way to change the current curriculum, it is "very difficult to make change at the school level" in the public system.[78] Other teachers and administrators, however, were more optimistic. Enock Nyakundi, a teacher in Standard 3 at Olympic Primary School, explained that he is "trying to nurture children to become responsible in the future,"[79] a response that suggests that he is more focused on giving students necessary decision-making tools, rather than measuring his success in tangible behavioral change. Ms. Olwande described her belief in the success of reproductive health education by saying, "I believe issues like unwanted pregnancy will be avoided by our girls, if this information is availed to them in good time."[80] Pregnancy is a particularly important concern for her since she runs a girls school.

Overall, on most issues, the difference between responses at Kibera School for Girls and Olympic Primary School were negligible. The two major differences in interview data

surround the issue of gender, in that both the students and the teachers at Kibera School for Girls are 100 percent female. This was likely the reason that many more teachers at Kibera School for Girls discussed education about menstruation, in terms of biological education, practical education, and self-esteem-based education.

Parent Questionnaires

Students' parents generally made similar assessments to those of the teachers and school administrators, with most parents expressing support for reproductive health education for their children and in particular the importance of receiving this education in school. Of the parents surveyed, 86.25 percent live in the Kibera Slum and the vast majority support some type of in-school reproductive health education for their children. Most parents thought that unintended pregnancy, HIV/AIDS, puberty and menstruation, and gender-based violence and rape were very important issues in their community. Similarly, most parents said that they were very worried about their child's risk for unintended pregnancy, HIV contraction, and being raped and abused. Likely due to these concerns, most parents felt that it was very important that their child learn about pregnancy and pregnancy prevention, HIV/AIDS and HIV/AIDS prevention, puberty and menstruation, and gender-based violence and rape as a part of their primary school education.

What exactly parents want included in this education is more varied. The most commonly chosen subjects were body changes during puberty (81.69 percent of parents), abstinence (64.79 percent for HIV prevention and 60.56 percent for pregnancy prevention), and information about what to do if you are a victim of rape or abuse (57.75 percent). Some parents reported that even some typically controversial subjects are important to focus on, including the relationship between menstruation and pregnancy (52.11 percent), menstruation in general (43.66 percent), contraception for pregnancy prevention (40.85 percent), and

condom use for HIV prevention (38.03 percent). Less than five percent of parents said that they did not want their child to receive any in-school education about any of the given subject-areas, which included pregnancy, HIV/AIDS, puberty and menstruation, and gender-based violence and rape.

When asked if they had any additional thoughts or opinions to share, some parents included personal comments at the end of the questionnaire. Many parents expressed support for school-based reproductive health education, though there were also a few objections. There were a few parents who mentioned concerns about their children wanting to engage in sexual activity earlier because of information about reproductive health to which they might be exposed in school, although this was far less common than parents who hoped that reproductive health education would help their children to make better decisions about their sexuality. A mother of a girl in Standard 7 said, "I want my child to be educated on theses issues in school so that she can decide well."[81] Overall, most parents focused on age appropriateness and ensuring that the content and the context of a reproductive health curriculum would be targeted to the needs and concerns of each age group. One mother of a girl in Standard 4 explained, "[t]his education should be taught a child at an early age for knowledge so that he/she can understand slowly."[82] Another mother of a boy in Standard 4 said, "I would like us like parents with you to be in the frontline to educate our children,"[83] suggesting a call for parent involvement as has been suggested been suggested by some teachers. The mother of a girl in Standard 7 said, "[i]t's good [for] a child to know how life is nowadays and how to prevent dangers and problems brought by diseases, pregnancy and rape."[84] This comment certainly appears to support the central conclusion in this paper that a context-specific curriculum is necessary.

Student Focus Groups

The students in all three focus groups showed a limited general knowledge of reproductive health issues, likely based on observation and minimal reproductive health education in school. Knowledge varied based on the age group, as to be expected, but each lacked important information for their level. Highly problematic areas included sexual transmission of HIV and STI's and the connection between the menstrual cycle and pregnancy.

