

Does Sexual Pleasure Influence Fertility Matters among Jamaicans?

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Abstract

Introduction: Fertility is defined as the current reproductive performance of an individual. There is an increase in the number of infertile women, and statistics revealed that almost 72.4 million women worldwide are infertile.

Objectives: The aim of this research is to find out: 1) If sexual pleasure influences fertility matters among Jamaicans, and 2) Which gender has the most sexual pleasure, and does it influence the number of children they have.

Methods: Data was collected from persons living in Jamaica. A non-probability sampling technique was used to obtain data from 1070 respondents. Data was obtained by using a web-based survey created in Google form and face to face interaction with all COVID-19 protocols observed. The data was then analyzed using the Statistical Package for the Social Sciences (SPSS).

Findings: The findings of this research revealed that sexual pleasure influences fertility in Jamaica. The research suggests that on average respondents who enjoy sex have 2 children. The number of respondents who enjoyed sexual intercourse revealed to be 93% (n=995). It was also found that males (95.4%) enjoy sexual intercourse more than females (91.6%; P value = 0.001 < 0.05) There is a statistical association between sexual pleasure and fertility.

Conclusion: Based on the findings, it can be concluded that sexual pleasure influences fertility in Jamaica.

Keywords: Sexual pleasure, fertility, Jamaica, influence, COVID-19 protocols.

Introduction

According to an article published by the Guttmacher Institute, a reproductive health survey conducted in 1995 revealed that among young adolescents 11-14 years of age who reported having sexual intercourse (boys, 64%; girls, 6%; average age of first coitus 9.4 years for boys and 11.3 years girls), the younger they were the less likely they were to practice contraception (use contraceptive at first sexual intercourse: boys, 37.7%; girls, 42.9%), increasing their chance of pregnancy (Eggleston, et al., 1999). Sexual pleasure is also important in reproductive health according to the journal article; The pleasure Deficit: Revisiting the Sexuality Connection in Reproductive Health, positive sexual encounters influence women's ability to get pregnant (Higgins & Hirsch, 2007). Limited indigenous scholarship in the field of sexual pleasure and fertility have been pursued particularly among Caribbean nationals. As such, this research seeks to evaluate 1) if sexual pleasure influences fertility matters among Jamaicans, and 2) which gender has the most sexual pleasure, and does it influence the number of children they have.

Literature review

Infertility, which is an inability to conceive children, is a worldwide issue that affects many couples and is also a common socio-medical issue (Czyzkowska, Awruk, & Janowski, 2016). Boivin, Bunting, & Collins (2007) noted that almost 72.4 million women worldwide are infertile and there is an increase in the number of infertile women, and this seem to be constant. Due to the high incidence of infertility and its subsequent psychological, social and also economic implications, it is therefore important to note that infertility is not merely a medical problem but also an acute psychological issue and relates to sexual performance (Czyzkowska, Awruk, & Janowski, 2016).

Domar, Zuttermeister, & Friedman (1993) postulated that infertility among African women is as a result of various psychological challenges, which is more so among women who desire to have children. Parenthood is more than just a social warrant but has become a part or a stage in life which brings on a euphoric feeling and continue to be a part of human development and as a result, unintended infertility can lead to a severe disagreement between couples and thus affects proper social relationships (Czyzkowska, Awruk, & Janowski, 2016).

Studies have established the negative influence of infertility on psychological health which include sexual behavior though this varies in gender, cause and duration of condition (Klock, 2011; Tao, Coates, & Maycock, 2011; Hasanpoor-Azghdy, Simbar, & Vedadhir, 2014; Rooney & Domar, 2018). Lower sexual satisfaction could be as a result of decreased frequency of sexual

intercourse and sexual dysfunction such as sexual arousal problems in women and premature ejaculation and erectile dysfunction in men (Tao, Coates, & Maycock, 2011). It has also been postulated that depression or symptoms associated with depression are closely related to sexual dysfunction and satisfaction by inhibited sexual arousal, inhibited orgasm and less pleasure during sexual intercourse (Baldwin, 2001), (Frohlich & Meston, 2002). A recent study conducted on 1528 participants, 511 with fertility issues and the results showed that satisfaction was moderate in both groups and also that fertility issues did not lead to lower sexual satisfaction (Mohammad, Khosravi, Chaman, Vahedi, & Sadeqi, 2016).

