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### Interrogating the Underlying Barriers to HIV Non-Protective Behaviors' Control among University Students: Towards an Effective Psycho-Educational Mitigation

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**Keywords:**

Barriers,  
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The study purposed to interrogate the underlying barriers to HIV non-protective behaviours' control among university students, geared towards formulating an effective psycho-educational intervention for the same. The population was both male and female year three university students. The respondents were 12 for the focus group discussion and 15 for the in-depth interviews, selected purposively. Data analysis was done using thematic analysis. There was concurrent data analysis and discussion of findings. The findings revealed that university students continue to engage in HIV non-protective behaviours like lack of and inconsistent condom use, multiple sexual partners and low adherence to HIV messages and training due to factors associated with low socio-economic status, shame, lack of knowledge, flaws within the HIV messaging, to mention but a few. It is therefore concluded that HIV continues to soar among university students through non-protective conduct related to unsafe sex, multiple and concurrent sexual partners and low interest in and negative attitude towards uptake of HIV control messages. Hence, there is a need for a supply of condoms in socially safe spaces, education on condom use and the dangers of multiple sexual partners, economic empowerment, and most importantly, embracing an effective psycho-educational intervention that addresses the specific learning needs of university students about HIV and its control.

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**INTRODUCTION**

The 15-24 year age bracket, to which university students belong, is and continues to be the most vulnerable as far as HIV infection is concerned (UNAIDS, 2008; Nanyonga et al., 2020; Murewanhema et al., 2022). Therefore, interventions that focus more on this category are essentially needed (Mbengo et al., (2022). For any effective intervention to be crafted and implemented, there is a dire need for care and comprehensiveness in understanding the barriers that create the HIV knowledge-HIV-related behaviour gap that exists in this population category, using qualitative approaches that augment the already existent quantitative data. This study aims at exploring why, despite possessing HIV knowledge, young male and female adults in tertiary institutions of learning, continue to indulge themselves in HIV non-protective behaviours. It continues to be an area of concern as to why HIV-related behaviours are difficult to modify, yet they are detrimental to HIV control, in order to formulate and suggest effective psycho-educational mitigation measures that can help resolve this challenge, as health is detrimental to academic progress and ultimately, academic achievement.

Young adults such as those in universities form 30 percent of new HIV infections (WHO, 2020) and 9 percent of the global HIV-positive population (UNAIDS, 2021) and the infections are projected to soar higher by approximately 13 percent by the year 2030 (UNAIDS, 2021; UNICEF, 2017) if interventions such as effective behaviour modifications do not happen. According to the Social Ecological Model (CDC, 2014; Kaufman et al., 2014), numerous factors explain why young people are susceptible to HIV at differing rates

which influence their likelihood of involving themselves in non-protective behaviours. These factors include but are not limited to communication, self-esteem, peer pressure, socio-economic status (DiClemente et al., 2008; Eaton et al., 2003), alcohol and drug use and misuse (Govender et al., 2019), inadequate knowledge (Harper et al., 2014), gender and cultural factors (Dancy et al., 2014; Van Staden & Badenhorst, 2009), self-efficacy, HIV risk perception and intimacy (Kobusingye, 2017). The sad reality is HIV is incurable and hence, any intervention, whether theoretical or practical, should be looked at as vital in curbing the scourge, for example, those suggested by Hosek and Pettifor (2019) and Muthoni et al., (2020). What is common among these interventions is that as much as they are successful in changing non-behavioral attributes, like, knowledge, attitudes, perceptions and intentions, they have not met considerable success in modifying behavioral attributes (Johnson et al., 2011; Picot et al., 2014; Protegerou & Johnson, 2014), like condom use consistency. To be able to develop a comprehensive effective intervention mitigation, it is important to understand what the barriers and facilitators are, especially those focusing on young people, specifically, emerging adults in higher institutions of learning such as universities.

