

# ETHNICITY AND PERSONALITY TRAITS IN RISKY SEX BEHAVIOUR AMONG NIGERIAN ADOLESCENTS

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## Abstract

Risky sexual behavior among adolescents is a serious public menace in many countries. However, there is limited research on the factors associated with it. This study examined the influence of ethnicity and personality traits on risky sexual behavior among adolescents. A cross-sectional design was employed, involving 500 participants (206 males and 294 females). Data were collected through a sexual risk behavior survey and the Big Five Personality Inventory. Hypotheses were tested, and a stepwise multiple regression analysis was used for data analysis. The results revealed that ethnicity positively predicted risky sexual behavior among adolescents, with  $\beta = 0.218$  and  $P < 0.001$ . Personality traits also predicted risky sexual behavior, with  $\beta = 0.240$  and  $P < 0.001$ . Therefore, it is recommended that parents, teachers, and guardians develop policies to promote moral teachings among children and adolescents. Additionally, sex education should be emphasized within families, regardless of religious barriers, to raise adolescents' awareness of the dangers associated with risky sexual behavior.

## Introduction

Adolescent sexual behavior is a natural and important part of development but can also be a cause for concern within any community (Knowles, Rinehart, Frick, & Steinberg, 2019). This stage of adolescence is marked by heightened sensitivity to social influences that drive behavioral changes. Researchers have noted the intricate cognitive processes during this transition from adolescence to adulthood, which interact with social and

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environmental cues (Tate, Kumar, Murray, et al., 2022). This shift toward social orientation often results in reduced involvement with immediate family members in favor of peer groups (Hansell & Mechanic, 1990, as cited in Losel & Hurrelmann, 1990). Adolescents' sensitivity to social norms compels them to conform to prevailing behaviors, which may have implications for their health and personality traits.

Unsafe sexual practices often result from adolescents' conformity to prevailing behaviors, coupled with their lower level of developmental maturity compared to adults (Lambie & Randell, 2013; Steinberg, Cauffman, Woolard, et al., 2009). Adolescents can act impulsively, misinterpret social cues and emotions, primarily due to ongoing brain development, which continues into early adulthood (Giedd, 2008). These developmental changes affect self-regulation, reward processing, the interpretation of social cues, emotional maturity, risk-taking behavior, resistance to peer influence, and the consideration of future consequences (Steinberg et al., 2009; American Academy of Child and Adolescent Psychiatry, 2022).

Risky sexual behavior constitutes a significant public health problem worldwide, with well-documented risk factors (Kirby, Laris, & Rolleri, 2005, as cited in Ngoc, Nguyen, Nguyen, Nguyen et al., 2020). Globally, risky sexual behavior carries an increased risk of negative outcomes, including sexually transmitted diseases and unwanted pregnancies (Odimegwu & Somefun, 2017; Pearson, Wall, & Sharp, 2021). These issues are prevalent among adolescents and are associated with a range of health problems, including sexually transmitted diseases, which are linked to socioeconomic challenges (Srahbzu & Tirfeneh, 2020). For instance, studies (e.g., Odumegwu & Somefun, 2017) show that approximately 20,000 girls under the age of 18 give birth daily in developing countries, including Nigeria.

The World Health Organization (WHO, 2019) reported that approximately 376 million new cases of four types of curable sexually transmitted infections (STIs) occur in individuals aged 15 to 49 years globally. Furthermore, 2.1 million adolescents aged 10-19 years were living with HIV (Human Immunodeficiency Virus), and 55,000 AIDS (Acquired Immune Deficiency Syndrome) deaths occurred among adolescents in 2016, largely due to risky sexual behavior (WHO, 2019). Previously, WHO (2002) reported that unsafe sex ranked second among the top ten risk factors in the global burden of diseases, with twelve million Americans alone infected with STDs annually. This report also indicated that forty-three million young people globally had viral STDs, which are incurable and persist for life. Sexually transmitted diseases cost society more than 3.5 billion dollars annually (WHO, 2002). The United Nations Programme on HIV/AIDS (UNAIDS, 2006) reported that sub-Saharan Africa accounts for 60% of all people living with HIV/AIDS. A thorough examination of WHO and UNAIDS reports concerning America and sub-Saharan Africa raises concerns about Nigeria's health institutions, which are considerably less functional.

