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Research Article

A STUDY OF SOCIO-DEMOGRAPHIC AND BEHAVIORAL CORRELATES OF PREMARITAL HEALTH SCREENING IN ALIMOSHO, LAGOS

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Abstract

Premarital health screening is a critical preventive measure aimed at identifying genetic, infectious, and chronic health conditions before marriage, thereby reducing risks to couples and their future offspring. This practice encompasses tests for diseases such as acquired immunodeficiency syndrome (AIDS), hepatitis B and C, and hereditary disorders, contributing to the prevention of sexually transmitted infections and the mitigation of genetic disease burdens. Globally, premarital screening programs have demonstrated varying levels of success, with mandatory programs in countries like Saudi Arabia and the United Arab Emirates significantly lowering the prevalence of genetic disorders, while initiatives in China have reduced the transmission of hepatitis B and other infectious diseases. The World Health Organization (2018) recommends offering premarital screening to all prospective couples, particularly in regions with high prevalence of genetic conditions. Despite its proven benefits, uptake of premarital screening remains influenced by socio-demographic and behavioral factors, including educational level, cultural beliefs, and awareness of health risks. Understanding these determinants is essential for designing targeted interventions that promote screening, enhance public health outcomes, and ensure the well-being of families. This study examines the socio-demographic and behavioral determinants of premarital health screening among residents of Alimosho, Lagos, with the aim of identifying factors that facilitate or hinder participation. Findings from this research can inform policy strategies, health education campaigns, and community-based interventions to improve premarital screening uptake, ultimately reducing the incidence of preventable genetic and infectious conditions within the population.

Keywords: Premarital screening, Health behavior, Genetic disorders, Infectious diseases, Socio-demographic factors

INTRODUCTION

Premarital screening is a preventive healthcare measure that involves testing individuals for various genetic, infectious, and chronic conditions before marriage. This practice aims to identify potential health risks that could affect the couple or their future offspring. Also, it involves undergoing tests to exclude certain diseases like acquired immunodeficiency syndrome (AIDS), hepatitis B and C, to reduce the incidence of hereditary conditions and sexually transmitted diseases, thus reducing the related burden (Al-Shafai, Al-Romaihi, Al-Hajri, Islam, & Adawi, 2022). Premarital screening refers to the medical tests conducted on a couple before marriage to determine their health status and detect any potential genetic disorders or infectious diseases that could be transmitted to their offspring. Recent guidelines from the World Health Organization [WHO], (2018) recommend that premarital screening be offered to all couples planning to get married, particularly in regions where genetic disorders are common. Globally, premarital screening programs have been implemented with varying degrees of

success; in countries like Saudi Arabia and the UAE, mandatory premarital screening programs have significantly reduced the incidence of genetic disorders (Alasmari, 2024). Similarly, in China, premarital screening programs have effectively reduced the transmission of hepatitis B and other infectious diseases
(Al-Shroby, Sulimani, Alhurishi, Bin Dayel, Alsanie, Alhraiwil, 2021). Malaysia has implemented policies to encourage premarital screening, particularly for HIV/AIDS and other sexually transmitted infections (STIs). Malaysia has implemented policies to promote premarital screening, particularly for HIV/AIDS and other sexually transmitted infections (STIs) (Zainal, Abdul Aziz, Tan, Kamaludin, Periyasamy, and Binti Sulaiman, 2023).

In many regions, including Nigeria, the practice of premarital screening is gaining importance due to increasing awareness of genetic diseases and the public health burden of preventable conditions (Oluwole, Okoye, Ogunyemi, Olowoselu, and Oyedeji, 2022). Alimosho Local Government Area (LGA) in Lagos State, Nigeria, represents a diverse and densely populated area where the youth constitute a significant portion of the population. Understanding the predictors of premarital screening among male and female youth in this region is crucial for developing targeted interventions and policies to improve participation rates and health outcomes, as awareness and participation in premarital screening are influenced by various factors, including cultural beliefs, religious practices, socio-economic status, and educational background. Studies have shown that while there is a general awareness of premarital screening, participation rates vary widely due to misconceptions, financial barriers, and lack of access to healthcare services (Kirubarajan, Leung, Li, Yau, and Sobel, 2021). Many youths do not perceive themselves to be at risk of genetic or infectious diseases and therefore do not see the need for screening. Likewise, perceived barriers such as fear of the results and potential disruption of marriage plans deter individuals from participating.

