

## ORIGINAL RESEARCH ARTICLE

# Perception, interpretation, and implication of non-penile vaginal sex among young adults in tertiary institutions in Northcentral Nigeria

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Juliana Rume<sup>1\*</sup>, Imran O. Morhason-Bello<sup>2</sup> and Adesina Oladokun<sup>2</sup>

Pan African University Life and Earth Sciences Institute (Including Health and Agriculture), University of Ibadan, Nigeria<sup>1</sup>; Obstetrics and Gynaecology Department, Faculty of Clinical Sciences, College of Medicine/University College Hospital, University of Ibadan, Oyo State, Nigeria<sup>2</sup>

\*For Correspondence: Email: [juliarume@gmail.com](mailto:juliarume@gmail.com); Phone: +2348032869742

## Abstract

Young adults in tertiary institutions engage in different sexual behaviours including penetrative and non-penetrative sex. This study explored young adults' perceptions, interpretations and implications for engaging in non-penile-vaginal sex (NPVS) in tertiary institutions of Plateau state, in the north-central Zone. An exploratory qualitative research approach was adopted. Eight (8) focus group discussions (FGDs) of singles and married males and females were conducted with seventy-nine (n=79) participants aged 18 – 30 years). Audio files were transcribed, coded, and managed using NVivo 12 software. Thematic analysis was applied to present themes and a description of key findings. Four (4) themes emerged. All groups acknowledged sexual satisfaction and improved intimacy as benefits of NPVS. The sexual orientation of people who partake in NPVS are often misinterpreted. Young adults involved in NPVS face rejection and stigmatization. Lastly, the sexual orientation misinterpretation, rejection and stigma of those who engage in NPVS is likely to be a result of the general believe that Nigeria is conservative in sociocultural values and expression. (*Afr J Reprod Health* 2024; 28 [1]: 75-83).

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**Keywords:** Non-penile-vaginal sex, perception, implications, young-adults

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## Résumé

Les jeunes adultes des établissements d'enseignement supérieur adoptent différents comportements sexuels, notamment des relations sexuelles avec et sans pénétration. Cette étude a exploré les perceptions, les interprétations et les implications des jeunes adultes concernant la pratique de relations sexuelles non pénienno-vaginales (NPVS) dans les établissements d'enseignement supérieur de l'État du Plateau, dans la zone centre-nord. Une approche de recherche exploratoire qualitative a été adoptée. Huit (8) discussions de groupe (FGD) d'hommes et de femmes célibataires et mariés ont été menées avec soixante-dix-neuf (n = 79) participants âgés de 18 à 30 ans). Les fichiers audio ont été transcrits, codés et gérés à l'aide du logiciel NVivo 12. L'analyse thématique a été appliquée aux thèmes présentés et à une description des principales conclusions. Quatre (4) thèmes ont émergé. Tous les groupes ont reconnu la satisfaction sexuelle et l'amélioration de l'intimité comme avantages du NPVS. L'orientation sexuelle des personnes qui participent aux NPVS est souvent mal interprétée. Les jeunes adultes impliqués dans les NPVS sont confrontés au rejet et à la stigmatisation. Enfin, l'interprétation erronée de l'orientation sexuelle, le rejet et la stigmatisation de ceux qui s'engagent dans les NPVS sont probablement le résultat de la croyance générale selon laquelle le Nigeria est conservateur en termes de valeurs et d'expression socioculturelles. (*Afr J Reprod Health* 2024; 28 [1]: 75-83).

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**Mots-clés:** Rapports sexuels vaginaux non pénienno, perception, implications, jeunes-adultes

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## Introduction

Non-penile-vaginal sex (NPVS) is an innovative terminology referring to sexual practices that occur in the absence of penile-vaginal penetration. Although, to the best of our knowledge, much has not been studied specifically about NPVS, nevertheless available literature is focused on non-penetrative sex (NPS)<sup>1</sup>, or outer-course<sup>2</sup>, which refers to sexual activities that usually do not include penis-vaginal sexual penetration<sup>3</sup>. NPVS is

a common sexual practice among young adults, which includes oral-genital contacts<sup>4,5</sup>, hand to genital contacts - masturbation (self or mutual)<sup>6</sup>, fingering (partnered or self), use of sex toy<sup>7</sup>, and other objects. Other examples of NPVS include anal sex<sup>8</sup>, rubbing, kissing, touching, foreplay, hand jobs, and other stimulations aim at achieving sexual satisfaction<sup>9,10</sup>.

