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Socio-Demographic Determinants of Premarital Screening Among Couples in Gusau Local Government Area

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Abstract

Premarital screening is an important preventive health intervention for identifying genetic incompatibilities and infectious disease risks before marriage. This mixed-methods study assessed the socio-demographic determinants of premarital screening and compared post-marital health experiences among screened and unscreened couples in Gusau Local Government Area, Zamfara State, Nigeria. Quantitative data were obtained from 367 married couples selected through multistage sampling across four wards using a structured questionnaire, while qualitative data were collected through ten key informant interviews and five in-depth couple interviews. Quantitative data were analysed using descriptive statistics, chi-square tests, and an independent-samples t-test, while qualitative data underwent thematic analysis. Although 63.3% of respondents demonstrated high awareness of premarital screening (mean = 3.99/5), awareness did not correspond to similarly high screening practice. Sex was not significantly associated with awareness ($\chi^2 = 0.004$, $df = 1$, $p = 0.947$). However, educational level ($\chi^2 = 31.065$, $df = 3$, $p < 0.001$; Cramer's $V = 0.299$) and religious beliefs ($\chi^2 = 21.313$, $df = 3$, $p < 0.001$; Cramer's $V = 0.247$) were significantly associated with screening practice. Screened couples reported substantially fewer post-marital health challenges than unscreened couples (17.6% vs. 56.6%; $t = -11.726$, $df = 357$, $p < 0.001$; Cohen's $d = 1.264$). The findings indicate that although awareness is relatively high, socio-demographic factors influence screening uptake, while screening is associated with fewer reported post-marital health challenges. Strengthening community-based education, targeting individuals with limited formal education, engaging religious leaders, and supporting accessible screening services are recommended.

Keywords: Couples, awareness, practice, premarital screening, socio-demographic determinants,

Introduction

In recent decades, genetic and communicable diseases have emerged as major challenges affecting marital well-being. According to the World Health Organization (WHO, 2024a), an estimated 40.8 million people were living with HIV/AIDS globally at the end of 2024. In the same vein, approximately 300,000 infants are born each year with major hemoglobin disorders, notably sickle cell disease, with Sub-Saharan Africa bearing the highest burden (WHO, 2024b). Nigeria bears the highest global burden of sickle cell disease, with an estimated 150,000 affected births annually, creating long-term emotional, social, and financial burdens for families (WHO, 2024b). Premarital screening has therefore become an important preventive health strategy, enabling couples to identify genetic incompatibilities and infectious disease risks prior to marriage and to make informed reproductive decisions (Adewoyin et al., 2020). Despite increasing awareness of premarital screening, evidence from Nigeria indicates a persistent gap between awareness and actual utilization. Several studies report that even where many individuals are aware of genetic



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and infectious disease screening, fewer than half actually undergo screening before marriage (Okoronkwo & Onuoha, 2018; Agofure & Danzaria, 2020; Oluwole et al., 2022). This suggests that awareness alone is insufficient to guarantee uptake.

Socio-demographic factors such as age, educational level, religion, income, and access to healthcare services significantly influence health-seeking behaviour, including the utilization of preventive health services like premarital screening (Andersen, 1995; Babitsch, Gohl, & von Lengerke, 2012). In Northern Nigeria, cultural norms, early marriage practices, strong religious influence, fear of stigma, and limited access to specialized health facilities further constrain the uptake of premarital screening (Galadanci, 2023).

In Gusau Local Government Area of Zamfara State, many couples reportedly enter marriage without undergoing premarital screening due to financial constraints, cultural expectations, religious interpretations, and limited availability of genetic counselling services. This situation has contributed to preventable health challenges, including inherited genetic disorders and chronic health conditions that place strain on families and the healthcare system. While previous studies in Nigeria have largely focused on students or intending couples, there is limited empirical, community-based evidence examining how socio-demographic factors influence married couples' participation in premarital screening and how this participation or lack thereof relates to post-marital health experiences. Understanding these dynamics among married couples in Gusau Local Government Area is essential for designing effective, culturally sensitive public health interventions. This study therefore examines the socio-demographic determinants of premarital screening and compares the post-marital experiences of couples who underwent screening and those who did not.

Research Objectives

The following research objectives guided the research:

- i. Assess the level of awareness and practice of premarital screening among couples in Gusau Local Government Area.
- ii. Examine the relationship between sex and awareness of premarital screening among couples in Gusau Local Government Area.
- iii. Assess the influence of educational level on the practice of premarital screening among couples in Gusau Local Government Area.
- iv. Determine the influence of religious beliefs on premarital screening among couples in Gusau Local Government Area.
- v. Determine the differences in the experiences of couples who undergo premarital screening and those who do not.

Literature Review

Sex and Premarital Screening

Sex and gender dynamics can influence awareness, attitudes, and participation in premarital screening. In sub-Saharan Africa, health-seeking behaviour is often gendered, with men and women differing in access to healthcare, autonomy, and involvement in health-related decisions (WHO, 2024a). Evidence from Nigeria suggests that women may have greater awareness of premarital screening because of their more frequent contact with healthcare services through



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antenatal care, family planning, and other reproductive health programmes, which provide opportunities to receive health information (Oluwole et al., 2022). However, greater awareness does not necessarily result in greater participation. In some northern Nigerian communities, men may have greater influence over household healthcare decisions, potentially limiting women's ability to advocate for premarital screening.

