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A systematic review of beneficial and adverse mental health outcomes associated with premarital sex among Nigerian adolescents and youths

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Abstract

Premarital sexual activity among Nigerian adolescents and youths is a public health concern with contested mental health implications. Within Nigeria's highly religious and culturally conservative context, the psychological consequences of premarital sex remain inadequately synthesized. This systematic review aimed to critically appraise and synthesize existing evidence on both the beneficial and adverse mental health outcomes associated with premarital sex among Nigerian adolescents and youths.

A systematic search of PubMed, Scopus, African Journals Online, ScienceDirect, and Google Scholar was conducted for peer-reviewed primary studies published between 2013 and 2025. Risk of bias was assessed using the Mixed Methods Appraisal Tool. Data were synthesized thematically.

Fourteen studies met inclusion criteria, comprising cross-sectional surveys, qualitative investigations, and mixed-methods studies across all six Nigerian geopolitical zones. Premarital sex was consistently associated with guilt, shame, depression, anxiety, and diminished self-esteem, particularly among females. However, severe mental health outcomes were predominantly linked to forced sexual initiation, transactional sex, and unintended pregnancy rather than consensual premarital activity. Conversely, some studies identified psychosexual benefits, including enhanced sexual esteem and satisfaction, when sex occurred within supportive relational contexts. Protective factors such as religiosity, parental communication, and comprehensive sexuality education moderated adverse outcomes.

Premarital sex exhibits a dual profile of mental health risks and benefits among Nigerian youths, with outcomes heavily mediated by contextual factors. Policy and practice should prioritize contextualized comprehensive sexuality education, mental health integration into youth-friendly sexual and reproductive health services, and targeted support for survivors of forced sexual initiation.

Key words: premarital sex, mental health, outcomes, adolescents, youths, Nigeria.

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Introduction

Adolescence and young adulthood are critical developmental stages characterized by exploration of intimate relationships and sexual behaviors. Globally, a substantial proportion of young people initiate sexual intercourse before marriage across both high-income and low- and middle-income settings.[1] In sub-Saharan Africa, premarital sexual activity remains an important public health concern due to its association with unintended pregnancy, unsafe abortion, sexually transmitted infections (STIs) including HIV, and various psychosocial challenges.[2-4] Nigeria, where approximately 60% of the population is younger than 25 years, represents a unique context for examining the relationship between premarital sex and mental health.[5] The country's sociocultural and religious environment, influenced by strong Christian and Islamic values, traditionally discourages premarital sexual activity and places significant emphasis on virginity, particularly among females.[6] However, increasing urbanization, greater access to global media, and digital technologies have contributed to changing sexual attitudes and behaviors among young people, creating tension between traditional expectations and contemporary experiences.[7] Despite persistent social stigma, evidence indicates that many Nigerian adolescents initiate sexual activity before adulthood, with a considerable proportion engaging in unprotected intercourse.[8]

The mental health consequences of premarital sex among Nigerian adolescents and youths are complex and context-dependent. Adverse outcomes, including guilt, shame, regret, depression, anxiety, emotional distress, and diminished self-esteem, have been reported, often intensified by social stigma, fear of parental or community disapproval, and conflict with religious or cultural beliefs.[9,10] However, evidence also suggests that consensual sexual experiences occurring within supportive relationships may be associated with positive psychosexual outcomes, including improved sexual esteem, satisfaction, and feelings of intimacy.[11] Importantly, adverse psychological outcomes may differ substantially depending on whether sexual experiences are consensual or involve coercion, transactional relationships, or unintended pregnancy, all of which carry distinct emotional and mental health consequences.[12]

Although several Nigerian studies and reviews have examined adolescent sexual behaviors, determinants of premarital sexual activity, and consequences of early sexual initiation,[13-15] no previous systematic review has synthesized evidence on both the beneficial and adverse mental health outcomes associated with premarital sex among Nigerian adolescents and youths. This knowledge gap limits the development of balanced and context-sensitive sexual and reproductive health (SRH) interventions. Therefore, this systematic review aimed to synthesize existing evidence on the spectrum of mental health outcomes associated with premarital sex among Nigerian adolescents and youths, including both harmful and potentially beneficial consequences. By examining how psychological outcomes vary according to sexual context, coercion, gender, and broader socio-cultural influences, this review provides evidence to guide future research, clinical practice, and culturally appropriate public health interventions.

