Sexuality Communication between Teachers and Adolescents in Nakuru County, Kenya.

Authors
Francis Ndegwa¹; Eliud Kirigia²; Pauline Ndoro³; Vicky Khasandi⁴
¹,²,³,⁴ Laikipia University, Kenya
Main author email: mugguro@gmail.com

Abstract
This study investigated sexuality communication between teachers and adolescents in Nakuru County, Kenya. Thirty teachers were sampled from ten secondary schools in Nakuru East and Njoro sub-counties representing urban and rural teacher populations. These schools included six same-sex secondary (three only boys and three only girls) schools and four mixed-sex secondary schools. The schools’ categories included two national schools, three extra-county schools, three county schools, and two sub-county schools. Three teachers were sampled from each school, including the guidance and counselling teacher who was purposively sampled. Two other teachers were randomly sampled, leading to thirty teachers. Data were collected using a self-administered questionnaire. The schools were categorized from letter A to J, and the teachers were coded as Teacher 1, Teacher 2, and Teacher 3. The results showed that teachers did offer some sexuality information, especially on HIV /AIDS and STIs, values and interpersonal skills, contraceptives, and unintended pregnancies, but were uncomfortable handling sexual variations and self-gratification topics. Time constraints due to high workload in teaching subjects, inadequate training, and societal taboos restricted sexuality communication. The findings show that efforts should be fostered to increase teacher training, especially in-service training in sexuality communication, to enhance teachers' capacity in delivering sexual health information to adolescents in secondary schools.

Key terms: Adolescence, sexuality, information, teaching, STIs
INTRODUCTION

The 1994 International Conference on Population and Development held in Cairo, Egypt, recognized adolescent sexual and reproductive health as fundamental human rights. During the conference, governments worldwide were challenged to commit to providing adequate adolescent sexual health services and information to address reproductive health challenges in adolescence and later on in adulthood. Consequently, in 2013, the Kenyan government signed a Ministerial Commitment to comprehensive sexual health education and services in which it committed to intensifying inclusive rights-based sexual education among adolescents starting from primary school. The topics envisaged in this sexual health education included sexual and reproductive physiology, HIV/STI prevention, values, and interpersonal skills, Gender and Sexual Reproduction health rights, and contraception and unintended pregnancies. This study aimed to investigate how teachers in Nakuru County, Kenya, implemented these recommendations, recognizing that teachers play a significant role in shaping adolescents' attitudes on many life issues.

Adolescent sexual health is a significant health concern worldwide due to health risks arising from their risky sexual practices. Risky sexual behaviour that is developed during the unstable developmental years of adolescence, such as unprotected intercourse, early sexual initiation and multiple sexual partners, can endanger the lives of the young people by exposing them to the threat of HIV infections and other sexually transmitted infections (STIs), teenage pregnancies and abortion complications (Exavery, et al., 2011).

Many studies in Africa report that many adolescents participate in unrestrained leisure undertakings, entertainment, music, alcohol, and sexual intercourse at a very early stage, often with several sexual partners (Mash, et al., 2006; Anderson, et al., 2007). It is worth noting that in adolescence; there is a steep rise in desire for personal growth and an unstable longing for self-formation and identity as the adolescents' transition to adulthood (Kaaya, et al., 2002; Kelly, 2001). One of the anticipated dimensions of healthy adolescence is the surge in emotional realizations that trigger an urge for experimentation with various aspects of sexuality. Thus, when adolescents are provided with the right information, they can make personal and sexual choices that they can take responsibility for (Tulloch, & Kaufman, 2013). A vast number of adolescents struggle to accommodate the fluctuating sense of self-worth as well as the inconsistent body image when they are deficient of information and psychosocial support that is necessary to assist them in neutralizing misconceptions and uncertainties at this stage (Chia & Gunther, 2006). The adolescence stage also provides a moment for the establishment of individual boundaries, which are essential in defining change towards adulthood.

