

## Influence of Self-efficacy on Risky Sexual Behaviors among Undergraduate Students: A Case of Egerton and Kabarak Main Campuses in Nakuru County, Kenya

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### Abstract

This study's purpose was to determine the influence of self-efficacy on risky sexual behaviors among undergraduate students of main campuses in Nakuru County. Social Learning Theory by Albert Bandura and Person-Centered Theory by Carl Rogers guided the study. The study was carried out among 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> year undergraduate students from main campuses in Nakuru County. The study adopted a correlational research design. The target population was 18570 undergraduate students. The accessible population was 8456 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> year undergraduate students whose sample was 367. Simple random sampling technique was used to select the respondents. The study included a sample of 10 peer counselors and 2 student counselors from the Egerton University and Kabarak University main campuses who were selected through purposive sampling. Data were obtained using questionnaire for undergraduate students, focus group discussions guide for peer counselors and interview schedule for student counselors. Validation of research instruments was done through peer and expert review and also through pilot testing which was done in Mount Kenya University (MKU) - Nakuru Campus. Both descriptive and inferential statistics were used to analyze quantitative data using SPSS Version 25 whereas the qualitative data was analyzed thematically. The analyzed data was presented in tables, graphs, and narratives. The researcher considered ethics of confidentiality and informed consent. The findings indicated that majority of the respondents were of the view that self-efficacy influence risky sexual behaviors among undergraduate students.

Keywords: Influence, Self-efficacy, Risky sexual behaviors, Undergraduate Students

### Introduction

Risky sexual behaviors have become a predicament all over the world affecting youth and may lead to sexually transmitted diseases and unintended pregnancies (Amaranganie, Perera, & Abeysena, 2018). According to World Health Organization (WHO), youth are young people aged between 15-24 years old and studies reported that more than half of all new HIV infections occur among people between the ages of 15 and 24 years where most undergraduate students fall under (Kasahun, Yitayal, Girum & Mohammed, 2017). Risky sexual behaviors can have major effects on undergraduate students' experiences that may include negative academic performance, inability to progress through the university academic years, decision to remain at university and overall psychological well-being (Abels & Blignaut, 2011). Young-Powell and Page (2014) attributed risky sexual behaviors to many people viewing university as the best stage of one's life because students are generally thought to have more free time, more parties and more sex.

A research that was done in the USA found that 92% of men and 77% of women undergraduate students had masturbated, and on their lifetime experiences and frequency of recent experiences that most participants reported experience with accessing sexual information (89.8 %) and sexual entertainment (76.5 %) online. Almost half (48.5 %) reported browsing for sexual products, and a substantial minority (30.8%) reported having engaged in cybersex (Döring & Pöschl, 2018). In Denmark 97.8% of males and 79.5% of females watched pornography among 1002 people aged from 18–30 years old (Hald,2006).

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In Asia, researchers have noted that while university students are potential human resources, this population group is particularly involved in health risk behaviors and preventing risky sexual behaviors among them would contribute to prevention of HIV, sexually transmitted infections (STIs), and unwanted pregnancies, which have posed a great burden on population health (Yi, Te, Pengpid, & Peltzer, 2018; Zou et al., 2013; Yu, Guo, & Sun, 2013; Yang et al., 2019).

African universities have been called to respond to the social issues of trauma, adversity, injustice and inequality including risky sexual behaviors that trouble their embedding communities, their staff and their students (Coulter, & Rankin, 2017). Several studies particularly in Sub-Saharan Africa have documented high and increasing premarital sexual activities among undergraduate students as they face social, peer and cultural pressure to engage in risky sexual behavior that may expose them to the risk of unintended pregnancy, early marriage, abortion and STIs/HIV/AIDS (Teferra, Erena, & Kabede, 2015; Amare, Yeneabat, & Amare, 2019; Kabede, Molla, & Gerensea, 2018; Gebresllasie, Tsadik, & Berhane, 2015; Derbie, Assefa, Mekonnen, & Biadlegne, 2016; Berhan & Berhan, 2015; Fetene & Mekonnen, 2018; Onoya et al., 2015). Other studies which were done in Zambia and South Africa concurred that a large number of students were engaging in risky sexual behaviours, such as having multiple sexual partners, inconsistent contraceptives use, and intergenerational sex (Menon, Sidney, Thankian & Lwatula, 2016; Hoque, Ntsipe, & Mokhatle, 2012; Onoya et al., 2015).

