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Risky Behaviours Related to Sexual and Reproductive Health among Female University Students in Albania, Implications for Public Health

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Abstract

Background: *Risky sexual behaviours are a significant global public health concern, especially among youth. These behaviours are associated with an increased risk of sexually transmitted infections, unintended pregnancies, and unsafe abortions. This study aims to assess the prevalence of risky sexual behaviours among female university students in Albania to design evidence-based health policies and interventions.*

Methodology: *A national cross-sectional study was conducted across both public and private universities in Albania from October to December 2024. Data were collected using an online self-administered questionnaire designed to assess the sexual behaviours of female university students. The data were analysed using SPSS v.29 statistical software to identify key risk factors and trends.*

Results: *Among the 5,966 female students surveyed, 47.2% reported being sexually active. Of these, 61.7% began sexual activity at an early age, between 12 and 18 years old. Nearly half of the participants (48.6%) reported never using a condom, and 32.7% used condoms occasionally. Additionally, 17.6% had multiple sexual partners. Furthermore, 70.6% did not use a condom the last time they had sex. Despite engaging in risky sexual behaviours, 79.7% of female had never been tested for STIs, and 88.1% had never been tested for HIV.*

Conclusion: *Risky sexual behaviours are widespread among female university students in Albania, with early initiation of sexual activity, multiple sexual partners, and unprotected sex being prevalent. These findings underscore the urgent need for comprehensive sexual health education and interventions that promote safe sexual practices and regular STI and HIV testing.*

Keywords

Albania, Condom use, Risky sexual behaviours, Sexual health, University students.

INTRODUCTION

Sexual health is widely recognized as a fundamental aspect of public health and social development due to its integral role in personal well-being and societal stability. The World Health Organization (WHO) defines sexual health as a state of physical, mental, and social well-being in relation to sexuality, emphasizing that it extends beyond the mere absence of disease or dysfunction [1] [2]. Sexual health encompasses various dimensions, including the ability to engage in pleasurable and safe sexual experiences, which ultimately contribute to quality of life and self-esteem [2] [3].

The significance of sexual health is evident when considering its repercussions on broader health outcomes. Research indicates that sexual health is closely linked with reproductive health, mental health, and the prevention of sexually transmitted infections (STIs) [4] [5]. For instance, the health and well-being of individuals are critically influenced by their sexual experiences throughout life, particularly during formative periods such as adolescence [1] [6]. Interventions aimed at improving sexual health literacy among different populations, including youth and older adults, have shown that enhanced understanding can lead to better sexual decision-making and reduced risk of adverse outcomes, such as unintended pregnancies and STIs [5] [7].

Furthermore, sexual health plays a crucial role in fostering social equity and addressing human rights issues. Sexual rights are increasingly recognized as human rights, thereby integrating social justice perspectives into public health discourses [8]. Effective sexual health education can dismantle stigma and misinformation, promoting inclusive access to information and services that respect individual rights [9].

The link between sexual health and social development is further strengthened by its impact on familial and community structures. Improved sexual health outcomes contribute to the stability of families, as healthy relationships are vital for nurturing and raising children [4]. Sexual health is an essential component of overall health and well-being, with the World Health Organization (WHO) and the United Nations Population Fund (UNFPA) providing comprehensive frameworks and definitions. According to WHO, sexual health is defined as "a state of physical, emotional, mental, and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction and infirmity" [10]. This definition highlights the multidimensional aspect of sexual health, which encompasses not only the absence of adverse conditions but also the presence of positive elements that contribute to an individual's overall health.