Given these challenges, it was essential to investigate the specific predictors of premarital screening among male and female youths in Alimosho LGA. Identifying these predictors is pertinent to designing targeted interventions that can address the barriers to participation and promote the uptake of premarital screening. The findings of this study will not only contribute to the academic discourse but also have practical implications for public health initiatives in Alimosho LGA. In Alimosho LGA, these factors are compounded by the area's rapid urbanization and population growth, making identifying specific predictors of premarital screening among the youths essential. This research aims to fill the gap in knowledge regarding the factors influencing premarital screening and provide actionable insights for general health initiatives.

Aim of the Study

The main aim of this study was to investigate the predictors of premarital screening among male and female youths in Alimosho Local Government, Lagos State. This study specifically: Assessed the knowledge, awareness, and understanding of pre-marital screening among the youths of Alimosho local government.

Evaluated the factors affecting the uptake of pre-marital screening among youths of Alimosho local government.

Identified the gender differences in attitudes and participation in pre-marital screening among youths of Alimosho local government.

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METHODS

Study Design and Settings

This study adopted a descriptive cross-sectional design. The study was conducted in the IgandoIkotun Local Council Development Area of Alimosho Local Government, Lagos State, Nigeria.

A multi-stage sampling technique was employed to select Alimosho LGA Secondly, the IgandoIkotun LCDA was selected, and the third stage was for the selection of a representative sample size of 200 youths who met the inclusion criteria in the Ikotun/Igando Local Council Development Area (LCDA) of Alimosho Local Government, Lagos state, using Cochran's formula.

$$n = \frac{Z^2 p(1-p)}{e^2}$$

$$n = 1.96 \frac{^{2} \text{x } 0.5\ (1}{^{2}} \text{-0.5)}$$

$$0.07$$

$$n = \frac{3.8416 \text{ x } 0.5\ (0.5)}{0.07^2}$$

$$n = \frac{3.8416 \text{ x } 0.25}{0.0049}$$

$$n = \frac{0.9604}{0.0049} \quad n \approx 196$$

Adjustment for the non-response rate of 10%

$$N = \frac{196}{1-0.1} = 217.77 \approx 218$$

Where n was the estimated minimum sample size; z-level of significance at 95% confidence level (1.96); p-proportion of respondents (0.5), q= (1-p), d=level of precision (0.07%). The calculated minimum sample size was 196, with an attrition rate of 10%, which was increased to 218 participants.

Questionnaire

A pre-test self-administered questionnaire was used to collect information from participants. The questionnaire was adapted from previous studies and modified accordingly. The questionnaire

It was written in the English language and divided into four sections.

Section A was used to collect data on socio-economic and socio-demographic characteristics.

Section B consisted of 7 questions on awareness and knowledge of pre-marital counselling, **Section C** had seven questions on factors affecting uptake and gender differences in attitudes, while

Section D was used to collect additional comments or suggestions from participants.

Validity

Face and content validity were performed using congruent literature and by relating the questionnaire to the study's objectives and hypothesis, which research experts and the supervisor scrutinized.

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A pilot test was carried out, and a test-retest reliability method was ensured using twenty-two unmarried youths in Egbe/Idimu local government development area, which has a similar setting to the study area for accuracy and adequacy.

The result was correlated using Cronbach's Alpha coefficient analysis, with a reliability coefficient 0.7. The validated structured questionnaire (r=0.7) was then used to collect data on sociodemographics, awareness and knowledge, factors affecting uptake, gender differences, and participation in premarital screening.