In Kenya, Othieno, Okoth, Peltzer, Pengoid and Malla (2015) determined associations between HIV risky sexual behaviour and depression among undergraduate students at the University of Nairobi and found that the percentage of those who had ever been diagnosed with sexually transmitted infections (STIs) was 9.71% (males 8.65%; females 11.01%); and for HIV 3.04% (males 2.02%; females 4.05%), and nearly 30% reported having had multiple partners in the previous 12 months, 27.4% of the students did not use condoms with sexual partners and 21% had engaged in sex after drinking within the previous 3 months (Othieno et al., 2015; Adam, & Mutungi, 2007; Waswa, 2006). Ochieng' (2013) observed that globally, the average age at which young people begin to have sex has steadily decreased. Ssewanyana et al. (2018) noted that a lack of research existed around the most common forms of sexual risk behaviours among young people, including their underlying factors and found that transactional sex, early sexual debut, coerced sex, and multiple sexual partnerships were prevalent. In agreement, Kabiru and Orpinas (2008) found that approximately 50% of the males and 11% of females were reported having had sexual intercourse at least once in their lifetime with a significant proportion reporting multiple sexual partnerships.

In Nakuru, Esho, Data, and Muniu (2018) did a study about the risky sexual behaviors among young people and found that it was but natural to exchange the half-baked feelings and experiences with peers and the environment that includes public media has sexually suggestive flavors. The study found that a large number of older adolescents wished that their parents had talked to them about sexual matters. While there are numerous studies expressing the influence of self-efficacy on risky sexual behaviors among the young people in Western world and African countries, such investigations have been rare in different Kenyan campuses and specifically in Nakuru County focusing on undergraduate students, hence this study determined the influence of self-efficacy on risky sexual behaviors among undergraduate students: A case of Egerton and Kabarak main campuses in Nakuru County.

Self-efficacy may influence risky sexual behaviors among undergraduate students. Lebeso, Maputle, Mabunda, and Chauke (2017) found that pregnancy among young people seemed to be an increasing

problem due to lack of knowledge, attitudes and perception that helps in building self-efficacy of students in order to counteract risky sexual behaviors.

### **Literature Review/ Theoretical Background**

Research has shown that self-efficacy may influence risky sexual behaviors among undergraduate students as noted in a wide range of literature globally, regionally and partly locally. In USA, Zamboni, Crawford, and Bryant (2017) used structural equation modeling to test variations of the Health Belief Model in predicting safer sex intentions among 151 African-American gay/bisexual men and found that including self-efficacy as a mediating variable improved the model and overall prediction of safer sex intentions. The study focused on gay/bisexual men, but this study determined the influence of self-efficacy on risky sexual behaviors among undergraduate students.

Javier, Abrams and Moore (2016) noted that despite condom use being the most protective measure against the transmission of human immunodeficiency virus little was known about the intermediary relationships between condom negotiation, assertive sexual communication, and condom use efficacy. The study examined two samples of African American college women participating in two HIV prevention interventions, one of which was based on social learning theory ( $N = 214$ ). Findings revealed that condom use efficacy at post-test fully mediated the relationship between intervention effect and assertive sexual communication at 3-month follow-up. In addition, condom use efficacy at post-test fully mediated the relationship between intervention effect and condom negotiation at 3-month follow-up. The study focused on condom efficacy whereas this study will focus on the influence of self-efficacy on risky sexual behaviors among undergraduate students. Scull et al. (2019) examined the prevalence and risk factors associated with risky sexual behaviors in community college students and did a diverse sample of 18–19-year-old community college students ( $N = 264$ ) and found that higher intentions to engage in risky sexual behaviors were associated with having lower intentions to communicate with a sexual partner about pregnancy and STIs, and having higher gender norm endorsement due to lack of self-efficacy.

In China, Li et al. (2017) examined the potential mediating roles of peer norms and self-efficacy and did a nationwide cross-sectional online survey among Chinese MSM in 2015 and found that HIV/sexual health community engagement, condom use peer norms, condom use self-efficacy, and frequency of condom use were mutually correlated. HIV/sexual health community engagement was associated with frequency of condom use, which was directly mediated by condom use peer norms and indirectly through self-efficacy. The study suggested that condom use peer norms and self-efficacy may be mediators in the pathway between community engagement and condom use. The above study focused on self-efficacy and men who have sex with men, but this study sought to determine the influence of self-efficacy on risky sexual behaviours among undergraduate students.