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REVIEW OF LITERATURE

The UNFPA further elaborates on the concept of sexual health by emphasizing human rights, stating that "all individuals have the right to attain the highest standard of sexual health" [11]. This includes access to accurate information, comprehensive sexual education, and appropriate health services that are essential for making informed decisions regarding one's sexual health. Key dimensions of sexual health include sexual rights related to consent, pleasure, and privacy, which are vital in ensuring individuals can engage in healthy and respectful sexual relationships [12]. Risky sexual behaviors (RSBs) are sexual practices that increase the likelihood of adverse health outcomes, particularly sexually transmitted infections (STIs) and unintended pregnancies. The World Health Organization (WHO) defines RSBs broadly, considering contextual factors that elevate risk, such as lack of protective measures, multiple sexual partners, and inadequate sexual health education [13]. The European Centre for Disease Prevention and Control (ECDC) emphasizes the connection between RSBs and the transmission of STIs, highlighting that behaviors like unprotected sex, especially with multiple partners, pose significant health risks [14].

A key aspect of RSBs is that they often stem from a combination of individual behaviors influenced by broader social and environmental factors. For instance, younger individuals, particularly adolescents, are at higher risk due to developmental factors, peer influence, and the often-limited access to comprehensive sexual education [15]. The WHO indicates that factors such as early age at first intercourse and substance use can exacerbate RSBs, leading to a heightened risk of HIV and other STIs [13] [16].

Individuals engaging in unprotected sex, particularly with multiple partners, are at heightened risk for acquiring STIs, including HIV [17] [18] [19]. Studies have indicated that young people who partake in casual or uncommitted sexual relationships without adequate protection exhibit substantially increased rates of STIs compared to their counterparts who practice safer sex [20] [21]. Furthermore, the consistent use of condoms has been shown to mitigate these risks, yet many individuals, particularly adolescents and young adults, often neglect this protective measure [22].

Unintended pregnancies represent another critical health outcome linked to RSBs. Engaging in unsafe sexual practices, such as not using contraceptive methods or having multiple sexual partnerships, can lead to higher rates of unintended pregnancies [20] [23]. Specific populations, such as adolescents and young adults, face increased vulnerabilities in this regard, often due to a lack of access to sexual health education and resources [24]. Such unintended pregnancies can lead not only to health complications for both the mother and child but also significant socio-economic consequences for young parents.

The psychological impact of RSBs is equally concerning. Individuals who engage in risky sexual behaviors may experience decreased self-esteem, increased anxiety, and emotional dysregulation, which can further perpetuate cycles of revictimization and ongoing harmful behaviors [25] [26]. Moreover, the intersection of substance abuse with RSBs often exacerbates these psychological challenges, as alcohol and drug use can impair judgment and further increase the likelihood of engaging in unprotected [27] [28] [29].

Early sexual initiation, defined as having sexual intercourse before the age of 18, is a significant public health concern globally, as it has been linked to various negative health outcomes. The prevalence of early sexual initiation varies considerably across different regions and populations, highlighting the need for targeted interventions.

From a global perspective, studies indicate that early sexual initiation affects many young people, with varying prevalence across countries. For example, a systematic review on early sexual initiation among Ethiopian youth found rates ranging from 18.4% among high school students to higher figures in specific local studies [30] [31]. Recent trends in condom use among adolescent girls reveal a complex interaction of social, cultural, and educational factors that impact their choices and behavioral practices regarding sexual health. Data from multiple studies across various settings show an inconsistent but generally low rate of condom use among sexually active adolescent girls.

A study in Cameroon highlighted that only 16.9% of sexually active adolescent girls reported using condoms, which represents a modest level of contraceptive use in this demographic [32]. These highlights significant gaps in effective sexual health education and access to contraception.

A study noted that condoms are viewed as the most accessible form of contraception, but that knowledge about proper use and negotiation strategies is lacking [33]. This emphasizes the need for comprehensive education that not only teaches about the availability of condoms but also empowers adolescent girls to negotiate their use effectively.

Cultural perceptions play a substantial role in determining condom use. A qualitative study from South Africa discussed how gender norms and peer pressure can negatively affect adolescent girls' ability to negotiate condom use, often viewing condoms as a symbol of distrust in romantic relationships [34]. This cultural bias can lead to lower rates of sexual health protection among girls.

