



# Assessment of Sexual Attitudes and Sexual Functions during Pregnancy in Women Attending Antenatal Clinics in Southeast Nigeria

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## Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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## ABSTRACT

**Background:** Sexual attitudes and functions during pregnancy are significant aspects of reproductive health, yet often under-researched, particularly in diverse cultural contexts such as Southeast Nigeria.

**Objective:** To assess sexual attitudes and sexual functions during pregnancy among women attending antenatal clinics in secondary and tertiary health facilities in Southeast Nigeria.

**Methods:** This cross-sectional descriptive study was conducted between November 2023 and April 2024. The study population included pregnant women attending antenatal clinics at a General Hospital and a Teaching hospital in Southeast Nigeria. A sample size of 300 participants was determined using Raosoft software, accounting for a 10% non-response rate. Data were collected using a structured questionnaire assessing socio-demographic information, sexual attitudes (adapted from the Sexual Attitudes Scale), and sexual functions (using the Female Sexual Function Index). Reproductive health experts evaluated the questionnaire's validity and reliability, confirmed with a Cronbach's alpha of 0.7. Data analysis was performed using SPSS version 26.

**Results:** The study included 300 participants with a majority aged 32-38 (45.33%), married (92%), and having secondary education (65.33%). Sexual attitudes revealed that 49% felt uncomfortable discussing sexual matters with their partners during pregnancy, and 58.67% believed sexual activity during pregnancy was unsafe. Sexual function assessment showed low levels of sexual desire (55.67% rarely felt desire) and a high incidence of discomfort during sexual activity (28.66% sometimes experienced pain). Psychological aspects indicated mixed feelings about body image and self-esteem, with significant support from partners (29.67% extremely supportive). Cultural and societal influences largely viewed sexual activity during pregnancy negatively (33.34% negative or strongly negative).

**Conclusion:** The findings highlight significant concerns regarding sexual attitudes and functions during pregnancy among women in Southeast Nigeria. Cultural, societal, and psychological factors play vital roles, necessitating enhanced communication and education efforts in antenatal care to address these issues.

*Keywords: Sexual attitudes; sexual functions; pregnancy; antenatal clinics; cultural influences; reproductive health.*

## 1. INTRODUCTION

Pregnancy is a critical period in a woman's life that involves numerous physiological, psychological, and social changes [1]. These changes can significantly affect sexual attitudes and functions. Understanding these changes is vital for providing comprehensive antenatal care, yet sexual health during pregnancy is often underexplored, especially in specific cultural contexts like Southeast Nigeria.

Sexual attitudes encompass beliefs, feelings, and values about sexual activity. During pregnancy, these attitudes can shift due to various factors such as physical discomfort, fear of harming the fetus, and changes in body image [2]. In many cultures, including those in Southeast Nigeria, traditional beliefs and taboos can further influence these attitudes [3]. For instance, some communities may view sexual activity during pregnancy as harmful or inappropriate, affecting couples' intimacy and emotional connection [4].

Sexual function refers to the physiological and psychological processes involved in sexual activity, including desire, arousal, orgasm, and satisfaction [5]. Pregnancy can lead to changes in these functions due to hormonal fluctuations, physical changes like weight gain and increased blood flow to the pelvic region, and psychological factors such as anxiety and mood swings [6]. Studies have shown mixed results on how pregnancy affects sexual function, with some women experiencing increased satisfaction and others reporting diminished desire and pleasure [7].

The cultural context of Southeast Nigeria plays a significant role in shaping sexual attitudes and functions during pregnancy. This region is characterized by diverse ethnic groups with distinct cultural practices and beliefs. Traditional views on sexuality, gender roles, and reproductive health can influence how pregnant women perceive and experience sexual activity [8]. For instance, in some communities, sexual activity during pregnancy is encouraged as it is

believed to facilitate childbirth, while in others, it is restricted due to fears of harming the fetus [9].

Research on sexual health during pregnancy has primarily focused on Western populations, with limited studies conducted in African contexts [10]. Existing studies in Nigeria have highlighted a range of experiences and attitudes, reflecting the country's cultural diversity. For example, a study by Obikeze et al. [3] found that many Nigerian women reported a decrease in sexual desire and frequency during pregnancy, attributed to physical discomfort and cultural beliefs. Conversely, Ezechi et al. [4] reported that some women experienced an increase in sexual satisfaction due to heightened emotional intimacy with their partners.