In Africa, Louw, Peltzer, and Ramlagan (2018) investigated young women's self-esteem, sexual-risk behavior and exposure to love life, a youth HIV prevention programme, and did a population-based household survey of youth aged between 18-24 years in four South African provinces using multi-stage stratified cluster sampling and found that not having sex with someone older, partner reduction, self-efficacy, relationship control and having a sense of future predicted self-esteem, and concluded that being in control of the relationship (self-efficacy) and having a sense of future are important factors in understanding sexual-risk behavior in young women. On the contrary, Aboussalam, Naude, Lens and Esterhuyse (2016) investigated the moderator effect of future time perspective in the relationship between self-efficacy and risky sexual behavior and conducted a random cluster consisting of 467 learners from English medium high schools of central South Africa and found that both self-efficacy and future time

perspective were negatively related to risky sexual behavior. The study identified self-efficacy and future time perspective as qualities that protect young people from engaging in risky sexual behaviors. The study focused on self-efficacy of high school students in South Africa, whereas this study focused on the influence of self-efficacy on risky sexual behaviors among undergraduate students in Nakuru County, Kenya.

In Ghana, Teye-Kwadjo, Kagee and Swart (2017) noted that attitudes towards condom use and perceived behavioural control (self-efficacy) over condom use were significantly positively associated with the intention to use condoms, and noted the importance of using behavioral beliefs, perceived control beliefs and behavioral intention as key variables in condom promotion programmes among youth. Asante, Osafo, and Doku (2016) did a cross-sectional study involving 518 university students in Accra, Ghana to determine how the Condom Use Self-efficacy Scale-Ghana can predict both actual condom use and future condom use and found that of all the participants, 84 % were sexually active but less than half of the sample (48 %) reported to have used condom during their last sexual intercourse, and a hierarchical regression analysis showed that components of the Condom Use Self-Efficacy Scale such as appropriation, assertiveness, pleasure and intoxication, and STDs predicted condom use and condom use intentions.

Ugoji (2014) noted that in the last three decades, it was observed that there was a substantial increase in the proportion of adolescents who engaged in sexual activity while at school and did a survey design investigating perceived effect of emotional intelligence, self-esteem, religiosity and media on risky sexual behavior of 300 secondary school students from 10 secondary schools within Asaba metropolis and found that relationships among risky sexual behavior and the independent variables were significant; however, the relationships between risky sexual behavior and emotional intelligence/religiosity were negatively significant. It was recommended that incorporating emotional intelligence and self-esteem training into the school curriculum of students' religious activities should be encouraged as well to enhance moral development of adolescents, hence a strong self-efficacy. The study focused on self-esteem among the adolescents whereas the present study determined the influence of self-efficacy on risky sexual behaviors among undergraduate students. Scoloven (2016) noted that HIV/AIDS knowledge was associated with self-efficacy for limiting sexual risk behavior.

Thompson, Lewis, and Neilson (2016) noted that risky sexual behavior is a serious public health problem as they found in research that trauma symptoms predicted unprotected sex and mediated effects of emotional maltreatment on unprotected sex and on assertiveness in sexual refusal and the effects of sexual abuse on unprotected sex. The study focused more on trauma effect on assertiveness resulting in risky sexual behaviors among children.

Bulduk and Erdogan (2012) investigated how HIV/sexually transmitted infection peer education affected HIV knowledge, perceived prevention self-efficacy, and risky sexual behaviors among Turkish university students who were sexually active but did not use condoms. The study found that significant differences according to group time interaction in the variables of HIV knowledge, self-efficacy for condom use and refusing sexual intercourse, and vaginal-oral-anal intercourse with condom, talking with the partner about condom use, refusing sexual intercourse with someone not using a condom, and taking alcohol before sexual intercourse. No differences were found according to group time interaction in self-efficacy for asking potential partners questions, using drugs before and after sexual intercourse, and sexual partner. Peer education should focus on safer sexual behaviors to develop strategies to increase self-efficacy. In Botswana, Moore et al. (2017) noted that impulsivity and extraversion have demonstrated associations with

risky sexual behavior and potentially traumatic events. Results indicated that impulsivity and extraversion were significantly positively associated with risky sexual behavior.