The perception of risk associated with sexually transmitted infections (STIs) is another critical factor influencing condom use. Recent studies suggest that adolescents with a history of STIs are more likely to use condoms in subsequent sexual encounters, reflecting a learned concern about sexual health [35].

The burden of STIs has been quantified in considerable detail. According to the Global Burden of Disease Study, STIs rank among the leading causes of morbidity and disability in low- and middle-income countries. Specifically, they account for a significant proportion of DALYs lost among these populations. As noted in a study conducted in Ethiopia, STIs, particularly among young people aged 20-24 years, constitute a leading cause of morbidity, significantly

contributing to DALYs [2].

Furthermore, Rowley et al. outline those diseases such as chlamydia, gonorrhea, and syphilis collectively yield substantial health burdens, contributing to millions of new infections annually and resulting in considerable healthcare costs. The high burden of disease from STIs related to RSBs is compounded by the emerging crisis of antimicrobial resistance, which threatens the effectiveness of existing treatments and is likely to lead to further increases in disease burden [3]. Analysis from Huang et al. indicates that from 1990 to 2019, the disease burden attributed to STIs has fluctuated, with significant public health implications for resource allocation and health policy. The study emphasizes the need for continuous monitoring and comprehensive sexual health education as strategies to alleviate the burden posed by RSBs and their related health outcomes [4].

Unprotected sexual activity is a major risk factor for STIs among adolescents. Studies indicate that sexually active adolescents are particularly vulnerable to infections due to biological factors, such as the immaturity of the reproductive system, which increases susceptibility to STIs [36]. The rise in STIs among adolescents is concerning, as the prevalence of infections like chlamydia and gonorrhea continues to increase in this demographic.

Unprotected sex is also a leading cause of unintended pregnancies among adolescents. It is estimated that around 60% of all pregnancies in adolescents in low- and middle-income countries are unintended, often resulting in unsafe abortions [37]. The impact of unintended pregnancies can be severe, affecting not only the physical health of the adolescent but also leading to substantial psychological distress and disruption of education [38]. Many adolescents engaging in unprotected sex lack awareness of available contraceptive options or face societal barriers in accessing these methods, which further exacerbates the issue [39], [40].

The psychological ramifications of unprotected sex among adolescents can be profound. Many young people experience heightened anxiety, shame, and societal stigma associated with unintended pregnancies and STIs, which can impact their mental health and overall well-being [41]. The stress of potential health complications or social repercussions can lead to issues such as depression and low self-esteem, compounded by feelings of regret regarding their sexual choices [42].

Access to adequate reproductive health services remains a significant barrier for adolescents. Low utilization of contraceptive methods and reproductive health services often stems from sociocultural beliefs and misinformation [39] [43].

It is clear that comprehensive sexual education plays an essential role in preventing the adverse consequences associated with unprotected sexual activity. Research has consistently shown that adolescents with access to sexual education are more likely to utilize effective contraceptive methods, thereby reducing the rates of STIs and unintended pregnancies [44] [45]. Educational programs can help dismantle harmful beliefs and facilitate discussions around safe sexual practices, ultimately fostering a healthier generation. Sexual education has been a part of the school curriculum in Albania since 1995, marking a significant development in the approach to adolescent health and education in the country. The introduction of sexual education aimed to disseminate essential knowledge regarding human reproductive health, sexually transmitted diseases, pregnancy, puberty, and other vital health topics relevant to youth [46].

Despite its incorporation into the curriculum, the effectiveness and comprehensiveness of sexual education in Albania have faced challenges. A modern critique highlights that the topics covered often focus primarily on the anatomy and physiology of reproduction, leading to significant gaps in knowledge regarding broader reproductive health issues, such as consent, relationships, and gender equality [47]. This narrow focus can hinder the development of critical information among young individuals necessary for making informed decisions regarding their sexual health.