Age and Premarital Screening

Age is an important socio-demographic factor that may influence health awareness, health-seeking behaviour, and participation in premarital screening. Older individuals may have greater exposure to health information and may be more likely to consider the long-term implications of health-related decisions. In Northern Nigeria, early marriage may also limit opportunities for health education and reduce autonomy in marital decision-making, particularly among young women (Galadanci, 2023). Studies in Nigeria suggest that age is associated with awareness and uptake of premarital screening, with some evidence indicating greater awareness and participation among individuals aged 25 years and above (Oluwole et al., 2022). Younger individuals may perceive themselves as healthy and therefore underestimate their risk of genetic or infectious diseases, potentially reducing their motivation to undergo screening.

However, the relationship between age and premarital screening is not consistent across studies. Some research indicates that younger adults may have greater awareness and willingness to undertake screening for conditions such as sickle-cell genotype, HIV, hepatitis, and fertility-related conditions. This may be related to greater exposure to formal education, social media, and premarital counselling among younger populations (Adewoyin et al., 2020;

Educational Level and Premarital Screening

Educational attainment is consistently associated with awareness and utilisation of premarital screening. Higher education can improve health literacy and individuals' ability to understand medical information, genetic inheritance, and the potential consequences of hereditary and infectious diseases (Oluwole et al., 2022). Studies from Nigeria and other settings have similarly reported higher awareness and practice of premarital screening among individuals with secondary or tertiary education compared with those with little or no formal education (Ibrahim et al., 2013; Memish & Saeedi, 2011; Oluwole et al., 2022).

However, education does not necessarily translate into screening uptake. Evidence suggests a persistent gap between awareness and actual practice, with individuals sometimes knowing about premarital screening but failing to undergo testing because of fear of unfavourable results, stigma, cost, emotional concerns, cultural expectations, and limited access to screening services (Adewoyin et al., 2020; Galadanci, 2023). This indicates that educational attainment is only one component of premarital screening behaviour and that knowledge must be supported by accessible services and an enabling social environment.

Religion and Premarital Screening

Religion and cultural beliefs can influence attitudes toward premarital screening, particularly in highly religious communities. Religious interpretations may affect how individuals understand genetic and infectious diseases, preventive healthcare, and the acceptability of screening before marriage. In some settings, beliefs concerning divine destiny may reduce the

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perceived need for medical intervention, while religious endorsement of screening can encourage acceptance (Ibrahim et al., 2013; Memish & Saeedi, 2011).

Religious and cultural expectations may also influence how marriage-related health decisions are made. In communities where families, elders, or religious authorities have substantial influence over marital decisions, couples may have limited autonomy to independently pursue premarital screening. Concerns about stigma, mistrust, marital rejection, or discussing sensitive reproductive and genetic issues may further discourage screening (Galadanci, 2023).

Income and Premarital Screening

Income and socioeconomic status can influence access to and utilisation of premarital screening services. Although individual screening tests may be affordable, the combined costs of multiple tests, transportation, consultation, and counselling can create financial barriers, particularly for low-income couples (Galadanci, 2023). Individuals with higher socioeconomic status may have greater access to formal healthcare services and may therefore demonstrate higher levels of knowledge and practice of premarital screening (Oluwole et al., 2022).

Evidence from African and other low- and middle-income settings suggests that financial capacity is associated with the utilisation of preventive healthcare services. Higher-income couples are generally better positioned to absorb the direct and indirect costs associated with screening, whereas financial constraints may cause lower-income households to prioritise immediate household or marriage-related expenses over preventive healthcare (Memish & Saeedi, 2011). Where healthcare services depend substantially on out-of-pocket payments, these costs may further discourage screening among economically disadvantaged groups.

Income may also interact with other determinants of premarital screening. Education, employment, gender, and access to healthcare can influence both an individual's ability to obtain health information and their capacity to pay for screening. Consequently, socioeconomic status should not be considered independently of these factors.

Differences in Screening Experience among Married Couples

Married couples may have different health experiences depending on whether they underwent premarital screening before marriage. Couples who undergo screening may have greater knowledge of their genetic and infectious disease status and may be better positioned to make informed reproductive and health decisions. For example, screening for haemoglobin genotype can identify carrier status and provide an opportunity for genetic counselling and informed reproductive planning (Alswaidi & O'Brien, 2009; Memish & Saeedi, 2011).

In contrast, couples who do not undergo screening may remain unaware of certain genetic or infectious conditions until they are identified later through pregnancy, antenatal care, illness, or other healthcare encounters. In the case of sickle-cell disease, for example, knowledge of both partners' haemoglobin genotype before conception can provide an opportunity for counselling concerning reproductive risks (Anie, Egunjobi, & Akinyanju, 2010). However, screening does not guarantee that couples will avoid adverse outcomes; rather, it provides information that can support informed decision-making.