Objectives of the study

The primary objective of this systematic review was to synthesize existing evidence on the mental health outcomes, both adverse and beneficial, associated with premarital sexual activity among adolescents and youths in Nigeria. The specific objectives were: i) to identify and characterize the range of mental health outcomes (including depression, anxiety, psychological distress, guilt, shame, self-esteem, sexual esteem, and sexual satisfaction) reported in studies examining premarital sex among Nigerian adolescents and youths; ii) to explore contextual and mediating factors (including gender, age, nature of the sexual encounter, relationship context, religiosity, parental communication, and socioeconomic status) that influence the relationship between premarital sex and mental health; iii) to critically appraise the methodological quality of existing studies and identify gaps in the current evidence base; iv) to derive evidence-based recommendations for policy, practice, and future research.

Methods

Study design

This study employed a systematic review design, adhering to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.[16] Given the anticipated heterogeneity of study designs and outcome measures, a thematic synthesis approach was adopted rather than quantitative meta-analysis.

Information sources

A comprehensive literature search was conducted using PubMed, Scopus, African Journals Online, ScienceDirect, and Google Scholar. Searches were conducted between January 2013 and December 2025. Additional studies were identified through manual screening of reference lists of eligible articles and relevant reviews. Grey literature, including unpublished reports, theses, conference proceedings, and program evaluation reports, was not systematically searched and may have resulted in the omission of relevant local evidence.

Search strategy

The search strategy employed combinations of the following keywords and Medical Subject Headings (MeSH) terms: “premarital sex”, “premarital sexual intercourse”, “sexual debut”, “sexual initiation”, “adolescent”, “youth”, “young people”, “mental health”, “depression”, “anxiety”, “psychological distress”, “guilt”, “shame”, “self-esteem”, “sexual esteem”, “psychosexual”, “Nigeria”. Boolean operators (AND, OR) were used to combine search terms. Searches were limited to articles published in English between January 2015 and May 2026.

Eligibility criteria

Inclusion criteria

Studies were eligible for inclusion if they: i) involved Nigerian adolescents and youths aged 10–24 years; ii) examined premarital sexual behavior or related sexual experiences; iii) reported mental health, psychological, or psychosexual outcomes; iv) employed qualitative, quantitative, or mixed-methods designs; and v) were published in English.

Exclusion criteria

Studies were excluded if they did not provide separate data for Nigerian adolescents and youths, focused exclusively on populations outside the eligible age range, did not report relevant mental health outcomes, were review articles, or had inaccessible full texts. In studies involving mixed age groups or broader populations, inclusion was considered only when data specific to adolescents and youths aged 10-24 years could be clearly extracted. Where participant age boundaries or population characteristics were unclear, and clarification was not obtainable from the published report, such studies were excluded to maintain methodological consistency. Studies were eligible for inclusion if they met the criteria presented in *Supplementary Table 1*.

Risk of bias assessment

Risk of bias was assessed using the Mixed Methods Appraisal Tool (MMAT), version 2018, which facilitates the appraisal of qualitative, quantitative, and mixed-methods studies.[17] Studies were categorized as having low, moderate, or high risk of bias based on the extent to which they fulfilled the relevant MMAT quality criteria. The implications of identified methodological limitations were considered during data synthesis and interpretation; therefore, findings from studies with moderate risk of bias were interpreted cautiously, particularly where concerns related to self-reporting, sampling methods, confounding, or cross-sectional study designs could influence the strength and generalizability of the evidence. The risk of bias assessment of the included studies is presented in *Supplementary Table 2*.

Study selection

Two reviewers independently screened titles and abstracts against the eligibility criteria. Full texts of potentially eligible studies were retrieved and assessed independently by both reviewers. Disagreements were resolved through discussion, with a third reviewer consulted when consensus could not be reached.

Data extraction and synthesis approach

A standardized data extraction form was developed and piloted on 3 included studies. Data extracted included: authors, year of publication, study objectives, study design, study setting and location, sample size and characteristics, key findings related to mental health outcomes, and study conclusions. Due to the methodological heterogeneity of included studies, a thematic synthesis

approach was employed, following the 3-stage process described by Thomas and Harden: line-by-line coding of findings, development of descriptive themes, and generation of analytical themes.[18]

Screening procedure

The PRISMA flow diagram (Figure 1) illustrates the study selection process. A total of 1247 records were identified through database searching. After the removal of duplicates, 892 records remained and were screened based on titles and abstracts. A total of 831 records were excluded at this stage, leaving 61 full-text articles assessed for eligibility. Of these, 47 studies were excluded for the following reasons: not specific to Nigeria (n=5), no mental health outcomes reported (n=18), study population outside the eligible age range of 10-24 years (n=7), review articles (n=12), duplicate publications (n=3), and unavailable full texts (n=2). Ultimately, 14 studies were included in the final qualitative synthesis.