Despite the inclusion of sexual health education in Albania's national school curriculum as early as 1995, challenges in its implementation persist. These include a lack of sustained funding, insufficient teacher training, and sociocultural resistance, particularly from conservative groups. In collaboration with the Ministry of Education, UNFPA has supported the institutionalization of comprehensive sexuality education (CSE) by training over 3,000 teachers across the country, targeting students aged 10 to 18 [48].

Nonetheless, sexual activity among adolescents in Albania begins early. According to a national assessment, 14% of girls and 23% of boys aged 15–24 reported having initiated sexual intercourse before the age of 18. Notably, women with secondary or higher education were less likely to engage in early sexual activity, underlining the protective role of education [49].

Social attitudes remain a barrier to the full implementation of CSE. Many parents and teachers in Albania believe that sexual education promotes promiscuity, and therefore consider it inappropriate for children. This stigma limits open discussion and weakens the impact of existing programs [50].

MATERIALS AND METHODS

Study Design

This research adopted a national cross-sectional design conducted between October and December 2024 to examine the prevalence of risky sexual behaviors among female university students in Albania. The design was selected for its suitability in identifying behavioral trends across a diverse population within a defined timeframe.

Journal of Nursing Practices and Research (JNPR)
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Volume 5, Issue 2, October 2025

Population and Sampling

Inclusion Criteria Eligible Participants Met the Following Criteria:

- Identified as female
- Aged between 18 and 25 years
- Enrolled in undergraduate or graduate programs at public or private universities in Albania
- Provided informed consent to participate in the study

Exclusion Criteria Participants were Excluded if they:

- Submitted incomplete responses
- Did not meet the age or enrollment criteria

A non-probability convenience sampling strategy was employed to recruit participants from multiple regions and institutions, aiming to enhance sample diversity.

Selection of Subjects

The study aimed to include a representative cross-section of the female university student population in Albania. Recruitment efforts targeted students from various disciplines, academic levels, and institutional types to increase heterogeneity.

Data Collection Procedure

Data were collected using a structured, self-administered questionnaire, which assessed demographic information, sexual behavior patterns, condom usage, and STI/HIV testing history. The instrument was distributed in two formats:

- Online, via institutional emails, university platforms, and social media networks
- In-person, during scheduled classroom visits in coordination with faculty members

Participants were encouraged to complete the survey anonymously, either on their personal devices or on printed forms. The questionnaire was developed in Albanian and underwent a pilot test with a small student sample to validate clarity and cultural appropriateness prior to full-scale administration.

Ethical Considerations

The study was conducted in accordance with the ethical principles of the Declaration of and was approved by the Ethics Committee of the European University of Tirana (nr. Prot. 414, date 08.02.2024). All participants were informed about the objectives, risks and their rights before engaging in the study. Anonymity, confidentiality and the right to withdraw participation at any time were essential elements of the ethical protocol.

Data Analysis

Data entry and statistical analysis were performed using IBM SPSS Statistics version 29. Descriptive statistics, including frequencies and percentages, were used to summarize sociodemographic variables and behavioral indicators. Crosstabulations were employed to examine associations between key variables.

Study Limitations

This study is not without limitations. The use of convenience sampling may have introduced selection bias, as participants were drawn from those most readily accessible, potentially limiting the representativeness of the findings to all female university students in Albania. As such, results should be interpreted with caution and not generalized beyond the study population.

Furthermore, while the questionnaire was adapted from internationally validated Knowledge, Attitudes, and Practices (KAP) tools, its contextualization for the Albanian setting required translation, cultural adaptation, and piloting with a small group of students to ensure clarity and relevance. Although this process helped strengthen face and content validity, further psychometric testing (e.g., reliability analysis or construct validity) would be valuable in future studies to confirm the robustness of the instrument.

Data Presentation

Results are illustrated through tables and figures that summarize key findings related to sexual health behaviors, condom use, and STI/HIV testing patterns among participants.

