Research Article

Sexuality and Attachment Styles as Predictors of Romantic Jealousy Among Women in Edo State, Nigeria: A Cross-Sectional Study

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Abstract

Background: Increasing rates of violence in romantic relationships have been reported to relate to jealousy. Romantic jealousy may have protective or deleterious effects on relationships depending on the scope, severity, and influence of sexuality, attachment styles, and inherent socio-demographic correlates. Developing effective strategies for improving the quality of romantic relationships requires a thorough understanding of the dynamics of romantic jealousy.

Objectives: This study aimed to examine the effects of sexuality and attachment styles on romantic jealousy among female nurses in Edo State, Nigeria.

Methods: In this cross-sectional study, the nurses (n = 468) from four hospitals in two local government areas in Edo State, Nigeria, were investigated. Participants were asked to complete a socio-demographic questionnaire, the Multidimensional Romantic Jealousy Scale, Multi-dimensional Sexuality Scale, and Adult Attachment Scale.

Results: Minority of the participants reported severe forms of romantic jealousy across domains (i.e., cognitive (16%), emotional (15.8%), and behavioral (17%)). While increasing age predicted cognitive jealousy, attachment styles, and sexuality jointly predicted all domains of romantic jealousy ($R = 0.35$, $R^2 = 0.12$, $F_{(11, 456)} = 5.87$, $P < 0.01$) among the participants.

Conclusions: In sum, romantic jealousy was infrequent among our study participants. Patterns of attachment styles and sexuality were found capable of predicting romantic jealousy.

Keywords: Attachment Style, Jealousy, Nurses, Sexuality

1. Background

Jealousy generally refers to the thoughts or feelings of insecurity, fear, and concern over a relative lack of possessions. It can consist of one or more emotions, such as anger, resentment, inadequacy, helplessness, or disgust. In its original meaning, jealousy is distinct from envy, though both terms have popularly become synonymous in the English language, with jealousy now also taking on the definition originally used for envy alone. Jealousy is a typical experience in human relationships, and it has been observed in infants as young as five months (1). Some researchers argue that jealousy is seen in all cultures and is, in effect, a universal trait (2); others, on the other hand, believe that it is a culture-specific emotion (3).

Romantic jealousy is defined as a set of thoughts, feelings, and actions that follow a threat to the existence or quality of a relationship, generated by the perception of a potential romantic attraction between the partner and a real or imaginary rival (4, 5). It has been also described as a cluster of emotions whose adaptive value is to coun-teract the breakdown of existing social ties (6). Romantic jealousy constitutes a sociocultural phenomenon present in varying degrees in all societies (7). When control is lost, however, intense and constant jealousy can become pathological (8-11).

Romantic relationships are a significant part of our lives. Healthy relationships increase our life satisfaction and psychological well-being, protecting us against the dangerous effects of stress (12-14). It provides us with a variety of positive effects, such as companionship, passion, and intimacy (15). Unfortunately, however, romantic relationships can also be a source of great sorrow and suffering. This is because factors such as jealousy, rejection, abandonment, and conflicts in a relationship can cause psychological distress and emotional pain. In fact, problems in romantic relationships may lead to the emergence or exacerbation of existing psychopathological symptoms such as depression, anxiety, and substance abuse (15).

Romantic jealousy, which is characterized by feelings of anger, humiliation, sadness, insecurity, and rejection,

has been associated with low self-esteem, dissatisfaction, and chronic doubts. Although jealousy is a normal emotion and can be an important component of healthy relationships, it may become pathological if the levels of intensity, persistence, and lack of insight are abnormally increased, especially if the symptoms are not noticed and treated in a timely manner [11].

According to attachment theory, the quality of a child's interactions with caregivers during the times of need shapes their future interactions, which include later relationships [16]. Studies have shown that insecure-avoidant individuals tend to report more romantic jealousy than those who are securely attached. This may be due to the fact that those who are insecurely attached, in comparison to securely attached individuals, tend to experience lower levels of trust, intimacy, and stability in their romantic relationships [17]. Available evidence suggests that individuals experiencing low self-esteem are much more afraid of their partners' dissatisfaction and unfaithful, which, in turn, increases the likelihood of experiencing romantic jealousy among them [18].

