



## **Factors Associated With Infertility Among Couples Attending Fertility Clinic In University Of Port Harcourt Teaching Hospital, Nigeria**

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### **ABSTRACT**

This research was carried out on factors associated with infertility among couples attending fertility clinic in university of Port Harcourt Teaching Hospital (UPTH). The objectives of the study were to identify demographical factors associated with infertility, to ascertain socioeconomic factors and to identify medical factors associated with infertility among couples. A descriptive design was used and a target population of 100 respondents was obtained from the register in the fertility clinic in UPTH. 80 respondents were selected out of it using Taro Yemen formula. Simple random sampling techniques, with self-structured questionnaire which consists of sections A and B, which was tested and retested for reliability, was adopted. 50 questionnaires were distributed to the respondents on the first visit, and 30 questionnaires were distributed on the second visit, which were retrieved on the same day making a total of 80 questionnaires. The data were analyzed using descriptive statistics represented on a table. The respondents were assured of the confidentiality of information provided. The results from the findings shows that majority of the respondents agreed that age, gender, education, late marriage, occupation, tubal blockage, disorders in female and male reproductive systems etc, are factors associated with infertility. Based on these findings, recommendations were made that parents, policy makers, and religions should allow and encourage early marriage of their children, nurses and other health professionals should educate couples on those factors that can predispose them to infertility. Also the school or any health institution should a course on fertility and infertility in their curriculum as well as imparting the knowledge to student nurses.

**Keywords:** Couples, Fertility, Socio-demographics, Socio-economic factors

### **INTRODUCTION**

Infertility is becoming a major public health concerns because, it affects one's mental well beings, disrupts social bonding and lower economic productivity to all those affected and erodes self-confidence. According to World Health Organization (2012), infertility/subfertility refers to inability of a couple to achieve or bring a pregnancy into term after 1 year or more of regular unprotected intercourse. The prevalence of infertility has not changed greatly although more couples are now seeking help than previous. Maker and Toth (2014), estimates from 1997 suggest that Worldwide, between three and seven percent of all (heterosexual) couples or women, have an unresolved problems of infertility. Many more couples, however experience involuntary childlessness for at least one year; estimates range from 12% to 28%. Approximately 50% of couples will conceive after receiving advice and simple treatment, but the

member requires complex assisted conception techniques and 40% of the couple will remain childless. The chance of conception, over the first 6 months of unprotected regular intercourse is approximately 60%. At the end of 1 year 80% couples will conceive. According to Himmel et al. (2014), 20-30% of infertility cases are due to male infertility, 20 - 35% are due to female and 25-40% are combined problem in both parts. In 10-20% of cases, no case is found. The most common causes of infertility are ovulatory problems which generally manifest themselves by sparse or absent of menstrual periods.

Most infertility is really of some degree of sub infertility and 1 in 7 couple needs special help to conceive, including some couples who have conceived before (Fraser and Cooper, 2013). According to Hinkle and Cheever (2015), primary infertility refers to a couple who never had a child or conceive before secondary infertility means that at least one conception has occurred but currently the couple cannot achieve pregnancy. It is often a complex physical problem and its causes are usually related to azoospermia, anovulation or tubal obstruction. However, men infertility is the most common due to deficiencies in semen, and semen quality is used as a surrogate measure of male fecundity/fertile (Fraser & Cooper, 2012). Conversely, women who are fertile experience a natural period of fertility before and during ovulation, and they are naturally infertile during the rest of the menstrual cycle. Fertility awareness methods are used to discern when these changes occur by tracking changes in cervical mucus or basal of temperature (National Health Service, 2014).

Notably, infertility can be treated medically, surgically or involved assistance conception, where by the egg and sperm are brought into these monitory to facilitate fertilization (Arnold, 2013). The initial management of the infertile couple is through primary care, therefore, the preliminary investigation of both partners and subsequent practitioner. It is important that both partners are involved in the management of their infertility and for that full explanation are given to couple at each stage in the investigation and treatment. Infertility is becoming more common than pregnancy and its alarming rate cannot be over emphasized and it affects an estimated 10-25% of couples in their reproductive age. In recent years, the number of couples seeking treatment for infertility has postponement of child bearing in women development of newer and more successful techniques for infertility treatment.