Quality appraisal

Each included study was independently appraised by two reviewers using the MMAT.[17] Discrepancies in quality ratings were resolved through discussion. *Supplementary Table 2* presents the quality assessment of the included studies.

Results

Characteristics of eligible included studies

The 14 studies included in this review were published between 2013 and 2025.[19-32] The geographic distribution spanned five of Nigeria's six geopolitical zones: South-West, South-East, North-Central, South-South, and multi-state national samples. No eligible studies were identified from the North-East or North-West zones, representing a notable geographic gap in the evidence base. The majority of studies employed cross-sectional quantitative designs, while others used qualitative approaches and mixed methods. Study populations comprised secondary school students, university undergraduates, community-based adolescents, and a nationally representative sample of young women. Sample sizes ranged from 120 to 23,446 participants. The age range of participants across studies was 10-24 years, consistent with the World Health Organization definition of adolescents and youth. Female participants constituted the majority in most studies, with several studies focusing exclusively on female adolescents. All included studies were published in English. The characteristics of the included studies are presented in *Supplementary Table 3*, and the contrasting mental health outcomes associated with consensual and coerced premarital sexual experiences among Nigerian adolescents and youths are presented in *Supplementary Table 4*.

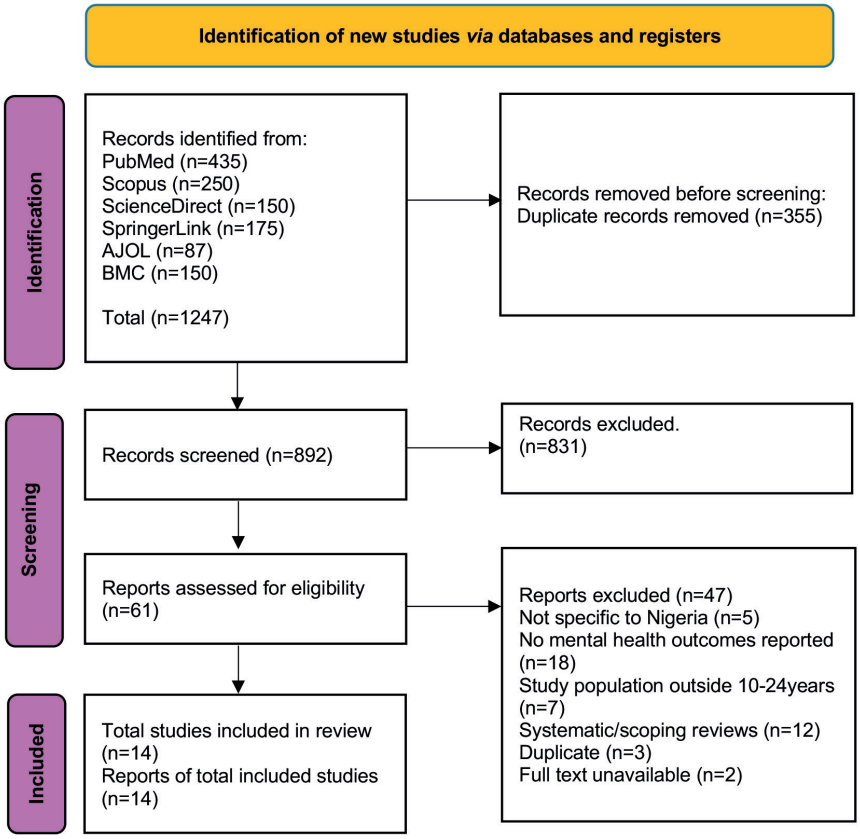

Figure 1. Diagram of the PRISMA 2020 Process for Systematic Reviews and Meta-Analyses.