In Kenya, Omanyo (2016) established the relationship between personality sub-types and involvement in risky sexual behavior among secondary school students in Nyakach Sub-county using a Correlation research design, and found that there was a relationship between personality and involvement in risky sexual behavior, and that personality subtypes are significant predictors of involvement in risky sexual behavior at 67.9%. The study focused on the relationship between personality and risky sexual behaviors among secondary students in Nyakach Sub-county.

Nydegger, DiFranceisco, Quinn, and Dickson-Gomez (2017) noted that unequal gender norms and age-disparate sexual relationships can lead to power imbalances and are also associated with intimate partner violence, sexual coercion and violence, and sexual risk behaviors. Female participants who had been in age-disparate sexual relationships were more likely to have been pregnant due to low self-efficacy. Traeen et al. (2014) found that the association between the use of sexually explicit material and sexual risk behavior was mediated by condom use self-efficacy in an indirect path. The study noted that in order to promote STI prevention, the actors in SEM may be used as role models in managing condom use in sexual contexts, hence building self-efficacy.

Tenkorang and Maticka-Tyndale (2014) examined associations between both community and individual level characteristics and sexual debut among youth in Sub-Saharan Africa. Cross-sectional survey data collected from 8,183 youth aged 11–17 in 160 schools in Nyanza, Kenya, were used to examine the relationships between individual and community measures and the timing of sexual debut. Youth with higher abstinence self-efficacy had a reduced risk of sexual debut. These researchers observed that in other parts of sub-Saharan Africa, youth in Kenya reported low rates of condom use. Using the Theory of Planned Behavior (TPB), the study examined whether beliefs and attitudes around condoms influenced intentions and actual condom use and found a direct relationship between attitudes and condom use for male respondents and an indirect relationship between these two variables for females. Mbugua and Karonjo (2018) noted that reproductive health knowledge was vital in the growth and development of young people's self-efficacy and could impact greatly on their educational and personal outcome as they proceed to adulthood. The study dwelled on the importance of reproductive health knowledge in building self-efficacy which impacts on risky sexual behaviors. These studies show the role of guidance and counseling in schools at various levels of education in order to build self-efficacy to counter risky sexual behaviors among students, whereas this study sought to determine the influence of self-efficacy on risky sexual behaviors among undergraduate students in Nakuru County.

## **Methodology**

The researcher applied correlational research design. The researcher applied positivist research philosophy. The location of the study was Nakuru County, where undergraduate students in two main campuses within the County were targeted, namely: Egerton University- Njoro Campus and Kabarak-Main Campus. The study's target population was the undergraduate students of the above named main campuses. The researcher focused on 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> year undergraduate students thus constituted the accessible population. Also, ten peer counselors participated in the focus group discussions and two student counselors were interviewed each representing the main campuses. The two campuses were selected using a purposive sampling technique based on the records of those students who were in session at the Registrar of Academics office of the two main campuses. The researcher used proportionate sampling to identify the number of respondents required per main campus. The researcher used



undergraduate students' questionnaire, peer counselors' focus group discussions guide and student counselors' interview schedule for soliciting data from the respondents. To ensure the reliability and validity of the research instruments, a pilot study was done at Mount Kenya University (MKU)-Nakuru campus. Both qualitative and quantitative data were analyzed. Descriptive and inferential statistics were employed in data analysis with the aid of Statistical Package for Social Sciences (SPSS) version 25. The analyzed data was presented in tables, graphs and narratives systematically so as to draw useful conclusions and recommendations.

## Results and Discussion

The objective of this study was to determine the influence of self-efficacy on risky sexual behaviors among undergraduate students with special reference to Egerton and Kabarak main campuses in Nakuru County. In this section, the study determined the influence of self-efficacy on risky sexual behaviors among undergraduate students. The students were required to fill the questionnaires, the peer counselors were asked to give information through focus group discussion (FGD), whereas the student counselors were asked to give information through the interview schedule.

### Undergraduate Students' Responses on the Influence of Self-efficacy on Risky Sexual Behaviors

The undergraduate students were asked to give information on their perceptions of the influence of self-efficacy on risky sexual behaviors. The findings are shown in Table 1.