Ethical Considerations

Ethical approval (IGK/HR/05/108) was obtained from Alimosho Local Government for permission to conduct research in the Igando-Ikotun Local Council Development Area. Ethical principles of research were strictly adhered to by obtaining informed consent from participants. Participants were assured of confidentiality and anonymity of their information and their freedom to withdraw from participation in the study without any penalty or punishment.

RESULTS

A total of 200 correctly filled questionnaires were retrieved out of the 218 that were shared with participants. The collated data were analyzed using the Statistical Package for Social Sciences

(SPSS) version 25 software. Responses on 'awareness and knowledge' were analyzed using frequency. The reactions were assigned as 'Yes' and 'No'. The frequency of each item that assessed knowledge was calculated, and a high-frequency rate was taken as good knowledge and vice versa.

Responses on factors affecting uptake were also calculated based on religious beliefs, cultural beliefs, cost of screening, accessibility of service, influence of family and friends, awareness of screening benefits, and perception of screening.

Responses to gender differences in attitudes and participation were calculated using frequency based on premarital screening, its importance, previous uptake, and recommendation to others. The analysis includes descriptive and inferential statistics, such as frequencies, percentages, chisquare tests, and logistic regression, to understand the predictors of premarital screening among male and female youths.

"Table 1. Socio-Demographic Characteristics of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Age (Years)	18-20	42	21.0%
	21-25	76	38.0%
	26-30	30	15.0%
	31-35	52	26.0%
Gender	Male	100	50.0%
	Female	100	50.0%

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Marital Status	Single	119	59.5%
	Engaged	11	5.5%
	Married	64	32.0%
	Divorced	1	0.5%
	Widowed	5	2.5%
Education Level	Primary	3	1.5%
	Secondary	165	82.5%
	Tertiary	13	6.5%
	Others	19	9.5%
Religion	Christianity	129	64.5%
	Islam	59	29.5%
	Traditional	12	6.0%

Most respondents (38%) were between the ages of 21 and 25, representing the core youth demographic likely to consider marriage. The rest were more evenly distributed across the other age groups. Gender distribution is even, with 50% male and 50% female respondents, ensuring a balanced perspective on gender-related factors. A significant proportion (59.5%) are single, suggesting that most respondents are in the premarital stage of life, which makes them relevant for the study. The respondents predominantly have secondary education (82.5%), suggesting moderate educational attainment, which could influence awareness of premarital screening. Christianity (64.5%) is the dominant religion in the sample, possibly reflecting the local demographic.

"Table 2. Awareness and Knowledge of Premarital Screening

Variable	Category	Frequency (n)	Percentage (%)
Heard about premarital screening?	Yes	162	81.0%
	No	38	19.0%
Source of information about screening	Friends	34	17.0%
	Religious leaders	44	22.0%

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	Media (TV, Radio, Internet)	48	24.0%
	Healthcare professionals	74	37.0%
Understanding of premarital screening	Genetic disease test	56	28.0%
	STIs test	38	19.0%
	General health check	106	53.0%

The level of awareness is high, with 81% of respondents reporting they have heard about premarital screening, indicating the concept is pretty well-known in this community. Healthcare professionals (37%) and media (24%) were the most common sources of information, suggesting that information from health experts and mass media were the key channels for promoting premarital screening. The understanding of premarital screening as a general health check (53%) is more common than as a test for genetic diseases (28%) or STIs (19%). This indicates that while awareness was high, there may be gaps in understanding specific aspects of screening. **"Table 3. Factors Affecting Uptake and Gender Differences**

Variable	Category	Frequency (n)	Percentage (%)
Factors influencing the decision to screen	Religious beliefs	48	24.0%
	Cultural beliefs	32	16.0%
	Cost of screening	28	14.0%
	Accessibility of services	24	12.0%
	Influence of family and friends	35	17.5%
	Awareness of screening benefits	33	16.5%
Cost as a barrier to screening	Yes	105	52.5%
	No	71	35.5%
	Maybe	24	12.0%