Quality appraisal of included studies

The methodological quality of the 14 included studies varied,[19-32] with 7 studies rated as high quality with low risk of bias and 7 studies rated as moderate quality with moderate risk of bias. The methodological strengths of the included studies included the use of validated instruments for assessing mental health outcomes, such as the Rosenberg Self-Esteem Scale, the Multidimensional Sexuality Questionnaire, and standardized depression screening tools, as well as adequate sample sizes and representation of both urban and rural populations. Qualitative and mixed-methods studies provided important contextual insights into adolescents' lived experiences, motivations, and perceptions surrounding premarital sexual experiences.

However, the findings should be interpreted considering several methodological limitations. The predominance of cross-sectional designs limits the ability to establish temporal or causal relationships between premarital sexual experiences and mental health outcomes. Reliance on self-reported measures of sexual behavior and psychological experiences may have introduced recall and social desirability bias, particularly within a socio-cultural context where premarital sex is strongly stigmatized. Additionally, studies rated as moderate quality were commonly limited by inadequate adjustment for potential confounding factors, non-probability sampling approaches, or insufficient reporting of methodological procedures. Consequently, although their findings contributed valuable contextual evidence, they were interpreted cautiously during the synthesis and weighed alongside the consistency of evidence from higher-quality studies. The concentration of studies within southern Nigeria also limits the national generalizability of the findings. The quality assessment scores of the included studies are presented in *Supplementary Table 2*.

Thematic review/key synthesis

The thematic synthesis of findings from the 14 included studies generated four overarching themes describing the mental health implications of premarital sex among Nigerian adolescents and youths.[19-32] To improve conceptual clarity, emotional and psychological distress outcomes were distinguished from self-esteem and psychosexual identity-related outcomes. While emotional distress refers primarily to negative affective responses such as guilt, shame, anxiety, regret, and depressive symptoms following sexual experiences, self-esteem and psychosexual well-being relate to individuals' perceptions of self-worth, sexual confidence, self-concept, and satisfaction.

Emotional distress and internalizing symptoms

Emotional distress was the most consistently reported adverse mental health outcome associated with premarital sex among Nigerian adolescents and youths. It encompassed feelings of guilt, shame, regret, disappointment, emotional trauma, anxiety, and depressive symptoms. These experiences were particularly common when sexual activity conflicted with personal, cultural, or religious beliefs, occurred within unsupportive relationships, or involved coercion.[19,26,28] The psychological distress reported by participants must, however, be interpreted within the broader Nigerian socio-cultural context, where strong societal disapproval of premarital sexual activity, especially among females, may influence self-reporting of emotions such as guilt and shame. Therefore, some reported adverse psychological outcomes may partly reflect internalized stigma and anticipated social judgment in addition to the sexual experience itself.

Depression emerged as a particularly salient outcome in the context of early sexual debut. In one study conducted in Enugu State, depressed adolescent boys and girls were significantly more likely than their non-depressed peers to have experienced sexual intercourse, and the youngest adolescents who were depressed were more likely to have initiated sex than older depressed adolescents.[31] This finding underscores the potential bidirectional relationship between depression and sexual activity: depressed adolescents may engage in sex as a maladaptive coping mechanism, while early sexual experiences may precipitate or exacerbate depressive symptoms through the mechanisms of guilt, regret, and social consequences. In Abuja, depression was identified among the selected outcomes of early sexual initiation, alongside loss of self-confidence, pregnancy, and abortion.[24] The emotional impact of premarital sex is not uniform but is mediated by the nature of the sexual encounter. Forced sexual initiation, reported by sexually active adolescents in a multi-state Nigerian sample, was associated with significantly different patterns of stress perception and coping compared to voluntary sexual initiation.[25] Adolescents with a history of forced sexual initiation were more likely to identify medical and body image concerns as stressors and were less likely to employ adaptive coping strategies, suggesting that the psychological burden of coerced sexual activity is distinct from and more severe than that of consensual premarital sex.

Self-esteem, identity, and psychosexual well-being

The relationship between premarital sex and self-esteem among Nigerian adolescents and youths is complex and appears to be bidirectional. Low self-esteem was identified as a risk factor for sexual activity; adolescents with low self-esteem were more likely to be sexually active compared to their counterparts with high self-esteem, and they also demonstrated higher scores on measures of risky sexual behavior.[22] This finding suggests that for some young people, sexual activity may represent an attempt to bolster self-worth or gain validation, particularly in contexts where other sources of self-esteem, such as academic achievement, family support, and economic opportunity, are limited. Conversely, premarital sex itself may negatively impact self-esteem, particularly among females. The loss of self-confidence was documented as an outcome of early sexual initiation in studies conducted in Abuja and other locations.[24] In qualitative investigations, adolescent girls described the shame and diminished self-regard that accompanied premarital sexual activity, especially when it led to unintended pregnancy or when the relationship ended.[26] The gendered nature of this outcome reflects the double standard that pervades Nigerian sexual culture, wherein premarital sex is more heavily stigmatized for females than for males.