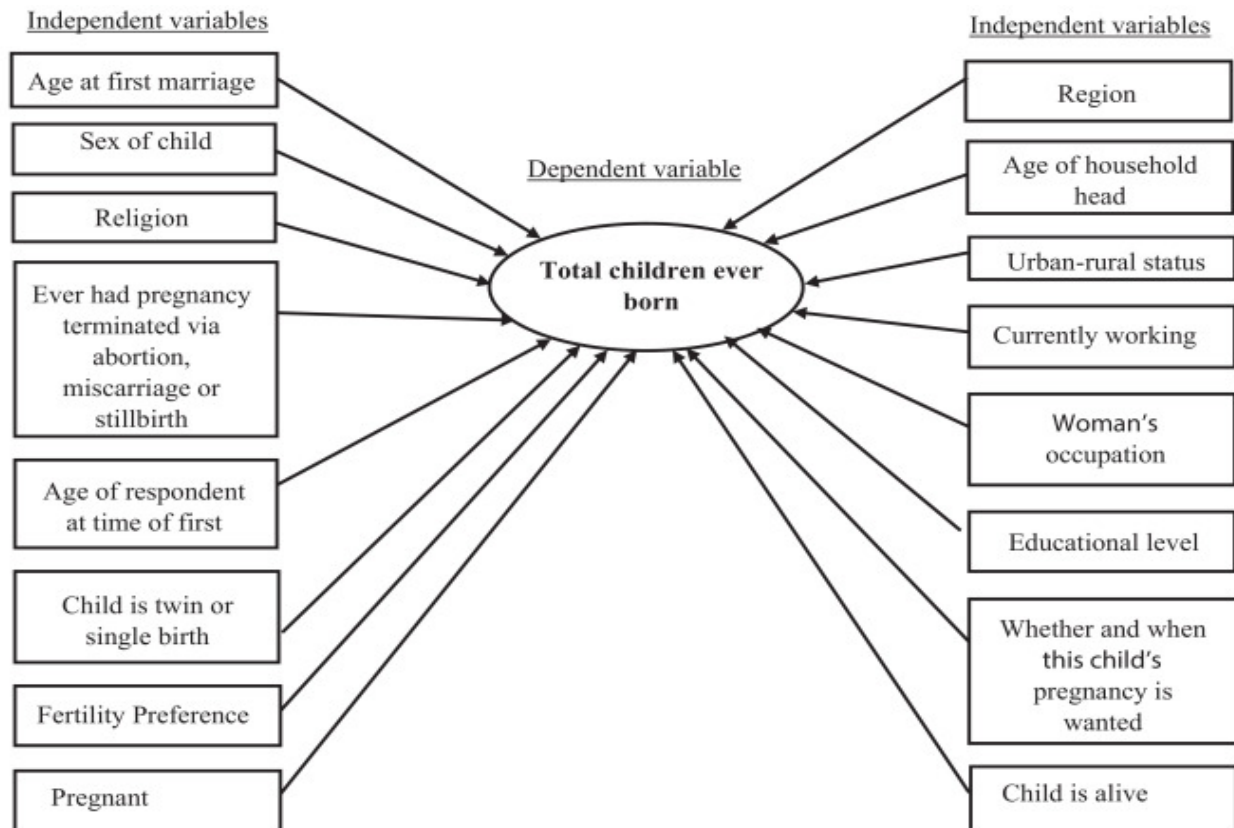
Other factors that affect sexual satisfaction in infertile couples, some of which include life satisfaction, coping, optimism, physical factors (anorgasmia, importance, premature ejaculation, and vaginismus), and social support (Shoji, Hamatani, Ishikawa, et al., 2014; Mahadeen, Hamdan, Habashneh, & Dardas, 2020; Taghavi, Aramesh, Azizi-Kutenaee, M. *et al.*, 2021) and assessing these factors could be used as factors to circumvent the issue. Undoubtedly, the issue of infertility is affecting people's relationship, and psychological wellbeing, which is aptly expressed by Luk and Loke (2019) who postulated that "A significantly higher proportion of women than men reported that their partner did not understand how the problem of fertility affected them and had worries that they were drifting apart in their relationship (Luk and Loke, 2019, p. 108). However, there is a paucity of studies on the matter of sexual pleasure and fertility, particularly among Jamaicans. As such, this study aims to evaluate and gain a better understanding of the relationship between sexual pleasure and fertility matters. This research it is hoped, will add to the body of knowledge relating to the issue of sexual pleasure and fertility matters.