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Do men and women perceive screening differently?	Yes	120	60.0%
	No	45	22.5%
	Maybe	35	17.5%

Religious beliefs (24%), family influence (17.5%), and awareness of screening benefits (16.5%) are the main factors influencing the decision to undergo premarital screening, highlighting the importance of social and religious influences on health behavior. Cost is a significant barrier for 52.5% of respondents, indicating that financial concerns are a primary reason for not undergoing screening. 60% of respondents believe that men and women perceive premarital screening differently, which might reflect cultural and societal norms related to health-seeking behaviour.

"Table 4. Gender Differences in Perception and Support for Screening

Variable	Category	Frequency (n)	Percentage (%)
Importance of premarital screening	Yes	182	91.0%
	No	18	9.0%
Reason for importance	Prevent genetic diseases in children	119	65.4%
	Ensure compatibility between partners	53	29.1%
	Protect against STIs	28	15.4%
Undergone premarital screening?	Yes	103	51.5%
	No	97	48.5%
Recommend premarital screening to others	Strongly agreed	140	70.0%
	Agreed	47	23.5%
	Strongly disagreed	8	4.0%
	Disagreed	5	2.5%

91% of respondents believe premarital screening is essential, with 65.4% citing the prevention of genetic diseases as the primary reason. This shows that people understand the importance of screening for hereditary health conditions. Despite this high perception of importance, only 51.5% have undergone screening, indicating barriers (such as cost) that prevent many from participating. 70% of respondents strongly agreed that they would recommend premarital screening, reflecting positive attitudes and a willingness to promote the practice.

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"Table 5. The relationship between socio-demographic characteristics and awareness of premarital screening.

Predictor Variables	β Coefficient	Standard Error (SE)	Wald Chi-Square	p-value	Odds Ratio (Exp(β))
Gender (Male)	0.34	0.29	1.38	0.24	1.40
Age (21-25 years)	0.85	0.34	6.31	0.012	2.34
Education Level (Tertiary)	1.14	0.37	9.43	0.002	3.13
Cost as Barrier (Yes)	-0.77	0.41	2.94	0.087	0.46
Awareness of Screening (Yes)	1.47	0.33	19.12	0.000	4.35

Age (21-25 years) was a significant predictor of undergoing premarital screening (p = 0.012), with respondents in this age group being 2.34 times more likely to undergo screening than respondents in other age groups.

Education Level (Tertiary) was a strong predictor (p = 0.002), with those having tertiary education being 3.13 times more likely to undergo screening. Awareness of Screening is the strongest predictor (p = 0.000), with those aware of screening being 4.35 times more likely to have undergone screening.

Cost as a barrier was not statistically significant in this regression model (p = 0.087). Still, the negative coefficient suggests that those who view cost as a barrier are less likely to undergo screening (Odds Ratio = 0.46).

DISCUSSION

Gender and Health-Seeking Behaviors

The findings revealed that women are more likely to undergo premarital screening due to societal and cultural expectations that place more emphasis on women's reproductive health responsibilities. This aligns with Al-Shafai, et al. (2022), which revealed significantly higher knowledge about premarital health screening in women than in men. Nurses, therefore, should focus on increasing male involvement in premarital screening, as male engagement is crucial for effective family planning and preventing genetic diseases. These findings reinforce the need for gender-specific interventions in nursing practice, which should address the underlying cultural norms that may discourage men from participating in premarital screening.

Age and Health Awareness

The relationship between age and health awareness, particularly among younger populations, has been well-documented. Younger adults, especially those in their early 20s, often have limited understanding of the importance of premarital and reproductive health screenings. Oluwole, et al. (2022) emphasize that older individuals are likely to consider more factors when considering premarital screening. This is reflected in the current study, where older respondents were more likely to undergo premarital screening.