Nigeria like other low and middle-income countries have a good number of its populations that are young adults and are faced with

vulnerability to sexually transmitted diseases, and limited access to sexual and reproductive health care services<sup>11,12</sup>. The literature has shown that young adults and other groups practice sexual activities that are non-penile vaginal, which are also capable of causing numerous biological and psychological problems<sup>9</sup>, and are considered to be part of risky sexual behaviour (RSB) leading to sexually transmitted diseases<sup>13</sup>. Young adults and adolescents commonly engage in dangerous sexual conduct (unprotected sex, sex with casual partners, promiscuity, early sexual initiation, etc.) which could lead to detrimental effects, like suicide, academic and occupational difficulties when they become habit and participants lack willpower or control over them<sup>14,15</sup>.

Since little is known about these behaviours within this study setting, finding out the perceptions, interpretations and implications of NPVS among young adults has the potential of improving future sexual health services and educational programming. Therefore, the study explored the knowledge of participants about the definition of terminologies, meanings, and interpretation of NPVS. Furthermore, the study sought opinions of participants about various sexual orientations and behaviours and the consequences/implications of engaging in NPVS by young adults. Findings target sexual health service providers sex educators and professionals to improve and expand sexual health and sexual education services.

## Methods

### *Study design*

An exploratory qualitative research approach was adopted as the study design<sup>16,17</sup>. This will also help to generate initial ideas and identify potential avenues to improve sexual health services, sex and health education needs of young adults, and for further research.

### *Study participants*

The study sample comprised students who have been studying for a minimum of one year in the two randomly selected tertiary institutions of learning in Plateau State central zone. The institutions are Plateau State University (PLASU), Bokokos and Federal College of Education (FCE), Pankshin.

### *Study procedure*

Purposive sampling was used to recruit seventy-nine (n=79) students aged 18 – 30 years who gave consent to participate in the FGDs. Interviews were conducted in private settings and audio recording was done with the permission of the participants from July to December 2022. Four sessions of FGDs were held in each institution (Single males, single females, married males and married females) with each of the groups having participants ranging from 8 - 12 in number, and were asked the same questions except for the follow-up questions where clarity is needed.

### *Study settings*

Federal College of Education Pankshin is located 3 kilometres from Pankshin town and about 119.1 km from Jos the capital city of Plateau state. The College's motto is "Excellence in Service". And it has seven (7) faculties, currently, a bill has been passed at the National House of Representatives to upgrade it to a teacher -training University<sup>18</sup>. The Plateau State University Bokokos is located about 70 kilometres away from Jos the State capital. As of May 2018, the University had four Faculties<sup>19</sup>.

### *Focus group discussions*

The FGDs in both institutions took place between July to December 2022, and the language used was English language. Each FGDs lasted 50 to 70 minutes. The discussion was done in private setting within the campus. In the initial, introduction of the interviewer and the note taker was done and the socio demographic data of the participants were collected. The participants read and signed the consent forms and the whole concept of the research (NPVS) was explained to the participants, this was to ensure that participants felt free to discuss considering the sensitivity of the topic of sex, to further strengthen their confidence, note taker were selected and trained from amongst the student union officials of each institution. The interviewers are persons who have spent over ten years each working in students setting conducting interview and facilitating discussions. The three major questions that guided the FGD were: what are the motivations for people to engage in nonpenile vaginal sexual behaviours? How are people who engaged in NPVS viewed within

society? and What do you think are the consequences of engaging in non-penile vaginal sexual behaviour?.

### **Data management**

The data collected from the focus group discussion was recorded by a note taker as well as audio records to ensure accuracy. The audio files were transcribed using 'express scribe' transcription software which was carefully checked through manually. Transcripts were imported into Nvivo 12 software for coding by two people. Thematic analysis was used to create a hierarchically organized outline with parent and child codes. Features were identified as themes where they severally recur in the data set across transcripts. However, where a single comment by a participant helps expound their narration, a theme is devised to encapsulate it in the template. Also, a Reflexive diary from the field was used as a supplement to further develop and refine codes into themes.