The students in Standard 1 had minimal knowledge, if any, of most topics, which for some areas should be expected for six and seven-year-olds but for others is deeply concerning. They mentioned razors, toothbrushes, and injections as sources of HIV infection, without any mention of sexual contact, as is to be expected. However, students asked, "If someone sits next to you can you get it?" and "Why do people with HIV/AIDS die?"[85] suggesting that these students still lack accurate knowledge about the transmission and treatment of HIV/AIDS. While possibly unnecessary for their age group, these students had no knowledge of how women get pregnant or the body changes related to puberty, including menstruation. What is particularly concerning, however, is their lack of knowledge about rape and sexual abuse. One student defined rape as "bad manners," and another said, "[t]hey take you somewhere to do bad things to you."[86] All of the students drew a man and a woman or girl in their pictures about rape. When combined with what they discussed, this suggests that they understand rape as something bad that males do to females, but they do not understand what exactly it may entail. Furthermore, they do not believe that men or boys can be raped due to their physical strength, which they said explicitly. This is concerning because it suggests that boys may not think anything is wrong if they are being sexually abused, because they are under the impression that this type of sexual violence does not apply to them. Moreover, all of the students' lack of clarity on private parts and what parts of the body

should not be touched suggests that many students may not understand the need to report various types of sexual abuse.

The Standard 4 students showed distinct signs that they had received some education on reproductive health in schools, however limited it may be. One student, though she struggled to pronounce it, described AIDS as being "caused by human immunodeficiency virus."[87] Another student mentioned that HIV is caused by "doing bad things" like having sex, while other students identified sharp objects, blood transfusions, and kissing, particularly "deep kissing,"[88] as ways that the virus could be transmitted. Although it is not completely clear what "deep kissing" refers to, it was interesting that it was mentioned by students who had obviously received formal education on HIV/AIDS, since kissing presents such a low chance of transmitting HIV that it is really not worth even mentioning in a health class. Furthermore, in terms of misinformation, one student asserted, "doctors cannot treat HIV,"[89] which is untrue, though there is not a cure. One student asked, "Why does HIV kill people?"[90] while another wondered why HIV/AIDS does not has a cure. Both questions suggest a possible lack of understanding of HIV treatment. In terms of prevention, students mentioned not sharing objects, abstaining from sexual intercourse, not engaging in "deep kissing," and "not raping,"[91] though the use of condoms and avoiding breastfeeding were not cited as prevention methods.

Students in Standard 4 were very clear about the relationship between sexual intercourse and pregnancy, and they even mentioned rape as a possible cause of pregnancy. It was interesting that some students appeared to define rape as something separate from sexual intercourse (a phrase which some experts argue implies consent). One female student said, "Even me I can get pregnant if someone rapes me." This comment caused a male student to ask, "If a small girl like this one do sex, even they can get pregnant?"[92] This is an interesting question because Standard 4 students are generally nine or ten-years-old and it is possible yet

unlikely that girls this age are already menstruating and therefore able to conceive. It is likely that none of the students took the menstrual cycle, an important biological component to pregnancy, into account during this conversation. Students also mentioned "deep kissing"[93] again as an act that could lead to pregnancy, which also suggests a misunderstanding of the biological basis of pregnancy.

On the subject of puberty and menstruation, the Standard 4 students appeared to have a good idea of outward physical changes, though they lacked knowledge of internal changes. They discussed puberty as including overall growth, voice changes, the growth of breasts for girls, and the appearance of pimples. Interestingly, they included "doing sex" and "having babies" in their definition of adolescence.[94] The discussion of menstruation, however, suggested that they did not truly understand the relationship between puberty and the ability to reproduce. Out of the five students, neither of the two female students in the group knew what menstruation was, while two of the three male students did know. The boys mentioned that beginning menstruation meant the start of "monthly bleedings" for girls and that they "start using Always,"[95] likely referring to the popular sanitary napkin company. It is concerning and unclear why the male students knew more than the female students, but it does suggest that none of the students had received information about menstruation in school, since they are in the same class and would have had access to the same information.

The Standard 4 students had many thoughts on the subject of rape, though it was unclear if this information was coming from school-based education, things they had heard at home, or other observations. One student described rape as "a disease," explaining that it is "a sex which is not wanted," while another student mentioned that rape is "not allowed in the morals."[96] All of the students had an understanding of private parts and parts of the body that should not be touched, and described a wide range of possible victims of rape (including girls, boys, and women). One student even seemed to have some knowledge of the 72-hour

rape-kit restriction, though it was unclear whether he really understood its meaning. He said, "[a]fter 72 hours has already passed, the person who raped will not be arrested,"[97] presenting a misunderstanding of the need to go to a hospital or clinic within 72 hours of an assault in order for medical professionals to document physical evidence of the assault and administer necessary medicines. Multiple students mentioned pregnancy, HIV, sickness, and death as possible outcomes for rape victims. The students were very clear about the various situations in which they could be raped by strangers and how to avoid interactions with strangers, though their concept of the possibility of being abused by friends or family members was less clear. They mentioned that rape could occur at the house of a neighbor or relative, but highlighting this occurrence is particularly important because of its commonality in Kibera. Students' questions about rape included, "Why does people like to rape us children or mothers?" and "When a man rapes a child, will the child get pregnant?"[98] The second question further suggests a lack of understanding of the connection between menstruation and pregnancy.