Given this backdrop, there is a pressing need to study other causes of this issue, such as socio-cultural factors, including the role of cultural values of different ethnic groups and their impact on adolescent sexual behavior. The influence of ethnicity on risky sexual behavior among Nigerian adolescents has received limited attention over the years. It is essential to understand how culture and cultural values, which vary widely, influence the sexual behavior of adolescents while considering their personality traits.

According to Platt (2011), ethnicity is a social group characterized by shared nationality, history, distinct culture, religion, and language. In Nigeria, there are over 270 ethnic groups, with the majority composed of the Igbo, Yoruba, and Hausa ethnic groups. Other minority groups include Ijaw, Efik, Ibibio, Tiv, Edo, Kanuri,

Biron, and Nupe, among others. These ethnic groups differ significantly in their ways of life, which may be a factor contributing to risky sexual behavior among youths from various ethnic backgrounds.

Personality and sexuality shape our experiences and how we interpret them (Clark, 2020). Research suggests a link between risky sexual behavior and personality (Berg et al., 2013), although the basis of this link remains unclear (Zietsch et al., 2010). It is noteworthy that most research in this area lacks an exploration of specific personality dimensions that may contribute to this issue. It is plausible that one or more personality dimensions play a more significant role. Personality encompasses an individual's character, attributes, and behavioral traits and is relatively stable over time, influencing various aspects of life (Ugwu et al., 2017). The Big Five model (John, Donahue, & Kentle, 1991) has been the primary theoretical model used to explain the sexual behavior of adolescents.

Personality and its development are influenced by various factors, with the environment being a significant extrinsic one. Cultural, racial, socioeconomic, educational, social, guidance, and health conditions can all shape personality development. Intrinsic factors include biological drives such as homeostasis, social drives, defensive assimilatory drives, and hereditary temperamental differences (Wingood & Dickmente, 2010). Parental education, health, emotional states, and social interactions are other factors that impact personality development.

In a study by Pearson, Wall, and Sharp (2021), which involved 180 inpatient adolescents, the researchers investigated antisocial traits and risky sexual behavior. The results revealed that most antisocial facets were not directly related to risky sexual behavior, but they were associated with attitudes towards risky sexual behavior, with age at admission being a significant variable. In another study, Zietsch et al. (2010) examined the genetic and environmental influences on risky sexual behavior and its relationship with personality. They found that risky sexual behavior was positively correlated with impulsivity, extraversion, psychoticism, and neuroticism, with these correlations primarily driven by overlapping genetic influences.

Pengpid and Peltzer (2021) assessed the prevalence and correlates of sexual risk behaviors among adolescents in Mozambique. Their findings highlighted the need for interventions, as a substantial number of adolescents in Mozambique reported engaging in sexual risk behaviors.

To date, there are numerous predictors of sexual risk behavior among young people, many of which are not well understood. This study aims to:

1. Determine whether ethnic group significantly predicts risky sexual behavior among adolescents.
2. Investigate whether personality traits significantly predict risky sexual behavior among adolescents.

Thus, the present study specifically hypothesizes that:

1. Ethnic group will significantly predict risky sexual behavior among adolescents.
2. Personality traits will significantly predict risky sexual behavior among adolescents.

## Method

## Participants

The study included 500 adolescents (206 males and 294 females) aged between 15 and 18 years, selected from Nigeria. The participants represented various ethnic groups: Igbo (N = 311), Hausa (N = 30), Yoruba (N = 143), and Others (N = 16).

## Measures

### Big Five Personality Inventory (BFI)

The researchers utilized the Big Five Personality Inventory (BFI), a 44-item assessment tool developed by John, Donahue, and Kentle (1991). This inventory evaluates personality across five distinct dimensions: Extraversion (8 items), Agreeableness (9 items), Conscientiousness (9 items), Neuroticism (8 items), and Openness to experience (10 items). Responses were recorded using a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Notably, items 1, 3, 4, 5, 7, 10, 11, 13, 14, 15, 16, 17, 19, 20, 22, 25, 26, 28, 29, 30, 32, 33, 36, 38, 39, 40, 42, and 44 of the BFI were scored positively, while items 2, 8, 9, 12, 18, 21, 23, 24, 27, 31, 34, 35, 37, 41, and 43 were reversely scored. The developers reported a Cronbach's alpha coefficient reliability of .80 and test-retest reliability of .85. BFI was adapted for professional use in Nigeria after several years of re-standardization research to enhance its suitability and relevance for Nigerians (Omoluabi, 2002). Additionally, the developers reported mean convergent validity coefficients of .75 and .85 when compared with the Big Five Instruments authored by Costa and McCrae (1992) and Goldberg (1992), respectively. Umeh (2004) obtained divergent validity coefficients with the University Maladjustment Scale (Kleinmuntz, 1961) as follows: Extraversion = .05, Agreeableness = .13, Conscientiousness = .11, Neuroticism = .39, and Openness to Experience = .24, using a Nigerian sample. These low correlation coefficients indicate the instruments' divergent nature and cross-cultural validity (Umeh, 2004).