### **Ethical clearance**

Ethical clearance for this study was obtained from the Institute for Advanced Medical Research and Training (IAMRAT), College of Medicine, University of Ibadan, Nigeria (ID number: UI/EC/0028). Administrative clearance was obtained from the Plateau State Ministry of Health and the Plateau State Ministry for Higher Education. Further permission was obtained from the institutions where the research was conducted and participants all signed an informed consent form before participating in the study.

## **Results**

### **Socio-demographic characteristics of participants**

Table 1 shows the sociodemographic characteristics of participants. The participant's mean age is 24.87 (SD3.47). Of the 79 total participants, 37 were males, consisting of 20 Single males and 17 married males while 42 were female consisting of 22 single females and 20 married females. Furthermore, the percentage population by gender was 47% and 53% for males and females respectively. Similarly, the total number of participants per institution was 42 and 37 for

PLASU and FCE with percentages of 53% and 47% respectively.

Discussions around sexual intercourse and forms of sex that do not involve penile-vaginal sex (NPVS) preceded the FGDs. After which the main questions as presented in Table 2 were asked and answers as provided by the participants, formed the themes and domains that are presented in the result section.

Four (4) themes emerged, first, the perceived rationale for engagement in NPVS is diverse among married and single adults, however, both groups acknowledge sexual satisfaction and improved intimacy as benefits of NPVS. Second, the sexual orientation of people who partake in non-penile-vaginal sex (NPVS) is complex and often misinterpreted. Third, young adults involved in non-penile-vaginal sex (NPVS) face rejection and stigmatization. And fourth, Access to services is likely to be limited due to sexual orientation disclosure challenges.

Following the question asked on the motivations/rationale for young adults engaging in different types of NPVS during the FGDs, along with some probing questions for clarification, most of the participants' responses show that the perceived rationale for engagement in NPVS is diverse among married and single adults. Furthermore, singles were more open in their discussion relative to the married population. A similar pattern was observed along the gender/sex line, also with males more willing to discuss or report their NPVS status. Nevertheless, all groups acknowledge sexual satisfaction as the benefit of NPVS. Young adults engage in activities like oral and anal sex, fingering, masturbation and other forms of NPVS note that conception is out of focus so makes them concentrate and obtain utmost satisfaction.

*"I think that most girls or boys do all these sex activities to satisfy their sexual desires. It can be oral or anal sex, some do finger, and some use sex toys or objects to release and enjoy themselves. It comes without the fear of being pregnant" (Single male, 22yrs).*

*"I feel people who engage in sexual activities like masturbation, use of sex toys, and anal sex, do so for sexual pleasure" (Single Female, 22yrs).*

**Table 1:** Sociodemographic characteristics of participants drawn from the study settings

Variable	Category	Frequency	Percentage
Age group	≤ 20	7	8.9
	21-25	40	50.6
	26-30	32	40.5
Marital status	Single Females	22	27.9
	Single Males	20	25.3
	Married Females	20	25.3
	Married Males	17	21.5
Institution	PLASU	37	46.8
	FCE	42	53.2

**Table 2:** Main questions asked during FGDs with their domains and themes:

Questions Asked	Domains	Themes
What are the motivations for people to engage in NPVS?	The rationale for NPVS.	NPVS was said to increase libido and deepen sexual satisfaction, Improved couple intimacy, Prevent pregnancy, Desire to earn money through selling sex due to poverty.
How are people who engaged in NPVS viewed within society?	Perceptions and interpretation of the NPVS.	Gender misinterpretation; there is a wide misconception about the gender of young adults who engage in NPVS. For example; the male is seen as gay, while the female is lesbian contrary to actual interpretations. Rejection; NPVS is reportedly linked to perceived rejection from friends, associates and family due to religious beliefs, culture and community norms about the definition of sex and sexual orientation.
What do you think are the consequences of engaging in non-penile vaginal sexual behaviour?	Challenges connected with the practice of NPVS.	Stigmatization and discrimination arise from the disclosure of NPVS status. Limited access to services; difficulty in disclosure of NPVS status due to fear of discrimination is likely to hinder access to services. Health risks; piles (haemorrhoids), STDs, and HIV.