The students from Standard 7 had obviously had significant school-based education about reproductive health, particularly about HIV/AIDS, but still appeared to lack some important practical information. Students cited blood infusions, body fluids, sharing needles, breastfeeding, and sexual intercourse as ways in which HIV can be transmitted. Like the students from Standard 4, these older students also mentioned kissing as a possible source of transmission. However, these students appeared to have a much better social understanding of the disease, which suggested that much of their information was coming from observations in the community. Students focused on the economic strains caused by HIV/AIDS, including those who are HIV positive being unable to work because of their illness and being forced to spend all of their money on medications. One concerning question was asked by a male students who wanted to know "if there are preventive measures" to be taken against HIV

contraction.[99] Some of his classmates suggested abstaining from sex and avoiding breastfeeding, but none of the students mentioned the use of condoms. The lack of knowledge about condoms is most concerning for the Standard 7 students because most of these students are 13-years-old and studies show some students of this age are already sexually active and many more will be very soon.

On the topic of pregnancy, Standard 7 students seemed to have some significant information, but were still missing some key points of understanding. They explained that females from the age of 12-years-old can get pregnant, that pregnancy is the result of the meeting of the male and female sex cells, and that pregnant women have larger stomachs and breasts and their monthly period stops, yet they still did not fully understand the relationship between pregnancy and menstruation. One student asked, "Why do they miss their period?" None of the students mentioned methods of preventing pregnancy, nor did they ask about them, but it is clear that this lack of understanding of the menstrual cycle would hinder a clear understanding of any hormonal form of contraception (which is one of the most common forms used in Kibera).

The discussion of puberty made the Standard 7 students' lack of understanding of menstruation even more clear. Students mentioned many physical changes associated with puberty, including voice deepening, growth of pubic and armpit hair, and the appearance of pimples; wet dreams, growth of facial hair, and broadening of shoulders for boys; and broadening of hips, growth of breasts, and the beginning of menstruation for girls. The students were able to define menstruation as the "flow of blood every month after 28 days," but obviously had a fairly shallow understanding of the process, since one student asked, "Why does menstruation appear in girls?" They understand what it is, but they do not understand why it occurs. Another student asked, "Why do boys experience wet dreams?" –

suggesting that the students lack an in-depth understanding of both the female and the male reproductive systems.

The Standard 7 students did demonstrate a sufficient understanding of rape and sexual abuse. They described rape as "the act of forcing someone to have sex with you," emphasizing that it was "without her permission" and could happen "violently." They demonstrated knowledge of private parts and where they should not be touched, as well as knowledge that sexual abuse is not a single-gender problem, with one student mentioning that "boys can be sodomized." Students also mentioned the risk of contracting sexually transmitted diseases from rape. They demonstrated a significant knowledge of where to go if they were raped, including health centers, the police, and their parents as important players.

Classroom Observations and Life Skills

Observations made at both schools suggest starkly different teaching styles and overall conditions for learning. The educational philosophy at Kibera School for Girls is based on the Montessori-model and student-centered learning. With an average class size of 16 students, and two or three teachers per class, students receive a personalized educational experience, which includes interdisciplinary, activity-based learning in which students are encouraged to express themselves and ask questions. Olympic Primary School presents a very different educational environment. Suffering from extreme overcrowding and underfunding, most classes have more than 80 students with just one teacher, who is often out of the classroom. Most teachers give assignments on the chalkboard and then leave the students alone in the classroom to complete them. With very little oversight, both students and teachers can be seen aimlessly roaming the school grounds throughout the day. In addition to the difference in teaching, students at Olympic Primary School each have a single notebook and a pencil, which is often sharpened down to little more than a stump. It is clear

that they do not have access to the same resources that Kibera School for Girls uses to engage their students with creative and interactive activities; however it is also clear that neither the teachers nor the administrators have the will to attempt to change this status quo.

The Headmistress at Kibera School for Girls, Anne Olwande, teaches a class called Life Skills once a week to each class. The class covers various areas of physical, emotional, and social health. Over the past weeks and months, the class has covered hand washing, decision-making, time-management, self-esteem, and friendship. Ms. Olwande often presents topics that may seem too advanced for lower primary school, but she adjusts the depth and approach of her lesson based upon which level she is teaching. She also uses games, read-aloud books, and role-playing scenarios to assist the students in understanding advanced topics. With the older students, she still uses these tactics, but also focuses on group discussion and "pair-share" techniques to encourage students to form their own thoughts and opinions. With all age groups she encourages student-generated content in her lessons to ensure that they are absorbing the concepts being discussed.

