Original Research Article

**Influence of peer pressure, loneliness and self-esteem on pre-marital sexual activities among Undergraduates in a selected private university in Osun State.**

**Abstract:** Pre-marital sexual activity holds several negative implications on physical and psychosocial well-being. Despite its prevalence, data are needed regarding the interplay between psychological state and pre-marital sexual activities of university undergraduates. This research therefore, assessed the influence of loneliness, peer pressure and self-esteem on pre-marital sexual activities among undergraduates in Redeemer's University, Nigeria. A cross-sectional survey was utilized. Three hundred and eighty purposively selected undergraduates - 194 males and 186 females between 16 to 25 (M=18.99, SD=1.61) participated in the study. A self-reported questionnaire consisting of demographic data form, University of California Loneliness Scale (UCALS), Yielding to Peer Pressure Scale (YPPS), Rosenberg Self-Esteem Scale (RSES) and the Sexual Abstinence Behavior Scale (SABS) was used to collect data. Descriptive statistics, multiple linear regression, and an independent sample t-test were utilized for the inferential data. The findings revealed that self-esteem [*β* = -.13, *t* = -2.57, *p* <.05], loneliness [*β* = .14, *t* = 2.79, *p* <.05], and peer pressure [*β* = .12, *t* = 2.33, *p* <.05] were significant predictors of pre-marital sexual activity. Significant gender differences was observed on pre-marital sexual activities among the participants (t (380) = -7.23, p <.01). It is recommended that mental health counselors should implement programmes to enhance self-esteem and social skills of those identified as vulnerable in the undergraduate population.

Keywords: Loneliness, Peer Pressure, Self-Esteem, Pre-marital Sexual Activities, Undergraduates

**Introduction**

Pre-marital sexual activities have been identified as a prevailing social issue among the youths holding severe implications for their physical and psychological health (Noroozi et al., 2014). Pre-marital sexual activities refer to any intimate contact with a mate before marriage (Hossen & Quddus, 2020), it is known to be a complex and multifaceted aspect of contemporary university life among undergraduates (De Beauvoir, 2023). This phenomenon is affected by different factors, like societal attitudes, societal norms, personal values, and individual choices (Hossen & Quddus, 2021). Within the university context, undergraduates often find themselves in an environment that encourages exploration, self-discovery, and forming intimate relationships (Teo & Simon, 2019), without the knowledge of protecting themselves against the negative physical, social and emotional implications of unsafe sex (Kim, 2017).

As societies become more progressive and open-minded, there is a reduced stigma associated with consensual sexual relationships outside the bounds of marriage (Teo & Simon, 2019). This shift in cultural attitudes may contribute to an environment where undergraduates feel more comfortable exploring their sexuality before committing to a lifelong partnership (Elshiekh et al.,2023). Moreover, the university environment itself exerts a vital influence in defining the sexual behaviors of undergraduates. The newfound independence and exposure to diverse perspectives can lead to increased experimentation with relationships and sexual activities (Offor & Offiah, 2021).

The academic environment is often characterized by social dynamics that can exert considerable pressure on students to conform to perceived norms and behaviours. (Offor & Offiah, 2021). The university experience is a time of transition and adjustment for many students, and feelings of loneliness or isolation may prompt individuals to seek companionship and intimacy through pre-marital sexual relationships (Rahmanian et al., 2022). Engaging in pre-marital sexual activities may pose risks to physical health, involving the transmission of sexually transmitted diseases (STDs) or unplanned pregnancies (Adhikari et al., 2018). Lack of proper protection, such as consistent and correct use of condoms, can heighten these risks. Students who lack adequate knowledge on safe practices and contraception are the potentials for reproductive health challenges as well as other physical and mental health consequences (Shrestha, 2019). Emotional consequences can be profound and vary widely among individuals. Such negative emotions include feelings of guilt, anxiety, or regret, particularly if the individuals involved have conflicting beliefs or values regarding sex ( Hossen & Quddus, 2021).

Studies suggest that individuals who engage in early sexual activities may experience increased vulnerability to psychological health problems, such as fear and nervousness, hopelessness and despair, as they navigate complex emotional experiences at a younger age (Scully et al., 2020). Additionally, the social stigma surrounding pre-marital sex in certain cultures can contribute to feelings of guilt or shame, potentially exacerbating the psychological consequences associated with early sexual encounters (Noroozi et al., 2014). Emotional distress, relationship issues, or unintended pregnancies can contribute to stress and distraction from academic responsibilities (Murdiningsih & Hindun, 2020). The incidence of pre-marital sexual activities among young people raises concerns about the potential influence of various psychosocial precursors such as peer pressures, loneliness, and self-esteem on the decision-making processes of these individuals. Loneliness, peer influence, self-esteem and the desire for acceptance may drive some undergraduates to imbibe in pre-marital sex to fit into the social fabric of university life (Adhikari et al., 2018).