Theoretical Framework

Sexual pleasure most frequently emerges in policy and programming as a consideration relevant to sexuality or sexual health rather than a topic in its own right. Rights based on operational definitions of sexual pleasure in the context of sexual health and reproductive health have been sorely lacking (Yadav, et al., 2019). Studies to assess the sexual impact of infertility in women undergoing fertility treatment found that younger age and female factor infertility were associated with increased sexual impact and thus these women are potentially at a higher risk of sexual dysfunction (Dong, et al., 2021; Sater, et al., 2022; Winkelman, et al., 2016;). The biometric model of fertility aims to show the different elements of fertility in terms of mathematical functions. The models used vary, and they analyze data with different complexities in an attempt to illustrate their relevance in fertility research. One such model is the Stochastic Models and Their Application to human Fertility Behavior.

The Biometric Model of Fertility is a mathematical function that examines factors that determine fertility, and these are specific among a population (Ibeji, et al., 2020; Menken, 1975; Miller, et al., 2010). Using Poisson regression, a generalized linear model (GLM), Ibeji et al. (2020) established that fertility of Nigerian women (ages 15-49 years) is determined by age at first

marriage, religion, fertility preference, and other issues. The conceptual model being fertility is influenced by religion, age of head of household, area of residence, employment status, occupational status, educational level, whether child is alive, and other social variables. These are presented in Figure 1, below:



Source: Ibejiet al. (2020, p. 4).

Figure 1. The schematic representation of the conceptual framework

This study is forwarding that sexual pleasure should be brought into the fertility discourse of Jamaicans, and by extension the general fertility paradigm. As such, the current research employed a quantitative research design to examine the relationship between sexual pleasure and fertility matters among Jamaicans.

Methods and materials

A quantitative research approach was used which explain the phenomenon of sexual pleasure and its influence on fertility matter of Jamaica. According to Apuke (2017) this method highlights objective measurements and the statistical, mathematical, or numerical analysis of data collection through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. This focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon (Apuke, Oberiri 2017). A non-probability sampling (convenience sampling) method was used to collect data from the population. Using a population size of 2,734,092 from the Statistical Institute of Jamaica

(STATIN) for 2018 (STATIN, 2022) with a 3% margin of error and a 95% confidence level, calculated sample size was 1070. A web based standardized survey questionnaire consisting of 15 closed-ended questions was used to collect data. The questions were developed based on information gathered on the topic “Sexual pleasure and its influence on Fertility in Jamaica”. The questionnaire was sent out from September 30 to December 10, 2021. Face to face interactions were done as well as the utilization of a generated link using Google form for the survey which was shared with participants through various social media platforms that targeted the same number of female and male respondents.