Given the impact of pregnancy on sexual attitudes and functions, there is a need for comprehensive antenatal care that addresses sexual health. Healthcare providers should be equipped with culturally sensitive knowledge and skills to support women in navigating these changes [11]. This includes providing accurate information, addressing misconceptions, and creating a supportive environment for discussing sexual health concerns [6]. This study sought to assess the sexual attitudes and sexual functions during pregnancy in women attending antenatal clinics in southeast Nigeria.

## 2. METHODOLOGY

### 2.1 Study Design

This study employed a cross-sectional descriptive design to assess sexual attitudes and sexual functions during pregnancy among women attending antenatal clinics in a secondary and tertiary health facilities in southeast Nigeria between November 2023 and April 2024. This design is appropriate for identifying patterns and relationships within a specific population at a single point in time [12].

### 2.2 Study Setting

The study was conducted in antenatal clinics of two hospitals (one General hospital and one Teaching hospital) in southeast Nigeria. This region is selected due to its diverse cultural and socioeconomic background, which provides a comprehensive understanding of sexual attitudes and functions during pregnancy.

### 2.3 Inclusion Criteria

- Pregnant women aged 18 and above.

- Women attending antenatal clinics during the study period.
- Women who gave informed consent to participate in the study.

### 2.4 Exclusion Criteria

- Women with known psychiatric conditions.
- Women with severe pregnancy complications that could influence sexual functions.
- Women who refused consent.

### 2.5 Sample Size Determination

In the study, the sample size was calculated by using the sampling of the unknown population formula on the Raosoft software. Thus, the minimum sample size that was based on a type 1 error of 0.05 and test power (power analysis) of 0.80 ( $\alpha = 0.05$ ,  $1-\beta = 0.80$ ) was found to be 274 participants. The sample size was adjusted to 300 to account for a non-response rate of 10 %.

### 2.6 Data Collection Instrument

Data was collected using a structured questionnaire, which consisted of the following sections:

1. **Socio-Demographic Information:** Age, education, occupation, marital status, parity, gestational age, and socioeconomic status.
2. **Sexual Attitudes:** Adapted from the Sexual Attitudes Scale.
3. **Sexual Function:** Assessed using the Female Sexual Function Index (FSFI).

### 2.7 Validity and Reliability of Instrument

The questionnaire was pre-tested on a sample of 40 pregnant women attending an antenatal clinic in southeast, Nigeria to ensure validity and reliability. Content validity was assessed by experts in reproductive health, while reliability was determined using Cronbach's alpha, with a value of 0.7.

### 2.8 Data Collection Procedure

Trained research assistants administered the questionnaires to eligible participants. Participants were assured of confidentiality, and informed consent was obtained before data collection. Data collection will occur over five months.

## 2.9 Data Analysis

Data was analyzed using SPSS (Statistical Package for Social Sciences) version 26. Descriptive statistics (frequencies, and percentages) were used to summarize the data.

## 3. RESULTS

The demographic information of the participants, as presented in Table 1, reveals a diverse age range with the majority being between 32-38 years old (45.33%), followed by 25-31 years old (34%). Most participants are married (92%), have completed secondary education (65.33%), and are predominantly self-employed (53.67%). The participants are overwhelmingly Christian (94.67%) and the majority have had one to two previous pregnancies (62%).

Table 2 examines the sexual attitudes of participants during pregnancy. A significant number of participants are uncomfortable discussing sexual matters with their partners, with nearly half disagreeing (49%). Most participants (52%) are neutral about the belief that sexual activity is beneficial for maintaining

intimacy during pregnancy. Anxiety about engaging in sexual activity is common, with 26.33% disagreeing and 21% agreeing. Many participants (29.67%) do not believe pregnancy has positively impacted their sexual relationship. Additionally, participants are divided on whether their partner's sexual desires have changed, and many feel that pregnancy has affected their sexual attractiveness, with 33.67% agreeing. Concerns about harming the baby during sexual activity are also prevalent, with 28.67% strongly disagreeing and 27% disagreeing. There is hesitancy about trying new sexual activities, with 35.33% strongly disagreeing.