 Loneliness is a pervasive and complex emotional state beyond the simple absence of social connections (Motta, 2021). At its core, loneliness reflects a deep sense of disconnection, where individuals feel emotionally isolated despite being surrounded by others (Yanguas et al., 2018). The phenomenon is not solely linked to physical solitude but can manifest in social relationships lacking meaningful connection (Barreto et al., 2021). The experience of loneliness can be overwhelming, affecting mental and physical well-being, and it often originates from a misalignment of one's social expectations and actual social interactions (Cacioppo & Cacioppo, 2018; Lim et al., 2020). The absence of meaningful social engagement can lead to a negative spiral, where feelings of isolation contribute to a diminished sense of self-worth, exacerbating the overall emotional distress (Luchetti et al., 2020).

 Furthermore, loneliness has tangible effects on physical health. Research indicates prolonged social isolation can lead to increased stress levels, disrupted sleep patterns, and weakened immune systems (Lim et al., 2020). The physiological impact underscores the interrelationship between mental and physical well-being, highlighting the importance of addressing loneliness as a holistic concern (Slater, 2019 ). Paradoxically, individuals may feel lonelier in a hyper-connected world, where online interactions often substitute for genuine face-to-face connections (Erzen & Çikrikci, 2018). The quality of social interactions becomes crucial, and fostering meaningful relationships requires intentional efforts beyond superficial online connections.

 Loneliness, often stemming from the challenges of adjusting to a new academic and social environment, can influence students' decisions regarding intimate relationships. Seeking connection and companionship, some undergraduates may get involved in pre-marital sex to alleviate feelings of isolation (Lawal & Okereke, 2021). However, this pursuit of intimacy can be a double-edged sword, as engaging in sexual activities without genuine emotional connection may exacerbate feelings of loneliness in the long run (Rahmanian et al., 2022). Additionally, the societal expectation that romantic involvement can alleviate loneliness may pressure individuals into premature or ill-advised sexual encounters (Dinh & Van Teijlingen, 2021; Slater, 2019).

Peer pressure is a pervasive and influential aspect of social dynamics, particularly during adolescence and early adulthood. It refers to the impact of peers' influence on the likelihood of an individuals to adopt attitudes, behaviors, or expectations that are contrary to their choice (Tegegne, 2022). This phenomenon can manifest in various forms, both positive and negative, shaping individuals' choices, values, and lifestyles (Ndie et al., 2019). Peer pressure is associated with social and emotional consequences. Harmful behaviours or activities such as substance abuse, risky sexual behaviours, or engagement in delinquent activities may result from the influence of peers who encourage such actions (Moldes et al., 2019). The need to fit in and gain social approval can override individual values, leading to regrettable decisions (Damtie et al., 2022). Peer pressure can contribute to a cycle of risky behaviours, impacting the individual and the broader community (Leshargie et al., 2019).

During adolescence, a period marked by identity formation, individuals often grapple with the need for acceptance and belonging. Peer pressure plays a pivotal role in shaping one's sense of identity, as individuals may conform to societal norms or group expectations to gain social approval (Murdiningsih & St Hindun, 2020). This can result in a struggle to align personal values with external expectations, leading to internal conflicts and challenges in establishing an authentic sense of self. Peer pressure has a vital impact on the landscape of pre-marital sexual activities among undergraduates. The social environment on college campuses often exerts a powerful influence on individual behaviours, and the pressure to conform to perceived norms can impact decisions related to relationships and sexuality (Ghaffari et al., 2020).

 Self-esteem is the overall perception of an individual's own worth and significantly influences an individual's mental and emotional well-being (Branden, 2021). A healthy level of self-esteem is associated with positive outcomes, including resilience, the capacity to adapt or cope with life's trials, or the pursuit of personal aspirations ( Orth et al., 2018). Individuals with high self-esteem are more likely to engage in behaviours that promote their well-being and success, as they possess a sense of confidence in their abilities and a belief in their intrinsic value. Conversely, low self-esteem can have profound and far-reaching consequences on a person's well-being (Orth et al., 2018). It may manifest in self-doubt, negative self-talk, and a pervasive inadequacy. Such feelings can hinder personal and professional development, as individuals experiencing low self-esteem avoid taking on new challenges due to fear of rejection (Rubio, 2021). This impact can extend to relationships, influencing the ability to form and maintain healthy connections with others (Orth et al., 2018).