Adolescents have an immense capacity to enhance their rights to sexual health, and this can be increasingly be realized through the provision of the right information. One of the various studies that form the basis for this observation was done by Miller (2002), who reported that adolescents who enquired from trusted sources about HIV were more likely to use condoms and embrace other precautionary practices to avert infections. But adolescents' access to information services, which could provide the support they need in this process, is often inhibited by cultural bottlenecks and taboos. This study assesses the provision of sexuality communication to adolescents by the teachers cognizant that teachers are a critical subgroup of the community interested in adolescents' sexual health. Several studies have been done on parents' place in aiding sexual growth and adolescents'
stability. Many studies have concluded that when parents provide sexuality information to their children, they are positively influenced to adopt healthy sexual lifestyles. Research has shown that the more open conversations between parents and adolescents have concerning sex, pregnancy, birth control, and sexually transmitted diseases (STIs), especially when this is initiated early, the more likely the delay in sexual debut in adolescents and the less likely for these adolescents to engage in risky sexual behaviour (Guilamo-Ramos, et al., 2012; Miller, 2002).

The study adopts the Systems theory propagated by Von-Bertalanffy (1965). The theory views life as a set of systems whose parts are interrelated, and that change in one component affects the stability of the system. With regard to sexuality communication, such as what this study explores, the researcher considers the views of Bertalanffy that the most fundamental character of a living thing is its organization and that studying entities as systems that are related to one another and that affect one another could help better understand the function of a specific system (Drack, 2008). Systems Theory thus considers organizations such as family and schools as one part of the whole that is interdependent and whose success is dependent on the input of all members. In this regard, the parents, teachers, and adolescents can be considered subsystems of the real world, connected and interdependent. The sexual health of the adolescents and the resultant social, stability, and security concerning sexual health is dependent on the role each of the subsystems plays.

Communication is an inherently integrative process that facilitates interaction between the various elements of the whole. Teachers and adolescent students operate in a context that requires constant interaction that allows acquisition of values and skills that aid the development of psychosocial skills, among others. The Systems theory is relevant as a communication approach because it provides a framework that places communication logically within the field of interaction (Lubbe & Puth, 1994). It is communication that co-ordinates behaviour control, defines the ideals and goals, and measures their attainment, which are essential components of the society's functioning. Hence, organizations such as schools are effective when they successfully bring in resources necessary for their survival and broader society. Such resources in the context of this research are the experiences, knowledge, skills, among others, that teachers present when communicating with their adolescent boys and girls about sexuality issues.

LITERATURE REVIEW

Unlike in olden days where parents and the adult community had enough time to socialize their youth sexually, most of today's adolescents spend much of their time in formal schools. The parents' opportunity to sexually socialize their children is reduced while schools have more opportunities for educating teens. However, the modern education system has been blamed for westernizing the African culture due to its heavy reliance on western content. Additionally, the schooling process takes a long time, thus postponing marriage, which has been blamed for increasing premarital sexual engagements. However, the mode of schooling, whether day or boarding, ultimately removes the adolescents from direct monitoring and control of parents; and provides them with a sense of independence that may lead to experimentation with sex (Zabin & Kiragu, 1998). According to Nganda (2005), about 66 per cent of in-school adolescents in Kenya are sexually experienced, and 20 per cent of premarital sex happens among high school students, most of which is unplanned and unprotected.

Most of the adolescents, however, attend schools where they partially get exposed to sexuality communication. Such adolescents may have access to sexual information from teachers, outside experts, older students, or a
combination of all three groups (Wight, et al., 2002). This school-based sex education is primarily intended to promote abstinence, delay the start of sexual intercourse, minimize the number of sexual partners or increase contraceptive use such as the condom and other types of birth control (Kirby & Laris, 2009). This education is meant to develop adolescents' skills to make informed choices regarding their behaviour and feel confident and competent about acting on them (Schaalma, 2004).