Theoretical Framework



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Andersen's Behavioral Model of Health Services Utilization provides a suitable lens for this study. Andersen's model of health services utilisation is a widely recognized framework for explaining why individuals access or fail to access available health services. The model was first introduced in 1968 and has undergone several modifications (Andersen, 1995; Babitsch, Gohl, & von Lengerke, 2012). Its main premise is that health service utilisation is influenced by predisposing, enabling, and need factors (Andersen, 1995). The model is useful for studying preventive behaviours such as screening practices, vaccination uptake, antenatal care, and other forms of early health intervention (Babitsch, Gohl, & von Lengerke, 2012). The model relates to the subject matter of this study since premarital screening is a preventive health behaviour that aligns with the objectives of the study.

Methodology

Research Design

The study uses a mixed-methods research design, combining quantitative and qualitative approaches to examine the socio-demographic factors influencing premarital screening among couples in Gusau LGA, Zamfara State. Quantitative data will measure awareness, practices, and socio-demographic characteristics through questionnaires, while qualitative data from Key Informant Interviews and the experiences of five couples will explore cultural, institutional, and policy influences. This approach allows data triangulation, improving the validity, reliability, and practical relevance of the findings.

Population of the Study

The population of the study for the quantitative analysis comprises all married couples, both male and female respondents, within the reproductive age of 15-49 years who are residing in Gusau Local Government Area. A total of 400 couples were selected and studied. In addition, 10 key informants with relevant expertise in reproductive health, genetics, and public health policy were selected, and 5 different couples with practical experiences and challenges were selected and interviewed in order to make the study more comprehensive.

Sample Size Determination

The sample size for this study comprises married couples aged 15-49 years living in Gusau Local Government Area. Although other states have data on marriage prevalence based on the Nigeria Demographic and Health Survey (NPC & ICF, 2019), data on Zamfara State is not consistently captured in that survey. As a result of this gap, the population of the study was estimated based on proportion (Rose, Spinks, & Canhoto, 2015).

Sampling Technique

Quantitative Sampling

This study used a multi-stage sampling technique. First, Gusau Local Government Area (LGA) was divided into its eleven council wards using cluster sampling. Next, the wards were grouped into safe and unsafe areas based on the security situation and on reports from local authorities and community leaders. Safe wards are those with minimal reported security challenges such as banditry, while unsafe wards have high insecurity. For this study, four wards, namely Tudun-Wada, Galadima, Sabon-Gari, and Madawaki, were classified as safe.



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In the third stage, simple random sampling was used to select two streets from each of the four safe wards. The selected streets are: Hayin Buba and Shaiskawa areas (Tudun-Wada); Unguwar Toka IV/Garkar Mai Katobara and Unguwar Musa IV/Garkar Shibo Mai Waina (Sabon-Gari); Katsaura XIII/Garkar Sarkin Gusau (Kanwuri) and G.R.A. I/Rest House (Madawaki); and General Abdussalami Housing Estate and Barakallahu (Galadima).

In the fourth stage, a complete listing of houses on the selected streets and areas was made, and each house was assigned a number. Systematic sampling was then used to select every n th house. From the selected houses, married couples were chosen using simple random sampling. The rationale behind this is that the Zamfara State Bureau of Statistics (2022) states that there are 76,620 households in the selected wards. This therefore increases the probability of finding a married couple in the household.

Qualitative Sampling

For the qualitative component, purposive sampling was used to select 10 key informants based on their expertise and role in reproductive health and public health programmes. Participants were chosen to represent clinical, laboratory, and policy perspectives, ensuring comprehensive coverage of relevant insights. The key informants included gynecologists and obstetricians (3), heads of medical laboratory technologists (2), programme officers of NGOs on health (2), public health lecturers (2), and the Director of Public Health, Zamfara State Ministry of Health.

In addition, five (5) married couples with diverse lived experiences relating to premarital screening were purposively selected and interviewed to provide first-hand accounts of their knowledge, perceptions, experiences, and decision-making processes regarding premarital screening. These interviews were conducted in the Hausa language to enable participants to express themselves freely and to ensure rich, culturally relevant data. The inclusion of couples from different backgrounds and experiences enhanced the depth and credibility of the qualitative findings by capturing a wide range of perspectives on premarital screening practices in Zamfara State.

Method of Data Collection

The researcher collected the data needed for the study through a mixed approach of quantitative and qualitative data collection. The quantitative instrument was administered through face-to-face administration of a closed-ended questionnaire as the primary instrument for data collection. The qualitative data, on the other hand, were collected through key informant interviews. In addition, trained male and female research assistants with backgrounds in sociology and proficiency in both Hausa and English were engaged to administer the questionnaires. Male assistants interacted with male respondents and female assistants with female respondents, in consideration of the cultural and religious sensitivities that may limit direct access by the researcher.

Method of Data Analysis

Collected data were analysed quantitatively using descriptive statistical tools such as tables and percentages. For the testing of hypotheses, the chi-square (χ^2) test was used to test hypotheses 1, 2, and 3, while an independent samples t-test was used to test hypothesis 4. The responses for the qualitative data, on the other hand, were analyzed using thematic analysis through the transcription of interviews.



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Findings

4.2 Socio-Demographic Characteristics of Respondents

The socio-demographic profile of the respondents is presented in Table 4.1. Understanding the demographic composition of the study population is essential because socio-demographic factors such as age, sex, educational level, religion, and income are known to influence health-seeking behaviour, including the awareness and practice of premarital screening. The data presented here provide the contextual backdrop for interpreting the findings on awareness, practice, and experiences of premarital screening in subsequent sections.