 Conversely, experiences of criticism, neglect, or unrealistic societal standards can erode self-esteem. As individuals transition through different life stages, they continue to shape and refine their self-perception through ongoing experiences, relationships, and achievements (Rubio, 2021). The relationship between self-esteem and pre-marital sexual activities among undergraduates is intricate, influenced by societal expectations, individual beliefs, and the quest for validation. Individuals with high self-esteem may feel empowered to make autonomous decisions about their sexuality, engaging in pre-marital sex as a reflection of their confidence and self-assuredness . On the contrary, those with lower self-esteem might be more susceptible to external pressures, seeking affirmation and acceptance through intimate relationships (Lin & Lin, 2018). For some, pre-marital sexual activities may serve as a means of bolstering self-worth. In contrast, for others, it could result from a desire to conform to perceived norms, potentially leading to a complex interplay between personal values and external expectations (Shrestha, 2019).

 Examining the influence of loneliness, peer pressure, and self-esteem on pre-marital sexual activities among undergraduates is significant as few statistics are available on the psychological and social issues surrounding the possibility of undergraduates engaging in pre-marital sexual practice within the Nigerian context. This study examines the predictive impact of loneliness, peer pressure and self-esteem on the frequency and involvement of undergraduates in pre-marital sexual activities in Redeemer's University, Nigeria. The following hypotheses will guide the present study

1. Peer pressure, loneliness and self-esteem will jointly and significantly predict pre-marital sexual activities.
2. Sociodemographic variables (age, gender and level of study) will jointly and significantly predict pre-marital sexual activities.
3. There will be significant sex differences between male and female undergraduates in relation to engagement in pre-marital sexual activities

**Method**

 **Research Design**

 The research utilized a nonexperimental correlation design.

**Sampling Techniques**: The study comprised of a cohort of undergraduates who were purposely selected from the faculties, programmes, levels of study and gender. Out of a total population of 6,700 undergraduates across eight faculties in Redeemer's University, the Taro Yamane formula for proportional sampling was used to calculate a total of three hundred and eighty (380) as the sample size. It was distributed proportionately among the eight faculties based on the number of students in each faculties using Krejcie & Morgan Kumar (1976) proportional allocation formula. Inclusion criteria include the students' being undergraduates and not below the age of 17 years; informed consent was also obtained after the objectives had been relayed to them. Participants who were unwilling to participate voluntarily in the study or are postgraduates' students were excluded.

**Study Participants:** The participants comprised of 194 (51.1%) males and 186 (48.9%) females, with age range between 17 and 25 years (*M* =18.99; *SD* =1.61). The majority, 378 (99.5%) were single, while only 2 (0.5%) were married. Most of the participants identified as Christian (99.2%), with the rest identifying as Muslim (0.8). The distribution according to their faculties shows that 30 (7.9%) were from the Built Environment, 68 (17.9%) were from the Basic Medical Sciences, 42 (11.1%) were from Engineering, 35 (9.2%) were from the Law, 28 (7.4%) were from the Management Sciences, 45 (11.8%) were from the Humanities, 70 (18.4%) were from the Natural Sciences and 62 (16.2%) were from the Social Sciences. Lastly, the level/year of study of the participants indicated that 71 (18.7%) were in 100L, 113 (29.7%) were in 200L, 97 (25.5%) were in 300L, 85 (22.4%) were in 400L and 14 (3.7%) were in 500L.

**Instruments:**

1. The Sexual Abstinence Behavior Scale is a 4-item scale developed by Norris et al. (2003). The scale assessed individuals' attitudes regarding the tolerability of pre-marital sex at varieties of their interpersonal engagement on a four-Likert response scale ranging between 0 (strongly disagree) to 4 (strongly agree). A high level of reliability (*α* = 0.77) was observed in the current study.
2. Peer Pressure Scale (PPS) is an 11-item instrument created by Palani and Mani (2016) to examine vulnerability to peer pressure among young persons. The instrument is rated on a 5-Likert scale (1 = strongly disagree to 5 = strongly agree). The aggregate score of each person is used to determine the manner in which one is susceptible to yielding to pressure from external persons. Cronbach's Alpha value observed in the current study was 0.79.
3. UCLA Loneliness Scale is a twenty-item self-reported instrument created by Russell (1996), to examine the subjective experiences of social isolation and loneliness. Respondents rank the respective items as either O ("I often feel this way."), S ("I sometimes feel this way."), R ("I rarely feel this way."), or N ("I never feel this way."). A higher score indicates more loneliness. The present study's internal consistency for UCLA-20 was α = 0.81.
4. Rosenberg self-esteem scale (Rosenberg, 1965) is a uni-dimensional instrument that examines global self-worth with 5-items that investigate how individuals look or feel about themselves. The items are worded in positive and negative statements on a 5-point scale, with answers varying from 0 (strongly disagree) to 4 (strongly agree). Items 3, 5, 8, 9, 10 are reversed scored. Hence, the higher the score the higher the self-esteem. The internal consistency of the current study was satisfactory (α = 0.83).

