

Determinants of Delayed Desired Conception among Reproductive Women of Port Harcourt

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Abstract

Background: Desired conception is an important process among families in Africa, particularly when married. Many women have desired to conceive at their matrimonial homes but find it difficult to actualize their plans. This study was carried out to x-ray the determinants of delayed, desired conception among reproductive women of Port Harcourt.

Materials & Method: This is a cross-sectional study involving 50 women who are within their reproductive period with age range 18-24years, 25-31years, 32-37years, 38-43years and 44-49years. A well - structured self administered questionnaire was issued to each participant.

Results: Data was analyzed with SPSS version 26 and Excel and P value < 0.05 was considered significant. The study shows that most women though married had delay in conception and this was predominant in women between 32-37years and 38-43years. Major factors implicated in causing delay to conception include uterine fibroid, alcohol consumption, abortions, contraceptive use and high maternal age.

Conclusion: Conception therefore can be delayed by both intrinsic and extrinsic factors.

Keywords: Determinants, Delayed, Age, Conception

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I. Introduction

Reproduction is an important aspect of African culture with the aim to maintain continuity in the family circle. This however can only be actualized when a mature male and female agree to be couple with the desire to have children. Desired conception is when both couple agree based on favourable conditions to have a child or children and delayed could be any factor that may impede or delay this conception process in the female.

A study by Linn et al revealed that conception rate continues to reduce from 4 to 10 months after oral contraceptive use.¹ Also, studies by Kay CR and Vessey et al shows delay in conception for previous oral contraceptive users.^{2,3} Delayed conceptions after oral contraception are caused by anovulation or defective ovulation.⁴ Factors such as parity and age, with nulliparous women on oral contraceptives until greater than 30 years old have greater reduction in fertility.³ Exogenous hormonal therapy causes delayed return of normal function of hypothalamic/pituitary/ovarian axis,⁵⁻⁸ and temporary infertility.⁹

Uterine fibroids are one of the most common benign tumours of the female genital tract,^{10,11} occurring in 20–50% of women of reproductive age.¹² 5 to 10% of patients who have not yet conceived have fibroids and these may be the cause of delayed conception in 1-2.4% of the patients.^{13,14} Fibroids cause delayed conception by blocking the movement of sperm from the vagina to the site of fertilization. However, fibroid location is of critical importance in ART outcomes.¹⁵

Increased blood serum concentration of prolactin causes many disturbances in the function of the gonads and it leads to an imbalance in GnRH and LH secretion and consequently to hypoestrogenism.¹⁶ Decrease oestrogen concentration due to hyperprolactinaemia affects women's sexual life and symptoms include lowered libido, dryness of the vagina – with subsequent dyspareunia,¹⁷ and disturbances in the arousal phase and orgasm.¹⁸

The most common symptoms of increase prolactin are menstrual disturbances (irregular cycles every six weeks and up to six months, amenorrhoea, oligomenorrhoea, hypomenorrhoea, hypermenorrhoea), shortened menstrual cycles (polymenorrhoea), premature regression of the corpus luteum, premenstrual syndrome, anovulation, lowered libido, dyspareunia, galactorrhoea, hirsutism, acne, headaches, and vision disturbances (with the presence of prolactinoma, mostly macroprolactinoma; and these clinical features are determinants of delayed conception.¹⁹ Hyperprolactinaemia is the cause of 3% of primary amenorrhoea and 18% of secondary amenorrhoea in women.²⁰ Considerable prolactin secretion occurs when animals are exposed to physical or psychological stress.²¹

Products arising from tobacco smoking include benzopyrene, cadmium, and cotinine. Cotinine, a product of tobacco has been implicated with reduced fertilizing ability of the oocyte.^{22, 23}

II. Material And Methods

A cross-sectional study was carried out among women of reproductive age in Port Harcourt. The study lasted for four weeks and 50 women participated with age ranges between 18-24, 25-31, 32-37, 38-43, and 44-49. The questionnaires were well structured and divided into two sections: demographics and determinants. Each participant was given a questionnaire to respond to questions in the two sections of the questionnaire after a well- informed consent was granted. Statistical analysis of data was done using SPSS Version 26 and Excel. P value < 0.05 was considered significant for data. Pearson’s correlation coefficient was used to test the relationship between age and duration in conception delay.

III. Results

Table 1 shows the age range for the women studied as well as the percentage of women who fall under each of the age groups. The mean of 35.96 was obtained for the ages. Frequency of Age distribution was highest for women between 32 – 37 years and lowest for 18 – 24 years.