Analysis of Data Collected

Based on the data above, the major players at both Kibera School for Girls and Olympic Primary School (teachers, parents, students) support the implementation of a comprehensive reproductive health curriculum. Teachers are concerned for their students, and parents are concerned for their children and their own ability to teach them, but students have been left with unanswered questions and inaccurate information. Each of the different data collection groups has its own unique opinion and concerns, but all the data suggests a common solution.

Teachers are very concerned about the environment in which their students are coming of age and worry that their lack of reproductive health education will put them at

greater risk for unintended pregnancy, HIV/AIDS and STI's, and rape and sexual abuse. Additionally, some teachers are concerned about students' self-esteem and body image, particularly as they enter puberty. Teachers at Kibera School for Girls, in particular, are concerned about whether their students are learning about menstruation because without this type of education they may be at risk for disease and infection, as well as low self-esteem. Many teachers cited evidence of students' early exposure to sexual activity and other reproductive health concepts as evidence for why this type of education is necessary at a young age. As a whole, teachers support reproductive health education at all levels of primary school, with discussions of sexual intercourse beginning in Grade or Standard 3.

Parents are also worried for their children's health and safety. They are most commonly concerned with their children learning about puberty, abstinence for HIV prevention, and what to do if one is the victim on rape or sexual abuse. Parents focus on the importance of school-based reproductive health education likely because of their own knowledge gaps in this area. One of the most important points of input from parents was their stress on the importance of variance in what is taught based on student age. This point also echoes the input of teachers.

Students, however, displayed a significant lack of knowledge in key reproductive health areas. For example, students of all ages typically lacked knowledge about the forms of HIV transmission (other than sharp objects) and the connection between beginning menstruation and the risk of pregnancy. Younger students also lacked important knowledge about rape and sexual abuse, including good touch/bad touch distinctions, the definition of rape, and who can be a victim of rape. Overall, students at all grade levels lack important information necessary for navigating life in Kibera at their age.

CONCLUSION

Based on this field research, this paper recommends that primary school students from the Kibera Slum should receive a holistic, school-based reproductive health education. This curriculum should include education on pregnancy, HIV/AIDS, puberty and menstruation, rape, and sexual abuse, with the educational information targeted to each specific age group. It is also important that this information be disseminated with a student-based teaching model, which encourages students' questions and interests to drive the direction of their education.

At Olympic Primary School it is clear that there is a significant amount of work to do in order to achieve this goal. Olympic Primary School parents want their children to receive this education; the teachers are concerned for their students if they do not have this information; and the students have unanswered questions and are missing vital information. However, as Mr. Ochieng explained, the truth is that there is little that can be done at the school-level. Curriculum policy for the public school system is made at the City Council level, and sometimes even at the national level. Moreover, Olympic Primary School students will continue to be left with lingering questions as long as the overall state of teaching instruction there remains the same with overcrowded classrooms and frequently absent teachers. Reproductive health education requires engaging teaching methods, and at the very least, requires the teacher to be present in the classroom. Certainly the health curriculum should be expanded to include additional lessons, subject matter, and depth, as Mr. Murithi suggested, and additional training and support for teachers, as discussed by Mr. Nyasio. However, these steps will only accomplish so much. In order to give its students the reproductive health education, as well as the general education, that they need, Olympic Primary School – which is likely representative of how many other public schools operate – must reevaluate its teaching methods and general classroom structure.

Kibera School for Girls presents a much more promising short-term model for reproductive health education for primary school students – Ms. Olwande's Life Skills class. This curriculum could be easily transformed into a model program for primary schools that includes reproductive health. Teaching reproductive health to primary school students requires the same teaching methods that are already used in Life Skills, including games, role-plays, read aloud books, and group discussions. Ms. Olwande's focus on student-generated content can ensure that students' questions are answered and that topics that may have been overlooked are brought up in group discussions. Furthermore, the framework of self-awareness and life skills will encourage the approval and involvement of parents who may be hesitant to endorse reproductive health education for their young children.

Overall, there are certain guidelines that should be followed in curriculum development by both schools, as well as other primary schools in Kibera, and possibly other schools serving slum communities. In each of the four major reproductive health subject areas (pregnancy, HIV/AIDS, puberty and menstruation, and rape and sexual abuse) there are certain topics that must be covered at some point, though specific content will vary based on age groups. The following are the recommendations that are supported by the research in this paper:

- Students should be taught about pregnancy, including the scientific explanation, abstinence as a form of prevention, contraception as a form of prevention, and the necessary measures that should be taken for antenatal, obstetric, and postnatal care.
- Students should be taught about HIV/AIDS, including the scientific explanation, different forms of transmission, abstinence as a form of prevention, condom use as a form of prevention, and how to address the stigma associated with the illness as well as other sexually transmitted infections and diseases.