FIGURES & TABLES

Table 1. Sexual Health Behaviours among Female University students (N = 5966)

Indicator	Category	Frequency	Percent (%)	Cumulative Percent (%)
Age of First Sexual Intercourse	12	5	0.1	0.1
	14	18	0.3	0.4
	16	336	5.6	6.0
	18	1382	23.2	29.2
	20	700	11.7	40.9
	>20	381	6.4	47.3
	Never had sexual intercourse	3144	52.7	100.0

Journal of Nursing Practices and Research (JNPR)
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Journal of Nursing Practices and Research (JNPR)
Volume 5, Issue 2, October 2025

Indicator	Category	Frequency	Percent (%)	Cumulative Percent (%)
Number of Sexual Partners	A few	497	8.3	8.3
	One	2325	39.0	47.3
	Never had	3144	52.7	100.0
Condom Use During Sexual Intercourse	Yes	525	8.8	8.8
	No	1370	23.0	31.8
	Occasionally	927	15.5	47.3
Condom Use During Last Intercourse	Yes	829	13.9	13.9
	No	1993	33.4	47.3
Ever Tested for STIs	Yes	631	10.6	10.6
	No	5335	89.4	100.0
Ever Tested for HIV/AIDS	Yes	389	6.5	6.5
	No	5577	93.5	100.0

RESULTS

Sexual Activity and Age of Initiation among the 5,966 participants, over half (52.7%) reported never having engaged in sexual intercourse. Among those who were sexually active, the age of first sexual experience varied, with 18 years being the most commonly reported (23.2%), followed by 20 years (11.7%) and over 20 years (6.4%). Early initiation at ages 16 or younger was reported by a smaller segment: 5.6% initiated at 16, 0.3% at 14, and only 0.1% at age 12. These findings suggest that a significant portion of Albanian female university students either delay sexual activity or abstain entirely—likely reflecting personal, cultural, or religious beliefs (Table 1, Figure 1).

Number of Sexual Partners Results also showed that 52.7% of students had never had a sexual partner. Of those who were sexually active, 39.0% reported only one sexual partner, and 8.3% reported a few partners. The relatively low percentage of respondents reporting multiple partners may indicate a trend toward monogamous relationships or an awareness of associated sexual health risks (Table 1, Figure 2).

Condom Use and Sexual Risk Analysis of condom use revealed inconsistent patterns. Only 13.9% of sexually active students used a condom during their last sexual encounter. Regarding overall use, 8.8% always used condoms, 15.5% used them occasionally, and 23.0% never used them. These figures highlight significant public health concerns regarding exposure to STIs and unplanned pregnancies (Table 1, Figures 3 and 4).

Testing for STIs and HIV Findings demonstrate low levels of routine sexual health screening. Only 10.6% of respondents had ever been tested for STIs, and just 6.5% for HIV. These low rates point to substantial gaps in preventive care and awareness of available health services among university students in Albania (Table 1, Figures 5 and 6).

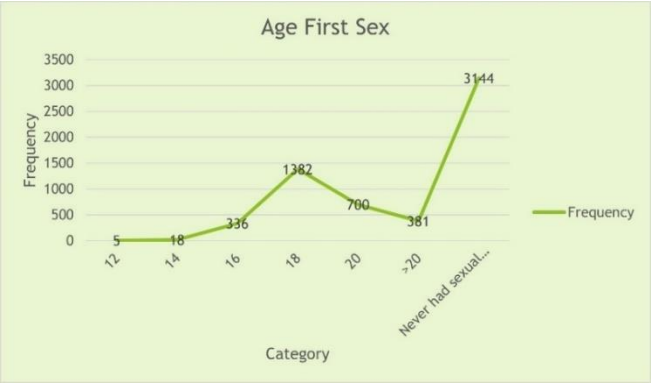

Figure 1. The distribution of age at first sexual intercourse

Distribution of age at first sexual intercourse among female university students in Albania (N = 5,966). Over half reported no prior sexual experience; age 18 was the most frequent initiation point among those sexually active.