*“All these women doing blow-job (oral sex) activities are for satisfying sexual pleasure” (Married Male, 28yrs).*

*“Most people who prefer all these kinds of sex activities, do so for sexual satisfaction” (Single Male, 25yrs).*

Most of the participants especially among the married groups, aside from sexual satisfaction, opined that NPVS helps improve couples' marriage intimacy in other words betters sexual relationship intimacy in couples. According to the group, oral and anal sex, including hand-to-genital contact

(fingering) contributes to increased intimacy among married couples.

*“NPVS is practised for marital reasons most especially when the other partner request for it making couples more intimate things like maybe oral sex or use of hands makes them feel better” (Married Male 30yrs)*

*“So, ahm... you know both married and singles do these things sometimes, and they do it in secret and some don't even hide it. Things like blow-job (oral sex), masturbation, fingering, kissing, sex toys or objects are used to achieve*

*sexual satisfaction. Even so, some of these things help married people, it makes them intimate in marriage” (Married male, 30yrs).*

*“Some men like kissing and romancing so that they will have satisfaction” (Married Female, 29yrs).*

*“Some do it for marital reasons when his or her partner prefers such kind of sexual activities” (Single Male 23, yrs)*

Some female participants from both groups of married and singles stated that peer and partner pressure, financial needs and the fear of being perceived as sexually immature are reasons for young adults' involvement in NPVS because most young adults take their friend's advice seriously and consider it good.

*“Some do oral sex or anal sex for money... because they need the money to solve a problem or send it home and some do it because they want to feel a big girl or a friend force them” (Married female, 28yrs).*

*“In terms of Peer Pressure okay let's give an instance: I might be with my friends discussing maybe I have not had that sexual experience before, based on the fact that a friend of mine was talking about a night spent and all that they did with her boyfriend they touched each other everywhere and even had sex and all the stuff so based on that story I might want to indulge in that act too”. (Married Female, 24yrs)*

*“To me, I think some do participate in non-penile vaginal sex maybe so that people will not say that they are not social. They might do those things so that they can say wow this person is social” (Single Female 23yrs)*

*“I think one of those reasons why people engage in those kinds of sexual activity is because of pressure from their boyfriend Let's say your boyfriend would decide to do it and you will feel okay let me show this guy that I love him; yes, so you end up doing it” (Single Female 23yrs).*

*“In this school, most students who don't engage in those sexual behaviours are called*

*old mama so they do it just for socialization.” (Married female 27yrs)*

The majority of the single females describe the motive for participating in NPVS as a means to prevent pregnancy with a few men too since they believe a female cannot impregnate another lady.

*“I know some people might go into it for fear of pregnancy like that of lesbianism at least if they go to the opposite sex, they might get pregnant so because of that they will decide to go to their fellow sex” (Single Female, 22yrs).*

*“To me, nonpenile vaginal sex cannot get one pregnant so it is better to go for it”. (Single Female 21yrs)*

When asked How people who engaged in NPVS as a sexual behaviour are viewed within the community, responses, indicate that the sexual orientation of those who engage in NPVS has been interpreted in various ways, and the majority of respondents had trouble identifying the sexual orientation of those who engage in those activities. This makes the sexual orientation of these individuals a complicated and frequently misunderstood phenomenon.

*“The thing here is that; it is not easy to know whether a man's masturbation means he is gay or not. Likewise, you can't know if a young lady using a dildo is lesbian or not. But you see most of these young boys and girls doing masturbation or using sex toys are usually seen as gay or lesbians” (married male 28yrs.).*

*“For me, I see these people that do oral or use sex objects are all like gay or lesbians, they are all the same people. Sometimes You will see a young man wearing chains, and behaving like a man to another man...” (single male, 24yrs).*

*“If you see a girl using an object or sex toy, she will soon have a female partner who will now be a lesbian” (single female, 18yrs).*

Although the majority of young adults considered people engaging in NPVS as lesbians, gay, bisexual, transgender or queer (LGBTQ), a handful of others were able to differentiate the gender complexity of practising NPVS and being called a gay or lesbian.