Table 1 : Socio-Demographic Characteristics of Respondents

Variable	Response	Frequency	Percentage (%)
Age	15–19	17	4.6
	20–34	124	33.8
	35–44	102	27.8
	45–54	87	23.7
	Above 55	37	10.1
	Total	367	100.0
Sex	Male	148	40.3
	Female	219	59.7
	Total	367	100.0
Ethnicity	Hausa	208	56.7
	Fulani	88	24.0
	Igbo	37	10.1
	Yoruba	30	8.2
	Others	4	1.1
	Total	367	100.0
Religion	Islam	287	78.2
	Christianity	69	18.8
	Traditional Religion	2	0.5
	Others	9	2.5
	Total	367	100.0
Educational Level	No Formal Education	56	15.3
	Pre-Secondary	41	11.2
	Secondary	45	12.3


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Variable	Response	Frequency	Percentage (%)
Occupation	Post-Secondary	225	61.3
	Total	367	100.0
	Civil Service	179	48.8
	Business	95	25.9
	Farming	81	22.1
	Others	12	3.3
	Total	367	100.0
Years of Marriage	Less than 5 years	93	25.3
	5–10 years	76	20.7
	11–15 years	54	14.7
	16–20 years	50	13.6
	More than 20 years	94	25.6
	Total	367	100.0
Marriage Type	Monogamy	271	73.8
	Polygamy	96	26.2
	Total	367	100.0
Monthly Income	Less than ₦70,000	114	31.1
	₦70,000–₦120,000	196	53.4
	₦121,000– ₦170,000	27	7.4
	₦171,000– ₦220,000	17	4.6
	₦221,000 and above	13	3.5
	Total	367	100.0
Ward	Tudun Wada	75	20.4
	Galadima	134	36.5
	Madawaki	92	25.1
	Sabon-Gari	66	18.0
	Total	367	100.0

Field Survey, 2026

As presented in Table 1, the age distribution of the respondents shows that the majority fall within the economically and reproductively active age groups. Specifically, 33.2% were aged 20–34 years, 27.8% were aged 35–44 years, 23.7% were aged 45–54 years, 10.1% were above 55



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years, and 4.6% were aged 15–19 years. This implies that over 61% of respondents fall between 20–44 years, which represents the prime marriage and childbearing years. The sex distribution indicates that 219 (59.7%) respondents were female while 148 (40.3%) were male. The higher female representation can be attributed to women's greater engagement with health-related matters and higher availability at households during data collection. In terms of ethnicity, the Hausa constituted the majority at 56.7%, followed by the Fulani at 24.0%, reflecting the ethnic composition of Zamfara State. Regarding religion, the overwhelming majority (78.2%) practised Islam, followed by Christianity (18.8%), aligning with the socio-cultural structure of Gusau. The educational level reveals that 59.4% had post-secondary education, while 15.3% had no formal education. Occupationally, 48.2% were civil servants. The income distribution shows that, 48.8% earned between ₦70,000 and ₦120,000 monthly, indicating that most respondents fall within lower-middle income levels.

Table 2: *Respondents' Level of Awareness of Premarital Screening*

S/N	Awareness Item	Yes f	(%)	No f	(%)
1	Have you ever heard of premarital screening?	299	(82.8)	62	(17.2)
2	Premarital screening refers to medical tests done before marriage	290	(79.9)	73	(20.1)
3	Premarital screening is done to detect infectious diseases such as HIV/AIDS, Hepatitis B and C	269	(75.1)	89	(24.9)
4	Premarital screening is for blood group compatibility	301	(82.9)	62	(17.1)



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S/N	Awareness Item	Yes f	(%)	No f	(%)
5	Premarital screening aims at detecting genetic disorders	296	(81.5)	67	(18.5)

Field Survey, 2026

The results in Table 2 indicate that the majority of respondents demonstrated good awareness of premarital screening across all five items. Most notably, 82.9% knew that premarital screening includes blood group compatibility testing, 82.8% reported having heard of premarital screening, 81.5% were aware that it aims at detecting genetic disorders, 79.9% understood that it refers to medical tests conducted before marriage, and 75.1% were aware that it is done to detect infectious diseases such as HIV/AIDS and Hepatitis B and C. The relatively lower awareness of the infectious disease component (75.1%) compared to blood group compatibility (82.9%) suggests that many respondents associate premarital screening primarily with genotype and blood group testing. The implication of these findings is that the respondents generally possess adequate awareness of premarital screening and its importance in preventing infectious and genetic diseases as well as ensuring compatibility among intending couples.