Sexual functions during pregnancy, detailed in Table 3, indicate that sexual desire is infrequent, with 55.67% rarely feeling desire. Sexual arousal is also uncommon, with 44% rarely experiencing arousal. Vaginal lubrication is a regular occurrence for some, with 33.67% rarely experiencing it and 18% always experiencing it. Orgasm frequency varies, with 27.33% sometimes and 25% often reaching orgasm. Pain during sexual activity is reported rarely by 26.33% and sometimes by 28.66%.

**Table 1. Demographic Information of Participants**

| Variable                              | Frequency (n = 300) | Percentage (%) |
|---------------------------------------|---------------------|----------------|
| <b>Age</b>                            |                     |                |
| 18-24                                 | 33                  | 11.00          |
| 25-31                                 | 102                 | 34.00          |
| 32-38                                 | 136                 | 45.33          |
| 39 and above                          | 29                  | 9.67           |
| <b>Marital Status</b>                 |                     |                |
| Single                                | 11                  | 3.67           |
| Married                               | 276                 | 92.00          |
| Divorced/Widowed                      | 13                  | 4.33           |
| <b>Educational Level</b>              |                     |                |
| No formal education                   | 12                  | 4.00           |
| Primary education                     | 16                  | 5.33           |
| Secondary education                   | 196                 | 65.33          |
| Tertiary education                    | 76                  | 25.33          |
| <b>Occupation</b>                     |                     |                |
| Unemployed                            | 37                  | 12.33          |
| Self-employed                         | 161                 | 53.67          |
| Employed                              | 91                  | 30.33          |
| Student                               | 11                  | 3.67           |
| <b>Religion</b>                       |                     |                |
| Christianity                          | 284                 | 94.67          |
| Islam                                 | 5                   | 1.67           |
| Traditional                           | 11                  | 3.67           |
| Others (Specify%)                     | 00                  | 0.00           |
| <b>Number of Previous Pregnancies</b> |                     |                |
| 0                                     | 77                  | 25.67          |
| 1-2                                   | 186                 | 62.00          |
| 3-4                                   | 32                  | 10.67          |
| 5 and above                           | 05                  | 1.67           |

**Table 2. Sexual attitudes of participants**

| Variable   | Response          |              |              |              |                |
|--|-------------------|--------------|--------------|--------------|----------------|
|  | Strongly Disagree | Disagree     | Neutral      | Agree        | Strongly Agree |
| I feel comfortable discussing sexual matters with my partner during pregnancy.           | 44 (14.67%)       | 147 (49.00%) | 51 (17.00%)  | 36 (12.00%)  | 22 (7.33%)     |
| I believe that sexual activity during pregnancy is beneficial for maintaining intimacy.  | 39 (13.00%)       | 25 (8.33%)   | 156 (52.00%) | 48 (16.00%)  | 32 (10.66%)    |
| I feel anxious or worried about engaging in sexual activity during pregnancy.            | 61 (20.33%)       | 79 (26.33%)  | 52 (17.33%)  | 63 (21.00%)  | 45 (15.00%)    |
| I believe that pregnancy has positively impacted my sexual relationship with my partner. | 86 (28.67%)       | 89 (29.67%)  | 64 (21.33%)  | 37 (12.33%)  | 24 (8.00%)     |
| I feel that my partner's sexual desires have changed since I became pregnant.            | 42 (14.00%)       | 51 (17.00%)  | 103 (34.33%) | 52 (17.33%)  | 52 (17.33%)    |
| I feel that pregnancy has affected my sexual attractiveness.                             | 34 (11.33%)       | 33 (11.00%)  | 55 (18.33%)  | 101 (33.67%) | 77 (25.67%)    |
| I believe that engaging in sexual activity during pregnancy can harm the baby.           | 86 (28.67%)       | 81 (27.00%)  | 54 (18.00%)  | 38 (12.67%)  | 41 (13.67%)    |
| I am open to trying new sexual activities during pregnancy.                              | 106 (35.33%)      | 84 (28.00%)  | 51 (17.00%)  | 38 (12.67%)  | 21 (7.00%)     |