*“In the society, it normally happens whenever a man wants to marry a girl, the parent will refuse that he should not marry that lady because she is too exposed, or she is into this and that kind of behaviour so they think she is a lesbian” (Single female, 25yrs).*

*“I think that we usually mixed up the identity of someone engaging in non-penile-vaginal sex with somebody who is a gay or lesbian. In my opinion, if a man masturbates for sexual satisfaction only, then that person is not gay. But if a man engages in anal sex with another man, then he is gay.” (Married male, 28yrs).*

When asked What the consequences for young adults engaging in NPVS are, responses indicate that the practice of NPVS was found to be associated with a lack of acceptance from family and friends. Young adults in the FGDs highlighted how those who engaged in various forms of NPVS are faced with the challenges of discrimination and stigma from families, friends and community members.

*“In our place, most families, cultures and communities do not support oral sex or the use of objects. If any boy or girl is caught in the action. The parent will be shamed in the community; hence his family and friends will not like it” (Single Male 21yrs).*

*“Our religion forbids using sex toys or things like oral or anal sex, even masturbation is considered bad. also, most people reject boys or girls who engage in these behaviours just because other people see it as bad” (Married male 30yrs).*

*“More to that, I think, if people know about your NPVS behaviour parents will not want their children to associate with you because they feel you will teach their children bad habits” (Single female 23yrs).*

People engaging in NPVS face stigmatization irrespective of their gender, marital status and the type of NPVS they practice. The stigma they face sometimes causes mental ill health and loss of self-esteem among their peers in the community

*“Most of the time, these boys or girls even married people too... who do all these things*

*like oral and anal sex, use a sex toy or masturbation suffer stigma. It causes depression because the person will be thinking alone and nobody to talk to him or her” (Single female 19yrs)*

*“I just want to add that apart from the society's attitude towards you, you will also have your consequences like you would not like to be participating in other activities that have to do with people just like the society will isolate you and you, in turn, will begin to isolate yourself from people and it can also destroy your mental health” (Single female 21yrs).*

*“Yea! You see even on this campus here there is a boy that is gay, if he sees me with other people he will be acting as if they are different from him when he came close to me I didn't know he was looking for a partner so people were laughing at me so I was surprised one day in his room he told me I am miss you so I asked him how can you be missing me when am here with you that is how I got to know he was gay and why people don't like coming close to him and why he don't like seeing me with other people” this people here know him (pointing fingers at other participants”. (Single Male 24yrs)*

*“Yes, you see just as someone mentioned religion, once you are sexually active not minding penile-vaginal or NPVS you will not be able to participate in things of religion or allow you to participate in things that have to do with prayers except you repent or they don't know” (single female 22yrs).*

A probing question asked during the FGDs was concerning the likely negative challenges and consequences that young adults could face due to involvement in NPVS Probing questions here were directed towards challenges related to accessing health care and other services. A participant described how people that are engaging in NPVS faced difficulty in accessing health services due to the perception of people about their sexual identity. Participants also identified the culture of general silence and lack of confidence by young people to openly discuss their sexual practices including NPVS – oral sex, anal sex and masturbation – because of the fear of rejection.

*“Anal sex causes pile because it widens the size of the anus. Now, because of fear of revealing this illness and the cause which is from anal sex, the person will just keep quiet and suffer, just to avoid rejection and stigmatization like somebody who died in my neighbourhood his boyfriend is a male like him” (Single female 24yrs).*

*“Some girls use cucumber for sexual satisfaction. After some time, their vaginal will be wide and they will start looking for the local medication (kayan mata) to tighten their vagina. They would not like to visit health clinics for fear of exposing the secret” (Single female 19yrs).*

*“The side effect of this sexual activity is that it can lead to STDs like gonorrhoea, HIV and all the others. Because of the fear of stigma, many people will not talk about a sickness like HIV, STIs or even visit the clinic to get preventive services” (Married Male 28yrs).*

## Discussion

We observed diverse perceptions and interpretations of engaging in non-penile vaginal sex, among single and married populations of men and women. Generally, people engage in NPVS to satisfy their sexual desire, and to improve intimacy among married males and females in formalized marital unions. This was similar to a study in Ethiopia among university students<sup>20</sup>. Other reasons that young people gave for engaging in NPVS in this study include preventing pregnancy and peer and partner pressure<sup>21</sup>.