**Ethical Consideration**

Research ethics for human participants were observed in line with the Helsinki Declaration. The objectives and proposed procedures were scrutinized by the ethical body at the Department of Psychology, Redeemer's University, Nigeria. Before the informed consent was obtained, the participants were briefed on the objectives, method, and possible risks and benefits of their inclusion in the research. The participants were informed of their right to exit the study without any consequence and they were assured of the confidentiality of their information.

**Data Analysis**

Statistical Package for Social Sciences (SPSS) version 27 was used to analyse descriptive and inferential statistics. Pearson (r) was used to assess the relationships among study variables while multiple linear regression analyses were utilized to test the formulated hypotheses.

**RESULTS**

# Table 1- Test of Relationship between variables

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Age
 | 1 | -.19\*\* | .00 | -.07 | .01 | .08 | -.03 |
| 1. Gender
 |  | 1 | -.03 | -.04 | .10\* | -.12\* | .35\*\* |
| 1. Level of Study
 |  |  | 1 | .01 | .06 | -.07 | .11\* |
| 1. Self-esteem
 |  |  |  | 1 | -.03 | -.01 | -.13\* |
| 1. Loneliness
 |  |  |  |  | 1 | .11\* | .14\*\* |
| 1. Peer Pressure
 |  |  |  |  |  | 1 | -.13\* |
| 1. Pre-marital Sexual Activities
 |  |  |  |  |  |  | 1 |

*Summary of Correlation Matrix among the Variables in the Study*

Note: \*\*p<.01, \*p<.05 N=380. Gender was coded 1 =Male, 2 = Female, Level of Study was coded 1 = 100L, 2= 200L, 3 = 300L, 4 = 400L, 5 = 500L.

The result in Table 1 shows the test of the relationship between variables. It was noted that gender had a significant relationship with loneliness [*r* (380) = .10, *p* <.05] and peer pressure [*r* (380) = -.12, *p* <.05] and pre-marital sexual activities [*r* (380) = .35, *p* <.01], indicating that female students have a higher level of loneliness, male undergraduate experience a high level of peer pressure while female undergraduates experience a high level of pre-marital sexual activities. Self-esteem has a significant relationship with pre-marital sexual activities [*r* (395) = -.13, *p* >.05], showing that as self-esteem increases, the likelihood of engaging in pre-marital sexual activities decreases. Also, the result indicates that there is a significant relationship between loneliness and pre-marital sexual activities [*r* (395) = .14, *p* >.05], this entails that an increase in loneliness will lead to an increase in pre-marital sexual activities among undergraduates. The result further showed a significant negative relationship between peer pressure and pre-marital sexual activities [*r* (395) = .13, *p* >.05], indicating that as peer pressure increases, the possibility of engaging in pre-marital sexual activities also increases among undergraduates.

# Table 2- *Multiple Linear Regression Analysis for the Prediction of Self-esteem, loneliness and peer pressure on Pre-marital Sexual Activities*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **ꞵ** | **T** | **R** | **R2** | **df** | **F** |
|  |  |  | .22 | .05 | 376 | 6.32\*\* |
| Self-Esteem  | -.13 | -.2.57\* |
| Loneliness | .14 |  2.79\* |
| Peer Pressure | .12 | 2.33\* |  |  |  |  |

Note: \*\* p < 0.01, \* p < 0.05, N=380

The results in Table 2 showed that self-esteem [*β* = -.13, *t* = -2.57, *p* <.05], loneliness [*β* = .14, *t* = 2.79, *p* <.05], and peer pressure [*β* = .12, *t* = 2.33, *p* <.05] were significant predictors of pre-marital sexual activities among undergraduates. It was further observed that the variables contributed a significant variance of 5% to the total variance observed in pre-marital sexual activities among undergraduates [*R* = .22, *R2* =.05, *F* (1, 376) = 6.32, *p* <.01]. The result confirmed hypothesis 1, and it was accepted.