Formal sexuality education in schools, including instruction about healthy sexual decision-making and STI/HIV prevention strategies, can improve adolescents' health and well-being (Lindberg, et al., 2006). Research has shown that sexuality education interventions in schools can help prevent or reduce the risk of pregnancies, STIs and HIV infections among adolescents (Chia & Gunther, 2006). Many adolescents report receiving at least some sexuality education from teachers (Kirby, 2002). Teachers' roles in providing sexual health information to adolescents are critical since most children spend most of their adolescence in school. Adolescence occurs when one develops physically, emotionally and psychologically, when decisions about relationship formation and sexual debut occur, and is a particularly salient period in which to address issues of sexuality (Kirby, 2002). Learning institutions are considered appropriate settings to educate adolescents about sexuality and relationships often before they start engaging in sexual activities (Kirby, 2002). Therefore, school-based sex education can be an important and useful way of enhancing adolescents' attitudes and behaviour (Schaalma, 2004). This study aimed to investigate whether teachers in Nakuru provide school-going adolescents with sexuality information to enable them to address their sexual challenges.

RESULTS AND DISCUSSIONS
The teachers' views concerning the sexuality topics they shared with the adolescents in schools were captured, and findings were summarized in Table 1 below.

| Topic                                           | Yes | No  |
|-------------------------------------------------|-----|-----|
| Sexual and reproductive physiology              | 13  | 14  |
| HIV/STI prevention                               | 15  | 12  |
| Values and interpersonal skills                 | 13  | 14  |
| Gender and Sexual Reproduction of health rights | 5   | 22  |
| Contraception and unintended pregnancies        | 16  | 11  |

The results indicate that 48.1 per cent of the teacher respondents reported that teachers communicate about sexuality and reproductive physiology with the adolescents, 55.6 per cent indicated that they share with the adolescents on HIV/STI prevention, 51.9 per cent said that they communicate on values and interpersonal skills. In comparison, only 18.5 per cent indicated talking about Gender and Sexual Reproduction health rights. With regard to contraceptives and unintended pregnancies, 59.25 per cent of the respondents reported to handle it with adolescent, while 40.75 per cent indicated that they did not address the topic. The findings reveal that teachers' sexual communication is not adequate since it is primarily geared towards preventing HIV/Aids and STIs, values and
interpersonal skills, contraception, and unintended pregnancies. The fact that sexuality and reproductive physiology is a topic that is primarily handled in biology may explain why many teachers indicated that they did not provide information about it since they might not be teaching the subject. Similarly, gender and sexual reproduction health rights may be more subject-based than a general one, which might explain why many do not communicate.

Focusing on one aspect of communication is detrimental to the overall sexual well-being of teenagers. This inadequacy is what is perceived in this study's theoretical framework to be failing the achievement of expected results in the communication process since every subset in the communication system must play its part fully to achieve the desired communication goals. It should be noted that to equip adolescents with skills to navigate their sexuality challenges fully, sexuality education is supposed to enhance sexual development, reproductive health, interpersonal relationships, affection, and intimacy (SIECUS, 2008: WHO, 2014). This can only be achieved when teachers expand the range of topics they can expose their adolescents to, in order to cater to the modern-day sexuality challenges the adolescent is faced with. This agrees with Breuner and Mattson (2016), who note that sexuality education should be wide-ranging to cover many topics including close relationships, sexual anatomy, reproduction, STIs, sexual activity, sexual orientation, abstinence, contraception, reproductive rights, and responsibilities as well as gender identity.