Sexuality and attachment are integral to the expression of healthy romantic relationships [19, 20]. Stable and secure attachment styles are consistent with positive engagement and sexuality. These dynamics have not received enough research attention in sub-Saharan Africa. Furthermore, there is a fear that western-styled education may influence cultural nuances in the expression of romantic jealousy.

2. Objectives

This study mainly aimed to examine the possible effects of sexuality (i.e., sexual esteem, sexual depression, and sexual preoccupation), socio-demographic variables (i.e., age, duration of the marriage, and family type), and attachment style (i.e., avoid, secure, and anxiety) on romantic jealousy among nurses in Edo State, Nigeria.

2.1. Hypotheses

Sexuality, attachment styles, and socio-demographic variables significantly predict cognitive, emotional, and behavioral subtypes of romantic jealousy among female nurses in Edo State, Nigeria.

3. Methods

3.1. Participants

To conduct this cross-sectional study, a sample of 468 female nurses aged 22 - 59 years (mean: 34.19; SD = 8.61) and living in Edo State were recruited between February and March 2022.

3.2. Instruments

3.2.1. Socio-demographic Characteristics

The data on age (years), religion, level of education, and family type were obtained using a socio-demographic questionnaire with four items.

3.2.2. Multidimensional Romantic Jealousy Scale

The Multidimensional Romantic Jealousy Scale (MJS) short form [21] is a 17-item scale with three subscales aimed at evaluating three components of jealousy, namely cognitive, emotional, and behavioral jealousy. According to the authors of this scale, the overall scale and all its subscales show good reliability, particularly in terms of cognitive, emotional, and behavioral jealousy (Cronbach's alpha 0.92, 0.85, and 0.89, respectively) [21]. Cronbach Alpha in this study was 0.92, 0.90, and 0.79 for cognitive, emotional, and behavioral domains, respectively.

3.2.3. Multi-dimensional Sexuality Scale

This one is a 30-item sexuality scale [22] with three subscales, including sexual esteem, sexual preoccupation, and sexual depression, each of which consists of ten items. It has a 5-point Likert scoring format ranging from 1 (agree) to 5 (disagree). Psychometric properties reported for the three subscales are as follows: Sexual esteem (range = 0.91 to 0.92), sexual depression (range = 0.85 to 0.93), and sexual preoccupation (range = 0.87 to 0.91). Psychometric properties in this study were 0.80, 0.73, and 0.72 for sexual esteem, sexual depression, and sexual preoccupation, respectively.

3.2.4. Adult Attachment Scale

This scale measures adult attachment styles by three subscales, namely secure, anxious, and avoidant [23]. The scale consists of 18 items, and it is scored on a 5-point Likert-type scale ranging from 1 (very uncharacteristic of me) to 5 (very characteristic of me). Collins and Read [23] reported Cronbach's alpha coefficients of 0.69 for Close, 0.75 for Depend, and 0.72 for Anxiety. Cronbach alpha in this study was 0.73, 0.72, and 0.74 for close, depend, and anxious attachment, respectively. In this scale, the scores above the mean are suggestive of a high level of attachment.

3.3. Sample Size Calculation

The total population of female nurses from the selected facilities was 1, 411. Since the population was known, the formula by Krejcie and Morgan [24] was used to calculate the appropriate sample size as:

$$n = \frac{\chi^2 \, NP \, (1-P)}{e^2 \, (N-1) + \chi^2 \, P \, (1-P)} \tag{1}$$

where n = sample size, p = proportion in the target population estimated to have a particular characteristic, e = marginal error, χ^2 = chi square value at a given degree of freedom which corresponds to the 95% confidence level, and N = given population. In this study, the following criteria were used to determine the sample size:

(1) The pilot study was conducted using 229 participants, and the prevalence rate for romantic jealousy was found to be 58.5%. Therefore, P = 0.6;

(2) A confidence level of 95% was used;

(3) The degree of precision (margin of error) was set at 5.0%;

(4) Chi-square value with df = 1 at 0.05 level of significance = 3.841;

The sample size was calculated to be 216.86, but was increased to 500 in order to improve the study's generalisability and decrease the possible bias.

