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Portraits of Evolutionary Fitness, Status Dominance and Moderating Role of Altruism in Sociosexual Orientation of Heterosexual Couples in Uyo.

by

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Abstract

Sociosexual orientation (SO) is something inimical to marriage especially when marriage is revered as an exclusive relationship between spouses. Despite this, some individuals have chosen the route of infidelity by employing different mating strategies, long-term versus short-term, which may be influenced by the desire for genetic relevance; being dominant or submissive; or exhibiting helping behaviours in the relationship. A quantitative cross-sectional survey design was used. The sample (n=307) comprised married members among academic staff of the University of Uyo, Nigeria. A structured instrument was used to collect data comprising the demographic, independent and outcome variables. Mini-K scale, Dominance scale, Self-report Altruism scale and Revised Sociosexual Orientation Inventory were used for data collection. Results showed that sociosexual orientation did not correlate with the independent variables, except with a demographic variable of gender, indicating that males displayed more unrestricted sociosexual orientation compared to females. It is recommended that men should consider the path of faithfulness because of the negative consequences of infidelity on the marriage relationship, family and even society.

Key words: sociosexual orientation, sociosexuality, evolutionary fitness, status dominance, altruism, university

1. Introduction

Before now, sex-related topics were scarcely discussed in public but in recent times, the narrative has changed. From the internet, to the broadcast and print media, in our environment – business outlets, religious institutions, academic settings, entertainment centers, and the likes, these issues stare us in the face. So, not talking about them is near impossibility. However, one principal area of rife public discussion about sex is in the act of reneging on marital commitment and choosing the path of infidelity. Marital dishonesty has been variously described as adultery, especially in the church and court circles. At the family and wide social circles, it is generally seen as unfaithfulness or infidelity or more casually as extra-marital affairs (Rokach and Chan, 2023). In an

examination hall or restaurant, a student or customer is allowed to demand for extra sheets or food as the case may be, and such “extra” is socially acceptable. However, this other “extra” that we have to discuss has remained a public burden for as long as creation and this burden is becoming more unbearable by the day. As a result of this, society has been looking for explanations to this aspect of human behaviour and one line of explanation is found in what is described as sociosexual orientation which has been extensively studied in recent decades (Waldis *et al.*, 2021).

Sociosexual orientation (SSO) is a measure of individual differences in the willingness to engage in sexual activity outside of a committed relationship (Simpson, *et al.*, 1991). SSO accounts for the reason an individual is willing to have a sexual relationship with another in which they are not in a romantic relationship with (Gana, *et al.*, 2023). This explains why there are “one-night stands”, “hook-ups”, prostitution and in extension, infidelity (Botnen, *et al.*, 2018; Sevi, *et al.*, 2018). Simpson and Gangestad developed and validated the Sexual Orientation Inventory (SOI) in 1991. The SOI comprised 7 items with higher scores representing unrestricted sociosexuality and lower scores indicating restricted sociosexuality. Unrestricted Sociosexual orientation is characterized by the predisposition and willingness to engage more easily and more often in uncommitted sexual relations, while restricted Sociosexual orientation is characterized by the need to have more time, stronger attachment, commitment and closeness with romantic partners before willing to engage in sexual intercourse with them. Individuals with unrestricted sociosexual orientation require less emotional bonding with a partner before engaging in sexual relations with them. They feel comfortable in “one-night stands”, “hook-ups”, “extra-pair copulations” short-term relationships, and in some cases, rape; whereas, individuals with restricted sociosexuality require greater closeness and emotional bonding with a partner prior to engaging in sexual activities. Therefore, restricted and unrestricted sociosexuality is indicative of long-term and short-term mating tactics respectively (Schwarz *et al.*, 2020).