**Table 3. Sexual functions during pregnancy**

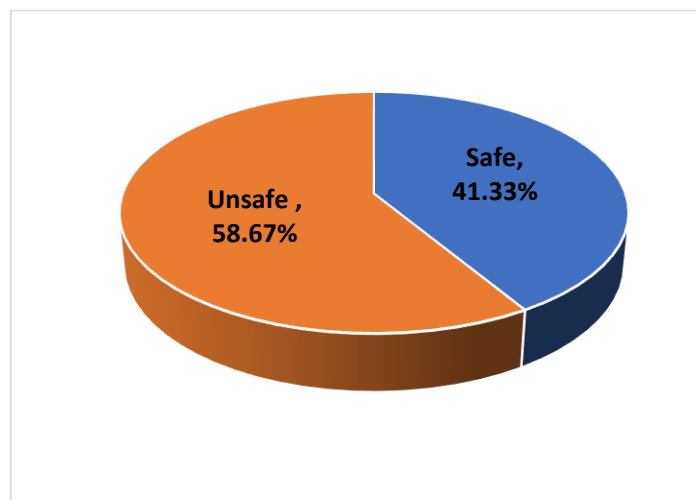
| Variable  | Response    |              |             |             |             |
|---|-------------|--------------|-------------|-------------|-------------|
|   | Never       | Rarely       | Sometimes   | Often       | Always      |
| How often did you feel sexual desire or interest during pregnancy?                                      | 13 (4.33%)  | 167 (55.67%) | 66 (22.00%) | 42 (14.00%) | 12 (4.00%)  |
| How often did you feel sexually aroused (physically "turned on") during sexual activity or intercourse? | 19 (6.33%)  | 132 (44.00%) | 72 (24.00%) | 51 (17.00%) | 26 (8.67%)  |
| How often did you experience vaginal lubrication during sexual activity or stimulation?                 | 03 (1.00%)  | 101 (33.67%) | 73 (24.33%) | 69 (23.00%) | 54 (18.00%) |
| How often did you reach orgasm during sexual activity or intercourse?                                   | 03 (1.00%)  | 73 (24.33%)  | 82 (27.33%) | 75 (25.00%) | 67 (22.33%) |
| How often did you experience pain or discomfort during sexual activity?                                 | 81 (27.00%) | 79 (26.33%)  | 86 (28.66%) | 51 (17.00%) | 03 (1.00%)  |

Fig. 1 shows that a majority of participants (58.67%) believe sexual activity is unsafe during pregnancy. Satisfaction with overall sexual life, as presented in Fig. 2, reveals that many participants are neutral (31.66%) or dissatisfied (26.00%), with only a small percentage being very satisfied (9.67%).

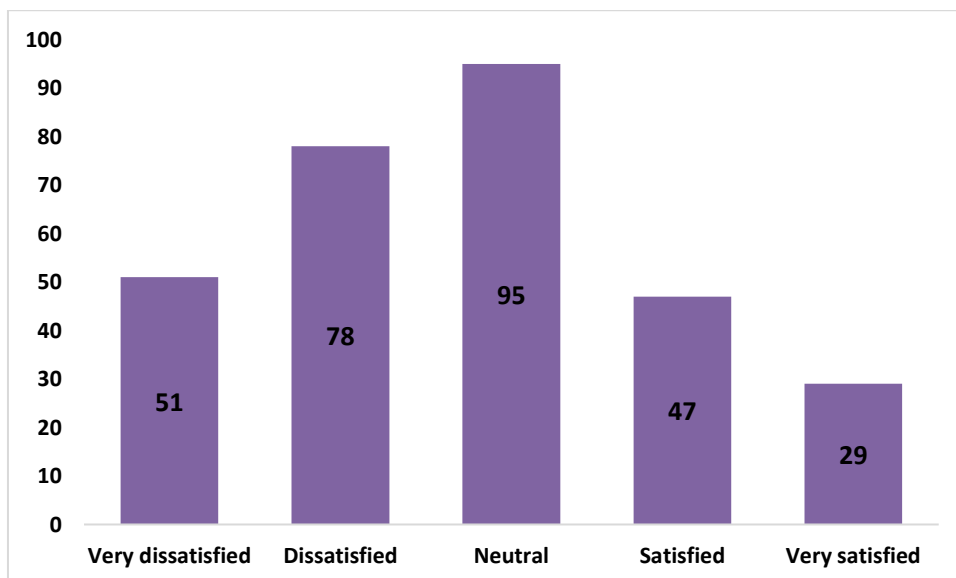
Table 4 explores psychological and emotional aspects. Feelings about body image during pregnancy are generally positive, with 31.67% very satisfied and 25.67% satisfied. Self-esteem related to sexual attractiveness is mostly neutral (33.33%), though some participants report high (23.67%) and very high (17.33%) self-esteem. Partner support is generally high, with 29.67% reporting their partner as extremely supportive.