3.4. Procedure

Four tertiary level facilities (i.e., University of Benin Teaching Hospital, Edo Specialist Hospital, Benin Medical Centre, and Faith Mediplex) were randomly selected from two local government areas in Edo State, Nigeria. The inclusion criteria were: Female nurses working at these facilities, involvement in a previous or ongoing romantic relationship, and provision of written informed consent. Those who refused to provide written consent were excluded from the study. The management of these institutions was contacted, informed about the nature and purpose of the study, and requested to grant permission to interview the staff, which was granted. Paper questionnaires were distributed to staff at these institutions, and written informed consent was obtained. Then the participants were asked to complete the questionnaires. No identifying information was included in the questionnaire, and a sealed bag was provided at each institution for participants to drop their completed questionnaires. A total of 500 participants were included in the study, out of who 489 agreed to participate, while 21 participants failed to complete the questionnaires and, therefore, were excluded from the study.

3.5. Ethical Considerations

This study was approved by the Ethics and Research Committee of the Redeemers University, Ede, Osun State (NHREC/TR/02/06/2007a). Participation was voluntary, and anonymity was ensured as no identifying information was collected.

3.6. Data Analysis

Data were electronically entered into a spreadsheet. SPSS version 22 was used to analyse the data. Descriptive statistics were used to summarize socio-demographic variables, while inferential statistics (*t*-test for independent samples, one-way ANOVA, and linear regression) were used to test the hypotheses. Level of significance was set at P < 0.05.

4. Results

4.1. Socio-demographic Characteristics of Participants

All the participants were female nurses aged 22 - 59 years (mean: 34.19; SD = 8.61) who lived in Edo State. Also, 64.1% of the participants were married, and 94% of them were Christians. The majority of the participants (77.4%) had a Bachelor's Degree in Nursing Sciences (BNSc), and about 67.7% of them were from monogamy homes. Nearly half of them (45.5%) worked at the University of Benin Teaching Hospital (UBTH) (Table 1).

4.2. Prevalence of Romantic Jealousy

Table 2 shows the prevalence of romantic jealousy. As shown in this table, 16% of the participants had severe cognitive jealousy, 15.8% had severe emotional jealousy, and 17.1% had severe behavioral jealousy; however, 41.9% of them had mild cases.

4.3. Prevalence of Sexuality Domains

According to the results on the prevalence of sexuality, 11.3% of the participants had a high experience of sexual esteem, 70.1% had moderate experience, and 18.6% had low experience. As for sexual depression, 12.2% of them had high experience, 72.2% had moderate experience, and 15.6% had low experience. Lastly, it was found that 17.7% of them had high sexual preoccupation and 70.5% had moderate experience, while 11.8% had low experience of sexual preoccupation (Table 3).

4.4. Prevalence of Attachment Styles

According to the findings on the attachment prevalence (Table 4), 12.2% of the participants had strong close attachment, 75.6% had moderate close attachments, and 12.2% had weak attachment. The findings on depend attachment indicated that 11.1% of them had very depend attachment style, 76.7% had moderate experience, and 12.2% had low experience. As for the anxiety attachment, 13.2% of them had strong anxiety attachment, 73.1% had moderate anxiety attachment, and 13.7% had weak anxiety attachment (Table 4).

Table 1. Frequency Distribution Showing Respondents' Socio Demographics

Factors	No. (%)
Relationship status	
Married	300 (64.1)
Dating	168 (35.9)
Total	468 (100.0)
Religion	
Christianity	440 (94.0)
Islamic	21 (4.5)
Traditional	6 (1.3)
Others	1 (.2)
Total	468 (100.0)
Education qualification	
Student nurse	36 (7.7)
Basic	29 (6.2)
Post basic	10 (2.1)
BNSc	362 (77.4)
Postgraduate	31 (6.6)
Total	468 (100.0)
Home type	
Monogamous	317 (67.7)
Polygamous	151 (32.3)
Total	468 (100.0)
Workplace	
Benin medical centre	63 (13.5)
Faith mediplex	61 (13.0)
Edo hospital	131 (28.0)
University of Benin Teaching Hospital	213 (45.5)
Total	468 (100.0)
Age (y)	
Range	22 - 59
Mean ± SD	34.19 ± 8.61