Penke and Asendorf (2008) proposed a tri-dimensional structure (components) of sociosexuality, viz; (i) Sociosexual behaviour refers to past sexual experience. Some people have uncommitted sex on a regular basis, others, sparingly and yet others, rarely or never. In the lifetime, an individual’s history of sociosexual behaviours reflects his or her overall investment (as regards time, energy, money and other limited resources) to short-term versus long-term mating tactics (i.e. finding and courting a variety of potential mates versus investing in a single committed relationship and potential offspring). In essence, past sociosexual behaviours reflect an individual’s personal experiences and learning history in the mating domain, and it might also be indicative of his/her habitual tendencies in this area (Tsoukas, *et al.*, 2018). (ii) Sociosexual attitude denotes an individual’s attitude towards sex without commitment, that is, beliefs about casual sex. As such, it may entail reflections about one’s own wish for emotional closeness prior to having sex, as well as one’s moral feeling towards it. Many factors influence individual’s differences in sexual attitudes including sociocultural and religious dispositions. For instance, cultural values (like chastity or freedom of self-expression), traditions (like religious commandments) and institutions (like marriage systems) tend to reflect the

reproductive demands of the environment and can thereby reinforce the adoptive degree of sociosexuality in populations (Gangestad, *et al.*, 2006), and (iii) Sociosexual desire refers to the arousal due to chances of casual sex. This is a motivational state that is characterized by heightened sexual interest and that is often accompanied by subjective sexual arousal and sexual fantasies, specifically targeted at potential mates to whom no committed romantic relationship exists (Simpson, *et al.*, 2004).

In this study, it is reasoned that the understanding of evolutionary fitness may give direction on how to address issues inherent in sociosexual orientation. Evolutionary fitness is the ability of an organism to survive and reproduce. It is the ability of an organism to pass its genes from one generation to another, and this is measured by reproductive success (how well a genotype or phenotype is passed on to the next generation compared to other genotypes and phenotypes in the population). Genotype is some relevant part of the DNA passed to the organism by its parents, while phenotype is the physical and behavioural traits of the organism, for example, size and shape, metabolic activities, and patterns of movement (Taylor and Lewontin, 2017). The components of evolutionary fitness are survival and reproduction. For an organism to reproduce, it has to survive long enough to reach the reproductive age. Therefore, traits which enable an organism to survive can increase evolutionary fitness. Reproduction is a component of evolutionary fitness because genotypes or phenotypes are passed on to other generations through this process, and survival is only important evolutionarily in so far as it affects the number of offspring produced. Evolutionary fitness is about success at surviving and reproducing, not about exercise, strength or resources, thus, if a particular genotype consistently leaves offspring that survive future generations, such a genotype is regarded as having higher fitness, while also taking into account the number of offspring reproduced (Suárez, 2022).

Another variable of interest that may influence the preponderance of sociosexual activities is status dominance. Status, a form of inequality based on esteem, respect and honour, pervades social life but is poorly understood and underestimated in terms of significance (Ridgeway *et al.*, 2022). Status is based on respect and esteem from others (van Kleef *et al.*, 2020). Dominance, in the simplest of terms, has been defined as having influence or authority over other people. Henrich and Gil-White (2001) conceptualized dominance to be characterized by forced or coerced compliance to leadership. “Within the context of marriage and gender studies, dominance refers to the supremacy a particular gender, especially the male gender portrays or exerts over the female gender in marriage” (Falana, 2019). Hamby (1996) defined dominance as any attempt that a life partner makes to take control over the other partner. He mentioned three different forms of dominance, (authority, restrictiveness and disparagement), and all these forms are with violence. Dominant individuals accrue social influence and achieve superior resource access and greater fitness through their greater coercive control over costs and benefits; they maintain their attained rank in a stable hierarchy through intimidation and threats (Cummins, 2005).