Figure 2. Number of sexual partners reported by female university students

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Volume 5, Issue 2, October 2025

Among female university students, sexual activity was limited for most, with the majority of sexually active students reporting a single partner and many reporting no sexual experience.

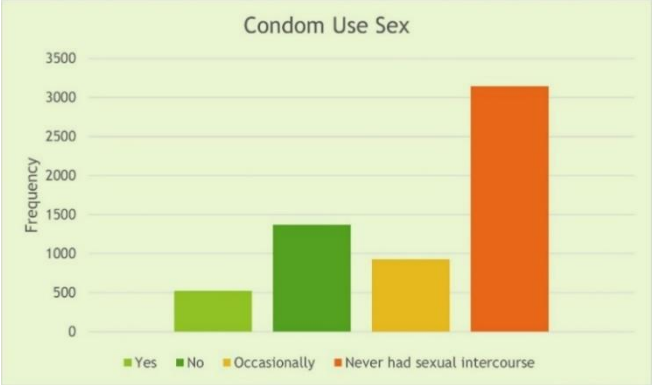

Figure 3. Frequency of condom use during sexual intercourse

The majority of students did not consistently use condoms, with a significant portion reporting occasional or no use.

Figure 4. Condom use during last sexual intercourse

Only a minority used protection during their last sexual encounter, indicating a notable gap in safe sex practices.

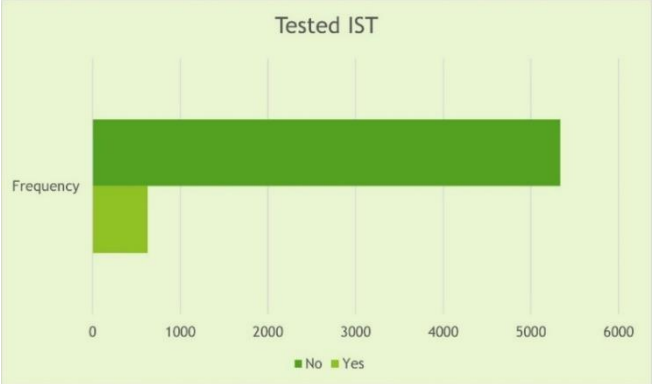

Figure 5. Students who have ever been tested for sexually transmitted infections (STIs)

The proportion of students who have ever been tested for STIs was low, with the majority reporting no prior testing, reflecting limited access to healthcare services or insufficient awareness of preventive screening measures.

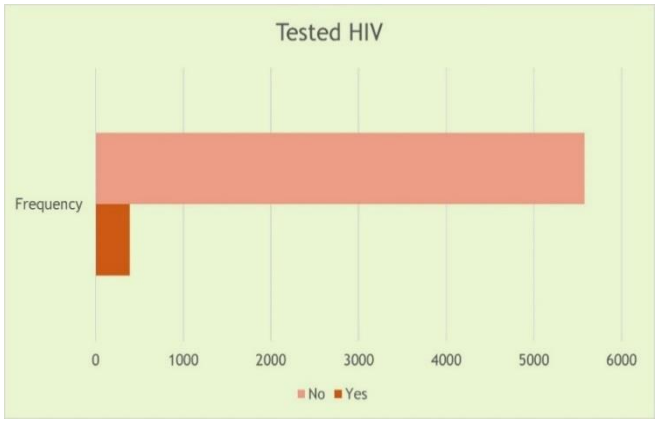

Figure 6. Female students who have ever been tested for HIV/AIDS

The proportion of students who have ever been tested for HIV/AIDS was very low, highlighting a critical need for increased awareness and improved access to HIV- related health services.