Abbreviation: BNSc, Bachelor's Degree in Nursing Sciences

4.5. Predictors of Cognitive Jealousy

The hierarchical multiple regression model showed that the cognitive jealousy was regressed on socio-demographic characteristics and that the cognitive jealousy was decreased when the age of nurses was increased ($\beta = -0.26$, $t = -2.68$, $P < 0.01$). All other variables, including relationship status ($\beta = -0.09$, $t = -1.56$, $P > 0.05$), duration of relationship ($\beta = 0.09$, $t = 0.99$, $P > 0.05$), educational qualification ($\beta = 0.07$, $t = 1.55$, $P > 0.05$), and home type ($\beta = -0.01$, $t = -0.22$, $P > 0.05$) were not effective

predictors of cognitive jealousy. The socio-demographic characteristics contributed a significant variance of 3% to the changes observed in cognitive jealousy ($R = 0.16$, $R^2 = 0.03$, $F_{(5, 462)} = 2.43$, $P < 0.05$).

When sexuality was added, the result indicated a significant variance of 7% in cognitive jealousy ($R = 0.26$, $R^2 = 0.07$, $F_{(8, 459)} = 4.07$, $P < 0.01$) with 4% attributed to sexuality; therefore, the added variable was significant ($\Delta R^2 = 0.04$, $\Delta F = 6.65$, $P < 0.01$), which implied that sexuality had a considerable potential to predict the cognitive romantic jealousy. The findings on the various aspects of sexuality revealed that sexual esteem ($\beta = -0.07$, $t = -1.29$, $P > 0.05$) and sexual preoccupation ($\beta = 0.04$, $t = 0.70$, $P > 0.05$) failed to precisely predict the cognitive jealousy. However, cognitive jealousy increased when the sexual depression increased significantly ($\beta = 0.15$, $t = 2.67$, $P < 0.01$).

Attachment styles were then added to the model, and it was found that the variables made a significant contribution of 9% to variance observed in cognitive jealousy ($R = 0.30$, $R^2 = 0.09$, $F_{(11, 456)} = 4.16$, $P < 0.01$) with 2% significant variance attributed to the variables added in the third step ($\Delta R^2 = 0.02$, $\Delta F = 4.19$, $P < 0.01$). This implied that age, sexuality, and attachment styles predicted cognitive jealousy.

4.6. Predictors of Emotional Jealousy

Emotional jealousy was regressed on socio-demographic characteristics, and it was detected that all considered factors failed to predict emotional jealousy. To be more precise, age ($\beta = -0.09$, $t = -0.98$, $P > 0.05$), relationship status ($\beta = -0.02$, $t = -0.37$, $P > 0.05$), duration of relationship ($\beta = 0.02$, $t = 0.27$, $P > 0.05$), educational qualification ($\beta = 0.07$, $t = 1.41$, $P > 0.05$), and home type ($\beta = 0.02$, $t = 0.43$, $P > 0.05$) were not effective predictors of emotional jealousy. Variance of just 1% could be attributed to the socio-demographic characteristics, although they had no significant effects on emotional jealousy ($R = 0.09$, $R^2 = 0.01$, $F_{(5, 462)} = 0.67$, $P > 0.05$).

Sexuality was then added, and the result indicated a significant variance of 4% in emotional jealousy ($R = 0.20$, $R^2 = 0.04$, $F_{(8, 459)} = 2.38$, $P < 0.05$) with a significant 3% attributed to sexuality ($\Delta R^2 = 0.03$, $\Delta F = 5.19$, $P < 0.01$). This implied that sexuality successfully predicted the emotional romantic jealousy. Contrary to expectations, the findings on various aspect of sexuality revealed that sexual esteem ($\beta = -1.10$, $t = -1.87$, $P > 0.05$), sexual depression ($\beta = 0.11$, $t = 1.83$, $P > 0.05$), and sexual preoccupation ($\beta = 0.03$, $t = 0.59$, $P > 0.05$) failed to independently predict the emotional jealousy.