Communication about sexual needs is infrequent, with 31% rarely communicating. Stress and anxiety levels regarding sexual activity are high, with 41% experiencing very high stress.

Table 5 examines cultural and societal influences. Cultural beliefs about sexual activity during pregnancy are mostly neutral (49%), with some negative (18.67%) and positive (10.67%) perceptions. Societal expectations are generally restrictive, with 32.67% finding them very restrictive. Family opinions have little influence on sexual activity, with 65.33% reporting no influence. Access to information and resources about sexual health during pregnancy is generally good, with 57% having good access.



**Fig. 1. Safety of Sexual Intercourse during Pregnancy**



**Fig. 2. Satisfaction on overall Sexual Life**

**Table 4. Psychological and Emotional Aspects**

| Variable   | Frequency (n = 300) | Percentage (%) |
|--|---------------------|----------------|
| <b>Feelings of Body Image during Pregnancy</b>             |                     |                |
| Very dissatisfied  | 22                  | 7.33           |
| Dissatisfied   | 41                  | 13.67          |
| Neutral  | 65                  | 21.67          |
| Satisfied  | 77                  | 25.67          |
| Very satisfied   | 95                  | 31.67          |
| <b>Self-esteem related to Sexual Attractiveness</b>        |                     |                |
| Very low   | 31                  | 10.33          |
| Low  | 46                  | 15.33          |
| Neutral  | 100                 | 33.33          |
| High   | 71                  | 23.67          |
| Very high  | 52                  | 17.33          |
| <b>Partner's Support and Understanding</b>                 |                     |                |
| Not supportive   | 32                  | 10.67          |
| Slightly supportive  | 57                  | 19.00          |
| Moderately supportive                                      | 45                  | 15.00          |
| Very supportive  | 77                  | 25.67          |
| Extremely supportive                                       | 89                  | 29.67          |
| <b>Communication with Partner about Sexual Needs</b>       |                     |                |
| Never  | 78                  | 26.00          |
| Rarely   | 93                  | 31.00          |
| Sometimes  | 72                  | 24.00          |
| Often  | 46                  | 15.33          |
| Always   | 11                  | 3.67           |
| <b>Stress and Anxiety Levels regarding Sexual Activity</b> |                     |                |
| No stress  | 09                  | 3.00           |
| Low stress   | 43                  | 14.33          |
| Moderate stress  | 61                  | 20.33          |
| High stress  | 64                  | 21.33          |
| Very high stress   | 123                 | 41.00          |

**Table 5. Cultural and Societal Influences**

| Variable  | Frequency (n = 300) | Percentage (%) |
|---|---------------------|----------------|
| <b>Cultural Beliefs about Sexual Activity during Pregnancy</b>          |                     |                |
| Strongly negative   | 44                  | 14.67          |
| Negative  | 56                  | 18.67          |
| Neutral   | 147                 | 49.00          |
| Positive  | 32                  | 10.67          |
| Strongly positive   | 21                  | 7.00           |
| <b>Societal Expectations about Sexual Behaviour during Pregnancy</b>    |                     |                |
| Very restrictive  | 98                  | 32.67          |
| Restrictive   | 81                  | 27.00          |
| Neutral   | 59                  | 19.67          |
| Permissive  | 51                  | 17.00          |
| Very permissive   | 11                  | 3.67           |
| <b>Influence of Family Opinions on Sexual Activity during Pregnancy</b> |                     |                |
| Not influential   | 196                 | 65.33          |
| Slightly influential  | 61                  | 20.33          |
| Moderately influential  | 34                  | 11.33          |
| Very influential  | 09                  | 3.00           |
| Extremely influential   | 00                  | 0.00           |

| Variable  | Frequency (n = 300) | Percentage (%) |
|---|---------------------|----------------|
| <b>Access to Information and Resources about Sexual Health during Pregnancy</b> |                     |                |
| No access   | 21                  | 7.00           |
| Limited access  | 36                  | 12.00          |
| Moderate access   | 29                  | 9.67           |
| Good access   | 171                 | 57.00          |
| Excellent access  | 43                  | 14.33          |

#### 4. DISCUSSION

The results of this study provide a comprehensive overview of the sexual attitudes of pregnant women attending antenatal clinics in Southeast Nigeria. A significant proportion of participants disagreed with feeling comfortable discussing sexual matters with their partners during pregnancy, while only a few strongly agreed. This suggests a potential communication gap between partners regarding sexual issues during pregnancy. Similar trends were observed in studies conducted in other regions, highlighting the universal nature of this issue [13,14]. For instance, Okunlola et al. [13] found that 45% of pregnant women in a similar demographic were uncomfortable discussing sexual matters with their partners.