### Personality Traits and Risky Sexual Behavior

In this study, personality traits were assessed using the Big Five Personality Inventory to measure extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience. The outcome variable was risky sexual behavior. All items were rated on a five-point Likert scale, ranging from (1) strongly disagree to (5) strongly agree. This construct aimed to identify personality types associated with risky sexual behavior among Nigerian adolescents. Ethnicity was also included in the demographic variables, with options for Hausa, Igbo, Yoruba, and Others. The outcome variable remained focused on risky sexual behavior. The items were scored on a four-point Likert scale, ranging from (1) Hausa to (4) others, to examine the relationship between ethnicity and risky sexual behavior among Nigerian adolescents.

### Sexual Risk Behavior Survey (SRS)

The SRS, developed by Turchik and Garske (2009), is a 23-item open-ended questionnaire designed to assess the prevalence of sexual risk behavior among college students. Turchik and Garske (2009) reported Cronbach's Alpha reliability coefficients ranging from 0.61 to 0.93 for subscales including Sexual Risk Taking with Uncommitted Partners, Risky Sex Acts, Impulsive Sexual Behaviors, Intent to Engage in Risky Sexual Behaviors, and Risky Anal Sex Acts. Ugwuozor (2015) validated this instrument for use among Nigerian

undergraduate students, specifically from the faculties of Arts and Social Sciences at the University of Nigeria, Nsukka. He reported a reliability coefficient index of .94 and a split-half reliability of .86.

## Procedure

Selected secondary school principals were approached and informed about the study. Informed written consent was obtained from the caregivers of adolescents, and adolescents aged 18 or older provided informed written consent, while those under 18 provided written assent. Data collection was conducted using two methods: an online survey (Google Form) shared via social media platforms among secondary school students in Nigeria and a physical questionnaire primarily administered within the Enugu metropolis.

The study employed a relatively large sample of adolescents in Nigeria, utilizing simple random sampling to ensure equal representation among respondents. Out of the 523 collected online surveys/questionnaires, 500 were used for analysis after data screening, with structural equation modeling applied to examine the research questions.

## Design/Statistical Analysis

The study employed a survey research design, and structural equation modeling was utilized for data analysis.

## Results

Table 1 displays the demographic distribution of respondents based on gender, age, place of residence, education level, and ethnic group.

**Table 1: Demographic Profile of the Respondents (n = 500)**

<i>Characteristics</i>	<i>Frequency</i>	<i>Percentage</i>
<b><i>Gender</i></b>		
<i>Male</i>	206	41.2
<i>Female</i>	294	58.8
<b><i>Age</i></b>		
<i>15-16</i>	137	27.4
<i>17-18</i>	363	72.6
<b><i>Place of residence</i></b>		
<i>City</i>	353	70.6
<i>Village</i>	51	10.2
<i>Nomad</i>	96	19.2

<b><i>Educational Qualification</i></b>		
<i>None</i>	17	3.4
<i>Primary</i>	0	===
<i>Secondary</i>	483	96.6
<b><i>Ethnicity</i></b>		
<i>Hausa</i>	30	6
<i>Igbo</i>	311	62.2
<i>Yoruba</i>	143	28.6
<i>Others</i>	16	3.2

As presented in Table 1, 41% of the respondents identified as male, while 59% identified as female. The majority of respondents fell within the age range of 17-18 years, comprising 73% of the sample, while those aged 15-16 constituted the remaining 27%. In terms of academic qualification, the vast majority of respondents were secondary school students, accounting for 97% of the sample, with the remaining 3% having no educational qualifications.

Regarding respondents' ethnicity, the data revealed that the largest ethnic group was the Igbo, comprising 62% of the responses, followed by the Yoruba at 29%. The Hausa and "Others" categories recorded the lowest response rates, at 6% and 3%, respectively.