The study was guided by the Determinant Framework (Nilsen, 2015; 2020) which consists of four domains and attempts to explain issues that influence the success of any intervention. The characteristics of the intervention feature duration, success and failure; the traits of the intervention users/implementers, that is, are they trained (skilled), knowledgeable and of appropriate age; the

traits of the clients/consumers in universities in terms of age, gender, self-efficacy and knowledge levels; contextual characteristic traits, that is, the milieu, culture, environment, setting, resource availability such as manuals, pay for trainers and for training staff or conditions surrounding the intervention; and finally, strategy characteristic traits, that is, methods of delivery that determine the success of the intervention. The study was also rooted in the Expectancy Utility Model (Savage, 1954), which seems to stipulate that young people may engage in HIV non-protective behaviours after weighing the pros and cons of such behaviours in terms of outcomes and ultimately choose those whose benefits outweigh the risks, and the theory of Reasoned Action (Ajzen, 1985; Ajzen & Madden, 1986) which argues that behaviour is influenced by intention which is a function of subjective norms and attitude towards that particular behaviour. University students, therefore, engage in HIV non-protective behaviours if they expect benefits that are far greater than the risks involved, and if their attitude towards these behaviours is positive rather than negative. These behaviours among young people begin with intuition, which is in turn influenced by attitudes, either from an approval or disapproval perspective.

### Research Problem

Young or emerging adults, year after year, have been taken through several interventions to prevent HIV-related non-protective behaviours such as talks, conferences and workshops, to mention but a few. However, there is no evidence-based intervention into this aspect of their personal, behavioural, social and eventually, health aspect that has specifically focused on school-going youths, such as those in universities (Harrison et al., 2010). In past research, it is noted that focus has largely been put on general risky behaviours instead of specific factors that drive these behaviours so that strategic mitigations can be suggested to tackle these underlying factors instead of the actual behavioural manifestations (Gupta et al., 2008;

Rotheram et al., 2009; Taylor, 2004). Hence there is a need to explore and investigate the underlying factors that drive university students to engage in HIV non-protective behaviours that may expose them to health challenges such as HIV, in order to inform future strategies for HIV prevention which might require a collective and holistic approach (Gupta et al., 2008; Gonzalez et al., 2019). The rate of HIV infection continues to soar high despite existent interventions such as knowledge of the causes and prevention methods for the scourge and this is evidence that there is a need for more effective interventions for this specific population since behaviours related to HIV risk have not evolved from non-protective to protective.

The knowledge-behaviour gap continues to widen mainly because attention has not been given to the underlying causes of behaviours that make young people susceptible to HIV. The subtle and underlying causes of the increase in HIV prevalence and risk are not being fully addressed by these interventions (Stirling et al., 2008). Therefore, understanding young people's non-protective behaviours and their underlying drivers, that is, why they can't control their sexual urges, do not use condoms consistently, can't practice peer resistance, have multiple sexual partners, abuse alcohol and drugs, do not test for HIV both at individual and couple level is important. Interventions geared towards addressing these causes in order to curb the general consequences would come in handy. Most studies on HIV non-protective behaviours have also largely focused on specifically those that are sexual in nature and ignored the indirect role of non-sexual HIV non-protective behaviours and attitudes, which this study will focus on too since they too inform intervention strategies that can help reduce and eventually eliminate HIV susceptibility. The research question was, "What are the underlying barriers to the effective HIV non-protective behaviours' control among university students?"

## LITERATURE REVIEW

University students, who by virtue of their age are young adults are prone to HIV because of the absence of protective behaviours and factors (Rudgard et al., 2023) where females are more prone to HIV risk than males (Stover et al., 2021; Global Burden of Disease Collaboration Network, 2021; Pettifor et al., 2018). The diverse sexual behaviours that are non-protective include not only multiple but also concurrent sexual partners, early onset of sex, sex that is condom-less, transactional sex, cross-generational or age-disparate sex, sex under the influence of alcohol and substances, to mention but a few, while the non-sexual but equally non-protective behaviours include lack of HIV testing both as individuals and as sexual partners, and absence of declaration of HIV status to sexual partners (Santelli et al., 2013; Steffenson et al., 2011; Kalichmen et al., 2007; Stockl et al., 2013; Kidman & Violari, 2020). All these factors are further compounded by low socio-economic status which affects the progress in education and availability of basic needs such as food and accommodation (Krieger, 2001; Chop et al., 2017).