Consent was sought prior to the completion of the questionnaire and the participants were informed that any personal information given by them would remain confidential. The survey was composed of questions collecting demographic data such as age and gender whereas the questions seek to identify whether sexual pleasure influences the fecundity rate in Jamaica. Before the data was collected from the participants, a team of data collectors was assembled and trained in research methods, particularly survey research and data collection. During the training periods, the team members had to successfully sit an Ethics course offered by The Global Health Network before they were allowed to collect data for this study. Each team member was assigned a set of parishes, and s/he had to collect data based on strict requirement based on the locations across the 14 parishes. The data was analyzed using the Statistical Package for the Social Sciences (SPSS) for Windows Version 26.0. This type of method consists of analysis and interpretation of data collected. The statistical tools were 1) descriptive statistics, 2) cross tabulations, and the data was presented by way of tables, and graphs.

Findings

Table 1 depicts the demographic characteristics of the Sampled Respondents, n=1070. 63.6% of the respondents were females (n=681) and 36.4% (n=389) were males. The majority of the respondents 42.6% (n=456) were between 18-27 years of age and the least 5.7% (n=61) were those belonging to the 58+ age group. The data showed that the majority of the respondents resides in Manchester 26.4% (283) and the least number of respondents resides in St. Thomas 2.8% (n=30) and Hanover 2.8% (n=30)

Table 1. Demographic Characteristics of the Sampled Respondent, n=1070

Details	% (n)
Gender:	
Female	63.6 (681)
Male	36.4 (389)
Age Group (in years):	
18-27	42.6 (456)
28-37	23.3 (249)
38-47	18.2 (195)
48-57	10.2 (109)

58+	5.7 (61)
Parish of Residence:	
Kingston	10.0 (107)
St. Andrew	4.3 (46)
St. Thomas	2.8 (30)
Portland	3.5 (37)
St. Mary	3.1 (33)
St. Ann	3.1 (33)
Trelawny	3.8 (41)
St. James	5.8 (62)
Hanover	2.8 (30)
Westmoreland	5.8 (62)
St. Elizabeth	8.3 (89)
Manchester	26.4 (283)
Clarendon	14.5 (155)
St. Catherine	5.8 (62)

Table 2 Sexual Matters of the Sampled Respondents, n=1070. Almost eight six per cent (n=916) of the respondents were sexually active. Fifty and two tenths per cent (n=495) of the respondents (n=987) reported that their first sexual encounter occurred between 16-18 years of age and 4.3% (n=42) reported that their first sexual encounter occurred at 25+ years of age. The analysis shows that 93% (n=995) of the persons surveyed enjoy sexual relations and 81.6% (n=873) said sexual pleasure influence how often they engage in sexual activity. 36.6% (n=392) believed that sexual pleasure increases their ability to have children. 87% (n=931) consider having sex as a healthy way to enjoy life. 22.6% (n=242) engage in sexual activity twice per week. The data also revealed that 24% (n=257) of the respondents rate their sexual pleasure at 9 and 18.9% (n=202) rate their sexual pleasure at 10 with the scale ranging from a low of 1 to a maximum of 10.

Table 2. Sexual Matters of the Sampled Respondents

Details	% (n)
Sexually Active	
Yes	85.6 (916)
No	14.4 (154)
Age of first sexual encounter (in years)	
16-18	50.2 (495)
19-21	34.0 (336)
22-24	11.6 (114)
25+	4.3 (42)
Enjoyment of sexual relations	
Yes	93.0 (995)

No	7.0 (75)
Sexual pleasure and its influence on sexual activity	
Yes	81.6 (873)
No	18.4 (197)
Sexual pleasure in relation to having children	
Yes	36.6 (392)
No	32.1 (343)
Maybe	31.3 (335)
Sexual activity and enjoying a healthy way of life	
Yes	87.0 (931)
No	13.0 (139)
Frequency in sexual activity	
Once per week	10.1 (108)
Twice per week	22.6 (242)
Three times per week	22.1 (236)
Four times per week	10.8 (116)
Five times per week	4.6 (49)
Six times per week	1.2 (13)
Seven times per week	3.0 (32)
I rarely engaged in sexual activities	15.2 (163)
I am not engaged sexually	10.4 (111)
Rating of sexual pleasure	
1	5.0 (54)
2	0.9 (10)
3	0.9 (10)
4	2.1 (23)
5	5.0 (54)
6	7.2 (77)
7	14.8 (158)
8	21.0 (225)
9	24.0 (257)
10	18.9 (202)