There is usually a discrepancy between the teachers' assertion that they provide sexual education and the adolescents' view of the same. For instance, in a study in Ghana, teachers reported that they engaged adolescents in sex communication, yet the adolescents refuted these claims. To account for this disparity, adolescents acknowledged that though there was some sexual health communication, the way it was delivered did not allow much feedback; thus, they still had many questions unanswered (Awusabo-Asare, et al., 2017). Moreover, not all teachers were comfortable discussing sexual health information with the learners; some felt that talking about it may encourage adolescents to initiate sexual activities. The study inquired about sexuality topics, which teachers find hard to communicate with the adolescents, and the results are as given below in Table 2.

| Topic                                      | Yes Frequency | Yes Per cent | No Frequency | No Per cent |
|--------------------------------------------|---------------|--------------|--------------|-------------|
| Consenting to sex                          | 3             | 11.1%        | 24           | 88.9%       |
| Use of contraception                       | 7             | 25.9%        | 20           | 74.1%       |
| Alternative sexual orientations (homosexuality/bisexuality) | 5             | 18.5%        | 22           | 81.5%       |
| Self-gratification (Masturbation)          | 10            | 37.0%        | 17           | 63.0%       |
| Group sex and multiple sex partners        | 4             | 14.8%        | 23           | 85.2%       |
| Sexual variations (oral/anal/vaginal sex)  | 16            | 59.3%        | 11           | 40.7%       |

A majority (59.3%) of the teachers reported that they found it hard to discuss sexual variations, including oral, anal, and vaginal sex with the adolescent. 37.0% of the teachers sampled posited that the topic of masturbation or self-gratification was hard to discuss, while 25.9% rated the use of contraceptives as being the most difficult.
A further 18.5% and 14.8% reported that the most challenging topics to discuss with adolescents were alternative sexual orientations (homosexuality/bisexuality) and multiple sex partners. Only 11.1% of the respondents opined that consenting to sex was challenging to teach. The findings indicate that teachers were able to communicate on a wide range of sexual issues. Still, many struggled to give guidance on sexual variations and self-gratification. This is accredited to the fact that such topics are relatively queer in the African context and considered unnatural.

The study also sought to establish the factors limiting teachers' ability to provide sexuality information to adolescents. The results are presented in Table 3 below.

Table 3: Factors that limit teachers' provision of sexual communication to adolescents

| Statement                                | Yes |          | No   |          |
|------------------------------------------|-----|----------|------|----------|
| Frequency                                |     | Per cent | Frequency | Per cent |
| Inadequate training                     | 8   | 29.6%    | 19   | 70.4%    |
| Inadequate teaching/learning materials   | 5   | 18.5%    | 22   | 81.5%    |
| Time constraints                         | 14  | 51.9%    | 13   | 48.1%    |
| Societal taboos regarding sex talk       | 7   | 25.9%    | 20   | 74.1%    |
| Disinterest/unwillingness to teach sexuality | 6   | 22.2%    | 21   | 77.8%    |

The teachers' opinions with respect to the limitations in providing sex education included time constraints as indicated by a majority (51.9%), inadequate training (29.6%), and social-based taboos regarding sex talk (25.9%). Additionally, 22.2% and 18.5% of the respondents felt that disinterest or the teachers' unwillingness to discuss sexuality issues with the adolescents and inadequate teaching and learning materials limit adequate sex education provision in secondary schools.

These findings agree with those of a study done in South Africa by Smith and Harrison (2013), who reported that teachers do offer some sexuality information to adolescents; however, time restraints and workload were setbacks to effective sexual health information dissemination. This calls for the need to schedule a specific time in the school timetable for teachers to communicate with adolescents about their sexuality issues. If time is allocated, then the teachers, who are an important subset in adolescent sexuality communication, will play their part well, which may help achieve the desired adolescent sexual health communication goals. However, some teachers were not very comfortable discussing sexuality topics with their learners and recommended that external personnel and programs be sourced from out of school fraternity to teach sex education. The reasons given for this was that students get tired with their usual teachers' persistent instruction, and teachers were not up to date with information about sexuality and life skills.

Through open-ended questions, the study sought to know whether teachers had adequate training and experience to enable them to communicate sexuality topics with the adolescents, and they reported the following:

"Much of the information teachers share may not be because of our training, but because as adults, we ever experienced similar challenges in adolescence. That is why it is easy to talk about them when you see adolescents struggle with the
same (SCH D; TR 2). Yes, there is some training on adolescent sexuality at the university, but due to the consistent interaction with the adolescents at school, teachers understand a lot about the challenges the adolescents' experience. (SCH F; TR 1).