A recent qualitative study of university students' perceptions of oral sex, intercourse, and intimacy shows a small subset, perceived oral sex as more intimate than vaginal intercourse because oral sex relatively makes them focus more on their partner<sup>4</sup>. Another study on “*Experiences with diverse sex toys*” among German heterosexual adults showed that the majority of participants reported using sex toys to augment their sexual satisfaction when they are not with their partners<sup>7</sup>.

Another interesting finding in this study is the perceived gender identity of people that engage in NPVS by their family, friends and in their community. For example, men who display behaviours that society ascribes to women are labelled as gay, whereas women who display behaviours typically ascribed to men are labelled

lesbians. Therefore, addressing wrongful gender misinterpretation is important to prevent discrimination against those who engage in NPVS behaviours<sup>22</sup>. The complexity of the gender identity of NPVS in this study also was coming from the religiosity that is typical of Nigerian societies among whom such acts are considered unreligious this is also the case with findings in similar studies<sup>23</sup>.

Young adults involved in NPVS face stigmatization and rejection from their family, friends and community people. The reasons for this rejection are connected to the prevailing societal norms, ethnic values, and respect for the family as found in similar studies<sup>24</sup>. In addition, Nigeria currently has restrictive laws on an open declaration of sexual identity by the LGBTQ community<sup>25</sup>. The negative reaction by the people often forces people who engage in NPVS for the reason of restriction, to express themselves silently and shyly and are prevented from openly seeking help. Available evidence also shows that people that suffer stigmatization from engaging in NPVS often manifest negative emotional and psychological well-being<sup>26</sup>. A similar study of Sexual Stigma, Sexual Behaviours, and Abstinence among Vietnamese Adolescents showed that females had significantly higher scores for perceived sexual stigma than males<sup>27</sup>. The stigmatization of young adults engaging in NPVS outside of marital union often prevents them from seeking appropriate counselling and care on sexual and reproductive healthcare services just as found in similar studies<sup>28</sup>.

We found that female participants emphasized peer pressure, partner pressure, financial incentive and fear of being mocked as sexually immature by their partner as some other reasons for engaging in NPVS. It is plausible that there is a liberal discussion on sexual activity among the students and possibly, their tutors than those schooling in a comparatively conservative environment. This could depend on factors like family background and the environment (urban or rural) where students are coming from. Other reasons could be exposure or access to internet facilities for the students.

## Strengths and weaknesses

There are some potential sources of limitation in interpreting the findings of this study. The study

was conducted only among students in tertiary institutions excluding young adults that are not in school. This sub-group of young adults might have different perceptions and understanding of NPVS. We did not openly ask about the sexual orientation/identity of participants due to the prevailing restrictive law against LGBTQ in Nigeria<sup>25</sup>. This could have denied us the opportunity to understand the perception and interpretation of NPVS from a distinct community. Despite these limitations, this study has some strengths. This is probably the first study that explored NPVS in Northern Nigeria which is generally believed to be conservative in sociocultural values and expression. We were able to learn from different groups of people in terms of marital status, gender and social status. The qualitative design provided an opportunity for participants to freely express their views and used different experiences to highlight their views.

## Public health implications of the study

This study has the following public health implication: To Develop and implement targeted sexual health education programs in tertiary institutions to provide accurate and comprehensive information especially about the implication of various sexual behaviours, including non-penile vaginal sex. Also Promote safe sexual practices, including the importance of consent, communication, and the use of protective measures to prevent sexually transmitted infections (STIs) and unintended pregnancies.

Strengthen existing reproductive health services on campuses and within the community to provide accessible information, counselling, and resources for safe sexual practices, by Encourage the development and enforcement of policies that promote accessible safe and supportive environment for sexual health discussions, education, and services, fostering a culture of respect and understanding among students and health care providers.