**Table 1** Likert Scale Score of Undergraduate Students' Perception of the Influence of Self-efficacy on Risky Sexual Behaviors

Likert Items	SD	D	N	A	SA
Refuse sex with someone at a party	49(14.2%)	39(11.3%)	37(10.8%)	67(19.5%)	152(44.2%)
Refuse sex, even if a boyfriend or girlfriend	75(21.8%)	86(25.0%)	50(14.5%)	67(19.5%)	66(19.2%)
Refuse alcohol/drugs, could make the right decision	31(9.0%)	22(6.4%)	27(7.8%)	74(21.5%)	190(55.2%)
Refuse alcohol/drugs, could communicate decision	17(5.0%)	34(10.0%)	28(8.3%)	101(29.8%)	159(46.9%)
Refuse sex, until partner agrees to use a condom	45(13.3%)	38(11.2%)	65(19.2%)	79(23.4%)	111(32.8%)
Could tell boy or girl-friend to start using condoms	35(10.4%)	30(8.9%)	47(13.9%)	107(31.8%)	118(35.0%)
Could tell first-time partner to use condoms	31(9.2%)	26(7.7%)	43(12.8%)	95(28.2%)	142(42.1%)
Could convince boy or girlfriend to use condoms, if using birth control pills	57(16.6%)	45(13.1%)	56(16.3%)	85(24.8%)	100(29.2%)

The scores in Table 1 show the responses of undergraduate students to the examined aspects of self-efficacy in relation to risky sexual behaviors. The undergraduate students rated their perceptions on the influence of self-efficacy on risky sexual behaviors through the following statement: Refuse sex with someone at a party. The majority of undergraduate students, 67(19.5%) and 152(44.2%) indicated agree and strongly agree respectively, while those who did not support the statement by indicating strongly disagree and disagree were 39(11.3%) and 37(10.8%) respectively. Those respondents who indicated

neutral were 49(14.2%). This implied that majority of the students in the universities refused sex with someone at a party. A strong self-efficacy among undergraduate students helps them to resist being lured to sex in parties. In reference to social learning theory, it is good when parents, counselors and other stakeholders inculcate assertive skills in order to build a strong self-efficacy hence curb risky sexual behaviors among undergraduate students.

Majority of peer counselors from Campus 'A' and Campus 'B' were of the view that lack of a strong self-efficacy contributed to risky sexual behaviors among their fellow peers i.e. students who follow peers for house parties and sexual expedition during weekends because of lack of assertiveness to say no to such invitations. According to the student counselors, self-efficacy is about ones-self, loving one-self and has to do with self-assertiveness. If a student has high self-efficacy then he/she may not yield to risky sexual behaviors, and if the self-efficacy is low then he/she is likely to engage in risky sexual behaviors. The counselors shared an experience of a number of clients whose self-efficacy was high and they were able to resist invitation for house parties that may lead to risky sexual behaviors but those with low self-efficacy found themselves engaging in risky sexual behaviors.

These findings concur with a study by Louw et al. (2018) who investigated young women's self-esteem, sexual-risk behavior and exposure to love Life, a youth HIV prevention programme and found that not having sex with someone older, partner reduction, self-efficacy, relationship control and having a sense of future predicted self-esteem, being in control of the relationship (self-efficacy) and having a sense of future are important factors in understanding sexual-risk behavior in young women. Also, the findings agree with a study done in USA by Zamboni et al. (2017) who found that including self-efficacy as a mediating variable improved the model and overall prediction of safer sex intentions.

The undergraduate students further rated the influence of self-efficacy on risky sexual behaviors through responses to the following statement: Refuse sex, even if a boyfriend or girlfriend. Majority of the respondents, 75(21.8%) and 86(25.0%) strongly disagreed and disagreed respectively. Those who indicated neutral were 50(14.5%), while those who agreed and strongly agreed were 67(19.5%) and 66(19.2%) correspondingly. This indicates that there is sufficient evidence to conclude that mainstream of the students in campus could not refuse sexual activities with their boyfriends or girlfriends. These findings concur with a study by Scull et al. (2019) who examined the prevalence and risk factors associated with risky sexual behaviors in community college students and did a diverse sample of 18–19-year-old community college students ( $N = 264$ ) and found that higher intentions to engage in risky sexual behaviors were associated with having lower intentions to communicate with a sexual partner about pregnancy and STIs, and having higher gender norm endorsement due to lack of self-efficacy. The findings differ with a study that was done in South Africa by Abousselam et al. (2016) who investigated the moderator effect of future time perspective in the relationship between self-efficacy and risky sexual behavior and found that both self-efficacy and future time perspective were negatively related to risky sexual behaviors. The university efforts to enhancing self-efficacy among undergraduate students through psycho educating them on assertive skills should be designed in order to mitigate risky sexual behaviors.