In Uganda, cultural norms such as men having multiple sexual partners exist and this affects sexual reproductive health (Uganda AIDS Commission, 2005). This also creates gender-norm perspectives that are instrumental in shaping how males generally approach sex roles, issues that are key in HIV prevalence (Scheuller et al., 2005). These practices aggravate engagement in multiple sexual partnerships and unprotected sex (Joshi, 2010). Gender as a factor of multiple sexual partners presents the fact that heterosexual relationships as gender roles have done well to demarcate sexual risk-taking (O'Sullivan et al., 2006). Risk-taking in sex is associated with unprotected sex among both concurrent and sequential sexual partners. Gender roles are culturally streamlined behaviours that set males apart from females and have been identified as drivers of risky sexual behaviour because of the sexuality, gender and relationships interface that

defines sexual behaviour (Gagnon & Simon, 1973; Simon & Gagnon, 1996). Males, by virtue of their gender, are expected to stray outside their committed partnerships for any available sexual opportunities, which aggravates and accelerates HIV risk (Littleton & Axson, 2003; Byers, 1996). The gender factor is further motivated by peer influence as peers among males influence each other to possess multiple sexual partners (Muehlenhard & MacNaughton, 1998). This is also in agreement with Smith (1991) and Santelli et al., (1998) who further assert that male adolescents are more likely to possess multiple sexual partners that are concurrent than their female counterparts. Age too has been presented as an indicator for multiple sexual partners, where the age of sex debut is noted especially among females specifically those below 30 years of age, a category that university students belong to (Seidman et al., 1992) while other studies such as those conducted by Or et al., (1991) and Lowry et al., (1994) identify and front abuse of alcohol and drugs as underlying influencers of multiple sexual behaviours.

Despite high STI/HIV rates and other aversive consequences, like unintended pregnancies, young adults such as those at university, continue to engage in activities of unprotected sex (O'Sullivan et al., 2010). From a cognitive point of view, the non-use of protection can be attributed to low or biased risk perception (Kobusingye, 2017), evidence evaluation that is biased (Harman et al., 2009), risk dismissal (Mays & Cochran, 1988; Woodcock et al., 1992) and risk ignoring (Mays & Cochran, 1988; Macintyre et al., 2004). Other researchers such as Donna et al., (2006) who conducted a study on college students, attribute the non-use of condoms to sensation-seeking, self-efficacy and self-esteem, in the study, the authors argue that sometimes, young adults may not practice safe sex because of the desire to take risks for the benefit of gaining experience (Zukerman, 1994). This experimentation behaviour accounts for the increase in the prevalence of HIV and other STIs. According to Protogerou and Turner-Cobb (2011),



attitudes represent the strongest predictive factor for lack of intention to use condoms and actual condom use. Also, past sexual behaviour predicts non-use of condoms at the level of intention. Another predictor is the time perspective as a moderator of the relationship between attitudes to condom use and intention to use condoms (Ross, 1992; Ross et al., 1992). Young people who are low on temporal perspective will most likely not use condoms (Protogerou & Turner-Cobb, 2011; Rothspan et al., 1996). Hence, the use or non-use of condoms among university undergraduate students is influenced by attitudes and relationship status (Casola et al., 2022; Pinchoff et al., 2017).

One other common HIV non-protective behaviour common among university students is transactional sex, that is, sex for financial and material returns. Initially, transactional sex was considered a preserve of sex workers, the reason why most HIV interventions focused on this population category (Gould & Fick, 2008) but this has underestimated the rate of informal sex work among populations such as students in tertiary educational institutions. Universities are known spaces for sex debut and exploration (Seloibe, 2005) basically for material gain and status (Shefer, Clowe & Vergnani, 2012). Students love to be flashy hence the need for financial favors in exchange for sex (Masvawure, 2010) and although this is common among female students, males too are susceptible. Transactional sex comes with dynamics in power, like, unequal access to financial resources and disparities in age, that is, cross-generational sex (Dunkle et al., 2004; Dunkle et al., 2004) with undesirable consequences such as physical violence, mental health challenges and sexual coercion (Choudhy et al., 2014).