Table 1: Age Distribution of Respondents

| Age Range | Frequency(F) | Percentage (%) | X | FX | P value |
|------------|--------------|----------------|------|-------|---------|
| 18-24 | 1 | 2.0 | 21 | 21 | 0.0002* |
| 25-31 | 7 | 14.0 | 28 | 196 | |
| 32-37 | 23 | 46.0 | 34.5 | 793.5 | |
| 38-43 | 16 | 32.0 | 40.5 | 648 | |
| 44-49 | 3 | 6.0 | 46.5 | 139.5 | |
| Total | 50 | 100.0 | | | |
| Mean=35.96 | | | | | |

F=Frequency, X= midpoint, * = significant

Table 2 shows the marital status of our respondents where 62% of them are married, 34% single, and 1% for divorced and cohabiting women. Most of our respondents fell into the married category.

Table 2: Marital Status of Respondents

| Marital status | Frequency (F) | Percentage (%) |
|----------------|---------------|----------------|
| Cohabiting | 1 | 2.0 |
| Married | 31 | 62.0 |
| Single | 17 | 34.0 |
| Divorced | 1 | 2.0 |
| Total | 50 | 100.0 |

Table 3 shows that most of the women who had encountered conception delay had spent 1 to 15 years waiting for conception. Majority of them had waited for 2 years and 15 years.

Table 3: Duration in Conception Delay

| Duration (years) | Frequency (F) | Percentage (%) |
|------------------|---------------|----------------|
| 1 | 5 | 10 |
| 2 | 19 | 38 |
| 3 | 6 | 12 |
| 4 | 3 | 6 |
| 5 | 2 | 4 |
| 7 | 1 | 2 |
| 10 | 1 | 2 |
| 15 | 13 | 26 |
| Total | 50 | 100 |

Table 4: Relationship between Age and Duration in Conception Delay

| Age Range | X | d CD (Years) | r | RS |
|-----------|------|--------------|-------|----------|
| 18-24 | 21 | 1 | 0.250 | positive |
| 25-31 | 28 | 7 | | |
| 32-37 | 34.5 | 23 | | |
| 38-43 | 40.5 | 16 | | |
| 44-49 | 46.5 | 3 | | |

X-midpoint, d CD- delay in conception delay, r-Pearson’s coefficient, RS- Relationship

There is a positive correlation between age and duration in conception delay (Table 4). Most of the respondents who fall between age ranges of 32-37 and 38-43 appear to have a greater percentage in conception delay with 46% and 32% respectively (Table 1 & 4). Most of our respondents had spent a duration of 2years and 15years waiting for conception at percentages of 38% and 26% respectively (Table 3). This affirms the major contribution to delay by some of the determinants studied in this research. Our study also shows that being single or divorced was not a major determinant to delay as most of our respondents were married (Table 2).

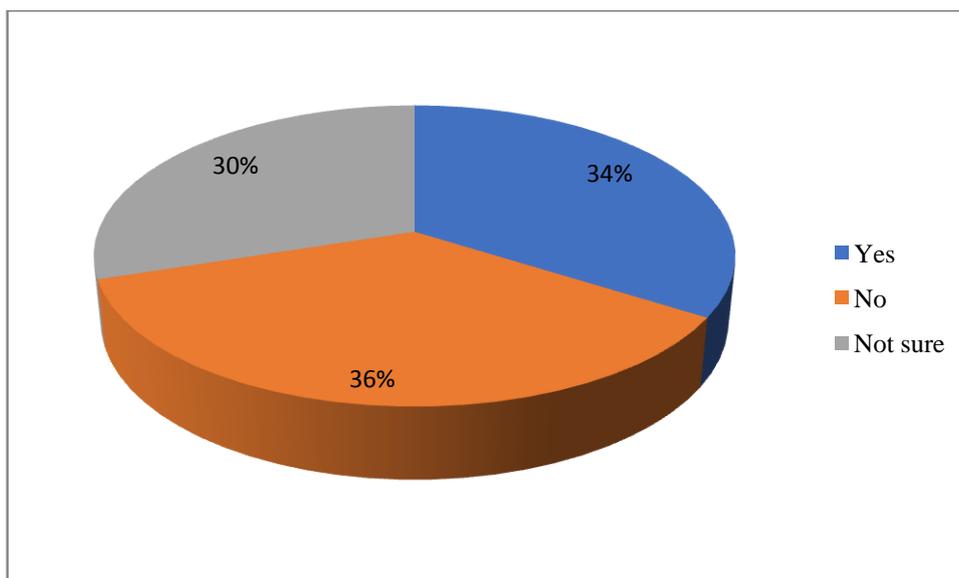


Fig.I. History of Fibroid among Respondents

34% of the women had a previous history of fibroid, 30% had no history of fibroid and 36% were not sure. Fibroid is a major contributor to infertility, hence 34% is significant.