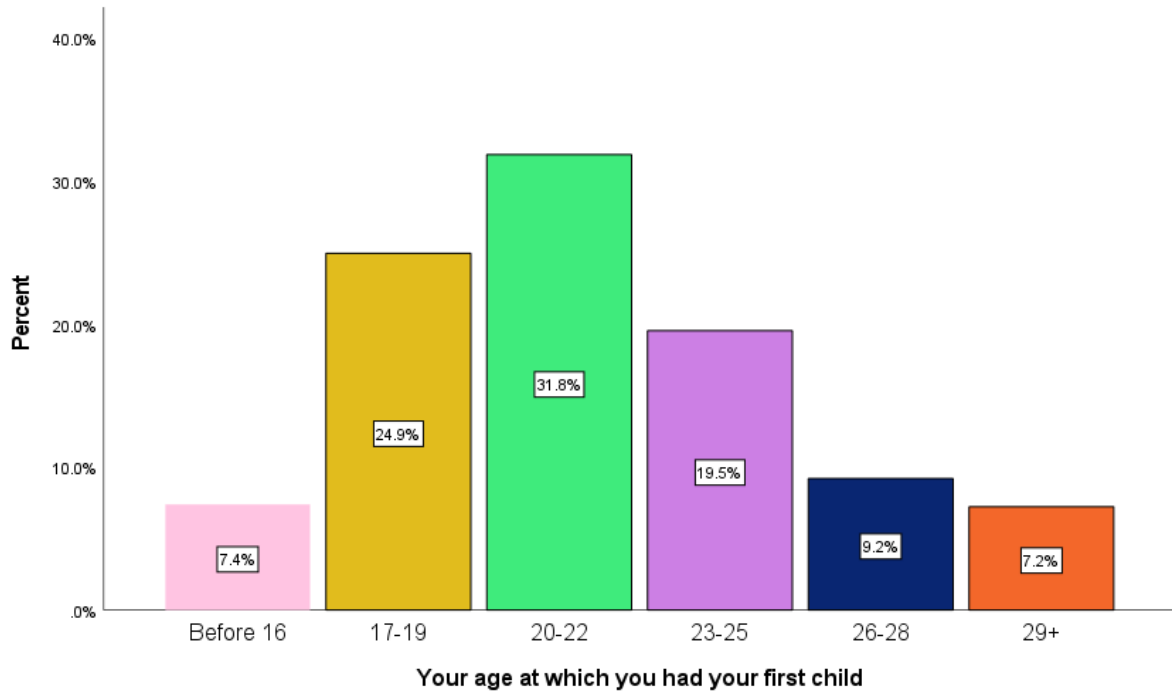


Figure 1. Age at which Respondents had their first child

Figure 1 displays the age at which respondents had their first child. The majority of respondents had their first child between the age of 20-22, 31.8% (n=194). The least respondents had their first child at 29+, 7.2% (n=44) and before 16, 7.4% (n=45).