- Special attention must be paid to the fact that there are HIV positive students present in the classroom. Rhetoric on HIV/AIDS cannot simply consist of the concept that AIDS is caused by bad behavior and leads directly to death. Both mother-to-child transmission and medical treatment for HIV/AID must be discussed.
- Students should be taught about puberty and menstruation, including the body changes of adolescent males and females, human anatomy of adult males and females (including sexual organs and their functions), menstruation, and the relationship between menstruation and pregnancy. Each of these topics should include scientific, practical, and self-esteem based education.
- Students should learn about rape and sexual abuse, including definitions of rape and sexual abuse, information about private parts and where one should not be touched, and reporting instances of abuse (if the student is the victim or a witness). Child commercial sex work should be described as a form of sexual abuse and the risks of commercial sex work should be discussed.
- In discussions of rape and sexual abuse, students should understand that if they are victims of abuse they are not to blame. Safety measures such as not walking alone or talking to strangers should be discussed, but victim-blaming rhetoric should be avoided.
- The curriculum should take a holistic approach to reproductive health, addressing physical, emotional, and social health in relation to the reproductive system. This should include but is not limited to discussions of self-esteem, how at address peer-pressure, and how to interact with strangers.
- Subjects like menstruation or those directly related to sexual activity – including pregnancy, the sexual transmission of HIV and STI's, condoms and contraception, and commercial sex work – should be reserved for students nine years of age and

older (starting in Grade or Standard 3). Teaching of these concepts should include a clear definition of sexual intercourse and other sexual activity that can transmit HIV and STI's.

- At all levels, the curriculum should include a variety of in-class activities, including games, role-plays, read aloud books, and group discussion in order to engage students and assist them in understanding advanced topics. Additionally, students should be encouraged to share their thought and questions with their teachers and classmates.
- The curriculum should include a component for parents which will explain the education their students are receiving, educate parents on reproductive health issues they may not understand, and advise parents on how to discuss reproductive health with their children at home.

A curriculum following the framework above would be particularly suited for children in Kibera, and could be implemented as a part of a holistic Life Skills curriculum modeled on the example of Kibera School for Girls. It is vital that students in Kibera and other slums receive a comprehensive reproductive health education in order to learn to respond to the issues they are faced with every day in their community – unintended pregnancy, HIV/AIDS and other STI's, difficulties in managing menstruation, sexual harassment, and the constant threat of rape and sexual abuse. Students are desperately in need of this education and primary school is the best place to give it to them. As explained by one parent, "Education is the foundation of life."[100] This is especially true when it comes to health education.

RECOMMENDATIONS FOR FURTHER RESEARCH

Building on this research paper, further research should include a wider range of primary schools serving Nairobi slums using the methodology tested in this paper to collect

information on each of the major data collection populations (teachers, students, parents) at each school. The wider scope of a future study could compile data that is more statistically significant and possibly find similarities or differences between schools or between different slums. A longer-term study could involve the implementation of a reproductive health curriculum that meets the above recommendations and then an assessment of its efficacy. This type of study could measure behavioral change and future outcomes, which could lead to more specific and refined curriculum recommendations.

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APPENDICIES

Appendix A: Teacher/Administrator Interview Questions

Name: Age: Gender: _____ Male _____ Female
Ethnic Affiliation: Religion Affiliation:
City/Province of Origin: School: Class Taught:

1. What does the phrase reproductive health mean to you?
2. What are the greatest reproductive health concerns in the Kibera Slum?
3. What are some of your greatest concerns for your students and their futures? i.e., pregnancy, HIV/AIDS, puberty and menstruation, gender-based violence, etc.
4. Do you think it is important for your students to learn about reproductive health issues? What should they learn? i.e., pregnancy and pregnancy prevention, HIV/AIDS and HIV/AIDS prevention, puberty and menstruation, gender-based violence and rape.
5. Do you think your students should learn about these issues in school?
6. Would you feel comfortable teaching your students about these issues?
7. Do you currently teach anything about these issues in your class? If so, in what capacity?
8. What do you hope the future of reproductive health education will look like at your school? Specifics of a curriculum, what should be taught, to what age group, etc.