Although many studies emphasized adverse psychological outcomes, the evidence regarding positive psychosexual experiences was limited and should be interpreted with caution. The available evidence was largely derived from a single study of university students in South-Western Nigeria, which reported higher levels of sexual esteem, sexual satisfaction, internal sexual control, and sexual assertiveness alongside lower levels of sexual depression and anxiety.[21] These findings suggest that consensual sexual experiences occurring within supportive and informed relational contexts may contribute positively to aspects of psychosexual development among some older adolescents and young adults. However, the restricted number of studies examining beneficial outcomes, the university-based nature of the available evidence, and differences in educational, socio-economic, and cultural backgrounds limit the generalizabil-

ity of these findings to the broader population of Nigerian adolescents and youths. Further longitudinal and population-based studies are required before firm conclusions can be drawn regarding the potential mental health benefits of premarital sexual experiences.

The bidirectional mental health-risky sexual behavior nexus

A consistent finding across multiple studies was the bidirectional relationship between mental health problems and risky sexual behavior. Depression, anxiety, and stress were shown to collectively and significantly predict engagement in risky sexual behaviors, explaining approximately 20% of the variance in such behaviors among young people in Ibadan.[23] This finding aligns with the broader international literature demonstrating that mental health problems may impair judgment, reduce self-efficacy for negotiating safer sex, and increase vulnerability to peer pressure and exploitative relationships. Risky sexual behaviors appear to exacerbate or precipitate mental health problems. In a household survey conducted in Ile-Ife, depressive symptoms were significantly associated with higher odds of neglecting condom use and having multiple sexual partners, while psychological distress was associated with a higher cumulative number of risky behaviors.[29] The association between sexual coercion and depression was particularly strong; sexual coercion was reported by university students and was strongly correlated with higher depression rates in both males and females.[24]

These findings support a syndemic framework, wherein multiple co-occurring psychosocial problems like mental health disorders, sexual risk behaviors, substance use, and violence mutually reinforce one another, creating a cluster of vulnerabilities that disproportionately affects disadvantaged youth. The transactional nature of some adolescent sexual relationships adds another layer of psychological complexity. In qualitative studies, some adolescents justified casual and transactional sex as survival strategies, enabling girls from poor homes to socialize with more privileged partners and potentially leading to marriage.[26] However, the psychological costs of transactional sex, including feelings of degradation, diminished self-worth, and internalized stigma, were also acknowledged. This ambivalence reflects the constrained agency within which many Nigerian adolescents, particularly females, make sexual decisions.

Protective factors and resilience

Despite the predominantly risk-focused nature of the literature, several studies identified protective factors that moderate the relationship between premarital sex and adverse mental health outcomes or promote psychological resilience. Religiosity emerged as a significant protective factor. Youth who were highly religious had a higher likelihood of abstaining from sex compared to their less religious counterparts, and this association remained significant after controlling for other covariates.[32] Religiosity appeared to function through multiple mechanisms, including internalized moral values, fear of divine punishment, social control exerted by religious communities, and the provision of alternative social networks and activities. However, the relationship between religiosity and mental health is not straightforward. While religious youth may be protected from the psychological consequences of premarital sex by virtue of their abstinence, those who do engage in sex despite strong religious beliefs may experience intensified guilt and cognitive dissonance.

Parental communication about sexual matters also emerged as a protective factor. Poor parent-adolescent communication was significantly associated with premarital sexual activity, suggesting that open, supportive parent-child relationships may delay sexual initiation and promote healthier sexual decision-making.[30] Conversely, lack of parental communication and monitoring was identified as a key theme driving early sexual initiation in qualitative data from Abuja.[24] In a study from Ibadan, almost all parents acknowledged that adolescents in secondary schools were sexually active, yet many did not believe their own children were sexually active, highlighting a critical disconnect between parental awareness and adolescent reality that impedes protective communication.[23] Comprehensive sexuality education, whether delivered through school health clubs or counseling programs, demonstrated potential to mitigate adverse outcomes. An intervention study in Ebonyi State found that school health club training programs could improve knowledge and perceptions of gender norms about sexuality, with about 90% of adolescents in both intervention and control schools agreeing that both boys and girls should remain virgins until marriage.[27] Counseling programs that advocated sexual abstinence were also found to be effective in secondary school settings.[19] However, the evidence base for the effectiveness of sexuality education in improving mental health outcomes, as distinct from knowledge and attitudes, remains limited.