DISCUSSION

This national cross-sectional study investigated the prevalence and patterns of risky sexual behaviors (RSBs) among female university students in Albania, with a focus on early initiation of sexual activity, inconsistent condom use, multiple sexual partners, and low levels of STI and HIV testing. These findings provide important insight into the sexual health behaviors of Albanian youth and underscore the need for comprehensive, evidence-based interventions tailored to the local sociocultural context.

The data show that more than half of the students had never engaged in sexual intercourse, while the most common age of sexual initiation was 18 years, followed by 20 years. This aligns with global literature suggesting that late adolescence is a typical time for sexual debut, although cultural and socioeconomic factors heavily influence this timing [51]. Early sexual activity has been associated with an increased risk of STIs and unintended pregnancies, as documented by WHO and multiple epidemiological studies [52] [53] [54] [55]

Among those sexually active, most reported having had only one partner, while a smaller proportion had multiple partners. Although the number of students with multiple partners was relatively low, this behavior still represents a key risk factor for STIs. This trend is consistent with research across various low- and middle-income countries, where traditional norms may favor monogamy, but evolving sexual practices still present health challenges [56].

Condom use was notably inconsistent. While 13.9% reported using a condom during their last sexual encounter, a considerable percentage did not use protection, and only 8.8% reported consistent condom use. These behaviors place young women at elevated risk for STIs and unintended pregnancies [57]. Cultural stigma, poor negotiation skills, and misconceptions about trust in relationships likely

contribute to low condom usage, mirroring findings in other global studies [58].

Alarmingly, only 10.6% of participants reported ever being tested for STIs, and a mere 6.5% had undergone HIV testing. This significant gap in preventive care aligns with findings from adolescent populations globally, where access to and awareness of sexual health services remain limited. The WHO has highlighted the importance of increasing routine testing among youth, particularly university students, as a critical component of STI prevention [59].

Despite Albania incorporating sexual health education into its school curriculum since 1995, its implementation appears to lack depth and reach. While students may learn the biological aspects of reproduction, they often lack exposure to broader themes such as consent, gender equity, and emotional well-being [60]. Recent assessments confirm that many students still feel uncomfortable discussing sexual health with educators or professionals, which limits the effectiveness of existing programs[61].

This study reinforces the urgent need for integrated sexual health education and services on university campuses. Interventions must extend beyond knowledge transmission to address behavioral, cultural, and systemic barriers. Such programs should be inclusive, stigma-free, and empower young women to make informed decisions, negotiate safe sex, and access regular testing services.

CONCLUSION

This study provides a comprehensive overview of the sexual and reproductive health behaviors among female university students in Albania. Although more than half of the respondents reported not being sexually active, a significant portion of those who were sexually active demonstrated patterns of early initiation, low condom use, limited STI and HIV testing, and exposure to potential risks associated with multiple sexual partners.

The findings emphasize that current sexual health education and services remain insufficient in addressing the real-life needs and challenges of young women in university settings. Persistent stigma, limited access to youth-friendly services, and a lack of open dialogue with educators and professionals continue to hinder the effectiveness of existing interventions.

There is a critical need for evidence-based, culturally sensitive sexual health programs that go beyond biological education and instead promote comprehensive knowledge, healthy relationships, and positive decision-making. Universities are uniquely positioned to act as entry points for change. They should integrate comprehensive sexuality education into their curricula, fostering peer-led awareness initiatives, and establishing youth-friendly health services on campus. Thus, university campus can create safe and supportive spaces that encourage informed and responsible decision-making.

At the same time, national policymakers must reinforce these efforts by ensuring that strategies explicitly address university populations, guaranteeing affordable access to contraceptives and testing, and embedding gender-sensitive approaches into prevention and care. In this way, institutional and policy measures can work together to close existing gaps, strengthen prevention, and promote equity.

Ultimately, improving sexual health outcomes for Albanian youth requires coordinated efforts across health, education, and policy sectors to ensure that students are equipped with the tools, confidence, and support they need to lead safe and informed sexual lives.

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