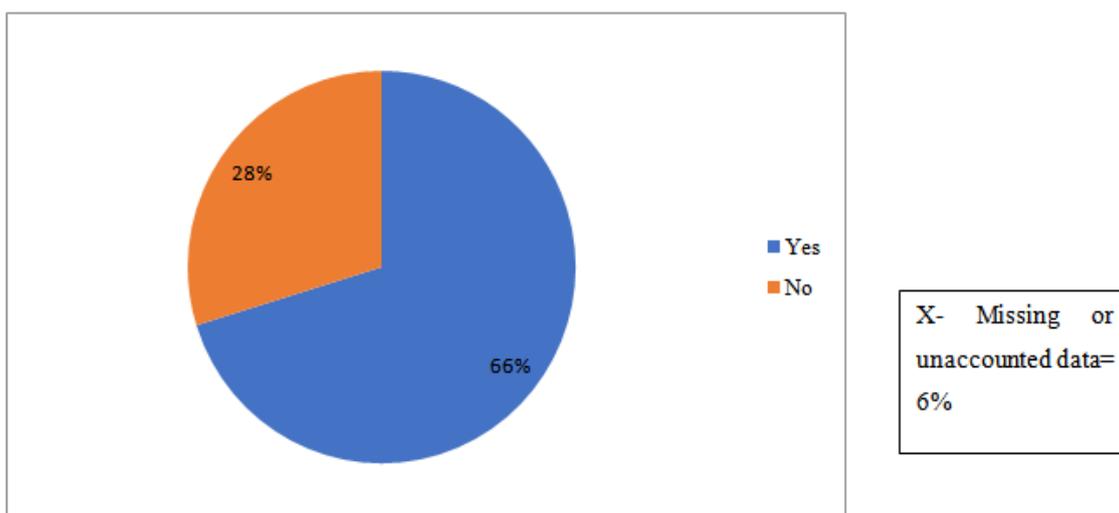


Fig.II. Percentage of Previous Abortions

66% of respondents had previous history of abortion and 28% do not.

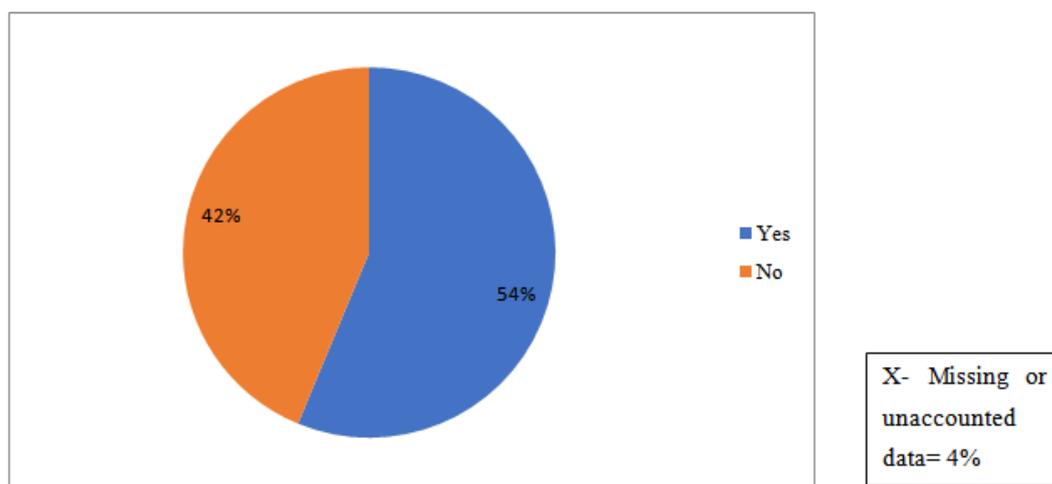


Fig.III. Percentage Alcohol consumption

54% of our respondents consume alcohol and 42% do not consume alcohol. Alcohol intake is quite high among our respondents despite the risks associated with its consumption.