# Table 3- *Multiple Linear Regression Analysis showing the Prediction of Sociodemographic variables (age, gender and level of study) on Pre-marital Sexual Activities*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **ꞵ** | **T** | **R** | **R2** | **df** | **F** |
|  |  |  | .37 | .14 | 376 | 19.76\*\* |
| Age | .04 |  .74 |
| Gender | .36 | 7.34\*\* |
| Level of Study | .12 | 2.42\* |  |  |  |  |

Note: \*\* p < 0.01, \* p < 0.05, N=380

The results in Table 3 reveal that age did not significantly predict pre-marital sexual activities [*β* = .04, *t* = .74, *p* >.05] while gender [*β* = .36, *t* = 7.34, *p* <.01] and level of study [*β* = .12, *t* = 2.42, *p* <.05] were significant predictors of pre-marital sexual activities among undergraduates. It was further observed that the variables (gender and level of study) contributed a significant variance of 14% to the total variance observed in pre-marital sexual activities among undergraduates [*R* = .37, *R2* =.14, *F* (1, 376) = 19.76, *p* <.01]. The result confirmed hypothesis 2, and it was accepted.

# Table 4- *Independent t-test showing the influence of gender on pre-marital sexual activities*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Variable* | *Source* | *N* | *Mean* | *SD* | *df* | *T* | *P* |
| *Gender* | *Male* | *194* | *7.81* | *5.40* | *378* | *-7.23* | *.000* |
| *Female* | *186* | *11.47* | *4.40* |

N=380, Gender was coded 1 =Male, 2 = Female

The results in Table 4 reveals that there was a significant difference between gender and pre-marital sexual activities {t (380) = -7.23, p <.01}. It was observed that there is a significant difference between the mean score for males (x̄=7.81, SD= 5.40) and females (x̄=11.47, SD = 4.40) university undergraduates. This suggests that the female undergraduates have a high level of likelihood to engage in pre-marital sexual activities compared to male students. The hypothesis which suggested a significant influence between gender and pre-marital sexual activities is, therefore, accepted.

**Discussion**

The present research assessed the predictive impact of peer pressure, loneliness and self-esteem on pre-marital sexual activities among undergraduates. According to the findings of the analyses, self-esteem, loneliness, and peer pressure were significant predictors of pre-marital sexual activity. This implies that social influence such as peer support, norms and modelling have a significant impact on university students' sexual behaviours. This finding was also reported by a study of psychosocial determinants of pre-marital sexual practices among university students in Sudan (Elshiekh et al., 2023). Previous studies have reported similar results (Hossen & Quddus, 2020; Mulugeta & Berhane, 2014). This implies that interventions seeking to promote delaying the initiation of sexual activity among undergraduates can utilized strategies that promote advantageous social and peer influence as well as equip students with capacity to manage peer influence to practice sex.

Considering the observed strong influence of peers, peer education interventions have been widely used to influence the sexual behaviours among youth (Akuiyibo et al., 2021; Ningrum, & Sumaryani, 2018) and may prove helpful in the current population. Loneliness and self-esteem have also been reported to be connected to peer relations (Pop et al., 2022). The result is consistent with the results of other studies where individuals who reported being isolated from their social network have been found to report lower esteem levels and more predisposed to engage in pre-marital sexual activity (Wéry et al., 2020)

Results of the current study also revealed a significant gender difference in engaging in pre-marital sex. Females have high possibility in involving in pre-marital sex than males, this finding supported the earlier observation by Ajuwon et al. (2006), that girls have permissive attitude to pre-marital sex than boys. However, evidence from other studies examining gender differences in pre-marital sexual activity (Czaderny, 2024) assert that males have higher likelihood of engaging in premarital sex. This inconsistency can be attributed to cultural differences and other factors such as parental monitoring and religiosity. Due to the prevalent practice of no open conversations about sex, parents and other caregivers rarely engage in face-to-face interactions about sex-related issues with their wards (Aliyu & Aransiola, 2023; Olusanya & Jegede, 2022; Alowolodu et al., 2020).

The present study focusses on specific psychological elements of pre-marital sexual activity amid university undergraduates. Utilizing a self-reported instrument, participants were able to freely release sensitive information regarding their sexual practices and attitudes. Participants were selected using random sampling as well as snowballing; hence, the sample of this research may not give a full glance of the phenomenon, similarly, the applying the result to wider population should be with caution. Despite these limitations, this study gives a distinct information for future sexual-health-related interventions for university students within the Nigeria context and other similar context.