The researcher further evaluated the perception of the respondents on refusal of alcohol or drugs in order to make the right decision. From the results, it was observed that majority of the respondents, 74(21.5%) and 190(55.2%) agreed and strongly agreed respectively that their decision to refuse alcohol and drugs assist them in making the correct decision. Those who indicated neutral were 31(9.0%), while 22(6.4%) and 27(7.8%) strongly disagreed and disagreed correspondingly. This means that there is sufficient evidence to conclude that the undergraduate students refuse alcohol or drugs so that they can make the right decisions

of refusing to engage in risky sexual behaviors. From the study it was also observed that majority of the respondents 101(29.8%) and 159(46.9%) agreed and strongly agreed in that order that their decision to refuse alcohol and drugs assist them to communicate the decision on sexual behaviors. Those who indicated neutral were 17(5.0%), while 34(10.0%) and 28(8.3%) strongly disagreed and disagreed correspondingly. This finding strongly indicates that undergraduate students are aware that the alcohol or drugs impairs decision making and communication.

These findings are similar to a study by Thompson et al. (2016) who found that substance use predicted unprotected sex and four or more partners. Ritchwood et al. (2015) found that substance use is more strongly related to risky sex among females than males. Kuperberg and Padgett (2017) analyzed a sample of 12,065 hook-up encounters among college students at 22 colleges and universities in the Online College Social Life Survey to explore how partner meeting locales may influence college students' risky behaviour when hook-up partners are met in those contexts. For other-sex encounters, meeting in bars or at parties, through common interest groups or history, and at dormitories was associated with binge drinking during encounters, while meeting online and in public was associated with reduced binge drinking during encounters. Osman et al. (2016) noted that youth populations are vulnerable to substance use particularly in developing countries where circumstances may be favorable for it. The overall prevalence of substance use was 31%. The prevalence of tobacco, cannabis, alcohol, amphetamines, tranquilizers, inhalants, opiates, cocaine, and heroin use was 13.7%, 4.9%, 2.7%, 2.4%, 3.2%, 1%, 1.2%, 0.7%, and 0.5%, respectively. Curiosity (33.1%) was the main reason for initiation of substance use. The main adverse effects reported were health problems including risky sexual behaviors (19.7%) and theft (19.7%). Peers (40.9%) were the prime source of substance use. This implies that self-efficacy is useful in resisting substance abuse which contributes to risky sexual behaviors. Therefore, parents, counselors, religious leaders and university management should put more effort to empower undergraduate students on self-efficacy in dealing with substance abuse which contributes to risky sexual behaviors.

Another statement used to test the influence of self-efficacy on risky sexual behaviors among undergraduate students was: Refuse sex, until partner agrees to use a condom. From the results, it was observed that majority of the respondents, 79(23.4%) and 111(32.8%) agreed and strongly agreed respectively, refuse sex until their partner agrees to use a condom. Those who indicated neutral were 45(13.3%), while 38(11.2%) and 65(19.2%) strongly disagreed and disagreed in that order. This indicates that there was significant evidence that a bulk of the students refuse sex until their partner agrees to use the condom. Furthermore, the result of the study indicate that majority of the students could tell the boyfriend or girlfriend to start using the condoms as indicated by 107(31.8%) and 118(35.0%) of the respondents who agreed and strongly agreed respectively. Those who indicated neutral were 35(10.4%) while 30(8.9%) and 47(13.9%) strongly disagreed and disagreed correspondingly. This indicate that mainstream of the students in the university could tell their boyfriend or girlfriends to start using the condoms.