Hence, status dominance here refers to dominance as it relates to males and females in marriage. It showcases how a spouse utilizes his/her sex (gender) status as a

spouse to affect the marriage in various beneficial or unbeneficial ways. In a qualitative study of couples (ottu, 2022), both husbands and wives demonstrated various ways of positive dominance through performance ecology and other strategies to save their marriage from the threats of infidelity and despair. In choosing a romantic partner, individuals have some qualities which they look out for, one of which is altruism. The term altruism was coined by August Comte, a socio-biologist, in 1851 by combining the Latin word “alter” which means “to other” and its Italian adjective “altru” (Jeya, *et al.*, 2021). Altruism has been defined as “voluntary, intentional behaviour that results in benefits for another” (Pfattheicher *et al.*, 2022). To Smith, *et al.*, (2016), altruism means benevolence or living for others. It is an unselfish concern for another’s welfare. Due to frequent confusion between altruism and other virtues such as prosocial behaviour, Ottu (2019), using his “Three horseshoe model of prosocial behaviour”, reclassified strands of views, opinions and definitions. According to this model, altruism falls under one (complaint) of the three (emotional, public, compliant) horseshoes which helps in the nurturing of altruistic behaviour during childhood.

The general aim of this study is to examine how evolutionary fitness, status dominance and altruism may impact the sociosexual orientation of members of the Academic Staff Union of Universities, University of Uyo branch (ASUU-UUB)?

2. Hypotheses

- i. Evolutionary fitness will positively and significantly predict sociosexual orientation (or its dimensions - behaviour, attitude and desire) such that higher level in evolutionary fitness will lead to unrestricted sociosexual orientation.
- ii. Status dominance will negatively and significantly predict sociosexual orientation (or its dimensions - behaviour, attitude and desire) such that higher level in status dominance will lead to unrestricted sociosexual orientation.
- iii. Altruism will significantly moderate the relationship between evolutionary fitness and sociosexual orientation (or its dimensions - behaviour, attitude, and desire).
- iv. Altruism will significantly moderate the relationship between status dominance and sociosexual orientation (or its dimensions - behaviour, attitude, and desire).

3. Materials and Methods

Design: A quantitative, cross-sectional survey design was utilized for the study. Using this design allowed the researcher to look at numerous characteristics at once in a given population at a single point in time (Setia, 2016).

Setting: The study was conducted on the University of Uyo Campus, comprising Town campus, Annex campus and Permanent site. Participants were drawn from different departments and faculties.

Participants: Three hundred and seven (307) members of the academic staff union of universities, University of Uyo branch participated in the study; they were 172 males and 135 females.

Sampling Techniques: Convenience sampling method was used to select the university. From the ASUU records, current registered members are 1046, although the total

academic staff is larger than this. Therefore, to determine the exact sample size, Taro Yamane's formula was used ($n=289$). The researcher used Taro Yamane's formula because the population was known and the participants possessed different characteristics. Participants were selected using the simple random sampling technique because the sample was not so much and they were easily accessible.

Instrumentation: Four instruments were used for this study. They were:

ii. Mini-K scale by Figueredo *et al.*, 2006: The mini-K questionnaire is a 20-item scale. It has a .70 internal consistency by Cronbach's Alpha, and .70 test and retest reliability. The scale is rated on a 5-point Likert format which participants use to indicate the extent to which they agree or disagree with each item. The questionnaire assessed measures of evolutionary fitness, thus, higher scores signify higher evolutionary fitness. To further ascertain the psychometric properties of the scale, Richardson *et al.*, (2017) confirmed that it demonstrated adequate internal consistency in past research (coefficient as around .70; Olderbak *et al.*, 2014). They also found insight, planning and control; mother/father relationship quality; friend social contact/support; family social contact/support; harm violence and community involvement factors. Importantly, these factors mapped onto constructs that have been theoretically and empirically tied to human life-history strategy in the past (Figueredo *et al.*, 2006, Olderbak *et al.*, 2014), thereby supporting construct validity of this measure.