Attachment styles were added to the model, and it was discovered that all variables made a significant contribution of 7% to the variance observed in emotional jealousy

Table 2. Prevalence of Romantic Jealousy

Romantic Jealousy	n	Mean ± SD	Prevalence [a]			
			None	Mild	Moderate	Severe
Cognitive jealousy	468	31.44 ± 7.81	48 (10.3)	149 (31.8)	196 (41.9)	75 (16.0)
Emotional jealousy	468	36.55 ± 8.49	44 (9.4)	177 (37.8)	173 (37.0)	74 (15.8)
Behavioral jealousy	468	11.39 ± 6.10	64 (13.7)	196 (41.9)	128 (27.4)	80 (17.1)

[a] Values are expressed as No. (%).

Table 3. Prevalence of Sexuality

Sexuality	n	Mean ± SD	Prevalence [a]		
			Low	Moderate	High
Sexual esteem	468	25.04 ± 7.32	87 (18.6)	328 (70.1)	53 (11.3)
Sexual depression	468	37.05 ± 6.85	73 (15.6)	338 (72.2)	57 (12.2)
Sexual preoccupation	468	35.77 ± 6.59	55 (11.8)	330 (70.5)	83 (17.7)

[a] Values are expressed as No. (%).

Table 4. Prevalence of Attachment Styles

Attachment	n	Mean ± SD	Prevalence [a]		
			Weak	Moderate	Strong
Close attachment	468	18.75 ± 4.07	57 (12.2)	354 (75.6)	57 (12.2)
Depend attachment	468	16.05 ± 4.07	57 (12.2)	359 (76.7)	52 (11.1)
Anxiety attachment	468	16.84 ± 5.53	64 (13.7)	342 (73.1)	62 (13.2)

[a] Values are expressed as No. (%).

($R = 0.27$, $R^2 = 0.07$, $F_{(11, 456)} = 3.20$, $P < 0.01$) with 3% significant variance attributed to the variables added in the third step ($\Delta R^2 = 0.03$, $\Delta F = 5.23$, $P < 0.01$). This suggested that the sexuality and attachment styles jointly predicted the emotional jealousy.

4.7. Predictors of Behavioral Jealousy

Behavioral jealousy was regressed on socio-demographic characteristics, sexuality, and attachment in the hierarchy of steps. It was revealed that age ($\beta = -0.04$, $t = -0.38$, $P > 0.05$), relationship status ($\beta = 0.08$, $t = 1.37$, $P > 0.05$), duration of relationship ($\beta = 0.04$, $t = 0.44$, $P > 0.05$), educational qualification ($\beta = -0.06$, $t = -1.17$, $P > 0.05$) and home type ($\beta = -0.08$, $t = -1.59$, $P > 0.05$) were not effective predictors of the behavioural jealousy. Variance of just 2% could be attributed to the socio-demographics, although they had no significant effects on behavioral jealousy ($R = 0.14$, $R^2 = 0.02$, $F_{(5, 462)} = 0.1.88$, $P > 0.05$).

Sexuality was added, and the result indicated a significant variance of 9% in behavioral jealousy ($R = 0.29$, $R^2 = 0.09$, $F_{(8, 459)} = 5.35$, $P < 0.01$) with 7% attributed to sexuality; this addition was significant ($\Delta R^2 = 0.07$, $\Delta F = 10.94$,

$P < 0.01$). This implied that sexuality successfully predicted the behavioral romantic jealousy. The findings on the various aspect of sexuality revealed that behavioral jealousy was increased with a significant decrease in sexual esteem ($\beta = -0.11$, $t = -2.17$, $P < 0.05$), sexual depression ($\beta = -0.19$, $t = -3.36$, $P < 0.01$), and sexual preoccupation ($\beta = -0.13$, $t = -2.68$, $P < 0.01$).