The result of the study also indicate that majority of the students 95(28.2%) and 142(42.1%) agreed and strongly agreed respectively could tell first time partners to start using condoms. Those who indicated neutral were 31(9.2%) while 26(7.7%) and 43(12.8%) strongly disagreed and disagreed in that order. This indicates that a big population of students in the university could tell their first-time partners to start using the condoms. Finally, concerning condom use self-efficacy, the result of the study indicate that majority of the respondents, 85(24.8%) and 100(29.2%) agreed and strongly agreed respectively, could convince boyfriend or girlfriend to use the condoms if using birth control pills. Those who indicated neutral were 57(16.6%), while 45(13.1%) and 56(16.3%) strongly disagreed and disagreed correspondingly. This



indicates that mainstream of the students in the university could convince their boyfriends or girlfriends to use condoms if they were using birth control pills.

These findings agree with a study that was done in China by Li et al. (2017) who found that HIV/sexual health community engagement, condom use peer norms, condom use self-efficacy, and frequency of condom use were mutually correlated. HIV/sexual health community engagement was associated with frequency of condom use, which was directly mediated by condom use peer norms and indirectly through self-efficacy. The study suggested that condom use peer norms and self-efficacy may be mediators in the pathway between community engagement and condom use. Javier et al. (2016) found that condom use efficacy at post-test fully mediated the relationship between intervention effect and assertive sexual communication at 3-month follow-up and in addition, condom use efficacy at post-test fully mediated the relationship between intervention effect and condom negotiation at 3-month follow-up. In Ghana, Teye-Kwadjo et al. (2017) noted that attitudes towards condom use and perceived behavioral control (self-efficacy) over condom use were significantly positively associated with the intention to use condoms, and noted the importance of using behavioral beliefs, perceived control beliefs and behavioral intention as key variables in condom promotion programmes among youth.

The findings coincide also with a research by Asante et al. (2016) who did a cross-sectional study involving 518 university students in Accra, Ghana to determine how the Condom Use Self-Efficacy Scale-Ghana can predict both actual condom use and future condom use and found that of all the participants, 84 % were sexually active but less than half of the sample (48 %) reported to have used condom during their last sexual intercourse, and a hierarchical regression analysis showed that components of the Condom Use Self-Efficacy Scale such as appropriation, assertiveness, pleasure and intoxication, and STDs predicted condom use and condom use intentions. Scoloven (2016) noted that HIV/AIDS knowledge was associated with self-efficacy for limiting sexual risk behaviour. Traeen et al. (2014) found that the association between the use of sexually explicit material and sexual risk behavior was mediated by condom use self-efficacy in an indirect path. The findings are also in agreement with a study that was done in Kenya by Tenkorang and Maticka-Tyndale (2014) who found that youth with higher abstinence self-efficacy had a reduced risk of sexual debut. Also Mbugua and Karonjo (2018) found that reproductive health knowledge was vital in the growth and development of young people's self-efficacy and could impact greatly on their educational and personal outcome as they proceed to adulthood. Majority of men tend to base their sexual relations on exploration factor whereas women tend to place emphasis on close relationships, which may alter their reasons for having sex. Studies indicate that most women tend to have less control over condom use with a partner, which means condom use negotiation requires individuals' level of high self-efficacy (Schimdt, 2015).

In summary, it is clear from the research findings and related literature that self-efficacy plays a key role in influencing risky sexual behaviors among undergraduate students. The findings indicate that majority of the respondents in the campuses manifested a strong sense of self efficacy by perceiving that they could refuse to engage in sex with boyfriends or girlfriends, refuse alcohol, and could abstain from premarital sex or encourage use of condoms in order to curb risky sexual behaviors. However, there are those who manifested low self-efficacy. This information can be useful in devising effective interventions and measures to enhance self-efficacy in order to mitigate risky sexual behaviors. Therefore, parents, counselors, religious leaders, policy makers and university management should enhance self-efficacy among undergraduate students in order to mitigate risky sexual behaviors.

This study further sought to establish the significance of the influence of self-efficacy on risky sexual behaviors among undergraduate students. A null hypothesis:  $H_01$ : *There is no statistically significant influence of self-efficacy on risky sexual behaviors among undergraduate students* was generated. Undergraduate students' self-efficacy was conceptualized by means of various variables derived from non-missing responses on 8 items measuring the various domains of students' self-efficacy in relation to risky sexual behaviors. Chi-square test was used to test the significance of this relationship at 0.05, significance level. The findings are presented in Table 2 and subsequently discussed.