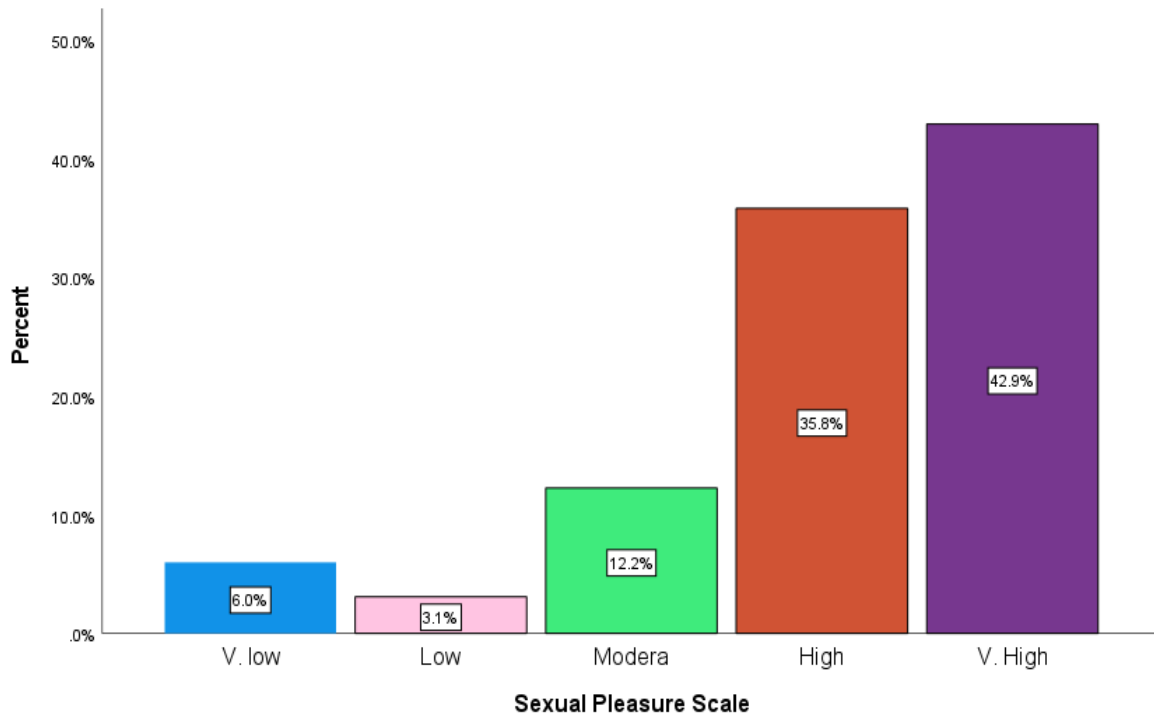


Figure 2. Rating of the Sexual Pleasure of Jamaicans

Figure 2 depicts a bar graph showing the sexual pleasure of Jamaicans. The findings revealed that majority of the Jamaicans are enjoying their sexual relations (very high, 42.9%, and high, 35.8%), with less than 10% of not enjoying their sexual relations (i.e., 6.0% very low; and 3.1% low).

Table 3 depicts Reproductive health matters, n=1070. Of the sampled respondents 55.1% (n=590) have children and the average number of children the respondents had is 2, 16.9% (n=181). Majority of the respondents which is 31.8% (n=194) had their first child between the age 20-22 and 7.2% (n=44) had their first child at 29+ which was the least chosen range. Furthermore, 64.1% of the sampled respondents began having children before 23 years, and the average fertility per person is 2.0 children (i.e., median; range = 6 children).

Table 3. Reproductive Health Matters

Details	% (n)
Have biological Child/ren	
Yes	55.1 (590)
No	44.9 (480)
Fertility	
0	44.9 (480)
1	16.0 (171)
2	16.9 (181)
3	10.5 (112)
4	6.6 (71)
5	3.2 (34)
6+	2.0 (21)
Age you had your first child(in years)	
≥ 16	45 (7.4)
17-19	152 (24.9)
20-22	194 (31.8)
23-25	119 (19.5)
26-28	56 (9.2)
29+	44 (7.2)

Table 4.1 presents descriptive statistics for enjoyment of sexual relations by the number of children. The findings revealed that there is a statistics difference in the rate of sexual pleasure experienced by Jamaicans who children and those who do not have children ($t=4.506$, $P < 0.0001$). Those who have children have a higher sexual pleasure (2.41 ± 1.584) than those who do not have children (1.64 ± 1.411).