The quantitative findings were further supported by the qualitative responses obtained from key informants. Data elicited from key informants indicated that awareness of premarital screening has improved significantly among intending couples due to increased health education and medical campaigns. One of the respondents explained the importance of premarital screening as follows:

Premarital screening is very important because it assists couples to have a better understanding of their health status before marriage. Many people now understand the need to check their genotype, blood group, HIV/AIDS and Hepatitis status before going into marriage so as to avoid future problems in the family. [Gynecologist, Federal Medical Centre Gusau, 10th December, 2025]

The Medical Laboratory Scientist at Ahmad Sani Yarima Bakura State Specialist Hospital also emphasized that awareness of premarital screening has increased due to sensitization efforts by health institutions and religious organizations. According to the respondent:

Many intending couples are now coming for premarital tests than before as most of them have heard about its importance through hospitals, religious centres, friends, or social media. The most common tests requested are genotype, blood group compatibility, HIV and Hepatitis screening. [Medical Laboratory Scientist, Ahmad Sani Yarima Bakura State Specialist Hospital, 15th February, 2026]

The Program Officer of an NGO Gusau highlighted community-level outreach and awareness of premarital screening. the officer explained that:

We organize community dialogues where we invite health workers, religious leaders, and community heads to discuss the importance of premarital screening. These dialogues have been effective in changing perceptions, especially among rural dwellers that previously had no access to such information. [Program Officer, CENCEX Gusau, February 2026]



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The Government on its part explained that premarital screening is an important public health strategy aimed at reducing the spread of infectious and hereditary diseases within the society. A Public Health Officer explained the significance of premarital screening as follows:

Premarital screening assists in preventing avoidable health complications in marriage. Through proper screening, couples get the opportunity to make better decisions about their future together. It also helps reduce health risks that may affect families later on. [Public Health Officer, Zamfara State Ministry of Health, 21st January, 2026].

Also, a Community Health Extension Worker observed that despite the high level of awareness recorded among respondents, some individuals still hesitate to participate in premarital screening programmes due to fear and misconceptions. The respondent stated that:

Although many people are aware of premarital screening, some still don't go for it due to fear of what the results might reveal or because of certain beliefs they hold. There is need for more public enlightenment and counseling to encourage acceptance of premarital screening among young people [Community Health Extension Worker, Primary Health Care Centre Gida Dari Gusau, 20th February, 2026].

Similarly, when couples with lived experiences were asked whether they were aware of premarital screening before marriage, the majority confirmed awareness, though the depth and source of their awareness varied considerably. The responses from couples interviewed in Hausa with their English translations are presented below.

Respondent 1 (Female, Galadima Ward, Post-Secondary Education):

Ina da masaniya akan gwajin lafiya kafin aure. A asibiti aka gaya mana cewa mu je mu yi gwajin saboda muhimmins. (I heard about premarital screening before marriage. At the hospital, they told us to go for tests because it is important). [Female respondent, Galadima Ward, March 2026]

Respondent 2 (Female, Madawaki Ward, Primary Education):

Yanzu na sani. Na san da ana yin gwajin lafiya kafin aure ne bayan aurena lokacin da na je asibiti domin duba lafiya ta. (I am now aware. I learned about it after my marriage when I went to the hospital for a medical checkup). [Female respondent, Madawaki Ward, March 2026]

Respondent 3 (Male, Tudun Wada Ward, Post-Secondary Education):

Sosai ma kuwa tun kafin inyi aure na san da ana gwajin lafiya kafin aure. Na san cewa gwaje gwajen sun hada da gwajin genotype, jini, cutar kanjamau da kuma Hepatitis. (I knew about it very well before I got married. I knew that premarital screening includes genotype testing, blood group, HIV and Hepatitis). [Male respondent, Tudun Wada Ward, March 2026]

The findings from both the quantitative and qualitative data revealed that respondents had a high level of awareness of premarital screening and its importance among intending couples. The survey showed that the majority of respondents understood that premarital screening involves medical tests conducted before marriage to detect infectious diseases, ensure blood group compatibility, and identify genetic disorders. The qualitative responses from key informants further supported these findings. All the key informants noted that increased sensitization by



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hospitals, religious organizations, and the media has improved awareness and acceptance of premarital screening. The informants also emphasized that premarital screening helps couples make informed marital decisions and reduces the risk of hereditary and infectious diseases.

Table 2: Source of Information about Premarital Screening

Source	Frequency	Percentage (%)
Hospital/Clinics	169	49.6
Religious Institutions	88	25.8
Family/Friends	47	13.8
Media (TV, Radio, Internet)	37	10.9
Total	341	100.0

Field Survey, 2026

Table 2 shows that hospitals and clinics were the leading source of information about premarital screening, cited by 49.6% of respondents, followed by religious institutions (25.8%), family and friends (13.8%), and media (10.9%). The findings indicate that health facilities and religious institutions are the two leading sources of awareness on premarital screening. However, the relatively low contribution of the media suggests a gap in public awareness campaigns, highlighting the need for stronger media involvement in promoting premarital screening awareness.

The survey findings were corroborated by responses from interview participants. The qualitative responses of key informants further explained the pattern seen in the quantitative findings.

Medical Laboratory Scientist said hospitals and clinics are still the surest source of information, as premarital screening is often advised during routine medical visits. The respondent stated that:

Most people come to the hospital to undergo premarital screening tests. We usually educate them about the importance of genotype, blood group, HIV and hepatitis screening. Hospitals have become the major source of information. [Medical Laboratory Scientist, first Scan Hospital Gusau, 12th February, 2026].

A Religious Leader also observed the crucial role of religious institutions in creating awareness among intending couples. The respondent avers:

In church/mosque, we usually encourage couples to try as much as possible to be medically screened before getting married. We tell that that it is important to know each other's health status before marriage, so many people first hear about premarital screening from religious gatherings [Religious Leader, Gusau, 18th February, 2026].