## Conclusion

This study showed that young people understand and engage in non-penile vaginal sex as a form of sexual behaviour. They expressed reasons why

people engaged in NPVS ranging from improving their sexual desire to peer/partner pressure and financial reasons. The relatively younger participants commonly engaged in NPVS to satisfy a sexual urge, whereas, the older adults practice NPVS for both sexual satisfaction and to increase couple intimacy. The gender misinterpretation, rejection and stigma reported in this study are likely to cause discrimination and hinder access to health care and other services. This study provides the required knowledge for sexual health professionals and future programming to improve and expand sexual health education and services.

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## Availability of data and materials

The corresponding author is to be contacted for all material in this study.

## Competing interests

The authors declare that there is no competing interest in the research.

## References

1. Ševčíková A, Gottfried J, Gocieková V, Gore-Gorszewska G, Blinka L and Kotík J. The Role of Non-penetrative Partnered Sex Activities in the Associations Among Erectile Difficulties, Sex and Relationship Satisfaction in Men Aged 50+. *Int J Sex Heal.* 2023;0(0):1-11. doi:10.1080/19317611.2023.2169850
2. Bakaroudis M. Outercourse: Exploring Nonpenetrative Forms of Pleasurable Safer Sex. *Am J Sex Educ.* 2014;9(3):381-397. doi:10.1080/15546128.2014.944736
3. Younis I, Abdel-Khalik G and Abo Bakr H. Nonpenetrative sexuality of never-married young women: An Egyptian experience. *Hum Androl.* 2020;10(1):1-6. doi:10.21608/ha.2020.43876.1070
4. Vannier SA and Byers ES. A qualitative study of university