Early sex debut has been another observed HIV non-protective behaviour among young people (Kobusingye, 2017) and the associated factors identification is important for the development of important sexual and reproductive health promotion (Lee et al., 2018). Early sex debut exposes university students to more non-protective sexual

behaviours, hence the need to identify its associated factors and magnitude (Mekonnen, 2020). Most students' debut sexual activity is not for themselves but for their sexual partners, especially among females (Akintola et al., 2012) and this is sometimes influenced by alcohol and drug use and abuse (Ghandour et al., 2014). Alcohol and drug use and risky sexual behaviours are associated (Caldeira et al., 2009). Reducing alcohol and drug abuse in situations that are sexually risky is important in reducing and eliminating HIV and other outcomes (Cooper, 2002). Therefore, tackling the underlying factors for risky sexual behaviours requires an in-depth analysis of the underlying reasons why university students possess multiple sexual partners, have early sex debut, practice unprotected, transactional and cross-generational sex, and have sex under the influence of alcohol and drugs. Tackling the underlying causes and barriers gives a practical basis for the eventual control of what is perceived as a basic behavioural choice and practice.

## METHODOLOGY

The study was intended to interrogate the underlying factors that explain non-protective behaviours among final-year students at one university in Uganda. The study used qualitative data drawn from fifteen in-depth interviews and one focus group discussion that included 12 students, that is, six males and six females. The study primarily collected data on university students' perceived underlying reasons for engaging in HIV non-protective behaviours. The use of in-depth interviews targeted data that would be free from the effects of dynamics in groups and the fact that they allowed for an opportunity for deeper interrogation for purposes of achieving sufficient information (Dohrenwend, 1965). To supplement data acquired through in-depth interviews (IDI), focus group discussions (FGD) were employed for benefits that carried social context, that is, how the respondents think, express themselves, and how their views take shape during the discussions with each other (Lewis

& Richie, 2003). In addition to their ability to enable the researcher to collect large amounts of data in a short period of time (Mark et al., 2005) and a good supplement to data collected using in-depth interviews. Data from both sources was triangulated to achieve richness and validity to enable it to be dependable. The study aimed at achieving personal understanding and views about the topic among university students that are limited when quantitative approaches are used.

The population for the study was year three male and female university students that are approximately 20-24 years of age, hence those in years one and two were excluded from the study primarily because they are assumed to lack the necessary experience in intimate relationships (Kobusingye, 2017) within the university social environment. The students were selected from within the same university but from two different courses or disciplines or faculties. According to UNAIDS (2016), HIV, which is a result of largely risky sexual behaviours or non-protective behaviours is more prevalent among young adults globally. Students at university are prone to practising HIV non-protective behaviours due to the environment that is characterized by the freedom to relate to new groups (Cherie & Berhane, 2012). So, they were purposively selected, although their willingness to become participants in the study was of paramount importance.

The data collected using FGDs and IDIs was digitally recorded and transcribed. It was analyzed using thematic analysis after the generation of themes from the collected data. Similar data outputs were merged. Data presentation, interpretation, analysis and discussion of findings were done concurrently. From an ethical point of view, participation in the study was voluntary. Participant names and other private information were excluded from the research process. Interviews and focus group discussions took approximately 60 minutes (one hour) each in a private, secluded and confidential environment.

## FINDINGS AND DISCUSSION

The study consisted of a sample of fifteen university students for the in-depth interviews (IDI) and 12 students in one focus group discussion (FGD) that had a balance of six males and six females. The participants were year three undergraduate university students between 20 and 25 years of age. From the results, the following themes emerged.

### Condom Use Factors

The participants admitted that one of the commonest HIV non-protective behaviours at the university was lack of condom use, as one male asserted,

*By the way, we don't use condoms. We don't like condoms at all. We don't see why we should use them, after all, there is contraception that is cheaply available in all drug shops near the university campus (IDI 2).*

Upon further interrogation about why safe sex or condom use is not practised by university students, the respondent explained.

*First of all, condoms have to be bought. This means money. This is an unplanned extra expenditure. They are more expensive than if my girl uses oral and injected contraception. Secondly, it is not easy to walk into a pharmacy and boldly ask for them. There is a certain look the pharmacy attendant gives you when you ask for condoms. As much as we want to enjoy sex whenever we want, it is really embarrassing and shameful to be seen purchasing condoms in an open space because everyone will know what they are for, and humanly speaking, not everyone likes to be associated with the act of sex (IDI 2).*

This argument was further reinforced by a female student, who, to her, condom use is difficult for the control of HIV among university students because females have limited or no knowledge about its usage,