Discussion

Overview of principal findings

Overall, the findings indicate that the mental health consequences of premarital sex are strongly influenced by the context in which sexual experiences occur, including the presence of consent, relationship quality, individual beliefs, access to SRH information, and societal attitudes.[19-32] Importantly, the available evidence supporting positive psychosexual outcomes remains limited and is primarily drawn from a single university-based study, requiring cautious interpretation. Conversely, the predominance of evidence reporting adverse outcomes may also reflect the influence of cultural and religious stigma surrounding premarital sex, particularly among female adolescents who experience stronger social sanctions for sexual activity. Therefore, the current evidence should not be interpreted as indicating that premarital sex is inherently harmful, but rather that its psychological consequences are shaped by a complex interaction of individual, relational, and socio-cultural factors.

Comparison with existing global literature

The findings of this review are broadly consistent with the international literature on adolescent sexuality and mental health. Globally, early sexual debut and risky sexual behaviors have been associated with higher rates of depression, anxiety, and low self-esteem, with the direction of causality likely being bidirectional.[33-35] In sub-Saharan Africa, a systematic review of adolescent sexual behavior found that early sexual initiation was associated with multiple adverse psychosocial outcomes, including depression, substance use, and poor academic performance, findings that align closely with the Nigerian evidence synthesized here.[36] However, the present review also highlights findings that diverge from the predominantly risk-focused global discourse. The identification of positive psychosexual outcomes among Nigerian university students, including higher sexual esteem and satisfaction, parallels emerging evidence from high-income countries that consensual adolescent sexual activity, when developmentally appropriate and adequately informed, need not be psychologically harmful and may even con-

tribute to healthy psychosexual development.[37] This finding challenges the assumption, prevalent in much of the Nigerian and broader African literature, that premarital sex is uniformly detrimental to adolescent mental health. It suggests instead that the relationship between premarital sex and mental health is mediated by factors such as age, relationship context, access to contraception and SRH services, and the degree of stigma experienced.

The syndemic relationship between mental health problems and sexual risk behaviors observed in Nigerian studies is also consistent with global evidence. Research from the United States, Europe, and other African countries has documented bidirectional associations between depression and risky sexual behavior, with mental health problems increasing vulnerability to sexual risk and sexual risk experiences, particularly those involving coercion or unintended pregnancy, exacerbating mental health problems.[38] This syndemic perspective suggests that interventions targeting adolescent sexual health cannot be effective without simultaneously addressing mental health, and *vice versa*.

The role of socio-cultural context

The Nigerian socio-cultural context exerts a profound influence on the mental health consequences of premarital sex, and this influence operates through multiple mechanisms. First, the strong religious and moral proscription against premarital sex creates conditions under which sexual activity is likely to generate significant guilt and shame, particularly when adolescents have internalized these values. The finding that 86.4% of adolescents in south-eastern Nigeria believe that premarital sex is wrong indicates the near-universal internalization of conservative sexual norms,[28] such that sexually active adolescents are almost inevitably in violation of their own moral standards. Second, the gendered double standard that prevails in Nigerian society ensures that the psychological burden of premarital sex falls disproportionately on females. The finding that boys are more permissive in their sexual attitudes and less likely to endorse premarital abstinence reflects the broader cultural script that male sexual activity is normative or even commendable, while female sexual activity is transgressive.[28] This double standard has direct mental health implications: girls who engage in premarital sex face not only internal guilt but also external stigma, social exclusion, and damaged reputation, all of which compound the psychological distress associated with sexual activity.