Attachment styles were added to the model, and it was noted that all variables made a significant contribution of 12% to the variance observed in the behavioral jealousy ($R = 0.35$, $R^2 = 0.12$, $F_{(11, 456)} = 5.87$, $P < 0.01$) with 4% significant variance attributed to the variables added in the third step ($\Delta R^2 = 0.04$, $\Delta F = 6.73$, $P < 0.01$). Sexuality and attachment styles were determined capable of jointly predicting the behavioral jealousy.

5. Discussion

Romantic jealousy is a complex emotion that can be activated by a real or perceived threat to a romantic relationship. It is an important public health issue, as it can affect the person involved, the spouse, and the perceived

rival, and even lead to death (25). According to our study results, the age was the only socio-demographic characteristic that successfully predicted cognitive sub-type of romantic jealousy. Sexual attachment and sexuality jointly predicted cognitive, emotional, and behavioural subtypes of romantic jealousy, as was hypothesized by our study.

In this study, older nurses were found less likely to report the cognitive sub-type of romantic jealousy. This may have been due to the fact that as individuals grow older, they become more experienced in controlling their thoughts and emotions as well as in navigating their relationships. Although our study sample only included female subjects, an interesting dynamic was already reported to exist between gender and age and aspects of romantic jealousy. Younger males were reported to show more behavioural subtypes of romantic jealousy, whereas younger females were shown to endorse emotional subtypes of romantic jealousy.

The average age of this sample was 34 years, and it was significantly associated with the cognitive subtype of romantic jealousy, which was consistent with the results from previous reports (26). This finding suggested that in romantic relationships, younger nurses placed more emphasis on the thoughts that defined their interactions. This may have had implications for counseling since men are more likely to place less emphasis on cognitive and emotional aspects while they place more emphasis on behavior leading to unintended schisms in their relationships. Age has been identified as a significant factor responsible for the emergence of inconsistencies in finding a pattern between gender and romantic jealousy, which may have explained why this was not a consistent finding across all subtypes of romantic jealousy in this study (27).

Romantic jealousy should be defined as a situational construct and should not be defined as the emotion of jealousy (28). As a result, viewing romantic jealousy as a prototype can explain why context, and individual characteristics vary with the sub-constructs of emotional jealousy. Culture, which was not specifically examined in this study, for example, has been reported to influence the expression of the varied construct as it refers to romantic jealousy (29). This study showed that sexuality, particularly sexual depression, independently predicted the presence and severity of the cognitive and behavioral sub-types of romantic jealousy among female nurses. Sexual depression has been found to successfully predict or correlate with romantic jealousy. Previous research found that sexual depression generated anxiety in the partners, which is often projected onto the perceived infidelity of the partner, and is often behavioral (29, 30). It is difficult to determine how the interaction between personality style and mood states influences the attachment styles. In this study,

generally, it was detected that anxious and dependent attachment styles were significantly correlated with more severe romantic jealousy subtypes in the cognitive and behavioral domains, which was consistent with the results from previous studies (30, 31).

Our study faced some limitations. First, our purposive sample only included females who mostly had postsecondary education status, which may have subjected our findings to bias and limited the generalisability of them. Therefore, it was suggested that future studies should be conducted by including a heterogenous population in terms of gender and educational status, which can facilitate exploring the effects of gender and educated vs. noneducated on expressions of romantic jealousy. Second, polygamous relationships were legal in Nigeria during our study period, which made it difficult to find out if participants in such settings were less likely to express severe forms of romantic jealousy. Our study findings may have helped researchers identify novel areas for future exploration and carry out interventional studies aimed at improving compatibility in romantic relationships. Clinicians may have also used our study findings for exploring attachment styles and sexuality when resolving crises among couples over romantic relationships during psychotherapy.

It was concluded that minority of the participants had severe romantic jealousy of various types. Age was determined as a protective predictor for the cognitive sub-type of romantic jealousy, while sexual depression, anxious and dependent attachment styles were found to be predictors of the cognitive and behavioral subtypes of romantic jealousy.

Footnotes

Ethical Approval: This study was approved by the Ethics and Research Committee of Redeemers University, Ede, Osun State (NHREC/TR/02/06/2007a).

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Informed Consent: Written informed consent was obtained from all participants.

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