Table 4.1. How many children do you have, and do you enjoy sexual relation intercourse?

Details	Rating of Sexual Pleasure	n	Mean±SD
Have children	Yes	995	2.41±1.584
	No	75	1.64±1.411

Table 4.2 presents a cross tabulation of ‘Do you have children?’ and Rating of Sexual Pleasure. A significant statistical relationship emerged between the two variables ($\chi^2(4) = 41.915, P < 0.0001$, contingency coefficient = 0.194). Jamaicans who do not have children are more likely to indicate having very low sexual pleasure (81.3%) compared to those with children (18.8%).

Table 4.2. Cross tabulation of do you have children by rating of sexual pleasure

Details	Sexual Pleasure Scale					Total
	Very Low	Low	Moderate	High	Very High	
Have children:	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)
Yes	18.8 (12)	42.4 (14)	62.6 (82)	59.3 (227)	54.5 (250)	54.7 (585)
No	81.3 (52)	57.6 (19)	37.4 (49)	40.7 (156)	45.5 (209)	45.3 (485)
Total	64	33	131	383	459	1070

Table 5 presents on the fertility of the respondents based on their gender. The finding revealed that on average male-respondents have more children (2.49 ± 1.660) than the female-respondents (2.28 ± 1.535)- $t = -2.093, P = 0.018$.

Table 5. Descriptive statistics of fertility by gender of respondents

Details	Gender	n	Mean±SD
Fertility	Female	681	2.28±1.535
	Male	389	2.49±1.660

Table 6 presents a cross tabulation between fertility and the rating of sexual pleasure of Jamaicans. A weak statistical association existed between the two aforementioned variables ($\chi^2(24) = 60.746, P < 0.0001$, contingency coefficient = 0.232). Respondents indicating a high sexual pleasure are less likely not to have children.

Table 6. Cross tabulation of Fertility and Rating of the Sexual Pleasure of Jamaicans

Details		Sexual Pleasure Scale					Total
		Very Low	Low	Moderate	High	Very High	
		% (n)	% (n)	% (n)	% (n)	% (n)	
Fertility	0	79.7 (51)	54.5 (18)	35.1 (46)	41.5 (159)	44.9 (206)	44.9 (480)
	1	3.1 (2)	9.1 (3)	16.0 (21)	17.5 (67)	17.0 (78)	16.0 (171)
	2	6.3 (4)	9.1 (3)	19.1 (25)	19.6 (75)	16.1 (74)	16.9 (181)
	3	1.6 (1)	12.1 (4)	14.5 (19)	8.9 (34)	11.8 (54)	10.5 (112)

	4	4.7 (3)	12.1 (4)	9.9 (13)	6.5 (25)	5.7 (26)	6.6 (71)
	5	1.6 (1)	0.0 (0)	3.1 (4)	5.0 (19)	2.2 (10)	3.2 (34)
	6+	3.1 (2)	3.0 (1)	2.3 (3)	1.0 (4)	2.4 (11)	2.0 (21)
Total		64	33	131	383	459	1070

Table 7 presents a cross tabulation of the rating of sexual pleasure and the gender of the sampled respondents. More male-respondents indicated that they highly enjoy sexual relations (53.7%) compared to 36.7% of female-respondents ($\chi^2(24)=48.733$, $P < 0.0001$, contingency coefficient = 0.232).