The belief that sexual activity during pregnancy is beneficial for maintaining intimacy was neutral for 52.00% of respondents, indicating ambivalence. However, 16.00% agreed and 10.66% strongly agreed, suggesting that a portion of the population acknowledges the positive impact of sexual activity on intimacy. Comparatively, a study by Moghaddam Hosseini et al. [15] reported higher agreement rates, reflecting cultural or regional differences in attitudes towards sex during pregnancy.

Anxiety about engaging in sexual activity during pregnancy was significant, with 21% agreeing and 15% strongly agreeing. This is consistent with the findings of Serati et al. [16], where 35% of pregnant women expressed concerns about sexual activity harming the pregnancy. The high levels of anxiety highlight the need for better education and reassurance from healthcare providers.

A notable 29.67% of participants disagreed that pregnancy positively impacted their sexual relationship, while 28.67% strongly disagreed. These results align with findings from previous research, such as a study by Shojaa et al. [17], where many women reported a decline in sexual satisfaction during pregnancy. However, the presence of a minority who felt positively about

the impact suggests variability in experiences that could be influenced by individual relationship dynamics and support systems.

The perception that a partner's sexual desires have changed since pregnancy was somewhat evenly distributed, with 34.33% being neutral. This finding is supported by previous studies indicating that pregnancy can lead to changes in sexual desire and frequency of sexual activity [6,18].

A considerable 33.67% of respondents agreed that pregnancy affected their sexual attractiveness, with 25.67% strongly agreeing. This mirrors findings from studies such as Fok et al. [2], where changes in body image and self-esteem during pregnancy were noted to impact perceptions of sexual attractiveness.

The belief that sexual activity during pregnancy can harm the baby was held by a significant portion of the sample, with 28.67% strongly disagreeing and 27% disagreeing. This fear is consistent with historical and cultural myths about sex during pregnancy, as reported by Bartellas et al. [19].

The openness to trying new sexual activities during pregnancy was relatively low, with 35.33% strongly disagreeing and 28% disagreeing. This could reflect a general conservativeness or discomfort with altering sexual routines during pregnancy, a finding supported by von Sydow [6].

When compared with previous studies, the findings of this research highlight both similarities and differences. For example, while anxiety about sexual activity and concerns about harming the baby were common themes across various studies [16,19], the level of discomfort in discussing sexual matters appears higher in this study compared to others [13]. Cultural, educational, and socioeconomic factors could explain these differences.

The results indicate that a majority of women rarely felt sexual desire or interest during



pregnancy, while some experienced it sometimes. Comparatively, a smaller proportion often or always felt sexual desire, with 4.33% never feeling it. This pattern aligns with findings from previous studies, which also reported a decline in sexual desire during pregnancy. For instance, Pauleta et al. [20] observed that decreased sexual desire is common in pregnancy due to physical discomfort, hormonal changes, and psychological factors.

Regarding sexual arousal, 44% of women reported rarely feeling sexually aroused, and 24% felt aroused sometimes. Those who often (17%) or always (8.67%) felt aroused were fewer, while 6.33% never felt aroused. These results are consistent with previous research by von Sydow [6], which indicated that many women experience reduced sexual arousal during pregnancy due to hormonal fluctuations and concerns about the baby's well-being.

The study found that vaginal lubrication during sexual activity was a common issue, with 33.67% rarely experiencing it and 24.33% sometimes experiencing it. Those who often (23%) or always (18%) experienced lubrication were in the minority. Only 1% never experienced lubrication. This finding is corroborated by the work of Serati et al. [16], who reported that vaginal dryness is a frequent complaint among pregnant women, potentially due to hormonal changes and increased stress levels.

Orgasm during sexual activity was another variable with mixed responses. While 27.33% sometimes reached orgasm and 25% often reached orgasm, 22.33% always did. Conversely, 24.33% rarely reached orgasm, and 1% never did. Previous studies, such as those by De Judicibus and McCabe [5], have shown similar trends, where orgasm frequency tends to decrease during pregnancy due to physical discomfort and anxiety about the effects of orgasmic contractions on the fetus.