**Conclusion**

The psychosocial components of premarital sexual activities include self-esteem, loneliness, peer-pressure, gender and level of study. The results of the study support the need for psychological treatment and counseling geared towards helping university undergraduates to manage emotional issues arising from the low self-esteem, peer pressure and loneliness. Future research can explore the prevalence and risk of pre-marital sexual activities, age of first intercourse among young persons out of the school or in school.

**Declaration**

**DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

The author(s) declare that in the writing or editing of this manuscript, the use of any generative AI technology such as Large Language Models (ChatGPT, COPILOT, etc.) or any text-to-image generators was strictly prohibited.

**CONSENT**

The participant(s) provided written consent, which has been collected and preserved by the author(s), in accordance with international or university ethical standards.

**References**

Adhikari, N., Adhikari, S., & Sulemane, N. I. (2018). Pre-marital sexual behaviour among higher secondary students in Pokhara Sub-Metropolitan City Nepal. *Sexual Health*, *15*(5), 403. https://doi.org/10.1071/sh17210

Akuiyibo, S., Anyanti, J., Idogho, O., Piot, S., Amoo, B., Nwankwo, N., & Anosike, N. (2021). Impact of peer education on sexual health knowledge among adolescents and young persons in two North Western states of Nigeria. *Reproductive Health*, *18*(1). https://doi.org/10.1186/s12978-021-01251-3

Aliyu, T. K., & Aransiola, J. O. (n.d.). *Parent-Adolescent Communication About Reproductive Health Issues in Nigeria*. SAGE Open. https://doi.org/10.1177/21582440231166607

Alowolodu, O. O., Olusanya, O. A., & Olusanya, O. A. (4 C.E., February 15). *Household Sexual Communication Dynamics and adolescent Sexual Health : Implications for Emerging Interventions in Ondo State, Nigeria*. Sabinet African Journal. Retrieved June 27, 2020, from <https://hdl.handle.net/10520/EJC-1d03e1ad1a>

Ajuwon, A. J., Olaleye, A., Faromoju, B., & Ladipo, O. (2006). Sexual behavior and experience of sexual coercion among secondary school students in three states in North Eastern Nigeria. *BMC Public Health*, *6*(1). https://doi.org/10.1186/1471-2458-6-310

Barreto, M., Victor, C., Hammond, C., Eccles, A., Richins, M. T., & Qualter, P. (2021). Loneliness around the world: Age, gender, and cultural differences in loneliness. *Personality and Individual Differences*, *169*, 110066. https://doi.org/10.1016/j.paid.2020.110066

Branden, N. (1992). *The power of self-esteem*. http://ci.nii.ac.jp/ncid/BA53674924

Cacioppo, J. T., & Cacioppo, S. (2018). The growing problem of loneliness. *Lancet*, *391*(10119), 426. https://doi.org/10.1016/s0140-6736(18)30142-9

Czaderny, K. (2023). Moderating effect of gender on the relationship between sexual knowledge and sexual activity among adolescents. *Sexuality Research & Social Policy/Sexuality Research and Social Policy*, *21*(1), 253–262. https://doi.org/10.1007/s13178-023-00899-9

Damtie, Y., Cherie, N., Fentaw, H., Kefale, B., Addisu, E., Yalew, M., Arefaynie, M., Adane, M., Adane, B., Kassa, A. A., Abebayehu, A., & Ayele, F. Y. (2022). Pre-marital sex and its association with peer pressure and watching pornography among young individuals in Ethiopia: a systematic review and meta-analysis. *Scientific Reports*, *12*(1). https://doi.org/10.1038/s41598-022-13448-y

De Beauvoir, S. (2012). *The second sex*. Vintage.

Deutscher, I., & Slater, P. (1971). The Pursuit of Loneliness: American culture at the breaking point. *Social Forces*, *49*(4), 642. https://doi.org/10.2307/2576762

Dinh, T., & Van Teijlingen, E. (2019). Factors influencing engagement in pre-marital sex among Vietnamese young adults: a qualitative study. *International Journal of Adolescent Medicine and Health*, *33*(4). https://doi.org/10.1515/ijamh-2018-0201

Elshiekh, H. F., Hoving, C., & De Vries, H. (2022). Psychosocial Determinants of Pre-marital Sexual Practices among University Students in Sudan. *Sexuality & Culture*, *27*(1), 78–103. https://doi.org/10.1007/s12119-022-10004-8

Elshiekh, H. F., Hoving, C., & De Vries, H. (2023). Psychosocial determinants of consistent condom use among university students in Sudan: findings from a study using the Integrated Change Model. *BMC Public Health*, *23*(1). https://doi.org/10.1186/s12889-023-15466-5