The researcher conducted data analysis using Partial Least Squares Structural Equation Modeling (PLS-SEM) to investigate the relationship between ethnicity, personality types, and risky sexual behavior among adolescents in Nigeria. The reported results indicate significance levels at  $p < .01$  and  $p < .001$ .

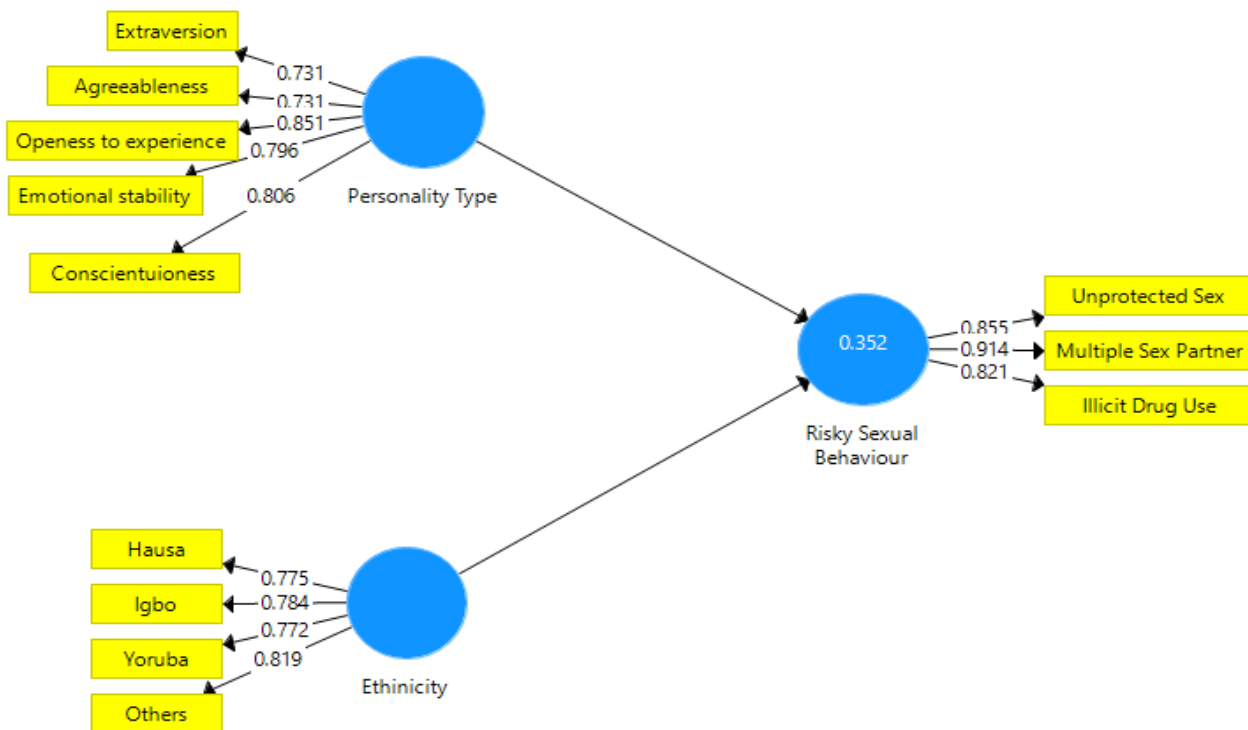
**Table 2: Construct Validity and Reliability**

	<i>Cronbach's Alpha</i>	<i>rho_A</i>	<i>Composite Reliability</i>	<i>Average Variance Extracted (AVE)</i>
<i>Risky Sex Behaviour</i>	0.831	0.845	0.898	0.747
<i>Ethnicity</i>	0.797	0.799	0.867	0.621
<i>Personality traits</i>	0.844	0.856	0.888	0.615

In developing the study variable, several important measures were followed to constructs validity and reliability and content validity. For content validity, different operational was evaluated by studying the existing literature and measurement used that contains multiples items. Both the confirmatory and exploratory analysis confirm the factorability of the variables. Figure 1 represents the factor loading of individual items. No items show the loading below 0.7, hence the model exceeded the suggested loading of 0.70. All the constructs are shown in