ii. Dominance Scale by Hamby, 1996: This scale comprises 37 items, divided into 3 subscales of authority (14 items), restrictiveness (12 items) and disparagement (11 items). Psychometric characteristics demonstrated good distribution and internal consistency (Hamby, 1996). It has alpha levels of .80 for authority, .73 for restrictiveness and .82 for disparagement. Authority is very closely related to decision-making power. Restrictiveness departs from an egalitarian concept of equal individuals; one partner feels the right to intrude upon the other's behaviour, even when the behaviour does not directly involve the restrictive partner. Disparagement is when one partner fails to equally value the partner and has an overall negative appraisal of his or her partner. The Dominance scale is scored on a 4-point Likert scale; each item is scored so that higher scores reflect more dominant behaviour. Hence, it measured dominance in this study

iii. Self-Report Altruism Scale (SRA) by Rushton *et al.*, 1981: The self-report altruism scale is a 20-item self-report tool designed to measure altruistic tendency by gauging the frequency one engages in altruistic acts. The SRA has been shown to have high internal consistency, with an alpha of 0.89. It has positive correlations with social responsibility, empathy, donation, sensitive attitudes, and prosocial individual values (Fekken, 1980). Average item to item correlations for the total scale were $M = .36$, $p < .05$. Participants answered on a 5-point Likert scale ranging from Never (0) to very often (4). Higher total score indicates greater reported altruism

iv. **Sociosexual Orientation Inventory (Revised)** by Penke, *et al.*, 2008: The revised sociosexual orientation inventory (SOI-R) was developed by Penke and Asendorff. It comprises 9 items that identify the general sociosexual orientation with the components of sociosexuality, viz; (a) Behaviour subscale shows the preferred number of sexual

partners (items 1-3). (b) Attitude subscale provides information on one's attitude towards uncommitted/casual sex (items 4-6) and (c) Desire subscale establishes the frequency of sexual fantasies about a person or persons other than the current romantic partner (items 7-9). For the development and validation of the SOI-R, Penke and Asendorf (2008) confirmed the adequacy of the expected three-factor structure through a confirmatory factor analysis (CFI = .98, NFI = .98, SRMR = .03). In addition, each of the dimensions showed good internal consistency. The cronbach's alpha coefficient of reliability for the subscales are: Behaviour (.91), Attitude (.86) and Desire (.87), while the total scale was (alpha = .83). High SOI-R scores represents an unrestricted sociosexual orientation (oriented towards short-term relationships), while low scores indicate restricted sociosexual orientation (oriented towards long-term relationships).

Procedure: Institutional permission was obtained from the Head of Department of Psychology, University of Uyo to ASUU secretariat, through the registrar, University of Uyo, requesting for the total number of ASUU members. The chairman of ASUU then granted the researcher permission to administer the questionnaire to it members during it congress. The researcher had rapport with the participants in which the aim of the study was explained to them; they were assured that their responses will be treated with utmost confidentiality. The researcher was assisted by some colleagues (research assistants) in administering and retrieving the questionnaires. Each participant was presented with a booklet containing an introduction page for demographic information and four questionnaire for the study. A total of 340 copies of questionnaire were distributed and 319 were returned. After removal of cases of missing values, the final sample consisted of 307 participants; 172 males and 135 females drawn from the University of Uyo Main campus, Town campus and Annex campuses. The filled questionnaires were screened and used for data analysis.

Statistics: Data collected was analyzed using both descriptive and inferential statistics. The mean, standard deviation, simple percentage, frequency were calculated for the descriptive statistics, while the inferential statistics was analyzed using multiple regression. Statistical package for the social sciences (SPSS) was employed for data analysis.