Infertility is not only a health problem but also a social and emotional problem, especially in African culture. Infertility among couples can lead to abandonment of social intimacy during the infertile times of the months, separation of a family or divorce, low self-esteem, depression and some psychiatric problems such as suicidal attempts, ambivalence, poor communication, anxiety, grief and loss of self-control in the relationship, causing disaggregation and discrimination of the families. During the researcher's clinical experience in university Port Harcourt Teaching Hospital, it was observed that most couples were counseled on those factors associated with infertility and how to prevent and treat it. Hence, the compliance was very low among couples with infertility associated problems due to one reason or the other. However, from the existing infertility records in the facility, there was an increase in the number of couples with infertility associated problem attending the clinics. This observation prompted the researcher to carry out this research work on factors associated with infertility among couples in University of Port Harcourt Teaching Hospital.

### **Objectives of the study**

The following specific objectives were stated to guide the study

1. To identify demographical factors associated with infertility among couples.
2. To identify socio-economic factors associated with infertility among couples.
3. To identify medical factors associated with infertility among couples.

### **Research Questions**

The study provided answers to the following research questions:

- i. What are the demographical factors associated with infertility among couples?
- ii. What are the socio-economic factors associated with infertility among couples?
- iii. What are the medical factors associated with infertility among couples attending infertility clinic in university of Port Harcourt Teaching Hospital?

**METHODOLOGY**

The descriptive research design was adopted in the study. The target population is all infertility couples attending fertility clinic in University of Port Harcourt Teaching Hospital. The population size was estimated to be 100. A simple random sampling technique was used to select the sample size of 80 which was determined using Taro Yamane’s formula. The instrument for collection of data was self-construction questionnaire with a reliability coefficient of 0.99. The data obtained through the questionnaire was analyzed using descriptive statistics of frequency and percentage.

**RESULTS**

The results of the study are presented below in tables:

**Table 1: Demographical factors associated with infertility among couple**

SN	Statement	SA	A	D	SD	(%)
1	A woman fertility are gradually decline with age	26 36.6%	22 31.0%	16 22.5%	7 9.9%	100%
2	Infertility affect both gender (male and female)	21 20.0%	37 52.1%	8 11.3%	5 7.0%	100%
3	Religious difference in believes, has been identified as One of the factors associated with infertility.	18 25.4%	12 16.9%	20 28.2%	21 29.6%	100%
4	Late marriage especially in women is one of the factors associated with infertility	21 43.7%	19 26.8%	15 21.1%	6 8.5%	100%

Results in table 1 shows that 26 (36.6) strongly agreed that a woman’s fertility gradually declined with age 22(31.0%) agreed also while 16 (22.5%) strongly disagreed and 7(9.9%) strongly disagreed that a woman fertility declined with age.

21(30.0%) strongly agreed that infertility affect both gender (male and female), then 27 (52.1%) agreed while 8(11.3%) disagreed and 5(7.0%) strongly disagreed. 18, (25.4%) strongly agreed that difference in religious believes, has been identified as an important determinant fertility pattern, 24 (33.8%) just agreed, while 20(28.2%) disagreed and 9(12.7%) strongly disagreed.

Also 31(43.7%) strongly agreed that late marriage especially in women is one of factors associated with infertility, then 19 (26.8%) agreed while 15(21.1%) disagreed and 9(12.7%) strongly disagreed

**Table 2: Socio-Economic factors associated with infertility**

SN	Statement	SA	A	D	SD	(%)
1	Some occupational activity can predispose one to infertility	20 28.2%	32 48.16%	14 19.9%	5 7.0%	100%
2	Poor dietary chosen can affect both male and female fertility	18 25.4%	28 39.4%	16 22.5%	9 12.7%	100%
3	Alcohol/drugs, dependency can be associated with poor health thereby reducing fertility of the couple	22 31.0%	34 47.9%	8 11.3%	7 9.9%	100%
4	Environmental exposure to pesticides, herbicides, insecticides and other chemicals can cause infertility	15 21.1%	31 43.7%	20 28.2%	5 7.0%	100%
5	Woman with high level of education are more likely at risk of infertility than their counterpart	26 36.6%	25 35.2%	7 9.9%	13 18.3%	100%
6	Stress, anxiety, lack of sleep, and exercise all adversely can affect fertility of the couple	20 28.2%	33 46.5%	9 12.7%	9 12.9%	100%