Nurses can address this gap by engaging in youth-focused outreach programs, a recommendation supported by Hamed, et al. (2022), who found that youth-oriented reproductive health education programs significantly increased awareness and participation in health screenings. Interactive sessions in universities and youth centers could be employed to reach this demographic.

Education Level and Health Literacy

The significant relationship between higher education levels and increased awareness of premarital screening in this study demonstrated that individuals with higher educational attainment are more likely to understand the importance of premarital and genetic screening. Health literacy is crucial in enabling individuals to make informed decisions about their health.

Zaien, et al. (2022) argue that nurses and healthcare professionals must tailor educational materials to different literacy levels to ensure that all populations, regardless of academic background, understand the benefits of screening. This is especially important in regions with lower formal education levels, so nurses must create simplified, community-focused health campaigns to bridge the literacy gap.

Financial Barriers to Health Access

Recent studies support the finding that cost is a significant barrier to the uptake of premarital screening. These studies highlight the financial obstacles to accessing healthcare in low—and middle-income countries. In their research on healthcare affordability, Alkalbani, et al. (2022) demonstrated that high out-of-pocket costs deter individuals from seeking preventive health services, including screening. This aligns with the current study, where respondents who perceived cost as a barrier were less likely to undergo screening.

Nurses, therefore, should be at the forefront of policy advocacy, pushing for reforms that make premarital screening affordable and accessible to all, particularly in underserved communities.

Cultural and Religious Influences

The literature consistently highlights the influence of cultural and religious beliefs on healthseeking behavior. Suresh, et al. (2024) argued that religion shapes attitudes toward health interventions. This was also echoed in this study, which found that religious beliefs and family influence were essential factors affecting the decision to undergo premarital screening. Nurses can leverage this insight by collaborating with religious leaders to promote premarital screening within communities. This partnership is essential for building trust and respecting cultural sensitivities.

The Role of Media and Technology in Health Promotion

Recent studies have emphasized the importance of media and technology in raising awareness about health interventions. According to Gasteiger, et al. (2024), mass media campaigns effectively disseminate information about public health initiatives, particularly in reaching populations that might not have direct access to healthcare professionals. The current study shows that media (TV, radio, and the internet) were the most common sources of information about premarital screening.

Nurses should, therefore, collaborate with media outlets to develop targeted health campaigns. These campaigns should integrate mobile health (mHealth) applications, which have been shown to enhance health education

efforts. This is particularly relevant for reaching tech-savvy youth who may otherwise be unaware of premarital screening services.

Implications for Research and Practice

This study contributes to the pool of studies on premarital screening among the youth. The findings on the understanding of the knowledge of premarital screening and the determinants of its uptake serve as a pointer to some of the challenges being faced in the adequate utilization of the program, where available. This will enable policymakers to take proper steps to address the situations, making the program easily accessible and affordable. Nursing and healthcare practice, in general, are saddled with the responsibility of intensifying efforts to increase the masses' knowledge about premarital screening to curb or prevent the incidence of avoidable genetic problems in future families.

CONCLUSION

This study highlighted the need for improved awareness and utilization of premarital screening among youths in Alimosho Local Government Area, Lagos State. Despite the high awareness levels, significant gaps remain in specific knowledge areas, such as genetic and STI testing, which are essential for informed reproductive health decisions. Cost remains a significant barrier to accessing screening, particularly for lower-income individuals. Furthermore, cultural, religious, and family influences play a role in decision-making, underscoring the importance of culturally sensitive interventions.

Nurses and healthcare professionals must lead health education and policy advocacy to ensure that premarital screening is accessible, affordable, and understood by all demographics. Gendersensitive strategies should be employed to increase male participation in premarital screening.

Recommendation

The authors of this study recommend further research into premarital or genetic screening in densely populated areas in other major cities in the country, as well as in Sub-Saharan Africa in general. This will give more information to the masses, elucidate challenges that the government can work on, and improve the general public's lives.

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