4. Results and Discussion

Data Presentation and Analysis

Table 1.1: Demographic Characteristics of the Participants

Variable	Frequency	Percent (%)
Male	172	56.0
Female	135	44.0
Total	307	100.0
Religion		
Christianity	289	94.1
Islam	5	1.6
Traditional	1	.3
Others	7	2.3
Missing	5	1.6
Total	307	100.0
Marital Status		
Married	284	92.5
Divorced	4	1.3
Separated	14	4.6
Widowed	4	1.3
Missing	1	.3
Total	307	100.0
Education		
B.Sc	117	38.1
Msc/MA	83	27.0
PhD	107	34.9
Total	307	100.0

Table 1.1 presents the demographic characteristics of the study participants. The result shows that out of the 307 respondents who participated in the study, 56% were males while 44% were females. Participants' religious affiliation reveals that over ninety percent (94.1%) were Christians. Also, majority of the participants (92.5%) were married while the rest were either divorced (4%), separated (14%) or widowed (1.3%). Participants' educational status cut across the three levels of first degree (38.1%), Masters (27%) and PhD (34.9%). The result further indicated that participants' age ranges between 25 and 68 years with an average age of 44 years with an average year of marriage being 11 years. Number of children of respondents ranges between zero (0) and six (6) with an average number of children being 3 children.

Table 1.2 Showing Zero-Order Correlation among the Independent Variables, Gender, Age, Years of Marriage, No of Children and the Dependent Variable

S/N	Variable	\bar{X}	SD	N	1	2	3	4	5	6	7	8	9	10	11
1	Sociosexual Orientation	14.03	5.72	307	-										
2	Sociosexual Behavior	2.57	2.29	307	.831**	-									
3	Sociosexual Attitude	6.42	2.59	307	.806**	.496**	-								
4	Sociosexual Desire	5.05	2.20	307	.779**	.530**	.398**	-							
5	Status Dominance	77.64	12.12	307	-.101	-.062	-.138*	-.034	-						
6	Evolutionary Fitness	53.16	11.57	307	.016	.018	.044	-.028	-.049	-					
7	Altruism	76.99	10.17	307	-.109	.011	-.174**	-.089	.177**	.016	-				
8	Age	43.78	9.08	304	.089	.085	.056	.077	.186**	-.132*	-.019	-			
9	Gender	0.5	0.76	304	-.232**	-.152**	-.230**	-.173**	.066	.153**	.036	-.176**	-		
10	Years of Marriage	11.07	8.27	306	.052	.062	.055	.005	.203**	-.097	.064	.733**	-.106	-	
11	No Children	2.55	1.40	307	.040	.082	.004	.012	.057	-.020	.007	.498**	-.124*	.602**	-

****.** $p = 0.01$

*****. $p = 0.05$

$N = 307$

The Table 1.2 above presents zero-order correlation between the independent variables and dependent variable of the study. The results showed that sociosexual orientation as a whole did not report significant correlation with any of the independent variables except with a demographic variable of gender ($r = -0.232, p < .01$); assessed through it three components, the following results are evident – sociosexual behaviour – ($r = -.152, p < .01$), sociosexual attitude - ($r = -.230, p < .01$) and sociosexual desire ($r = -.173, p < .01$). This means that males scored higher than females in all three dimensions of sociosexual orientation, representing a more unrestricted sociosexuality, which translates to being more involved in infidelity. The fact that sociosexual orientation did not correlate with any of the independent variables (evolutionary fitness and status dominance) and the moderating variable (altruism) implies that participants of the study do not consider these factors while engaging in uncommitted sexual relations.

The finding of this study is in consonance with previous studies (Gana and Arshakyan, 2021; Nascimento *et al.*, 2018; Townsend and Wasserman, 2011; Zheng *et al.*, 2014) which consistently found that men displayed more permissive attitude towards uncommitted sexual relations than women. In a cross-cultural study, Schmitt (2005) indicated that gender differences in sociosexuality are culturally universal as men are more promiscuous than women in all countries. Penke and Asendorf (2008) submitted that German men were more promiscuous than women but only through attitude and desire, not in behaviour aspects of sociosexuality.