Third, the limited availability of youth-friendly SRH services, including contraception, STI testing, and post-abortion care, means that the physical consequences of premarital sex, unintended pregnancy, STIs, and unsafe abortion often compound the psychological consequences. The high prevalence of unsafe abortion among Nigerian adolescents, driven in part by the stigma associated with premarital pregnancy, is both a physical and mental health crisis.[39-43]

Distinguishing consensual from coerced sexual activity

One of the most important findings to emerge from this review is the critical distinction between consensual and coerced premarital sexual activity. Studies that explicitly examined forced sexual initiation found it to be associated with significantly more severe and enduring psychological consequences, including altered stress perception, maladaptive coping, and higher rates of transactional sex.[25] The prevalence of forced sexual initiation in a multi-state sample indicates that a substantial minority of Nigerian adolescents experience their first sexual encounter through coercion, and the mental health burden borne by this group is likely to account for a disproportionate share of the adverse outcomes attributed to premarital sex in the broader literature.[44,45] This distinction has important implications for research and practice. Studies that aggregate all premarital sexual activity without distinguishing consensual from coerced encounters may overestimate the negative psychological consequences of voluntary sexual activity while obscuring the specific needs of survivors of sexual violence. Future research should routinely disaggregate findings by the nature of sexual initiation.

Strengths and limitations of the study, and review of existing gaps in literature

Strengths

This systematic review has several notable strengths. To our knowledge, it is the first systematic synthesis specifically examining both beneficial and adverse mental health outcomes associated with premarital sexual experiences among Nigerian adolescents and youths. The review employed a comprehensive search across multiple electronic databases, a transparent study selection process guided by PRISMA recommendations, independent screening by multiple reviewers, and methodological appraisal using the MMAT. The inclusion of quantitative, qualitative, and mixed-methods studies enabled a broader understanding of both measurable mental health outcomes and the contextual experiences influencing adolescent sexual behavior. Furthermore, the distinction between consensual and coerced sexual experiences provides a more nuanced interpretation of the relationship between premarital sex and mental health.

Limitations

Several limitations should be considered when interpreting the findings of this review. First, the exclusion of non-English publications and the absence of a systematic search of grey literature may have resulted in the omission of relevant local studies, program evaluations, and unpublished evidence. Second, the conclusions are constrained by the methodological limitations of the included studies, particularly their predominantly cross-sectional designs, reliance on self-reported sexual and psychological outcomes, and the presence of moderate risk of bias in half of the included studies. These limitations reduce the ability to establish causality and may have introduced social desirability, recall, and reporting biases.

Third, the evidence base was geographically concentrated outside Nigeria's North-East and North-West regions and disproportionately represented female participants, limiting the extent to which findings can be generalized to all Nigerian adolescents and youths. The absence of studies involving sexual minority populations further restricts understanding of the diversity of adolescent sexual experiences and mental health outcomes in Nigeria. Finally, publication bias cannot be excluded because studies reporting statistically significant or adverse associations may be more likely to be published than studies reporting null or contrasting findings.

Revised gaps in the existing literature

Several important gaps in the evidence base were identified. First, the absence of longitudinal studies limits understanding of the temporal relationship between premarital sexual experiences and subsequent mental health outcomes. Second, the predominance of studies from southern Nigeria limits the cultural and geographic representativeness of the current evidence. Given substantial regional differences in religious practices, gender expectations, educational

opportunities, and social norms across Nigeria, mental health experiences associated with premarital sex among adolescents from northern regions may differ considerably from those reported in the available studies.

Third, male adolescents and young men remain relatively underrepresented in the literature, despite the possibility that they may experience distinct psychological consequences related to sexual expectations, coercion, relationship challenges, and societal norms regarding masculinity. Fourth, there is a complete absence of studies examining sexual minority adolescents and youths, which limits understanding of the unique mental health vulnerabilities and experiences of these populations. Finally, evidence regarding positive psychosexual outcomes remains extremely limited and largely restricted to educated university populations. Future research should employ inclusive sampling approaches, longitudinal designs, and culturally sensitive methodologies to produce a more comprehensive understanding of the diverse experiences of Nigerian youth.

Conclusions

This systematic review provides the first comprehensive synthesis of evidence examining the mental health outcomes associated with premarital sexual experiences among Nigerian adolescents and youths. The findings demonstrate that these experiences are complex and strongly shaped by contextual factors, including consent, relationship quality, personal values, gender norms, access to SRH services, and broader socio-cultural influences. The available evidence indicates that adverse outcomes such as guilt, shame, depression, anxiety, diminished self-esteem, and emotional distress are commonly reported, particularly in contexts involving coercion, unintended pregnancy, social stigma, and limited support systems. However, evidence supporting positive psychosexual outcomes, including sexual esteem and satisfaction, remains limited and is largely derived from university-based populations, warranting cautious interpretation.