The role of informal sources of information such as family and friends is important and sometimes awareness is spread through personal experiences, said a Community Health Extension Worker. The respondent said that:

Some people only hear about premarital screening from friends or family members who have undergone it before. They talked about their experiences and encouraged others to take the test [CHEW, Primary Health Care Centre Gusau, 20th February 2026].



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A triangulation of quantitative and qualitative findings reveals a strong convergence regarding public awareness of premarital screening. Hospitals and clinics emerge as the primary sources of information (46.0%), with medical visits driving awareness. Religious institutions follow as a significant source (31.1%), emphasizing their role in health messaging within trusted contexts. Family and friends also contribute to awareness (12.8%), but remain secondary to formal institutions. In contrast, the media plays a weak role (10.1%), with limited reach noted in rural areas. This hierarchical information flow highlights a gap in mass communication efforts, suggesting a need to enhance media-based health communication to improve awareness of premarital screening.

Table 3: Sex and Awareness of Premarital Screening

Sex	Aware (Yes)	Not Aware (No)	Total
	f (%)	f (%)	
Male	120 (81.1%)	28 (18.9%)	148
Female	179 (83.6%)	34 (16.4%)	219
Total	299 (82.8%)	62 (17.2%)	367

Field Survey, 2026

As shown in Table 3 among male respondents, 81.1% reported being aware of premarital screening compared to 83.6% of female respondents.

The quantitative findings were further corroborated by the qualitative responses obtained from key informants. While the quantitative analysis showed no significant sex difference in awareness levels, key informants observed that women tend to be more proactive in seeking premarital screening despite similar awareness levels. A Gynecologist explained:

Women tend to participate more in premarital screening because they are usually more concerned about reproductive health and the wellbeing of the family. Many female partners encourage their spouses to go for screening before marriage.”

[Gynecologist, Federal Medical Centre Gusau, 14th January, 2026]

A Medical Laboratory Scientist also emphasized that female respondents showed greater willingness to undergo premarital screening programmes. According to the respondent:

In most cases, women are more cooperative during premarital screening exercises. They usually come prepared for all the tests, while some men are often reluctant and delayed the process” [Medical Laboratory Scientist, Royal Laboratories, Gusau, 20th February, 2026].

Also, a Community Health Extension Worker observed that some men still underestimate the importance of premarital screening compared to women. The respondent stated that:

Many women assume premarital screening necessary in order to protect future children and family health, but some men still believe there is no need unless they are encouraged by their partners, families, or religious institutions” [Community Health Extension Worker, Primary Health Care Centre Gusau, 3rd March, 2026].

The Government on its part explained that both men and women should equally participate in premarital screening because it is an important preventive healthcare measure. A Public Health Officer explained as follows:



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Premarital screening is not the responsibility of the women alone. Both partners need to know their health status before marriage in order to prevent hereditary and infectious diseases and promote healthy families” [Public Health Officer, Zamfara State Ministry of Health, 28th January, 2026]

The findings from both the quantitative and qualitative data revealed that gender significantly influences the practice of premarital screening among respondents. The survey showed that female respondents recorded a higher level of participation in premarital screening compared to male respondents. The qualitative responses further supported these findings, as key informants emphasized that women are generally more health conscious and more willing to participate in premarital screening programmes than men. The majority of respondents perceived women as more willing to undergo premarital screening than men.

Table 4. Educational Level and Practice of Premarital Screening

Educational Level	Screened (Yes) f (%)	Not Screened (No) f (%)	Total
No Formal Education	13 (25.0%)	39 (75.0%)	52
Pre-Secondary	21 (56.8%)	16 (43.2%)	37
Secondary	22 (48.9%)	23 (51.1%)	45
Post-Secondary	142 (66.7%)	71 (33.3%)	213
Total	198 (57.1%)	149 (42.9%)	347

Field Survey, 2026

Table 4 reveals a clear gradient in screening practice across educational levels. Among respondents with post-secondary education, 66.7% had undergone premarital screening, compared to 56.8% of those with pre-secondary education, 48.9% of those with secondary education, and only 25.0% of those with no formal education.

The findings indicate that higher educational attainment is associated with greater practice of premarital screening, suggesting that education plays an important role in influencing awareness and acceptance of premarital screening practices.

The quantitative findings were further supported by the qualitative responses obtained from key informants. Data elicited from the respondents indicated that educational level greatly influences the practice of premarital screening among intending couples. One of the respondents explained the relationship between education and premarital screening practice as follows:

People who are educated are more likely to go for premarital screening because they knew the health implications involved. Most couples with higher education willingly come for genotype, HIV, Hepatitis, and blood group tests before marriage.” [Medical Doctor, Federal Medical Centre Gusau, 12th January, 2026]

A Medical Laboratory Scientist also emphasized that respondents with post-secondary education showed greater acceptance and participation in premarital screening programmes. According to the respondent:



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Majority of the couples that comes for premarital screening have post-secondary education. This is because they are usually more informed about the importance of screening and really wants to know their compatibility status before marriage” [Medical Laboratory Scientist, Ahmad Sani Yarima Bakura Specialist Hospital, 18th February, 2026].

A Religious Leader on the other hand, observed that awareness and acceptance of premarital screening are often lower among individuals with little or no formal education. The respondent stated that:

People with low educational background do not fully understand why premarital screening is necessary. In some cases, they believe it is not important until religious leaders or health workers explain the benefits to them” [Religious Leader, Central Mosque Gusau, 5th March, 2026].