Table 7.A cross tabulation of Rating of

Details	Gender		Total
	Female	Male	
Sexual Pleasure Scale:	% (n)	% (n)	% (n)
Very Low	7.8 (53)	2.8 (11)	6.0 (64)
Low	4.1 (28)	1.3 (5)	3.1 (33)
Moderate	15.4 (105)	6.7 (26)	12.2 (131)
High	36.0 (245)	35.5 (138)	35.8 (383)
Very High	36.7 (250)	53.7 (209)	42.9 (459)
Total	681	389	1070

Discussion

In the last three years, the Coronavirus disease 2019 (COVID-19) has taken the center stage of our thoughts as policies and science are developed to address the pandemic. In the midst of the discussion on COVID-19, little emphasis is placed on sexual pleasure and its influence on reproductive health matters among Jamaicans. Two of the measures to address the pandemic are social distancing, and staying at home. The current study has indicated that sexual pleasure among Jamaicans is at least high (high, 35.8%; very high, 42.9%), males indicated a greater sexual pleasure (very high, 53.7%) compared to female-Jamaicans (very high, 36.7%), and that a weak statistical association existed between sexual pleasure and fertility ($\chi^2(24)= 60.746$, $P < 0.0001$, contingency coefficient = 0.232).

It is documented in the literature that infertility, which is an inability to conceive children, is affecting mental health of couples (Czyzkowska, Awruk, & Janowski, 2016), this correlates with findings of this research. This research revealed that 81.3% of those who indicated having a very low sexual pleasure were those who do not have children compared to 18.8% of fertile Jamaicans. Furthermore, 79.7% of those who indicated a very low sexual pleasure had no children, and that 45% of the sampled respondents indicated not having a child. Child birth is critical to the continuation of humanity and people place most importance on child-bearing, which explains why infertility is associated with mental health issues (Domar, Zuttermeister, &

Friedman, 1993) similar to sexual pleasure. The findings of this research revealed that 87.0% of the sampled respondents indicated that there is an association with enjoying sexual relations and a healthy way of life. In addition, 78.7% of respondents indicated that they are enjoying their sexual relations (high, 35.8%; very high, 42.9%), with less than 10% of respondents not enjoying their sexual relations (i.e., 9.1%; very low, 6.0%).

Boivin, Bunting, & Collins (2007) noted that almost 72.4 million women worldwide are infertile and there is an increase in the number of infertile women. Of the sampled respondents who are 18+ years old, in this study, 45% of them have not had a child; but there is need for more information to determine what per cent are infertile. Nevertheless, there is current empirical evidence that there is a positive statistical association between fertility and sexual pleasure. The current findings contradicts Mohammad, Khosravi, Chaman, Vahedi, & Sadeqi's study (2016) study that fertility issues did not lead to lower sexual satisfaction, and concurs with those that found infertility and sexual dissatisfaction.

According to an article published by Oxford Academic titled Sex and Reproduction: An Evolving Relationship Reproduction is not solely dependent on sexual activity, on the contrary of evolutionary belief, sexuality has been driven by the imperative to reproduce (Benagiano, 2009). This study revealed that 44.9% (n=480) of the respondents indicated that they did not reproduce while the majority 55.1% (n=590) of the respondents stated that they have reproduced. Another study explains this suggesting that women who reported less sexual intercourse and engaging in less sexual for eplay have a difficulty with arousal and ultimately fertility (Norten, Schilling, Couchman, & Walmer, 2001). This explains in this research that less sexual intercourse resulted in less incidence of fertility.

According to the group statistics in Table 4, participants who enjoyed sex reported to having children. Campbell (2009) also noted that the better the quality of the sexual pleasure the higher the chances of conception and that for women, more orgasms not only equates to more pleasure but also enhanced fertility.

Conclusion

Most people experience pleasure from sex. This research has shown that males engage in sexual activity more frequently than women, moreover, there is in fact a positive relationship between sexual pleasure and fertility. This research also revealed that the fertility rate in Jamaica is at an average of 2 children, which correlates with the national average.

Recommendations

There is a need for further study to establish the factors that attribute to associations between:

- Frequencies of engaging in sexual intercourse and difficulty with arousal which lead to ultimately fertility.

- Why men experience more sexual pleasure than their female counterparts, and
- The role of the covid-19 pandemic on sexual pleasure.

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