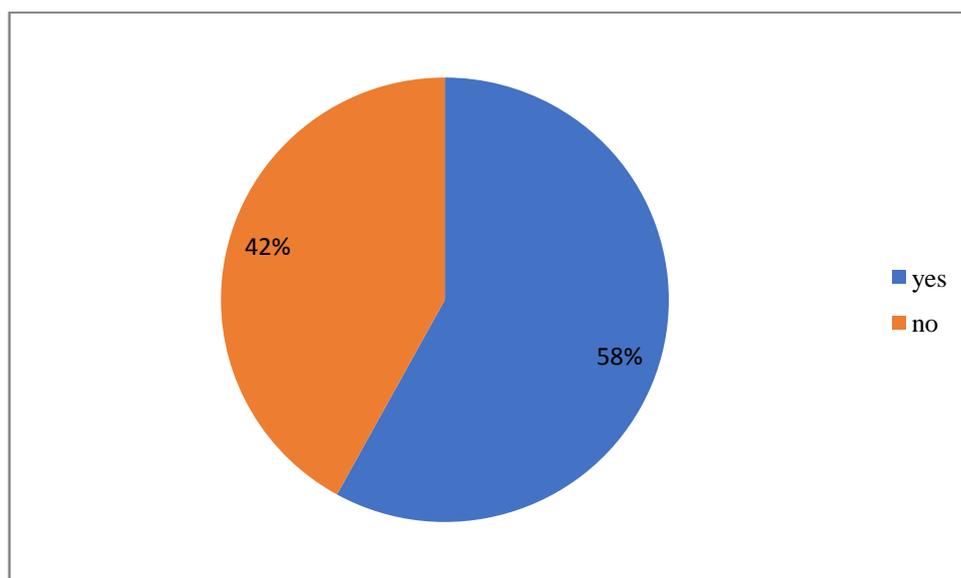


Fig.IV. Contraceptive Use among Respondents

IV. Discussion

In African culture, the desire of a woman of reproductive age is to give birth or have children, especially among married women. However when this desire is delayed, it becomes a concern to the woman and to the entire family. Every woman is important as far as reproduction or conception is concerned. The happiness of every husband is to see their wives conceiving at their desired time. Also, married women will be comfortable in their matrimonial homes when conception is not delayed to avoid hate speeches or maltreatment from their in-laws.

Desired, delayed conception may be due to several factors and some of these factors appear commoner with a certain group of women. Our study revealed that most women who had delay in conception were between the ages 32-37 years and 38-43 years. Among the participants studied, delayed conception was as high as 46% for the former age group and 32% for the later. This appears to agree with some researchers who reported that fertility decreases with age especially beyond 35 years.^{24, 25 & 26} Age therefore is a major determinant to delayed desired conception as proven from our study. Also the mean age for this present study is 35.96 years, showing that majority of our respondents fell between 32 to 37 years, hence our findings appear significant for age and data ($P < 0.05$). Therefore most of the determinants affecting conception appear useful and significant for the

most predominant age group. Our study also shows that despite the fact these women were in the married category, they still had delayed conception. This reveals that singlehood or divorce may not be a barrier to conception, as some of them in this category though desired conception, could not however conceive.

34% of our respondents had a history of uterine fibroid as against 30% who do not have. The difference though appearing inconsequential is statistically significant ($P < 0.05$). However the occurrence of fibroid as a major determinant to infertility is a long established fact.^{27, 28 & 29} The studies by Patel et al, Day et al and Ezzati et al had independently documented that uterine fibroid affects 35 – 77% of reproductive age women.^{30, 31 & 15} This is in consent with our study as 34% of our participants who are in their reproductive age group had uterine fibroid. Again Day et al., 2003 also reported that when age approaches 50 years, the likelihood of fibroid increases to 70 – 80%.³¹ This finding could be inferred from our present study as 78% of our participants fell within the age class of 32 – 43 years. Hence the prevalence of uterine fibroid in this age class is scientifically consequential and could affirm the reason for delayed conception. This also agrees with Olotu et al who reported from a retrospective study of patients in Port Harcourt between 2000 and 2007 that prevalence of uterine fibroid for ages 16 – 25 years, 26 – 35 years and 36 – 45 years were 3.5%, 51.9% and 44.6% respectively.³²

Some possible determinants to delayed conception as captured in our study include alcohol consumption and our data obtained shows that a greater percentage (54%) of these women consumes alcohol. Again 66% of the respondents had a previous history of abortions. This can explain the reason majority of our respondents almost in every age group suffered from delayed conception. Both chronic alcohol intake and abortions have been highly implicated in previous studies in infertility and delayed conception. This is in consent with Mutsaerts et al and Hakim et al who reported that increase in alcohol consumption delayed conception.³³ Tobacco use among our respondents was about 10%, which may not be a major determinant to delayed conception in this study. However most women who use tobacco may not own up to it for its current tribal sentiments and weirdness associated with the act especially among African women. Use of contraceptives has been reported by previous studies of Kay CR and Vessey et al as implicated in delayed conception.^{2, 34} In our study as well, 58% of the women has previous use of contraceptives. Again this buttresses the reason for increase in delayed conception among our study group.

V. Conclusion

Conception is an important aspect of reproductive life of a woman and indeed the joy of every family across the African continent and this conception may be delayed for one reason or the other. These reasons could however be intrinsic or extrinsic factors. Our study has been able to report possible determinants to delayed conception and we know these factors may differ with location and ethnicity. However delayed conception identified among our respondents were due to high maternal age, alcohol consumption, uterine fibroid, use of contraceptives and abortion.

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