Appendix B: Teacher/Administrator Interview Results

Sample: 15 Teachers/Administrators
Average Age: 35.07 years
Gender: Female – 11; Male – 4
Ethnicity: Luhya – 5; Luo-4; Kamba – 3; Nubian – 1; Meru – 1; Kisii – 1
Religion: Christian – 1; Catholic – 2; Muslim – 1; Pentecostal – 1; None Given – 1
Origin: Nairobi – 4; Nyanza Provice – 3; Eastern Province – 3; Kibera – 2; Mombasa – 1; Western Province – 1; Rift Valley – 1

Greatest Reproductive Health Concerns in Kibera: HIV/AIDS – 8; Unintended Pregnancy – 7; Gender-Based Violence and Rape – 5; Medical Care – 3; Education – 3; Early Sexual Activity – 3; Drug Abuse – 3; Poverty – 2; Women's Empowerment – 2
Greatest Concerns for Students: HIV – 7; Poverty – 6; School Completion – 5; Gender Based Violence and Abuse – 5; Pregnancy – 4; Engaging in Premarital Sex – 3; Not Understanding Menstruation – 2; Engaging in Commercial Sex Work – 1
What Students Should Learn about Reproductive Health: HIV Contraction and Prevention – 9; Practical Education on Menstruation – 9; Pregnancy – 7; Gender-Based Violence, Rape, Abuse, and about their private parts – 5; Human Anatomy – 5; Puberty/Physical Changes – 3; Social Health & How to Interact with Strangers – 3; Self-Esteem Related to Menstruation – 3; Risks Associated with Premarital or Early Sexual Activity – 3
Average Age to Start Discussing Sexual Activity (11/15 Answered): 9.27 years, Grade/Standard 3
Thoughts on Parental Involvement in Reproductive Health Education: They should reinforce the information learned in school at home – 5; They do not have enough education themselves – 4
Future Hopes for Reproductive Health Curriculum: Include physical health – 6; Include Social Health – 5; Include Emotional Health – 4; Set Aside Separate Class Time – 4; Invite Guest Speakers – 2; Provide Additional Training and Materials to Teachers – 2

Appendix C: Teacher/Administrator Consent Form

Dear Participant,
You have an opportunity to participate in a research study about primary school health education in Kibera, being conducted by Susanna Banks in conjunction with the School for International Training and Wesleyan University. Your participation will involve a one-on-one interview with the researcher that may involve the discussion of different reproductive health issues including pregnancy, HIV/AIDS, puberty, menstruation, and gender-based violence. This interview is completely voluntary and your participation will not affect your employment status in any way. You are free to decline to participate in the study and are free to end the interview at anytime. Anything you say on record

during the interview may be used (along with your name) in the study. If you consent to participate in this study, please read the statement below and print and sign your name.

"I do agree that my answers in an individual interview with Susanna Banks may be used for research purposes. I understand that my name as well as my answers will be used in the study. I understand that my participation in this study is completely voluntary and will not in any way effect my employment status."

_____ _____

Signature Date

_____

Name (Print)

Appendix D: Student Focus Group Guides

1. What do you know about HIV? How do you get it? What happens when you get it? What questions do you have about HIV?
2. What do you know about pregnancy? Who can get pregnant? How do you get pregnant? What happens when you get pregnant? What questions do you have about pregnancy?
3. What do you know about how your body changes when you grow up? How do boys change? How do girls change? What is menstruation? What questions do you have about these changes?
4. What do you know about rape? What is the definition of rape? Where is it ok to be touched and where is it not? What happens if someone is raped? Where can they go? What questions do you have about rape?

With 1st Graders: After each leading guide ("What do you know about ____?") ask the students to draw a picture (2-3 minutes). Students will share their pictures and the facilitator will continue to ask questions to create discussion. (easier for them to express themselves, break the ice)

With 4th Graders: Pair-share (talk to the person next to you) for the each leading guide ("What do you know about ____?") and then transition to group discussion.

With 7th Graders: Focus on group discussion and interaction between the students.

Appendix E: Student Focus Group Notes

Standard 1 Focus Group:

- HIV/AIDS
    - Mentioned transmission through razors, toothbrushes, and injections, but none of the students mentioned sexual transmission
    - When you get HIV "you die quickly;" "you are taken to hospital"
    - "If someone sits next to you can you get it?"
    - "Why do people with HIV/AIDS die?
- Pregnancy
    - Know that it means having a child, but have no concept of how women become pregnant
- Puberty and Menstruation
    - No concept of puberty other than general body growth
    - No concept of menstruation
- Rape
    - "It's bad manners"
    - "They take you somewhere to do bad things to you"
    - Understand rape as something that is bad that men do to girls, but don't actually know what it is
    - Believe that boys cannot be raped because of their strength
    - Where to go if you are raped: police, hospital, chief
    - "What is rape?"