Result in table 2 shows that 20 (28.2%) strongly agreed that some occupation activity can predispose one to infertility, 32(45.1%) agreed, while 14(19.9%) disagreed and 5(7.0%) strongly disagreed. 18(25.4%) strongly agreed that poor dietary chosen can affect both male and female fertility, then 28(39.4%) agreed, while 16(22.5%) disagreed and 9(12.7%) strongly disagreed. 22(31.0%) strongly agreed that alcohol/drug dependency can be associated with poor health thereby reducing fertility, the 34(49.9%) agreed. 15(21.1%) strongly agreed that environmental exposure to pesticides, herbicides, insecticides and other chemicals exposure can cause infertility, then 31(43.7%) agreed while 20(28.2%) disagreed and 5(7.0%) strongly disagreed. 26(36.6%) strongly agreed that people with poor or no education are likely at high risk of infertility than their counterpart. 20(28.2%) strongly agreed that stress, anxiety, lack of sleep and exercise adversely can affect fertility, 33(46.5%) agreed and 9(12.3%) disagreed and also 9(12.7%) strongly disagreed.

**Table 3: Medial conditions associated with infertility among couples**

SN	Statement	SA	A	D	SD	(%)
1	A disorder in the female reproductive system such as edometriosis, cervical incompetence etc is one of the factors associate with infertility	23 32.4%	31 43.7%	10 14.1%	7 9.9%	100%
2	Low sperm count in male such as Azospermia is one of the factors associated with infertility	30 42.2%	28 39.4%	9 12.7%	4 5.6%	100%
3	Tubal blockage which can be congenital or acquired is associated with infertility	19 26.8%	40 56.3%	6 8.5%	6 8.8%	100%
4	Chronic illness e.g Diabetes mellitus, HIV/AIDS, hypothyroidism can cause infertility	15 21.1%	31 43.7%	10 14.1%	15 21.1%	100%
5	Advance, effect of some drugs and treatment (iatrogenesis) can render couple to sudden infertility	21 29.6%	37 55.1%	5 7.0%	8 11.3%	100%

Result in table 3 shows that 23(32.4%) strongly agreed that disorder in the female reproductive system such as endometriosis is one of the factor associated with infertility, 31(43.7%) just agreed while 10(14.1%) disagreed and 7(9.9%) strongly disagreed. 28(39.4%) strongly agreed that low sperm count in male is one of the factors associated with infertility, then 30(42.2%) agreed, while 9(12.7%) disagreed and 4(56%) strongly disagreed. 19(26.8%) strongly agreed 40(56.3%) agreed and 6(8.5%) disagreed while 6(8.5%) strongly disagreed that tubal blockage which can be congenital or acquired is associated with infertility. 15(21.1%) strongly agreed that chronic illness e.g Diabetes mellitus, HIV/AIDS can cause infertility then 31(4.3.7%) just agreed, while 10(14.1%) disagreed and 15(21.1%)-strongly disagreed. 21(29.6%) strongly agreed that advance effect of some drugs and treatment can render the couple to sudden infertility, 37(52.1%) then agreed, while 5(7.0%) disagreed and 8(11.3%) strongly disagreed.

### DISCUSSION OF FINDINGS

From the findings in table 1 it showed that 67.6% strongly agree that age is one of the factors associated with infertility. Majority of the respondents agreed that age is one of the factors responsible for infertility which is aligned with a study carried out by Dunsan et al. (2012) which states that women’s fertility begins to decline in their late 20s with substantial decrease by their late 30s. This is in line with Mayo (2016). 72.1% agreed that infertility affects both genders which is in line with Hemel, et al (2014). 69.2% disagree that religion is not one of the factors associated with infertility which is not in agreement with the review of Maker and Toth, (2014). The result also showed that 70.5% agreed that late marriage especially in women is one of the factors that are associated with infertility among couples which is in agreement with De Walle (2012) who stated that most infertility occur in marriage due to increased marriage age.

The result in table 2 showed that 70.5% agreed that some lifestyle activities like poor dietary habits, alcoholism/drug dependency, can predispose one to infertility, which is in line with Frisco Institution for reproductive medicine (2017) that states; smoking of tobacco, poor choice of diet and alcoholism/drug dependence can reduce the sperm count in males and ovulation in females. 88.3% agree that some

occupation and environmental exposure an increase the chances of infertility. This is in line with Homan et al. (2015), which asserts that fertility can be affected by many different occupations. The respondents strongly agree that high level of education associated with infertility. This aligns with a study by Kharif et al (2017), which states that high level education greatly influences the age of marriage and hence the possibility of infertility.