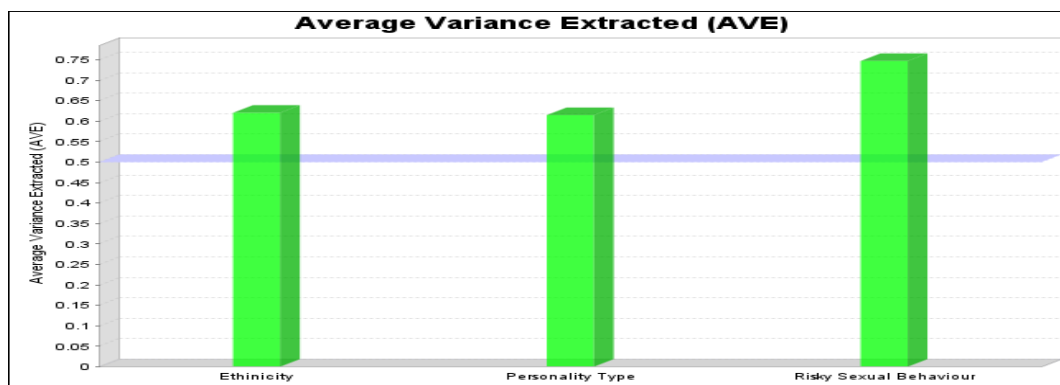
table 2 that none of the variable Cronbach's alpha less than 0.70. Furthermore, composite reliability was above the accepted level. To ensure the convergent validity, the average variance extracted also checked and showed all variable exceeded the recommended value of 0.50. So, all the variables confirm content validity and reliability.

**The Relationship between Ethnicity, Personality trait and Risky sexual behaviour among adolescent in Nigeria.**



**Fig 1: Measurement model**

Figure 1 shows the factor loading of individual items and confirms the confirmatory factor analysis. To evaluate the discriminant validity of the 3-variables is used in the study, Heterotrait-and Monotrait (HTMT) analysis was executed.



**Fig 2: Represents the graph of AVE**



Fig 2 shows the graph of average variance extracted for each of the latent variable used, it was observed that from table 2 the AVE of all the construct were above the recommended standard AVE of 0.5. Hence all the bar is shown with a green color in the graph.

**Table 3: Discriminant Validity (HTMT)**

	<b>Ethnicity</b>	<b>Personality Trait</b>	<b>Risky Sexual Behaviour</b>
<b>Ethnicity</b>	0.788		
<b>Personality Trait</b>	0.807	0.784	
<b>Risky Sexual Behaviour</b>	0.574	0.552	0.844

Result of confirmatory factor analysis shown in table 3 supports the empirical evidence of the uniqueness of most of the variables. It is pertinent to state that the values in the above table indicated that there is no discriminant validity problems according to HTMT<sub>0.85</sub> criterion. This implies that the HTMT criterion did not detects collinearity problem among latent construct. The construct of Ethnicity – *Hausa, Igbo and Yoruba* are relatively good. Hence having ensured the discriminant validity for further analysis by maintaining that no correlation exceeds the limit of HTMT.

### Structural Equation Modelling

In Smart-PLS, to observe the effects of independent variables on the dependent variable, normally two steps followed are measurement model and structural model. Some of the criterions, such as construct validity and reliability already discussed above. In addition to that in the structural modelling equation R square also shown for the predictive ability of independent variables on the dependent variables. The value of  $R^2$  (0.352) indicates that ethnicity among adolescent in Nigeria.35.2% of the variation in risky sex behaviour that is caused by the four selected variables. Additionally, for the model fit SRMR value was examined, which is 0.075 means model is a good fit

**Table 5: The Direct effect of ethnicity and personality trait on risky sexual behaviour**

	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics ( O/STDEV )</b>	<b>P Values</b>
<b>Ethnicity -&gt; Risky Sexual Behaviour</b>	0.218	0.222	0.049	4.490	<b>0.000</b>
<b>Personality trait -&gt; Risky Sexual Behaviour</b>	0.240	0.231	0.058	4.159	<b>0.000</b>

In structural modelling, the total of four hypotheses was examined through the use of empirical data collected from among the adolescents in Nigeria. All the four hypotheses were accepted. For a better presentation, Table 5 shows the p-value and t-value. There is clear evidence that we will accept all the hypothesis presented in this



study such that ethnicity and personality are statistically significant and have a positive relationship with risky sexual behaviour among adolescent that we considered.