**Table 2** Chi-square Statistical Test of the Influence of Self-efficacy on Risky Sexual Behaviors among Undergraduate Students

Likert Items	Chi-Squ.	Df.	Asymp. Sig.	Exact Sig.	Point Probab.
Refuse sex with someone at a party	133.965 <sup>a</sup>	4.00	.000	.000	.000
Refuse sex, even if a boyfriend or girlfriend	10.157 <sup>a</sup>	4.00	.038	.038	.001
Refuse alcohol/drugs, could make the right decision	291.901 <sup>a</sup>	4.00	.000	.000	.000
Refuse alcohol/drugs, could communicate decision	217.209 <sup>b</sup>	4.00	.000	.000	.000
Refuse sex, until partner agrees to use a condom	50.402 <sup>c</sup>	4.00	.000	.000	.000
Could tell boy or girl-friend to start using condoms	103.757 <sup>d</sup>	4.00	.000	.000	.000
Could tell first-time partner to use condoms	147.792 <sup>d</sup>	4.00	.000	.000	.000
Could convince boy or girlfriend to use condoms, if using birth control pills	30.688 <sup>e</sup>	4.00	.000	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 68.8.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 67.8.

c. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 67.6.

d. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 67.4.

e. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 68.6.

The chi-square results in Table 2 indicate that the p-value of the areas of the influence of self-efficacy on risky sexual behaviors among undergraduate students were as follows: refuse sex with someone at a party (.000), refuse sex, even if a boyfriend or girlfriend (.001), refuse alcohol/drugs could make the right decision (.000), refuse alcohol/drugs could communicate decision (.000), refuse sex until partner agrees to use a condom (.000), could tell boy or girl-friend to start using condoms (.000), could tell first-time partner to use condoms (.000), and finally, could convince boy or girlfriend to use condoms, if using birth control pills (.000). Since all the p-values are less than 0.05, the study rejects the null hypothesis and accepts the alternative hypothesis that there is a statistically significant influence of self-efficacy on risky sexual behaviors among undergraduate students. This finding implies that self-efficacy does influence risky sexual behaviors among undergraduate students and therefore should be given attention by parents, counselors, university administrators and all other stake holders in order to empower undergraduate students on self-efficacy to curb risky sexual behaviors.

This study further sought to establish the risk of the influence of self-efficacy on risky sexual behaviors among undergraduate students in the private and public main campuses in Nakuru County. The findings of risk factor analysis are indicated in Table 3 and subsequently discussed.

**Table 3** Risk Factor Analysis of the Influence of Self-efficacy on Risky Sexual Behaviors among Undergraduate Students

Influence of Self-efficacy on Risky Sexual Behaviors among Undergraduate Students	Value	95% confidence interval	
		Lower	Upper
Odds Ratio for university (Kabarak / Egerton)	.841	.453	1.562
For cohort efficacy = strongly disagree.	.864	.512	1.460
For cohort efficacy = strongly agree	1.028	.934	1.131
N of Valid Cases	346		

The Table 3 indicates the results of the odds ration of the influence of self-efficacy on risky sexual behaviors among undergraduate students in private and public universities in Nakuru County. From the analysis, it was observed that the odds ratio of private to public was 0.841 which indicate that there was strong influence of self-efficacy in private university than the public university on risky sexual behaviors among the students due to strict rules and regulations in the private campuses, some based on religious values hence uphold high moral values including psycho educating them on assertive skills and confronting undergraduate students from engaging in risky sexual behaviors in campus in comparison to public campuses who may be lenient.

### Conclusions

Concerning the influence of self-efficacy on risky sexual behaviors among undergraduate students in Nakuru County, it was concluded that majority of the undergraduate students refuse to have sex with someone in parties and also refuse sexual activities even with their boyfriends or girlfriends and furthermore refuse sex until their partner agrees to use condom. It was also concluded that undergraduate students are aware that alcohol or drugs impairs their decision making and communication in relation to risky sexual behaviors. A Chi-square test was done and the results indicated that all the p-values were less than 0.05, therefore, the study rejected the null hypothesis and accepted the alternative hypothesis that there is a statistically significant influence of self-efficacy on risky sexual behaviors among undergraduate students. From the risk factor analysis that was done, the results show that there was a strong influence of self-efficacy in private university than the public university on risky sexual behaviors among the students.

### Recommendations

In order to address risky sexual behaviors among undergraduate students there should be a deliberate effort by the stakeholders in universities to empower undergraduate students on self-efficacy in order to counter risky sexual behaviors.

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