The training is not sufficient, but there is a lot of sexual information available online and through textbooks that a teacher can access as a source of sexual information (SCH I; TR 3). There is no enough training on adolescent sexuality at the university. Since teachers attend different universities, the emphasis on adolescent sexuality may not be similar, and this is bound to reflect differences in the way teachers handle sex-related topics (SCH A; TR 2). Sexual information has become very dynamic in contemporary society, and the adolescent of our days, for whom we were trained, is no longer the same as today's adolescent who has easy access to multiple channels of sexuality information. So, there is a need for more updated training to cater for today's adolescent challenges (SCH E; TR 1).

Most teachers said that they had acquired an understanding of adolescent challenges through their own adolescence experiences. They also reported that they had received some adolescent sexuality-related training at the university. Due to the consistent interaction with adolescents, they understood a lot more and were able to guide on adolescent sexual challenges. Since universities have varied teaching approaches to teacher education, there were claims by some of the teachers that they lacked enough training on the same. The plethora of data available on and offline was also pointed out as a source of sexuality information. On the other hand, some teachers hinted at the lack of adequate training and the difficulty of discussing sexually related topics due to the cultural or taboo limitations in society. Teachers also suggested that sexual information had become very dynamic in contemporary society; hence, more time and study was necessary to better understand and disseminate information.

Additionally, through the open-ended questionnaires, the study further aimed at finding out the reason why teachers found it hard to teach some sexuality-related topics. Some of the teachers' responses included the following: Sexual permissiveness has become widely accepted in society, and many adolescents no longer consider it a serious misconduct. Even the attempts to dissuade the adolescents from engaging in sex look outdated in the era of so much public endorsement of sex (SCH C; TR 2). Avoiding communication on sex is occasioned by the need to maintain respect between the adolescent and us. Sex is a taboo topic, and that prevents thorough discussions on sexual issues that may interest the adolescents (SCH J; TR 1). Most adolescents are shy and will not say their specific problems, so it is hard to give meaningful guidance unless an adolescent approaches the teacher with a particular concern (SCH D; TR 1). Discussion on sexual issues always elicits a lot of excitement among adolescents making it challenging to handle the topics objectively (SCH G; TR 1). Most of the adolescents are so young and may not make sense of serious sexual communication; it is better to allow them to first mature so that they can understand some things; otherwise, they will start practising them based on the information you have provided. Others will start thinking about marriage to fulfil their sexual needs (SCH E; TR 2).

From the findings, the teachers observed that sexual misconduct had greatly been tolerated by the society and is nowadays considered lesser an evil than times back. Teachers also added that it was hard to intensely discuss sexuality topics and maintain high respect among adolescents, that adolescents would start looking at the teachers as though they were their peers. Adolescents were also said to be shy, so they avoided voicing out their sexual challenges. Other teachers reported that discussions on sexual issues elicited a lot of excitement among
adolescents, making it difficult to discuss the topic objectively. Another observation was that sexual talks are considered more of marital discussions and may, therefore, not be much valued by the adolescents.

The findings concur with Taffa et al. (1999) that teachers provide some sexual communication to adolescents, although this depends on how comfortable a teacher is with the content being disseminated. When the level of discomfort is high, the message communicated may be ambiguous, especially when constrained by the taboos associated with the subject. Mukoma et al. (2009) further observe that teachers though willing to offer sexuality education to adolescents, may do it inadequately, not out of wilful neglect of the subjects' importance but rather out of discomfort with handling sex-related topics. For instance, the researcher noted that teachers believing in abstinence-only as the appropriate early pregnancy and STIs prevention strategy for adolescents reported difficulty teaching condom use in comprehensive sex education.