Erzen, E., & Çikrikci, Ö. (2018). The effect of loneliness on depression: A meta-analysis. *International Journal of Social Psychiatry*, *64*(5), 427–435. https://doi.org/10.1177/0020764018776349

Gebhard, C., Regitz-Zagrosek, V., Neuhauser, H. K., Morgan, R., & Klein, S. L. (2020). Impact of sex and gender on COVID-19 outcomes in Europe. *Biology of Sex Differences*, *11*(1). https://doi.org/10.1186/s13293-020-00304-9

Hossen, M. A., & Quddus, A. H. G. (2020). Prevalence and determinants of pre-marital sex among university students of Bangladesh. *Sexuality & Culture*, *25*(1), 255–274. https://doi.org/10.1007/s12119-020-09768-8

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607–610. https://doi.org/10.1177/001316447003000308

Lawal, A. M., & Okereke, C. G. (2020). Relationship satisfaction in cohabiting university students: evidence from the role of duration of cohabitation, loneliness and sex-life satisfaction. *Vulnerable Children and Youth Studies*, *16*(2), 134–143. https://doi.org/10.1080/17450128.2020.1842574

Leshargie, C. T., Alebel, A., Kibret, G. D., Birhanu, M. Y., Mulugeta, H., Malloy, P., Wagnew, F., Ewunetie, A. A., Ketema, D. B., Aderaw, A., Assemie, M. A., Kassa, G. M., Petrucka, P., & Arora, A. (2019). The impact of peer pressure on cigarette smoking among high school and university students in Ethiopia: A systemic review and meta-analysis. *PloS One*, *14*(10), e0222572. https://doi.org/10.1371/journal.pone.0222572

Lim, M. H., Eres, R., & Vasan, S. (2020). Understanding loneliness in the twenty-first century: an update on correlates, risk factors, and potential solutions. *Social Psychiatry and Psychiatric Epidemiology*, *55*(7), 793–810. https://doi.org/10.1007/s00127-020-01889-7

Lin, H., & Lin, Y. (2018). The study of body image, self-esteem and sexual satisfaction of college students in Southern Taiwan. *Universal Journal of Educational Research*, *6*(4), 647–652. https://doi.org/10.13189/ujer.2018.060408

Luchetti, M., Lee, J. H., Aschwanden, D., Sesker, A., Strickhouser, J. E., Terracciano, A., & Sutin, A. R. (2020). The trajectory of loneliness in response to COVID-19. *American Psychologist/the American Psychologist*, *75*(7), 897–908. https://doi.org/10.1037/amp0000690

Mlyakado, B. P., & Timothy, N. (2014). *Effects of Students' Sexual Relationship on Academic Performance among Secondary School Students in Tanzania*. https://www.semanticscholar.org/paper/Effects-of-Students%27-Sexual-Relationship-on-among-Mlyakado-Timothy/9024cce16c1e48e772dffde041af4daf55047f29

Moldes, V. M., Biton, C. L. L., Gonzaga, D. J., & Moneva, J. C. (2019). Students, Peer Pressure and their Academic Performance in School. *International Journal of Scientific and Research Publications*, *9*(1), p8541. https://doi.org/10.29322/ijsrp.9.01.2019.p8541

Motta, V. (2021). Key concept: loneliness. *Philosophy, Psychiatry & Psychology*, *28*(1), 71–81. https://doi.org/10.1353/ppp.2021.0012

Mulugeta, Y., & Berhane, Y. (2014). Factors associated with pre-marital sexual debut among unmarried high school female students in bahir Dar town, Ethiopia: cross- sectional study. *Reproductive Health*, *11*(1). https://doi.org/10.1186/1742-4755-11-40

Murdiningsih, M., Rohaya, R., Hindun, S., & Ocktariyana, O. (2020). The effect of adolescent reproductive health education on pre-marital sexual behavior. *International Journal of Public Health Science*, *9*(4), 327. https://doi.org/10.11591/ijphs.v9i4.20444

Ndie, N. E. C., Anene, N. J. O., & Ezenduka, N. P. O. (2019). Assessment of effect of peer pressure and mass media on secondary school students' involvement in pre-marital sex in Anambra state of Nigeria. *Journal of Health Science*, *7*(4). https://doi.org/10.17265/2328-7136/2019.04.003