**Table 6: Summary of the test of hypothesis**

**Hypothesis One**

H <sub>0</sub> : Ethnic group will not significantly predict risky sex behavior among adolescents	
H <sub>1</sub> : Ethnic group will significantly predict risky sex behavior among adolescents	
<b>Conclusion</b>	Table 5 above suggest that ethnic group is statistically significant and have a positive relationship with risky sexual behaviour given that $\beta=0.218$ and $P < 0.001$ . We therefore conclude that ethnic group can significantly predict risky sexual behaviour among adolescents at 5% level of significance

**Hypothesis Two**

H <sub>0</sub> : Personality trait will not significantly predict risky sex behaviour among adolescents	
H <sub>1</sub> : Personality trait will significantly predict risky sex behaviour among adolescents	
<b>Conclusion</b>	Table 5 above suggest that personality trait is statistically significant and have a positive relationship with risky sexual behaviour given that $\beta=0.240$ and $P < 0.001$ . We therefore conclude that personality trait can significantly predict risky sexual behaviour among adolescents at 5% level of significance

**Discussion**

The results of this study revealed that ethnicity was a significant positive predictor of risky sexual behavior ( $\beta = 0.218$ ,  $p < 0.001$ ), supporting the first hypothesis, which posited that ethnic group would significantly predict risky sexual behavior among adolescents. The findings indicated that adolescents from various ethnic backgrounds engaged in risky sexual behaviors and were less likely to use condoms during sexual encounters. This may be attributed to challenges in promoting sex education and condom use campaigns in Nigeria. As depicted in Figure 1, a majority of young people were found to engage in unprotected sex and have multiple sex partners. These results align with the cultural diffusion theory and the ecological argument, which suggest that health behaviors are influenced by social conditions, even after accounting for individual and household characteristics (Uchudi, Magadi, & Mostazir, as cited in Odumegwu & Somefun, 2017).

Furthermore, this study identified personality traits as significant positive predictors of risky sexual behavior ( $\beta = 0.240$ ,  $p < 0.001$ ), affirming the second hypothesis. Notably, the most significant effects were observed in two personality dimensions: Openness to experience (characterized by curiosity, imagination, and sophistication) and conscientiousness (marked by high levels of thoughtfulness, good impulse control, and goal-directed behaviors). These dimensions were strongly associated with risky sexual behavior. This finding aligns with the Personality Trait Approach, which considers risk-taking as a personality trait that distinguishes individuals from one another. In essence, risk-taking is viewed as a trait unique to an individual, akin to sensation-seeking and self-esteem. Research on risk-taking behavior and its relation to personality factors has shown the significant role played by various personality characteristics, including sensation-seeking (Robbins & Bryan, 2004), self-esteem (Wild et al., 2004), locus of control (Robinson, 2007), egocentrism (Greene, 2000), and the five-factor

model of personality (Essau, 2004), in explaining risk-taking behavior. Thus, it can be concluded that personality significantly predicts risky sexual behavior among adolescents at a 5% level of significance.

Additionally, this study found that illicit drug use contributed to risky sexual behavior among adolescents, such as engaging in unprotected sex and having multiple sexual partners.

### **Limitations of Findings**

Like many other psychological research studies, the present study has several limitations. One significant limitation is the generalizability of the findings, as they are primarily based on a sample of Nigerian adolescents. Consequently, no comparisons could be made between Nigerian adolescents and their counterparts from other countries, particularly within Africa. Furthermore, the researchers encountered challenges in persuading participants to engage in the study and explaining the nature of the questions. Given the cultural perception of sex, some participants found the questions too explicit, leading to a withdrawal of participation.

### **Conclusion**

In conclusion, the findings underscore the influence of personality characteristics and ethnicity on risky sexual behavior. It is evident that risky behaviors are not confined to a single personality type but can manifest in individuals with various personality traits. This study serves as a call to action for society, government agencies, and health-related organizations to prioritize the issue of risky sexual behavior as a matter of paramount concern.

### **Recommendations**

Based on the conclusions drawn from this study, several recommendations are made. Firstly, it is highly advisable for parents, teachers, and guardians to develop policies that promote moral teachings among children and adolescents. Additionally, religious institutions should enhance their efforts in promoting moral ethics among young people. Moreover, sex education should be encouraged within families, regardless of religious barriers, to raise awareness among adolescents about the dangers of risky sexual behavior.

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