- students' perceptions of oral sex, intercourse, and intimacy. *Arch Sex Behav.* 2013;42(8):1573-1581. doi:10.1007/s10508-013-0130-0
5. Morhason-Bello IO, Kabakama S, Baisley, Kathy, Francis SC, and Watson-Jones D. Reported oral and anal sex among adolescents and adults reporting heterosexual sex in sub-Saharan Africa: A systematic review. *Reprod Health.* 2019;16(1):1-24. doi:10.1186/s12978-019-0722-9
  6. Shekarey A, Sedaghat Rostami M, Mazdai K and Mohammadi A. Masturbation: Prevention and treatment. *Procedia - Soc Behav Sci.* 2011;30:1641-1646. doi:10.1016/j.sbspro.2011.10.318
  7. Doring N, and Poeschl S. Experiences with Diverse Sex Toys Among German Heterosexual Adults: Findings From a National Online Survey. *J Sex Res.* 2020;57(7):885-896. doi:10.1080/00224499.2019.1578329
  8. Fahs B, Swank E and Clevenger L. Troubling Anal Sex: Gender, Power, and Sexual Compliance in Heterosexual Experiences of Anal Intercourse. *Gender Issues.* 2015;32(1):19-38. doi:10.1007/s12147-014-9129-7
  9. Zimmer F and Imhoff R. Abstinence from Masturbation and Hypersexuality. *Arch Sex Behav.* 2020;49(4):1333-1343. doi:10.1007/s10508-019-01623-8
  10. Chowdhury MRHK, Chowdhury MRK, Nipa NS, Kabir R, Moni MA and Kordowicz M. Masturbation experience: A case study of undergraduate students in Bangladesh. *J Popul Soc Stud.* 2019;27(4):359-372. doi:10.25133/JPSSv27n4.024
  11. Olaleye AO, Obiyan MO and Folayan MO. Factors associated with sexual and reproductive health behaviour of street-involved young people: Findings from a baseline survey in Southwest Nigeria. *Reprod Health.* 2020;17(1):1-11. doi:10.1186/s12978-020-00937-4
  12. Feldmann J and Middleman AB. Adolescent sexuality and sexual behavior. *Curr Opin Obstet Gynecol.* 2002;14(5):489-493. doi:10.1097/00001703-200210000-00008
  13. Tekletsadik EA, Ayisa AA, Mekonen EG, Workneh BS and Ali MS. Determinants of risky sexual behaviour among undergraduate students at the University of Gondar, Northwest Ethiopia. *Epidemiol Infect.* 2022;150. doi:10.1017/S0950268821002661
  14. Thepthien B and Celyn. Risky sexual behavior and associated factors among sexually-experienced adolescents in Bangkok, Thailand: findings from a school web-based survey. *Reprod Health.* 2022;19(1):1-11. doi:10.1186/s12978-022-01429-3
  15. Badillo-Viloria M, Sánchez XM, Vásquez MB and Díaz-Pérez A. *Risky Sexual Behaviors and Associated Factors among University Students in Barranquilla, Colombia, 2019 TT - Comportamientos Sexuales Riesgosos y Factores Asociados Entre Estudiantes Universitarios En Barranquilla, Colombia, 2019.* Vol 19.; 2020:436-449. <https://bd.univalle.edu.co/scholarly-journals/risky-sexual-behaviors-associated-factors-among/docview/2432818473/se-2?accountid=174776>
  16. Rendle KA, Abramson CM, Garrett SB, Halley MC and Dohan D. Beyond exploratory: A tailored framework for designing and assessing qualitative health research. *BMJ Open.* 2019;9(8). doi:10.1136/bmjopen-2019-030123
  17. Hunter DJ. Defining Exploratory-Descriptive Qualitative (EDQ) research and considering its application to healthcare. 2019;4(February):4-11.
  18. Webpage Federal college of Education Pankshin. Home. Published 2023. Accessed March 15, 2023. <https://www.fcepkn.edu.ng/>
  19. Plateau State University Bokokos. Approved Programmes. Published 2023. Accessed March 15, 2023. [https://plasu.edu.ng/approved\\_programmes.php](https://plasu.edu.ng/approved_programmes.php)
  20. Mehari Z, Wubshet M, Deribe K and Biadgilign S. Epidemiology of non-penetrative sex among university students in the context of HIV/AIDS prevention in Northwestern Ethiopia. *East Afr J Public Health.* 2011;8(1):6-12. Accessed May 3, 2023. <https://pubmed.ncbi.nlm.nih.gov/22066275/>
  21. Enzuladu E, Kwaak A Van de, Zwanikken P and Zoakah AI. Exploring the Factors Influencing Adolescent Sexual Behavior in Plateau State Nigeria. *Am J Med Med Sci.* 2017;2017(1):1-6. doi:10.5923/j.ajmms.20170701.01
  22. Cortez R, Saadat S, Marinda E and Odutolu O. Adolescent Fertility and Sexual and Reproductive Health in Nigeria: Determinants and Implications. *World Bank Gr Heal Nutr Popul.* Published online 2016:1-104.
  23. Amadiume I. *Sexuality, African Religio-Cultural Traditions and Modernity:Expanding the Lens.* Vol 16. BioMed Central; 2021. doi:10.1080/17441692.2020.1814833
  24. Odimegwu C and Somefun OD. Ethnicity, gender and risky sexual behaviour among Nigeria youth: an alternative explanation. *Reprod Health.* 2017;14(1):1-15. doi:10.1186/s12978-017-0284-7
  25. Adebajo AT. Culture, morality and the law: Nigeria's anti-gay law in perspective. *Int J Discrim Law.* 2015;15(4):256-270. doi:10.1177/1358229115591403
  26. Sattler FA and Christiansen H. How do discrepancies between victimization and rejection expectations in gay and bisexual men relate to mental health problems? *Front Psychol.* 2017;8(MAY):1-6. doi:10.3389/fpsyg.2017.00857
  27. Kaljee LM, Green M, Riel R, Lerdboon P, Tho, LH, Thoa TK and Minh TT. Sexual Stigma, Sexual Behaviors, and Abstinence Among Vietnamese Adolescents: Implications for Risk and Protective Behaviors for HIV, Sexually Transmitted Infections, and Unwanted Pregnancy. *J Assoc Nurses AIDS Care.* 2007;18(2):48-59. doi:10.1016/j.jana.2007.01.003
  28. Tun W, Vu L, Dirisu O, Sekoni A, Shoyemi E, Njab J, Ogunsola S and Adebajo S. Uptake of HIV self-testing and linkage to treatment among men who have sex with men (MSM) in Nigeria: A pilot programme using key opinion leaders to reach MSM. *J Int AIDS Soc.* 2018;21(S5). doi:10.1002/JIA2.25124/FULL.