Table 5 : Religious Beliefs on Premarital Screening

Religion	Religion Influences f (%)	Religion Does Not Influence f (%)	Total
Islam	176 (61.3%)	111 (38.7%)	287
Christianity	58 (84.6%)	11 (15.4%)	69
Traditional Religion	1 (50.0%)	1 (50.0%)	2
Others	7 (77.8%)	2 (22.2%)	9
Total	242 (66.3%)	123 (33.7%)	367

As shown in Table 5, the perceived influence of religious beliefs on premarital screening decisions varies considerably across religious affiliations. Among Christian respondents, 84.6% reported that their religious beliefs influence their screening decisions, compared to 61.3% of Muslims. The notably higher proportion among Christians may reflect more structured institutional guidance from churches on premarital health requirements, including mandatory counselling and testing before church weddings. The findings indicate that religious beliefs is associated with greater practice of premarital screening meaning that there is generally positive perceptions that religious beliefs can influence attitudes toward premarital screening.

The quantitative findings were supported by the quantitative responses obtained from key informants and couples with lived experiences. Data obtained from some of the respondents explained that certain individuals believe that health outcomes are predetermined by God and therefore there is little or no need of going for medical testing before marriage while others, explained that prayer and faith are sometimes viewed as sufficient protection against health challenges. Religious beliefs emerged as a powerful factor shaping premarital screening decisions, operating both as an enabler and a barrier. An Islamic Religious Leader provided a nuanced perspective:

Islam encourages Muslims to seek knowledge and protect their health. Premarital screening is consistent with this teaching because it helps prevent suffering for future children. However, some people believe that whatever God has destined will happen, so they see no



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need for screening. This is a misunderstanding of Islamic teachings because Islam also encourages prevention and taking necessary precautions.” [Islamic Religious Leader, Gusau, February 2026]

A Christian Religious Leader added:

In our church, premarital screening is part of the marriage preparation process. We require couples to present their test results before the wedding can proceed. This has helped many couples make informed decisions about their future together. The church sees screening as an act of responsibility towards one’s future spouse and children.” [Christian Religious Leader, Gusau, February 2026]

The Director of Public Health acknowledged the dual role of religious influence on premarital screening, pointing out that:

Religious beliefs can be both an enabler and a barrier. When religious leaders understand and endorse screening, their followers are more likely to comply. However, when religious leaders themselves are not well-informed, they may inadvertently discourage screening. This is why we are prioritising engagement with religious institutions.” [Director of Public Health, Zamfara State Ministry of Health, January 2026]

However, responses from couples with lived experiences generally emphasized that religion is not the only factor affecting screening decisions, as fear of unfavorable test results and concerns about marriage prospects also discourage some couples from participating in screening. One of the respondents explained that:

Respondent 1 (Female, Madawaki Ward):

Wasu mutane suna kin gwajin lafiya kafin aure saboda suna ganin cewa cuta da warkewa a hannun Allah suke, saboda haka ba sa ganin bukar yin gwajin. (Some people refuse premarital screening because they believe that both sickness and healing are in God’s hands, so they do not see the need for testing). [Female respondent, Madawaki Ward, March 2026]

Respondent 2 (Female, Sabon-Gari Ward):

Addini nay a bada goyon baya ga gwajin aure domin lafiya muhimmin abu ne a Musulunci. (My religion supports premarital screening because health is important in Islam). [Female respondent, Sabon-Gari Ward, March 2026]

The findings from both quantitative and qualitative data revealed that, several respondents acknowledged that religious beliefs affect decisions regarding premarital screening. One female respondent observed that some individuals believe that whatever God has destined will happen regardless of medical tests making people to see little value in screening. Another respondent explained that some people rely solely on prayer for protection against health problems and do not consider premarital screening necessary. However, a male university graduate emphasized that refusal to undergo screening is not always based on religion, pointing out that fear of test results and lack of interest also contribute to non-participation. These views suggest that while religion influences attitudes toward screening, other social and personal factors are also important determinant of premarital screening.

Differences in the experiences of couples who undergo premarital screening and those who did not?

Research Question 5 sought to determine whether there are differences in post-marital health experiences between couples who underwent premarital screening and those who did not.



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The overall data on health challenges since marriage revealed that 34.2% of respondents reported experiencing major health challenges, while 65.8% reported no health challenges. However, when disaggregated by screening status, a striking difference emerged: among screened couples, only 17.6% reported health challenges, compared to 56.6% of unscreened couples. The detailed breakdown by type of health challenge is presented in Table 4.9.

Table 6 Experiences based on Years of Marriage

Years in Marriage	Positive Experience	Negative Experience	Total
Less than 5 years	78	15	93
5–10 years	60	16	76
11–15 years	40	14	54
16–20 years	35	15	50
More than 20 years	65	29	94
Total	278	89	367

Table 6 presents the differences in experiences between couples who undergo premarital screening and those that did not, according to years of marriage. The findings indicate that the majority of the respondents reported positive experience with 298 (75%) showing positive outcomes compared to 89 (24.3%) who reported negative experiences. Among the couples who had been married for less than 5 years, 78 (21.3%) reported positive experience, while only 15 (4.1%) reported negative experience. Similarly, among those married for 5-10 years, 60 (16.3%) reported positive experiences compared to 16 (4.4%) who reported negative experiences.