Standard 4 Focus Group:

- HIV/AIDS
    - "Caused by human immunodeficiency virus" (female student knew the definition of HIV, but could barely pronounce it)
    - HIV is caused by "doing bad things" like sex
    - Transmitted by kissing, particularly deep kissing
    - Transmitted through sharp objects and blood transfusions, not by touching
    - "Doctors cannot treat HIV"

    - "Why does HIV doesn't have a cure?"
    - "Why does HIV kill people?"
    - Prevention: not sharing sharp objects, "not doing sex," "not doing deep kissing," "not raping" (no mention of condoms or of avoiding breastfeeding)
- Pregnancy
    - Pregnancy is caused by having sex, rape, or "deep kissing"
    - "Even me I can get pregnant if someone rapes me"
    - "If a small girl like this one do sex, even they can get pregnant?"
- Puberty and Menstruation
    - Adolescence = "doing sex," pimples, big, fat, tall, voice change, breasts, "have babies"
    - Menstruation: "start using always," "start monthly bleedings" (2 girls did not know, 2/3 boys did know)
    - No understanding of the connection between menstruation and pregnancy
- Rape
    - "Rape is a disease – a sex which is not wanted"
    - "Not allowed in the morals"
    - Who can be raped: girl, boy, mother, child, any woman
    - Have an understanding of private parts that should not be touched
    - Consequences of rape: pregnancy, HIV, sickness, death
    - Go to the hospital – "After 72 hours has already passed, the person who raped will not be arrested"
    - Tell parents, teachers
    - "Why does people like to rapes us children or mothers?"
    - "When a man rapes a child, will the child get pregnant?"
    - Have an understanding that interactions with strangers can lead to rape
    - Neighbor/relative's house as a possible site of rape – possible understanding of familial abuse

Standard 7 Focus Group:

- HIV/AIDS
    - Transmission through blood transfusions, body fluids, kissing, sharing needles, breast feeding, sexual intercourse
    - Economic strains – out of work, spend all money on medication

    - "If there are preventative measures?"
    - Prevention: abstaining from sex, avoid breastfeeding (no mention of condoms)
- Pregnancy
    - Who can get pregnant: females from 12-years-old
    - Meeting of male and female sex cells
    - What happens: larger belly, larger breasts, monthly period stops, carry baby for 9 months
    - "Why do people get pregnant?"
    - "Why do they miss their period?"
    - Do not really understand the relationship between menstruation and pregnancy
- Puberty and Menstruation
    - Voice deepens, pimples, wet dreams, shoulders broaden, menstruation, hips broaden, pubic and armpit hair grows, beards grow, breasts grow
    - Menstruation: 'flow of blood every month after 28 days"
    - "Why does menstruation appear in girls?"
    - "Why do boys experience wet dreams?"
    - Understand outward appearance of puberty, but do not understand what is occurring internally, particularly with their sex organs
- Rape
    - "The act of forcing someone to have sex with you"
    - "Without her permission"; "Violently"
    - "Boys can be sodomized"
    - Knowledge of private parts that should not be touched
    - Can lead to STD contraction
    - Where to go: health center, police, parents

Appendix F: Parent Questionnaire

Your Age: _____ Student's Age: _____ Student's Grade: _____

Relationship: ____ Mother _____ Father _____ Other Relative ____ Non-relative Guardian

Your Student's Gender: _____ Male _____ Female Your Tribe: _____

Your Village/Estate: _____ Your Family's Religion: _____

1. Rate the importance of the following issues in your community: Circle one number for each.

	I have never heard of this	Not Important	Sort of Important	Important	Very Important
Pregnancy and pregnancy prevention	1	2	3	4	5
HIV/AIDS and HIV/AIDS Prevention	1	2	3	4	5
Puberty and Menstruation	1	2	3	4	5
Gender based violence and rape	1	2	3	4	5

2. Rate your concerns about your child's risks for the following: Circle one number for each.

	I have never heard of this	I am not worried about this	I am sort of worried about this	I am worried about this	I am very worried about this
Unwanted pregnancy	1	2	3	4	5
Contracting HIV	1	2	3	4	5
Being raped or abused	1	2	3	4	5

3. Rate the importance of your child learning about each of the following in school: Circle one number for each.

	I have never heard of this	My child should never learn about this	I do not care if my child learns about this	My child should learn about this	It is very important that my child learn about this in school
Pregnancy and pregnancy prevention	1	2	3	4	5
HIV/AIDS and HIV/AIDS Prevention	1	2	3	4	5
Puberty and Menstruation	1	2	3	4	5
Gender based violence and rape	1	2	3	4	5

4. What influences your opinions about your child learning about each of the following issues in school: Check (√) any and all that apply.