*Surely, I wish I knew a lot about condom use. I even don't know the best brands available out there. I don't know how it is used, or how it can safely be kept and utilized. I have a feeling that if condom use was entirely in the hands of us the females, they would be used more than they are being used and we would be safer from STIs, especially HIV. I have had the chance to see a female condom. Hmmm madam, have you seen that condom? It looks funny and non-practical. I would also like to tell you that these condoms make sex non-enjoyable. It is like eating a sweet in its wrappings. So, generally, these issues of sex are very complicated. But truthfully, even if you start by using them, gradually, you stop because you now trust your man (FGD 4).*

These submissions hence point to the fact that safer sex is not as practiced as it is popularized. Difficulty in purchasing condoms due to economic and social image factors are reasons for this. Also, the role of females in negotiating for safer sex practices is still minimal and wanting. Perceived enjoyment of the physical benefits of sex is affected, according to university students. It also emerges from the in-depth interviews and focus group discussions that condom use is not consistent and sustainable due to an increase in emotional intimacy between sexual partners over time. All these factors, though they explain the underlying reasons for the non-use of condoms, are evidence of the risks that young people at university take, which expose them to HIV, STIs and unintended pregnancies. The balance between safety and pleasure is difficult to achieve, as another female student retorted,

*Actually, my boyfriend, who is also a student at this university, and I are always having disagreements over whether or not we should use condoms. I am for safer sex while he is not for it. As he enjoys the whole thing, in those moments, my mind is in a worry and anxiety mode about the likely diseases I might be exposing myself to, just in case he is not as faithful to me as I envision. I worry, and even*

*after, I am usually angry at him for not keeping it safe. He forces me to use contraception and I know that at my age, birth control is not good for my body. I am stressed, though I love him. Generally, sex, which is supposed to be enjoyable becomes a battlefield between us (FGD 6).*

These findings concur with those done in past research, for example, Zinhle et al., (2019) who conducted a study on South African university students agree that low or non-use of condoms in this type of population can be explained by the perception that the relationships are characterized by stability and commitment, and hence do not need to use condoms every time they have sex. They expect their sexual partner to be faithful and exclusive, and hence, any suggestion to use protection is interpreted as a sign of unfaithfulness. There is a need to promote condom use consistency even in what is perceived as committed relationships due to the presence of HIV risk (Hoffman et al., 2017). Trust alone is not sufficient (Haddad et al., 2018; Maharaj & Cleland, 2005).

### **Multiple Sexual Partners' Factors**

Another theme that emerged from the IDIs and FGDs that helped to unearth the underlying factors for the involvement in HIV non-protective behaviours was the existence of concurrent multiple sexual partners. Respondents argued that this is due to varied reasons, as one female student asserted,

*University students have many sexual partners. I will speak on behalf of the girls. I see many of us with many boyfriends, each for different purposes, and yes, we have sex with almost all of them for different reasons. You find a girl with a university boyfriend, another that is working class and then a sugar daddy who is usually much older and most probably a married man (IDI 1).*

This submission was further enhanced by another female from an FGD on the different purposes of the different categories of sexual partners,

*The campus boyfriend comes in two forms, that is, an academic boyfriend who will assist in academic tasks when the need arises such as assisting in coursework writing and discussion. These ones usually get a share of the money we get from sugar daddies but also get the sexual benefits. They are usually innocent and unsuspecting and think that we are truly in love with them. The campus boyfriend may also be the one we truly love but because they too are financially challenged, the relationship does not survive for long but we keep them around. The working-class boyfriend is the one with two potentials, that is, money and a possible marriage partner in future. So at the end of the day, the academic and economic needs get to be taken care of and the psychological assurance of a future partner for marriage is not forgotten (FGD 7).*

These submissions are indicative of the reality of not only multiple sexual partners but also cross-generational sex. On further interrogation about the reasons for possessing different age-group sexual partners, the same student advanced,

*Madam, in this day and age, there is nothing for free. If that sugar daddy gives you money for whatever reason, he will definitely want something back in return for his handout. I mean the repayment mode is sex and they demand it right away without any delay. The saddest bit is that these older men don't want to use condoms, so it is like for those favours, you must pay back in kind, on his terms, not yours (FGD 7).*

Therefore, cross-generational sex happens primarily for financial benefits but is further complicated by the fact that it increases HIV vulnerability because it reduces the bargaining power for safer sex practices as one male student in an FGD confirmed,