Teachers play an imperative role in communicating with adolescents on sexuality, which helps expose adolescents to the right information on sexuality. Christensen (2018) further agrees that with valid information on sexuality, adolescents could make sound decisions regarding their own sexuality and be able to respect the views of other adolescents with different sexuality choices. Additionally, L'engle et al. (2016) affirm that sexuality education is necessary for teaching adolescents the relationship between sexual life, making love, and human relationships. This is where teachers' communication comes in handy, cognizant that when accurate sexual education is availed, it prepares adolescents to accept physical and functional changes without having emotional judgment; thus they can be free from fear of disgrace or guilt (Tulloch, & Kaufman, 2013).

CONCLUSION AND RECOMMENDATION
Conclusion: This study aimed to assess whether teachers in Nakuru County engaged the learners in sexual communication to aid them in negotiating sexuality challenges in adolescence. Specifically, the study investigated the topics that teachers handled, relative to the 1994 International Conference on Population and Development held in Cairo, Egypt, which recognized adolescent sexual and reproductive health as fundamental human rights. The study found that most of the teachers in Nakuru County were able to engage adolescents on various topics including HIV /AIDS and STIs, values and interpersonal skills, contraceptives, and unintended pregnancies. Teachers were, however, uncomfortable handling sexual variations and self-gratification topics. Among hindrances that curtailed teachers' ability to effectively communicate sexuality information were time constraints due to high workload in teaching subjects, inadequate training necessary to cater to emerging dynamics of adolescent sexuality, and societal taboos that curtail the level of openness on sexuality issues with children. Teachers are strategically positioned to offer
sexuality communication to adolescents since most of them attend formal schooling. The pedagogic training teachers go through is an added advantage that can allow teachers to systematically entrench the desired sexuality value system that would be critical in enhancing the right attitude towards sexuality. Teacher-adolescent sexuality communication can, therefore, be better used to intervene in adolescent sexual behaviour.

**Recommendation:** The study recommends that more efforts should be fostered to increase teacher training, especially in-service training in sexuality communication, to enhance teachers' capacity in delivering sexual health information to adolescents in secondary schools.

**References**

Anderson, K.G., Beutel, A.M., & Maugham-Brown, B. (2007). HIV risk perceptions and first sexual intercourse among youth in Cape Town, South Africa. *International Family Planning Perspectives, 33*(3), 98–105.

Awusabo-Asare, K., Stillman, M., Keogh, S., Doku, D. T., Kumi-Kyereme, A., Esia-Donkoh, K., Leong, E, Amo-Adjei, J., & Bankole, A. (2017). From paper to practice: Sexuality education policies and their implementation in Ghana, New York: Guttmacher Institute.3-38).

Breunet, C. C., & Mattson, G. (2016). Sexuality education for children and adolescents. *Pediatrics, 138*, e1-11. doi: 10.1542/peds.2016-1348.

Chia, S. C., & Gunther, A. C. (2006). How media contribute to misperceptions of social norms about sex. *Mass Communication and Society, 9*(3), 301-320.

Christensen, L. S. (2018). Professionals' perceptions of female child sexual offenders *Journal of Interpersonal Violence; 886260518785377. doi: 10.1177/0886260518785377

Drack, M. (2008). Ludwig Von Bertalanffy’s early system approach. *The University of Chicago Graduate Journal, 8*, 1-11. http://journals.iss.org/index.php/proceedings552nd/article/viewFile/1032/322.

Exavery, A., Lutambi, A. M., Mubyazi, G. M., Kweka, K., Mbaruku, G., & Masanja, H. (2011). Multiple sexual partners and condom use among 10-19 year-olds in four districts in Tanzania: what do we learn? *BMC Public Health. 2011; 11*(1):490. https://doi.org/10.1186/1471-2458-11-490.

Guilamo-Ramos, V., Bousis, A., Lee, J., McCarthy, K., Michael, S. L., Pitt-Barnes, S., & Dittus, P. (2012) Paternal influences on adolescent sexual risk behaviours: A structured literature review. *Pediatrics 130*, e1313–e1325.