In examining the relationship between the dimensions of sociosexual orientation (behaviour, attitude and desire) and well-being (emotional, psychological and social), Blasco-Belled *et al.*, (2021) found that men reported more positive attitudes toward casual sex and fantasized more than women. Women generally experience more negative psychological consequences than men following casual sex and, unlike men, women's sexual behaviour tend to be associated with their perception of partner's potential and willingness for parental investment. Furthermore, culturally, women are expected to display restrained attitude towards sex as the society is always quick to tag women as promiscuous but have some explanations to offer if the same behaviour is displayed by a man. To support this, the Akwa Ibom and Cross River states of the south-south region of Nigeria even has a cliché'- "*owoden ittrike brusai*", this means that sexual relations outside of a committed relationship is inevitable for a man.

5. Conclusion and Recommendations

Sociosexuality is usually assessed as the overall orientation toward uncommitted sex without emotional attachment through the prism of two opposing poles (long-term versus short-term; restricted versus unrestricted). These mating strategies can change as a result of predictable outcomes like changes in mate value, sex ratios in the mating pool, ability to connect with both present and intended mates, level of acceptability by mates, etc (Buss and Schmitt, 2019). Consequently, individuals can switch between these strategies depending on the costs and/or benefits at stake. Also, environmental conditions such as the presence of pathogens are known to affect sociosexuality both in and outside laboratory settings (Moran *et al.*, 2021). A study carried out at the beginning of the

COVID-19 pandemic showed that sexual disgust increased significantly with the increase in the perceived risk of being infected by the deadly Corona virus, which may limit the frequency of casual sex (Hlay *et al.*, 2021).

A restricted sociosexual orientation is of utmost benefit to marital relationships because it minimizes infidelity. Urganci *et al.*, (2021) reported that individuals with lower relationship quality had more unrestricted sociosexual orientation, which in turn predicted a greater intention toward infidelity. Lower quality relationships were associated with greater intentions toward infidelity. Also, Blasco-Belled, *et al.*, (2022) investigated the relationship between the facets of sociosexuality (behaviour, attitude and desire) and the tripartite model of mental health (emotional, psychological and social) found differences in sociosexual attitudes and desire across gender; showing significant results only for men. However, emotional and psychological well-being were positively predicted by sociosexual behaviour and negatively predicted by desire. On the whole, marital fidelity not only preserves the unity of a family but also produces a generation of individuals who value the sanctity of matrimony (Asadu *et al.*, 2020).

The results of this study have implications first, for the family because it is the fulcrum of society. The family is where values are internalized so it is recommended that, parents and guardians should be intentional in demonstrating faithful behaviours toward each other and by so doing, creating a worldview of trust and dependence among family members. This will go a long way in reducing tension and stress. According to the evolution-based lifespan model of Belsky *et al.*, (1991), individuals who experience early social stress in the family during the first to seven years of their lives, and who did not learn the enduring and rewarding characteristics of relationships may likely subscribe to a short-term mating strategy which is in consonance with infidelity. During counselling for marriage, intending couples should be sensitized about the responsibilities that come with marriage, as well as its outcomes (favourable and unfavourable – for better, for worse). Religious organizations should be at the acme of the social crusade against immorality in marriage, urging their members to be faithful to the tenets of marriage. This can be done through several facets of teaching and coaching.

For an overall healthy society, just like we have health centers in communities, there should be marriage counselling centers championed by non-governmental organizations (NGOs) in collaboration with government agencies, utilizing trained marriage counselors to assist couples who are faced with infidelity issues. Moreso, couples should be encouraged to seek help when they notice negative changes in their relationship. Government should empower its citizens either by creating jobs, creating favourable atmosphere for businesses to thrive or establish skills training centers so they can fend for themselves because, some people are involved in extra-pair copulations for financial reasons. For organizations, employers should adopt some disciplinary measures to discipline members who demand sexual favours from people before carrying out responsibilities in which they are employed to do.

Lastly, cultures and traditions should not place more value on a particular gender (especially the male gender) in preference to another and by so doing encourage undue dominance which could be detrimental to romantic relationships. The society should

encourage the norms of integrity and faithfulness, because marital infidelity can lead to divorce and the negative consequences of divorce on both the family and society cannot be overemphasized (Odebode *et al.*, 2022).

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