Also the findings showed that 80.7% strongly agreed that disorder in reproductive systems of both males and females (for example low sperm count in males, tubal blockage, and endometriosis in females) is one of the medical factors associated with infertility. This aligns with The National Fertility Association (2017) which states that disorders in reproductive health is one of the major causes of infertility. 73.3% agreed that adverse effect of some drugs and treatment and chronic illness can also cause infertility, which is in line with Fraser and Cooper (2013) that states that hypothyroidism, hyperthyroidism, diabetes, -and iatrogenic effect can predispose one to infertility. Majority of the respondents strongly agreed that disorders in reproductive health is one of the major causes of infertility. This agreed with the Study of Nordquist (2016), that those with cervical incompetence are engaged with secondary infertility due to habitual miscarriage, which is one of the major cause of infertility in develop country.

### **CONCLUSION**

Based on the finding of the study, it was concluded that the secondary infertility was associated with socio-demographic factors such as age, religion and gender, socio-economic status such as occupation and education, including medical conditions such as edometriosis, low sperm count, tubal blockage, chronic illness and effect of some drugs.

### **RECOMMENDATIONS**

Base on the findings, the following recommendation were put forward by the research

1. With the help of nurses and other health providers, the couple should be well educated and oriented on their reproductive/fertile life, especially on those factors such as medical, socioeconomic and demographic factors that can predispose them to infertility.
2. They should also educate the couples and the family member on important of balance diet and dietary hygiene, adjustment of social and sedentary lifestyle, avoidance of psychological stress and regular check-up.
3. Nurses/nursing student should try to be updated in knowledge on infertility and its management. Those at risk or predispose to infertility due to their occupation and exposure to environment, should be well educate on avoidance of such hazards at their work place
4. The school or any health institution should include fertility and infertility study in their school curriculum, especially on those factors associated with infertility.
5. Religion leaders should also encourage their members especially married couple to make a wise choice, pattaining to use of Artificial Reproductive Treatment (ART).
6. Health policy maker should as well try as much as they can to encourage early marriage at least 20-25 years and collaboration with the government in reducing educational system in the country.
7. Finally, infertile couple should be encouraged by the health profession on regular sexual inter course-without any use of contraceptive device and avoid anxiety or emotional imbalance.

### **REFERENCES**

- Bushnik, T., Cook, J.L., Yuzpe, A.A., Tough, S. & Collins, J. (2012). Estimating the prevalence of infertility in Canada. *Human Reproduction*, 27(3), 738–46.
- Chimbatata, N. B., Malimba, C., & Chimbatata, N. B. W. (2016). Infertility in sub-Saharan Africa: A woman's issue for how long? A qualitative review of literature. *Open Journal of Social Sciences*, 4(08), 96-102.
- Cong, J., Li, P., Zheng, L. & Tan, J. (2016). Prevalence and risk factors of infertility at a rural site of

- Northern Chin. *PLoS ONE*, 11(5),1-4. e0155563.
- Fraser D.M. and Cooper M.A. (2013). Myles test book for midwives (14<sup>th</sup> ed). Edinburgh London New York, Churchill Livingstone.
- Frisco Institute for Reproductive Medicine (2017). Medical record by Vanguard communication, <http://www.google.com> 972-301-8668.
- Hinkle J.L and Cheever K.H. (2015). Brunner and Suddanthis, Testbook of Medical - surgical nursing (13<sup>th</sup> ed). Lippincolt Williams & Wilkins.
- Homan, G., Davies, M., & Norman, R. (2007). The impact of lifestyle and reproductive performance in the general population and those undergoing infertility treatment: A review. *Human Reproduction Update*, 13(3), 209-23.
- Inhom M.C. (2017). Fertility, reproduction and sexuality. Social and cultural perspectives berghal books, New York. Oxford, Email support@, berghalmbooksonline.com.
- Kelvin McQuillium (2014). How religious influence fertility population and development review, vol. 30.25-36 published by population council, <http://www.stor.org/stable/3401497>.
- Khraif M. et al (2017). Education's impact on infertility. The case of King Saud University Women Riyadh. Middle - East fertility journal vol. 22 (1) 131 on 1<sup>st</sup> June 2017.
- Mohammed H. et al (2011). The relationship between occupation and semen quality, international journal of fertility and sterility: published online 2011 Sep - Oct.
- National Infertility Association (2017). Female infertility causes, treatment and prevention <http://www.resolve.org>.
- Nordguist Christian (2016). Infertility: causes, diagnosis, risk factors and treatment. Retrieved from <http://google.healthlinemediawork>.
- World Health Organization (WHO, 2016). Infertility definitions and terminology. Retrieved from <http://www.who.int/countries> on 26th April 2017.