Kaaya, S. F., Flisher, A. J., Mbwambo, J. K., Schaalma, H., Aaro, L.E., & Klepp, K. I. (2002). A Review of Studies of Sexual Behaviour of School Students in sub-Saharan Africa. *Scandinavian Journal of Public Health, 30*, 148-160.

Kelly, G. F. (2001). *Sexuality today: The human perspective* (7th Ed.). McGraw-Hill.

Kirby, D., & Laris, B. A. (2009). Effective curriculum-based sex and STD/HIV education programs for adolescents. *Child Development Perspectives, 2*, 210–9.

Kirby, D. B. (2002). The impact of schools and school programs on adolescent sexual behaviour. *Journal of sex research, 39*(1), 27–33.
L’engle, K. L., Brown, J. D., & Kenneavy, K. (2006). Mass media are an important context for adolescents' sexual behaviour. *Journal of Adolescent Health.* 38(3), 186-192. doi:10.1016/j.jadohealth.2005.03.020.

Lindberg, L. D., Santelli, J. S., & Singh, S. (2006). Changes in formal sex education: 1995–2002. *Perspectives on Sexual Reproductive. Health* 38, 182–89.

Lubbe, G., & Puth, P. (1994). *Public relations in South Africa: A management reader.* Cape Town: Heinemann.

Mash, R., Kareithi, R., & Mash, B. (2006). Survey of sexual behaviour among Anglican youth in the Western Cape. *South African Medical Journal* 96 (2), 124–127.

Miller, B. C. (2002). Family influences on adolescent sexual and contraceptive behaviour. *Journal of Sex Research.* 39(1):22–26.

Mukoma, W., Flisher, A. J., Ahmed, N., Jansen, S., Mathews, C., Klepp, K. I., & Schaalma, H. (2009). Process evaluation of a school-based HIV/AIDS intervention in South Africa. *Scandinavian Journal of Public Health* 37 (2), 37–47.

Nganda, S. (2007). Sex education: Do Our Teens Need It? *Human sexuality Beyond Reproduction*, Eleanor Maticka-Tyndale et al. (eds.). Fanele.

Sexuality Information and Education Council of the US (SIECUS). (2008). Adolescent Sexuality. Retrieved from http://www.siecus.org/index.cfm?fuseaction=Page.viewPage&pageId=620&parentID=300

Schaalma, P. (2004). *Sex education as health promotion. What does it take?* Delacorte Press.

Smith, K. A., & Harrison, A. (2013). Teachers' attitudes towards adolescent sexuality and life skills education in rural South Africa, *Sex Education*, 13(1), 68-81. doi: 10.1080/14681811.2012.677206.

Taffa, N., Haimanot, R., Dessalegn, S., Tesfaye, A., & Mohammed, K. (1999). Do parents and young people communicate on sexual matters? The situations of Family Life Education in rural towns in Ethiopia. *Ethiopian Journal of Health Dev.* 139(3):205-210.

Tulloch, T., & Kaufman, M. (2013). Adolescent sexuality. *Paediatrics in Review*, 34, 29–39.

Von-Bertalanffy, L. (1965). “General System Theory and Psychiatry.” *In the American Handbook of Psychiatry*, edited by S. Arieti, 3, 705–721. Basic Books (2nd ed., 1974:1096–1117).

Wight, D., Raab, G., Henderson, M., Abraham, C., Busto, K., & Hart, G. (2002). The limits of teacher-delivered sex education: Interim behavioural outcomes from a randomised trial. *British Medical Journal*, 324, 1430–1433.

WHO. (2014). *Health for the World’s Adolescents: A Second Chance in the Second Decade*, Geneva: WHO Documents Production Services. Retrieved from www.medinstitute.org/media/index.htm.

Zabin, L. S., & Kiragu, K. (1998). The Health Consequences of Adolescent Sexual Fertility Behaviour in Sub-Saharan Africa, *Studies in Family Planning*, 29 (2), 210–232. John Wiley & Sons, Inc.