Ningrum, S. a. W., & Sumaryani, S. (2018). Peer education prevents sexual risk behavior among adolescents in rural area. *Indonesian Nursing Journal of Education and Clinic (Jurnal Pendidikan Dan Praktik Keperawatan Indonesia)*, *2*(2), 193. https://doi.org/10.24990/injec.v2i2.172

Noroozi, M., Taleghani, F., Merghati-Khoei, E., Tavakoli, M., & Gholami, A. (2014). *Pre-marital sexual relationships: Explanation of the actions and functions of family*. https://www.semanticscholar.org/paper/Premarital-sexual-relationships%3A-Explanation-of-the-Noroozi-Taleghani/230274ca95f527eb2f61cf1e41918d506402f410

Norris, A. E., Clark, L. F., & Magnus, S. (2003). Sexual abstinence and the Sexual Abstinence Behavior Scale. *Journal of Pediatric Health Care*, *17*(3), 140–144. https://doi.org/10.1067/mph.2003.12

Nurmala, I., Ahiyanasari, C. E., Wulandari, A., & Pertiwi, E. D. (2019). Pre-marital Sex Behavior Among Adolescent: The Influence of Subjective Norms and Perceived Behavioral Control Toward Attitudes of High School Student. *Malaysian Journal of Medicine & Health Sciences*, *15*(3).

Offor, U. I., & Offiah, C. (2021). Reasons And Implications of Pre-marital Sexual Escapades Among Female Undergraduates of Nnamdi Azikiwe University, Awka. *UNIZIK Journal of Educational Research and Policy Studies*, *9*, 154–162.

Olusanya, O., & Jegede, A. (2022). Existing Practices of Parent-child Communication on Sex-related Matters among Households in Ondo State, Nigeria. *European Scientific Journal*, *18*(22), 159. https://doi.org/10.19044/esj.2022.v18n22p159

Orth, U., Erol, R. Y., & Luciano, E. C. (2018). Development of self-esteem from age 4 to 94 years: A meta-analysis of longitudinal studies. *Psychological Bulletin*, *144*(10), 1045–1080. https://doi.org/10.1037/bul0000161

Palani, V., & Mani, S. (2016). Exploratory factor analysis: development of perceived peer pressure scale. *International Journal of Information Science and Computing*, *3*(1), 31. https://doi.org/10.5958/2454-9533.2016.00004.1

Pop, L. M., Iorga, M., & Iurcov, R. (2022). Body-Esteem, Self-Esteem and Loneliness among Social Media Young Users. *International Journal of Environmental  Research and Public Health/International Journal of Environmental Research and Public Health*, *19*(9), 5064. https://doi.org/10.3390/ijerph19095064

Rahmanian, F., Zarei, N., & Motazedian, N. (2022). Risk factors of pre-marital sex among university girl students: a Qualitative study. *Shiraz E Medical Journal.*, *23*(6). https://doi.org/10.5812/semj.113737

Rubio, F. (2007). *Self-Esteem and foreign language learning*. https://dialnet.unirioja.es/servlet/libro?codigo=277697

Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, Validity, and factor structure. *Journal of Personality Assessment*, *66*(1), 20–40. https://doi.org/10.1207/s15327752jpa6601\_2

Scully, M., Swords, L., & Nixon, E. (2020). Social comparisons on social media: online appearance-related activity and body dissatisfaction in adolescent girls. *Irish Journal of Psychological Medicine*, *40*(1), 31–42. https://doi.org/10.1017/ipm.2020.93

Shrestha, R. B. (2019). Pre-marital Sexual Behaviour and its Impact on Health among Adolescents. *Journal of Health Promotion*, *7*, 43–52. https://doi.org/10.3126/jhp.v7i0.25496

Tegegne, W. A. (2022). Self-esteem, peer pressure, and demographic predictors of attitude toward pre-marital sexual practice among first-year students of Woldia University: Implications for psychosocial intervention. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.923639

Teo, H. S. Y., & Simon, A. (2019). The perception of pre-marital sex among students in a religious moral based university. *Abstract Proceedings International Scholars Conference*, *7*(1), 1558–1585. https://doi.org/10.35974/isc.v7i1.1004

Wéry, A., Canale, N., Bell, C., Duvivier, B., & Billieux, J. (2020). Problematic online sexual activities in men: The role of self‐esteem, loneliness, and social anxiety. *Human Behavior and Emerging Technologies*, *2*(3), 217–226. https://doi.org/10.1002/hbe2.193

Yanguas, J., Pinazo-Henandis, S., & Tarazona-Santabalbina, F. J. (2018). The complexity of loneliness. *PubMed*, *89*(2), 302–314. https://doi.org/10.23750/abm.v89i2.7404