A significant proportion of women experienced pain or discomfort during sexual activity, with 28.66% sometimes experiencing it and 26.33% rarely experiencing it. A smaller number experienced it often (17%) or always (1%), while 27% never experienced pain. This prevalence of pain is supported by findings from Brtnicka et al. [21], who noted that pain during intercourse is a common complaint among pregnant women, often attributed to physiological and anatomical changes during pregnancy.

The perception of the safety of sexual activity during pregnancy is another critical aspect of the study. A majority of the respondents (58.67%) believed that sexual activity is unsafe during pregnancy, while 41.33% considered it safe. This safety concern is consistent with prior research indicating widespread anxiety and misconceptions about the risks of sexual intercourse during pregnancy. According to a study by Bartellas et al. [19], many pregnant women and their partners harbor fears about potential harm to the fetus, even though medical advice often reassures that sex is generally safe during a low-risk pregnancy.

The findings of this study align with previous research in several key areas, confirming that sexual desire, arousal, and orgasm tend to decline during pregnancy, while issues like vaginal dryness and pain during intercourse become more prevalent. Hormonal changes, physical discomfort, psychological stress, and concerns about fetal safety are common factors influencing these changes.

The results (Fig. 2) indicate that a significant proportion of respondents are either dissatisfied or very dissatisfied with their sexual life during pregnancy. Specifically, 17% reported being very dissatisfied, and 26% dissatisfied, totaling 43% of the respondents. A neutral stance was taken by 31.66% of the women, while those who were satisfied and very satisfied accounted for 15.67% and 9.67%, respectively.

These findings suggest that a considerable number of pregnant women experience dissatisfaction with their sexual lives. This dissatisfaction could be influenced by physical discomfort, hormonal changes, and psychological factors associated with pregnancy. Previous studies have also highlighted similar trends. For instance, Pauleta et al. [20] found that many women report decreased sexual satisfaction during pregnancy due to a variety of physical and emotional changes. Similarly, Olsson et al. [22] observed that sexual satisfaction often declines during pregnancy, particularly in the third trimester.

The survey results also indicate diverse feelings regarding body image among pregnant women. About 31.67% of the respondents reported being very satisfied with their body image, and 25.67% were satisfied. Conversely, 7.33% were very dissatisfied, and 13.67% were dissatisfied, while 21.67% felt neutral about their body image during pregnancy.

These findings align with previous research indicating that body image concerns can fluctuate during pregnancy. Changes in body shape and weight can lead to both positive and negative perceptions among pregnant women. According to Clark et al. [23], positive body image during pregnancy is often associated with higher self-esteem and overall well-being, while negative body image can contribute to psychological distress.

The data shows that self-esteem related to sexual attractiveness varies significantly among the respondents. While 17.33% reported very high self-esteem and 23.67% had high self-esteem, a notable portion reported low (15.33%) or very low (10.33%) self-esteem. The largest group (33.33%) felt neutral about their sexual attractiveness during pregnancy.

This variation in self-esteem reflects the complex interplay between physical changes and emotional responses during pregnancy. Previous studies have shown that self-esteem can be influenced by a woman's perception of her changing body and her partner's reactions. Bostan and Özdelikara [24] noted that positive partner support and open communication can significantly enhance a pregnant woman's self-esteem related to sexual attractiveness.

Regarding partner's support and understanding, 29.67% of the respondents reported that their partners were extremely supportive, and 25.67% considered their partners very supportive. However, 10.67% felt their partners were not supportive, and 19% reported slight support, with 15% indicating moderate support.

The level of partner support is crucial for a woman's emotional well-being and sexual satisfaction during pregnancy. Studies by Fok et al. [2] have highlighted that supportive partners can positively influence sexual satisfaction and reduce stress levels associated with sexual activity during pregnancy.

Communication about sexual needs appears to be limited among the respondents, with 26% never discussing their needs and 31% rarely doing so. Only a small percentage (3.67%) reported always communicating their sexual needs, while 15.33% and 24% did so often and sometimes, respectively. Effective communication with a partner is essential for maintaining sexual satisfaction and emotional intimacy during pregnancy. Research by Mazzoni

et al. [25] has shown that open communication about sexual needs can help address concerns and improve sexual relationships during pregnancy.