*You may think this is a challenge for girls only. Let me tell you that boys too have sugar mummies for financial benefits. They come to us*

*for sex and we also get money from them. You can't ask her to do HIV testing and most times, she can't allow to use condoms. You need her help as she needs your services. Surviving HIV in this era is very hard (FGD 2).*

These findings indeed explain the underlying economic and material factors for HIV non-protective behaviours and agree well with those discovered in research conducted by Zinhle et al., (2019) who link the two factors, that is, socio-economic status at home and risky sexual behaviours. Lakes and Kurz (2020) also link the transactional benefits of multiple sexual partners while a study by Drakes et al., (2013) is specifically among females only. The same views are held by Bantebya et al., (2014) whose study was in Uganda and linked cross-generational sex with financial and material benefits, compared to sex with peers or age mates. This points to the reality of the existence of multiple sexual partners that exposes the apparent presence of cross-sectional sex as one major indicator.

### **Low Adherence to HIV Messages' Factors**

One unique finding from the interaction with the respondents was what was themed as low adherence to HIV messages factors. It was noted that out of another in-depth interview, a female respondent argued,

*From the time we reported for university studies in year one in 2022, there have been talks organized by the university to talk to us about sex, HIV and relationships. We thank the university for allowing such activities. However, we find it hard to benefit from such talks. These talks are not individualized and as much as such problems are universal for our age group, they are experienced uniquely by students. So we are clamped together in one place and they assume we are experiencing relationships similarly. How I wish we had a chance to talk one-on-one with the experts*



*before it is too late, right from the beginning of tertiary education (IDI 2).*

The training factors that rhyme with the above were further boosted by an argument from an FGD where a male student elaborated,

*This is a digital era of the GenZ. This should already tell our leaders in the university about the modes needed in educating us about relationships and their dangers. Imagine of all people, they bring us much older facilitators who have lost touch with exactly what we go through. These trainers are as old as our parents. They talk about abstinence from sex. Is this even possible? The days of abstaining are long gone. We need people of our age because they know what we are going through and we are comfortable enough to express our experiences. And actually, physical meetings are not effective because of our large numbers. They need to go online and teach us using online sources like videos and the like. And, by the way, these things of coming once a year to talk about such issues is not helpful. From year one, I have only attended two such talks. This is not impactful (FGD 3).*

This assertion points to an existent gap in education and training in terms of timing of training, source of information in terms of age and frequency of training. When probed about if gender of trainers matters, one female student agreed,

*Thank you for asking. Now that you ask, it makes me think, why are we of different genders brought together in one room for such talks when the facilitators are only males? To me, it is funny finding I have to describe what sugar daddies put us through when we are in the same room with boys. They actually laugh at us and some of them are our boyfriends and this may mean the end of that relationship at the end of that talk. We females go through our unique forms of relationship drama that we don't want*

*boys to hear about and I guess this applies to boys too (FGD 10)*

Hence, educational and training need about HIV non-protective behaviours among university students are key in the control of such behavioral tendencies. These factors stand out from the already given ones because education is at the heart of the control of unprotected sex, multiple sexual partners and cross-generational sex. These and related issues are discussed in research conducted by Kirby (2008) who asserts that educational programs aimed at reducing HIV among young people must not ignore what is included in the syllabus for example, condom use. This is further cemented by research findings arrived at by Menon et al., (2014) that such educational programs must include life skills education while Kirby et al., (2007) agree that all educational programs should enable the uptake of new and healthy relationships, hence behaviour change programs.

## CONCLUSIONS

University students engage in unsafe and unprotected sexual relationships because of the economic and social image factors involved in purchasing them. Condoms are not as used as often and consistently as they should because they are not readily available in spaces university students consider safe and there is a lack of knowledge about their use especially since they are viewed and perceived as the sole responsibility of the male partner in the intimate relationship.

Multiple sexual partnerships and relationships are rampant and considered normal among university students. Specifically, university students engage in sexual relationships with both age mates, slightly older partners and partners that are much older than them. This reveals a peculiar case of cross-generational sex that happens due to primarily financial and material benefits as the socio-economic status of their home backgrounds. The sexual relationships between age mates and classmates are pleasure and academic-based while

those with the career category are for future commitment purposes.