	Pregnancy and pregnancy prevention	HIV/AIDS and HIV/AIDS Prevention	Puberty and Menstruation	Gender based violence and rape
I do not know enough about this myself				
My religious beliefs forbid my child to learn about this				
I am worried learning about this in school will encourage my child to have sex				
I believe that my child's gender prevents him/her from needing to learn about this				
I believe that my child's age prevents him/her from needing to learn about this				
I believe that my child should learn about this, but not in school				
I believe that learning about this in school will help my child to make better decisions				

5. What do you think your child should learn in school about pregnancy? Check (√) all that apply.

_____ I do not want my child to learn about pregnancy in school.

_____ I want my child to learn the scientific explanation for how and why pregnancy occurs.

_____ I want my child to learn about abstinence as a method to prevent unwanted pregnancy.

_____ I want my child to learn about birth control and other forms of contraception to protect against unwanted pregnancy.

6. What do you think your child should learn in school about HIV/AIDS? Check (√) all that apply.

   _____ I do not want my child to learn about HIV/AIDS in school.

   _____ I want my child to learn the scientific explanation for what HIV/AIDS is and how it is spread.

   _____ I want my child to learn about abstinence as a method to prevent HIV/AIDS.

   _____ I want my child to learn about condom use as a method to protect against HIV/AIDS.

   _____ I want my child to learn about stigma as a major problem associated with HIV/AIDS in my community.

   _____ I want my child to learn about treatment for HIV/AIDS and people can live with the disease.

7. What do you think your child should learn in school about puberty and menstruation? Check (√) all that apply.

   _____ I do not want my child to learn about puberty and menstruation in school.

   _____ I want my child to learn about the changes his/her body will go through during puberty (including hormone changes, hair growth, and the development of reproductive organs).

   _____ I want my child to learn about why menstruation occurs and what to do when it begins (including how to use sanitary napkins).

   _____ I want my child to learn the scientific explanation for menstruation and how it is related to pregnancy.

8. What do you think your child should learn in school about gender based violence and rape? Check (√) all that apply.

   _____ I do not want my child to learn about gender based violence and rape in school.

   _____ I want my child to learn about what gender based violence and rape are.

   _____ I want my child to learn what to do if he/she is raped or abused.

   _____ I want my child to learn what to do if he/she sees rape or abuse in our community.

   _____ I want my child to learn about how we can all prevent rape and abuse in our community.

9. Do you have any additional thoughts or opinions on your child's school health education?

Appendix G: Parent Questionnaire Results

Total Distributed: 227

Total Returned: 84

Total Filled: 80

Average Parent Age: 36.06 years

Average Student Age: 10.05 years

Student Age Range: 6 years to 15 years

Relationship: Mother – 27; Father – 24; None Listed – 8; Other Family – 8; Mother and Father – 7; Guardian – 4; Parent – 2

Student Gender: Female – 49; Male – 30; None Given – 1

Ethnicity: Luo – 30; Luhya – 24; None Listed – 9; Nubian – 5; Kikuyu – 3; Kisii – 3; Kenyan – 2; Kamba – 2; Kalenjin – 1

Slum Residents: 69 out of 80 (86.25 %)

Religion: Christian – 41; Catholic – 13; Muslim – 10; Seventh Day Adventist – 5; None Given – 3; Church of God – 1; Anglican – 1; Salvation Army – 1; Legion Maria – 1; Orthodox – 1; PAG – 1; Jeshi la Vuokovu – 1; Holy Spirit – 1

Questions #1-3: 72 respondents; Mode = 5 for all; Averages = 4's and 5's

Questions #5-8: 71 respondents

#5 – Pregnancy Education

- None: 3/71 (4.23%)
- Science: 35/71 (49.30%)
- Abstinence: 43/71 (60.56%)
- Contraception: 29/71 (40.85%)

#6 – HIV/AIDS Education

- None: 3/71 (4.23%)
- Science: 44/71 (61.97%)
- Abstinence: 46/71 (64.79%)
- Condoms: 27/71 (38.03%)
- Stigma: 32/71 (45.07%)
- Treatment: 36/71 (50.70%)

#7 – Puberty and Menstruation Education

- None: 3/71 (4.23%)
- Body Changes: 58.71 (81.69%)
- Menstruation: 31/71 (43.66%)
- The relationship between menstruation and pregnancy: 37/71 (52.11%)

#8 – Gender-Based Violence and Rape

- None: 3/71 (4.23%)
- Definitions: 39/71 (54.93%)
- What to do if you are a victim: 41/71 (57.75%)
- What to do if you are a witness: 35/71 (49.30%)
- Prevention: 37/71 (52.11%)