The survey reveals high levels of stress and anxiety related to sexual activity, with 41% of respondents experiencing very high stress and 21.33% reporting high stress. Moderate stress was reported by 20.33%, while low and no stress was reported by 14.33% and 3%, respectively.

High stress and anxiety levels can significantly impact sexual function and overall well-being during pregnancy. A study by von Sydow [6] found that anxiety and stress are common during pregnancy and can lead to decreased sexual desire and satisfaction.

The findings of this study are consistent with previous research on sexual attitudes and functions during pregnancy. Studies have consistently shown that pregnancy can lead to changes in sexual satisfaction, body image, self-esteem, partner support, communication, and stress levels. For example, Laumann, et al. [26] highlighted that sexual satisfaction often declines during pregnancy due to physical discomfort and emotional changes. The importance of partner support and open communication in maintaining sexual satisfaction during pregnancy has been emphasized by numerous studies [24,25].

The high levels of stress and anxiety reported in this study are also in line with previous research. von Sydow [6] noted that stress and anxiety are prevalent during pregnancy and can negatively affect sexual function. Addressing these psychological factors is crucial for improving sexual satisfaction and overall well-being among pregnant women.

The findings of this study further reveal a varied landscape of cultural beliefs regarding sexual activity during pregnancy. A significant portion of women (49%) held neutral views, suggesting a level of ambiguity or lack of strong cultural prescriptions about sexual activity during this period. Meanwhile, 33.34% (14.67% strongly negative and 18.67% negative) held negative beliefs, reflecting a substantial cultural aversion. In contrast, 17.67% (10.67% positive and 7.00% strongly positive) viewed sexual activity positively during pregnancy. These findings are consistent with previous research by Eze and Anozie [27], which reported a spectrum of beliefs about sexual activity during pregnancy in Nigerian

communities, influenced by varying cultural norms and education levels.

Societal expectations appear to be largely restrictive, with 59.67% (32.67% very restrictive and 27.00% restrictive) of women reporting restrictive societal attitudes. Only a small fraction (20.67%) described their societal context as permissive (17.00% permissive and 3.67% very permissive). These results align with the study by Okafor et al. [28], which found that societal norms in many parts of Nigeria tend to be conservative, particularly regarding women's sexual behaviour during pregnancy. The study highlights the potential for societal expectations to contribute to feelings of shame or guilt associated with sexual activity during pregnancy.

Family opinions had varying degrees of influence on sexual activity during pregnancy. The majority (65.33%) reported that family opinions were not influential, while 20.33% found them slightly influential, and only 3.00% described them as very influential. No participants considered family opinions to be extremely influential. This finding contrasts with previous studies, such as that by Adeyemo et al. [29], which reported stronger family influences in other Nigerian regions, suggesting regional differences in family dynamics and their impact on personal decisions during pregnancy.

Access to information and resources about sexual health during pregnancy varied significantly among participants. A notable 57% reported good access, while 14.33% had excellent access. However, 19.67% experienced limited or no access. These findings indicate an overall positive trend in resource availability but also highlight disparities. This is supported by a study by Obikeze et al. [3], which noted improvements in sexual health education and resources in urban areas of Southeast Nigeria, though rural areas still face significant challenges.

Comparing these results with previous studies shows both consistencies and regional differences in attitudes and access to sexual health information. Eze and Anozie [27] observed that cultural beliefs about sexual activity during pregnancy are often ambivalent, aligning with our findings. Okafor et al. [28] highlighted the restrictive societal norms that our study also reports. However, the influence of family opinions appears less pronounced in our study compared to findings by Adeyemo et al. [29], suggesting

that family influence on sexual activity during pregnancy may vary significantly by region. Moreover, our findings on access to sexual health information resonate with Obikeze et al. [3], who documented improvements in resource availability but also noted persistent gaps. These comparisons underscore the importance of regional context in understanding sexual attitudes and behaviours during pregnancy.

## 5. CONCLUSION

The study highlights significant variations in sexual attitudes and functions among pregnant women in Southeast Nigeria, with cultural and societal influences playing vital roles. The findings underscore the need for comprehensive sexual health education and support for pregnant women.

## CONSENT

Informed consent was obtained from all participants. Participants were assured of the confidentiality of their responses and their right to withdraw from the study at any time without any consequences.

## ETHICAL APPROVAL

It is not applicable.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during the writing or editing of manuscripts.

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