Various HIV non-protective behaviours are also explained by educational and training gaps among university students. This happens due to factors related to the sources of educational information in terms of gender and age. It also involves the shortages and limitations in the mode, debut and frequency of the educational programs. The content of the training programs is also wanting. This was the most outstanding underlying factor that is unique to university students and its unpacking may help address issues related to multiple sexual partners and unsafe sex. Hence, the most salient underlying barriers to effective HIV non-protective behaviour control among university students are unsafe sex, multiple sexual partners and gaps in training programs and can be prevented through an effective psycho-educational approach that focuses on life skills education and behaviour change programs designed specifically for this category of youths.

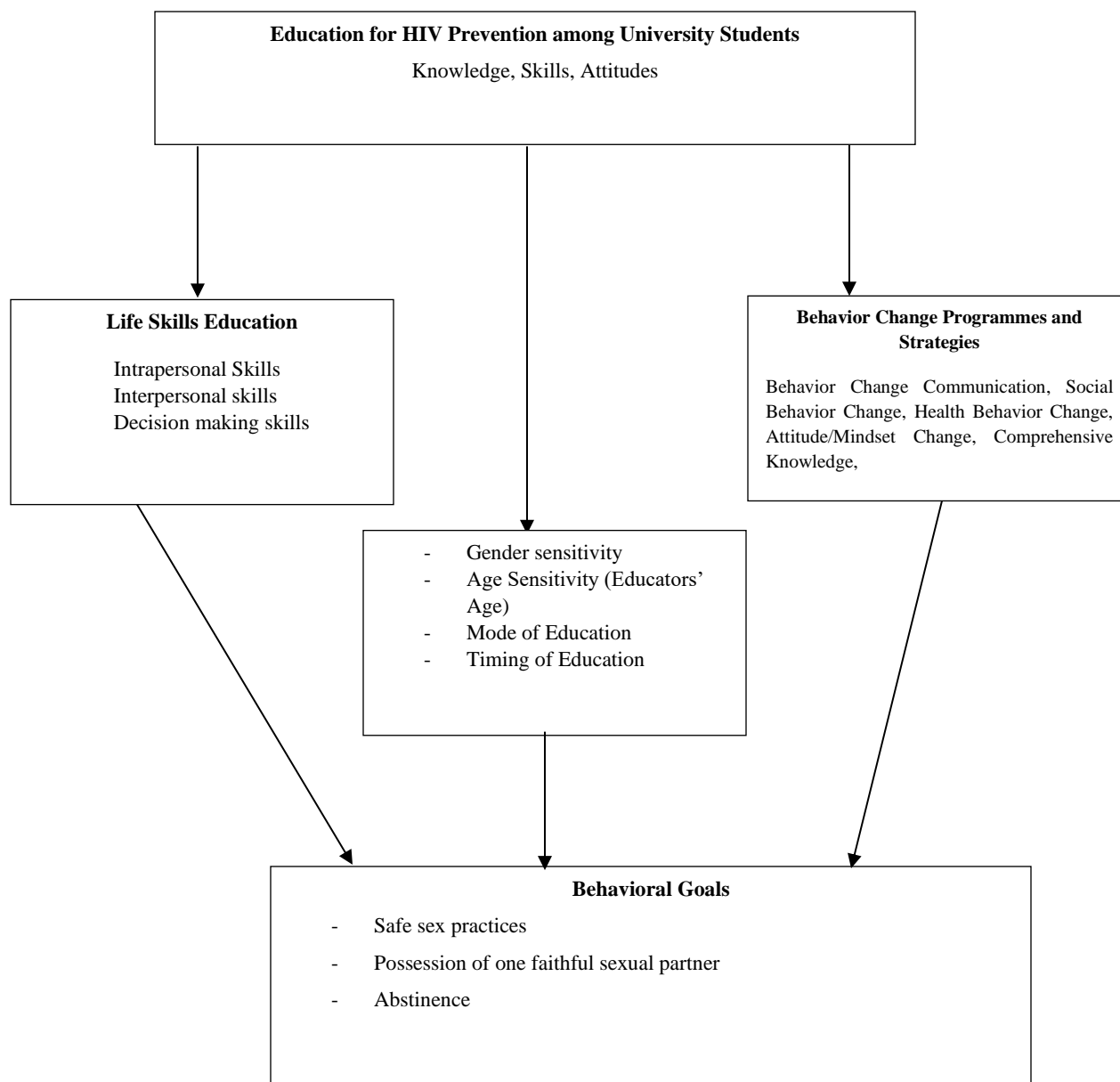
### **Recommendations and Mitigations**

Based on the findings and conclusions, it is recommended that university students receive economic empowerment and assistance from the university in terms of guidance and provision, especially for those from socio-economically impoverished backgrounds, as they tend to be the most susceptible to temptations to engage in transactional sex with both young and much older sexual partners.