A balanced public health response should therefore avoid framing premarital sexual activity as uniformly harmful or universally beneficial. Instead, interventions should recognize the diversity of adolescent experiences and promote culturally sensitive sexuality education, improved access to youth-friendly SRH and mental health services, prevention of sexual coercion, and supportive social environments that enable young people to make informed and healthy decisions.

Recommendations

Based on the evidence synthesized in this review, interventions addressing adolescent sexual health and mental well-being in Nigeria should adopt culturally responsive, developmentally appropriate, and trauma-informed approaches.

1. For policymakers: comprehensive sexuality education should be strengthened within educational policies and curricula in ways that are sensitive to Nigeria's cultural and religious diversity. Engagement with parents, educators, community representatives, and faith-based stakeholders is essential to ensure that sexuality education addresses consent, healthy relationships, emotional well-being, prevention of sexual coercion, and responsible decision-making while remaining socially acceptable within local contexts.
2. For healthcare providers: youth-friendly SRH services should integrate routine assessment of psychological distress, experiences of coercion, and psychosocial needs. Healthcare professionals should receive training in adolescent-friendly communication, confidentiality, non-stigmatizing care, and trauma-informed approaches for survivors of sexual violence.
3. For educational institutions: schools and universities should strengthen counseling systems, peer-support programs, and referral pathways that provide adolescents and youths with confidential support regarding relationships, sexual concerns, mental health challenges, and experiences of abuse.
4. For religious and community leaders: given their significant influence on social attitudes and adolescent behavior, religious and community institutions should be engaged as partners in promoting supportive parent-adolescent communication, reducing harmful stigma, preventing sexual violence, and encouraging access to appropriate health services.
5. For parents and guardians: parents should be supported through community-based programs that improve their confidence and skills in discussing sexuality, relationships, consent, and emotional health with adolescents in a supportive and non-judgmental manner.
6. For researchers: future studies should prioritize longitudinal designs, include underrepresented regions of Nigeria, examine male and sexual minority populations where feasible, and evaluate interventions designed to improve both sexual and mental health outcomes.

Implications of the Study

The findings of this review have important implications for research, policy, and clinical practice. From a research perspective, there is a need for longitudinal and culturally diverse studies that examine how premarital sexual experiences interact with individual, relational, and socio-cultural factors to influence mental health over time. Particular attention should be given to underrepresented geographical regions and populations to improve the representativeness of future evidence.

For policy and public health practice, the findings suggest that interventions based exclusively on abstinence messaging may not sufficiently address the realities of adolescent sexual experiences. More effective approaches should combine age-appropriate sexuality education, mental health promotion, consent education, prevention of sexual violence, and improved access to confidential youth-friendly services within culturally acceptable frameworks.

For clinical practice, the demonstrated relationship between psychological distress, risky sexual behaviors, and sexual coercion highlights the need for integrated models of care in which SRH and mental health services operate collaboratively. Routine identification of emotional distress and experiences of coercion may facilitate earlier intervention and appropriate referral pathways.

Future directions

Future research should move beyond cross-sectional assessments to longitudinal studies capable of identifying whether mental health difficulties precede sexual initiation, result from sexual experiences, or occur through reciprocal pathways. Research should also expand to the North-East and North-West regions of Nigeria to capture the influence of diverse cultural, religious, and socio-economic contexts. Further studies involving male adolescents and young adults are needed to understand gender-specific experiences and expectations surrounding premarital sex. There is also a need for ethically conducted research exploring the experiences of sexual minor-

ity youths, whose perspectives remain largely absent from the existing literature. Additionally, intervention studies evaluating comprehensive sexuality education, integrated mental health and SRH services, digital health interventions, and community-based programmes are required to determine effective strategies for promoting healthy sexual development and psychological well-being among Nigerian adolescents and youths.

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Online supplementary material:

Supplementary Table 1. Inclusion and exclusion criteria.

Supplementary Table 2. Quality appraisal and risk of bias assessment.

Supplementary Table 3. Summary of the included studies.

Supplementary Table 4. Contrasting mental health outcomes associated with consensual and coerced premarital sexual experiences among Nigerian adolescents and youths.

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