For those respondents who had been married for 11-15 years and 16-20 years, positive experience exceeded the negative experiences with 40 (10.9%) and 35 (9.5%) reporting positive outcomes. Negative outcomes in these categories were relatively lower resulting for 14 (3.8%) and 15 (4.1). Among couples married for more than 20 years, 65 (17.7%) reported positive outcomes while 29 (7.9%) reported negative outcomes. Even as this category recorded the highest negative experiences, positive experience still remained dominant.

The findings suggest that positive experiences were more common than negative experiences across all categories of married duration. This may indicate that premarital screening contributes to better marital and family health outcomes by helping couples make informed health decisions before going into marriage so as to avoid future health complications.

The quantitative findings were further corroborated by qualitative responses obtained from health professionals and respondents across different years in marriage. Data elicited from the respondents indicated that years in marriage influence the experiences of premarital screening among couples.

A Medical Doctor explained the positive experiences among couples in the early years of marriage are as follows:

Couples that did premarital screening intend to start their marital life with clear knowledge and understanding of their health status. This helps in reducing fears and prevention of

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genetic or infectious conditions. [Medical Doctor, Federal Medical Centre Gusau, March 2026].

A Gynecologist provided a clinical perspective on the experiences:

The difference between screened and unscreened couples is very evident in our practice. Unscreened couples often present with complications that could have been prevented, such as children with sickle cell disease, recurrent miscarriages due to incompatible blood groups, and late-stage HIV infections that were not detected early. Screened couples who received proper counselling are better prepared to manage any challenges that arise.” [Gynecologist, Federal Medical Centre Gusau, March 2026].

A Public Health Officer observed that awareness and compliance have improved over time, particularly among younger couples. The respondent stated that:

Nowadays married couples are more exposed to health education which makes them more likely to undergo premarital screening compared to older couples who had limited awareness at the time of their marriage.” [Public Health Officer, Zamfara State Ministry of Health, 2026].

A Community Health Practitioner also noted that older marriages often reflect gaps in past health systems. According to the respondent:

In earlier years, premarital screening services were not widely utilized, that is why older couples did not benefit from early detection of some health conditions before marriage.” [Community Health Practitioner, Primary Health Care Centre Gusau, 2026].

Discussion of Findings

This section discusses the key findings of the study in relation to existing literature and the theoretical framework of Andersen’s Behavioural Model.

The finding that 82.8% of respondents had heard of premarital screening is consistent with studies conducted in other parts of Nigeria, including Adekanle et al. (2019) who reported 78.4% awareness in South-West Nigeria, and Oladimeji et al. (2020) who found 80.3% awareness in North-Central Nigeria. However, the composite awareness analysis revealed that only 63.3% had a high level of awareness, suggesting that surface-level awareness does not necessarily translate into comprehensive knowledge. This aligns with Andersen’s model distinction between awareness as a predisposing factor and actual knowledge that enables health behaviour.

Relationship between Sex and Awareness

The findings revealed that while both sexes have similar awareness levels, women are more proactive in translating awareness into practice. This distinction between awareness and action is important for policy formulation, as interventions need not focus on raising awareness differently by sex but should address the behavioural gap between awareness and practice, particularly among men.

The studies points to difference in screening rates between those with no formal education (25.0%) and those with post-secondary education (66.7%) underscores the magnitude of the education-health behaviour nexus. Education enhances health literacy, critical thinking, and the ability to navigate healthcare systems, all of which facilitate screening uptake. This finding supports Andersen’s model, which identifies education as an enabling factor.



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The finding that 84.6% of Christians reported religious influence on their screening decisions compared to 61.3% of Muslims may be attributable to the institutional mechanisms within churches that make screening a precondition for church weddings. Creating similar mechanisms within Islamic marriage processes could enhance uptake among Muslim couples.

The also showed that unscreened couples had a negative health experience compared to screened couples. This finding provides the most compelling evidence for the value of premarital screening and is consistent with the literature showing that premarital screening reduces the incidence of genetic disorders and enables early detection and management of infectious diseases (Adekanle et al., 2019; Oladimeji et al., 2020).

Recommendations

Based on the findings and conclusions of this study, the following recommendations are made in line with the objectives of the study:

1. Government and health agencies should intensify community-based health education programmes on premarital screening to improve comprehensive awareness, particularly on the infectious disease component, beyond the current surface-level knowledge reported by 36.7% of respondents with moderate or low awareness.
2. Since sex does not significantly influence awareness, premarital screening campaigns should target both males and females equally through shared channels such as hospitals, religious institutions, and community outreach programmes.
3. Targeted interventions should be designed for individuals with low or no formal education, using simplified health messages in local languages and community health workers to improve their understanding and uptake of premarital screening.
4. Religious leaders should be engaged as advocates for premarital screening, with Islamic scholars disseminating messages that frame screening as consistent with Islamic teachings, and churches continuing to mandate screening before weddings.
5. The government should make premarital screening mandatory and subsidise its cost, while healthcare facilities should promote couple-centred screening to ensure both partners are tested together for maximum preventive benefit.



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