Condom use needs to be popularized in cases where abstinence is difficult to achieve. The popularization of safer sex practices should include availability in students' halls of residences and hostels, education on their safe use and consistency. Every focal person for condom supply in students'

residences must possess safe sex knowledge and skills, and the willingness to educate others, irrespective of gender. This implies that girls' residences too must have a supply of male condoms in addition to those made for females.

Education and training about sexual and reproductive health with the goal of preventing HIV risk should properly be structured to fit the learning and practical needs of university students. The educational programs must embrace sex education as sex debut for the majority happens at university. The messages must be passed on by peers, hence peer education, like, fellow university students, which implies a need for trainer of trainers (ToT) programs to actualize this goal. Secondly, life skills education should be a vital part of educational programs aimed at the prevention of HIV-related behaviours, specifically, intra-personal skills like assertiveness and self-esteem among others; interpersonal skills such as negotiation and compromise among others, and, skills for effective decision-making such as decision making, critical thinking, creative thinking and problem-solving. Thirdly, behaviour change programs must be part and parcel of HIV prevention training and educational programs, with consideration of why they are hard to change and the benefits of change of behaviours by promoting realities of secondary virginity as one major reality among students that have already engaged in sexual activities. Fourthly, educational programs must include the advancement of HIV testing among sexual partners. Testing for HIV must be practised both individually and jointly as sexual partners to reduce the likelihood of contracting the disease. This forms the basis of an effective psycho-educational model for the prevention of HIV among university students as illustrated;



The above model represents a proposed psycho-educational model and framework that could work to improve the effectiveness of HIV prevention messages geared towards reducing the engagement in HIV non-protective behaviours among university students. It includes life skills education, specifically life skills for knowing oneself, knowing others and making effective decisions. These messages would be more effective if the mode of delivery became age, gender and time considerate, that is, peer educators whose age and that of respondents do not have a significant variation, for

purposes of achieving a sense of belonging and identification between the facilitators and the beneficiaries. Behaviour change is a much-needed intervention and needs prioritization in all HIV prevention messages. Female students deserve to be trained by female peer educators while male students should be trained by males too, for purposes of identification. Timing of HIV prevention messages is important. The messages should commence as soon as university studies start and should continue throughout the course of university studies. The messages should embrace

behaviour change communication, social behaviour change and health behaviour change messages. Attitude and mindset change is an important component that must be embraced in all messages aimed at changing behaviours from non-protective to protective behaviours. Knowledge passed on to university students should focus on comprehensive rather than basic knowledge since, by virtue of the age of university students, this is what is appropriate for them. The overall end goal of these messages should be to achieve consistent condom use or safer sex, possession of one sexual partner if abstinence is not achievable, and last but not least, abstinence as the safest strategy for HIV prevention among university students.

### Limitations and Practical Implications of the Study

The study was about a highly sensitive topic that touches not only the affective, that is, emotional aspect but also a very private aspect, that is, the sexual experiences of university students. As a result of this, it is possible that the respondents did not express themselves maximally for fear of being judged and tagged as sexually irresponsible, based on the socio-cultural and religious context. This implies that studies such as these could make use of more quantitative approaches on HIV non-protective behaviours, which are able to protect the privacy of respondents, though these too are limiting in nature. The study was also limited by pre-determined reservations in the researcher as one that indirectly criticized the pre-existing approaches to controlling and reducing HIV non-protective behaviours among emerging adults in universities. However, if embraced, this actually could be beneficial as it does not rubbish the existing interventions but rather, boosts and complements them for this specific and unique but very vulnerable population. Hence this study calls for revision of HIV prevention policies in universities and at other higher levels to fit the ever-evolving needs of young people as far as HIV control is concerned.

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