

KNOWLEDGE OF AGE AND HORMONAL IMBALANCE ON FEMALE FERTILITY IN PORT HARCOURT**Barinua K. Gbaranor^{*1}, Nazor P. Barinua-Gbaranor², Progress Dakuro Victor³, Peace E. Okpara¹, Amadi Choice N.⁴ and Abiye Tamuno-Opubo¹**¹Department of Human Physiology, College of Medical Sciences, Rivers State University, Port Harcourt, Nigeria.²Department of Office and Information Management, Faculty of Management Sciences, Rivers State University, Port Harcourt, Nigeria.³Department of Human Anatomy, College of Medical Sciences, Rivers State University, Port Harcourt, Nigeria.⁴Department of Nursing, College of Medical Sciences, Rivers State University, Port Harcourt, Nigeria.***Corresponding Author: Dr. Barinua K. Gbaranor**

Department of Human Physiology, College of Medical Sciences, Rivers State University, Port Harcourt, Nigeria.

Article Received on 10/02/2020

Article Revised on 02/03/2020

Article Accepted on 23/03/2020

ABSTRACT

Age and hormonal imbalance are important factors that cannot be overlooked in terms of fertility. As women are getting older, their ova are decreasing and menopause may set in. Hormone is another factor that plays a key role in infertility because decrease or increase affects fertility. The aim of the study is to assess the knowledge of age and hormonal imbalance on female fertility. The study revealed that 44.0% (22/50) of the participants were between the ages 38-43 years. 58.0% (29/50) of the women do not have the knowledge that age is one of the determinants of fertility and 42.0% (21/50) of the participants are aware that age is one of the determinants of fertility. Also, the study revealed that 62.0% (31/50) of the participants have no knowledge that hormonal imbalance delays fertility and 38.0% (19/50) of the said participants are aware that hormonal imbalance delays fertility in female. The study also revealed that 34.0% (17/50) are not sure, 34.0% (17/50) agreed and 32.0% (16/50) strongly agree that age and hormonal imbalance determines fertility.

KEYWORDS: Knowledge, Age, Hormonal imbalance, Fertility.**INTRODUCTION**

Hormones are reproductive parameters that play a crucial role in reproductive characteristics of an individual. Hormonal imbalance has been reported to be the major cause and diagnosis of female infertility; an increase in follicle stimulating hormone (FSH) is likely to decrease the production of ova, which may have a negative effect on fertilization (Lee *et al.*, 2013). The following factors can lead to hormonal imbalance, these include drugs, depression, stressful lifestyles and unbalanced diets (Naveed *et al.*, 2015).

Changes in hormonal levels, progesterone and estrogen, may cause negative impact on ovulation, sexual desire, mood and fertility in a female (Naveed *et al.*, 2015). Hot flashes experienced during menopause may be due to hormonal imbalance (Levis and Griebeler, 2010). Contraceptives and hormone replacement therapy cause are likely to cause hormonal imbalance (Naveed *et al.*, 2013).

Previous studies revealed that environmental pollution has drastic effects on the overall health of an individual by causing hormonal disturbance and various degrees of

disorders (Safila *et al.*, 2013; Lang *et al.*, 2008; Markowski *et al.*, 2011; and Blucher, 2013). Early menarche, uterine fibroids, eating disorders, infertility, breast cancer, heavy bleeding, menstrual changes, premenstrual syndrome and endometriosis are due to elevated levels of estrogen (Achari and Khanam, 1965; Claessens and Cowell, 1981; Khyade, 2017 and Deshpande, 1975).

Fertility in a woman decreases with age. Women that have attained the age of 35 years, have decreased fertility (Pal and Santoro, 2003; Baird *et al.*, 2005; Kaplan *et al.*, 2005).

MATERIALS AND METHOD

This is a cross-sectional study involving 50 women. The age range was between 18-48 years. Well structured questionnaires containing demographics and knowledge of age on hormonal imbalance were administered to participants. The participants were grouped based on their age into 18-24, 25-31, 32-37, 38-43, and 44-48. Data was analysed using SPSS Version 26. P value < 0.05 was considered significant for study.

RESULTS**Table 1: Age of Respondents.**

	Frequency	Percentage (%)
18-24	5	10.0
25-31	7	14.0
32-37	7	14.0
38-43	22	44.0
44-48	9	18.0
Total	50	100.0

Table 2: Educational Level.

	Frequency	Percentage (%)
Secondary	15	30.0
Tertiary	25	50.0
Informal Education	8	16.0
X	2	4.0
Total	50	100.0

X = missing or unaccountable

Table 3: Knowledge about age as a determinant of fertility.

	Frequency	Percentage (%)
Yes	21	42.0
No	29	58.0
Total	50	100.0

Table 4: Knowledge that hormonal imbalance delays fertility.

	Frequency	Percentage
Yes	19	38.0
No	31	62.0
Total	50	100.0

DISCUSSION

The age of a woman influences her ability to reproduce. There is a negative relationship between age and ability to reproduce in women; reproductive ability decreases with increase in age. The present study revealed that 58.0% of the participants are not aware that the age of a woman influences her ability to reproduce. The present study is in agreement with the findings of Pal and Santoro, (2003), Baird *et al.* (2005), and Kaplan *et al.* (2005). They reported that the reproductive ability of women decreases at the age of 35.

In the present study, it was observed that 62.0% of the participants are not aware of the negative impact hormonal imbalance has on fertility. This is in agreement with study by Lee *et al.*, (2013), hormonal imbalance has role in the causes and diagnosis of female infertility and a rise in follicle stimulating hormone in women may decrease the production of ova and may affect fertilization.

CONCLUSION

This study revealed that most women are not aware that age and hormonal imbalance has influence on their reproductive abilities. Proper enlightenment campaign should be carried out.

REFERENCES

- Achari K, Khanam W. Study of endometrium and ovaries in fibromyomas. J Obstet Gynecol India. 1965; 15:356-362.
- Baird DT, Collins J, Egozcue J, Evers LH, Gianaroli L, Leridon H, Sunde A, Templeton A, Van Steirteghem A and Cohen J et al. Fertility and ageing. Hum Reprod Update, 2005; 11: 261–276.
- Blüher M. Adipose tissue dysfunction contributes to obesity related metabolic diseases. Best Pract Res Clin Endocrinol Metab., 2013; 27(2): 163-177.
- Claessens EA, Cowell CA. Acute adolescent menorrhagia. Am J Obstet Gynecol., 1981; 139(3): 277-280.
- Deshpande N. Hormonal imbalance in breast cancer. J Steroid Biochem, 1975; 6(5):735-741.
- Kaplan B, Nahum R, Yairi Y, Hirsch M, Pardo J, Yogev Y and Orvieto R. Use of various contraceptive methods and time of conception in a community-based population. Eur J Obstet Gynecol Reprod Biol., 2005; 123: 72–76.
- Khyade RL. A study of menstrual disturbance in cases of fibroid uterus. International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 2017; 6(6): 2494-2497.
- Lang IA, Galloway TS, Scarlett A, Henley WE, Depledge M, Wallace RB, et. al. Association of urinary bisphenol A concentration with medical disorders and laboratory abnormalities in adults. JAMA., 2008; 300(11): 1303-1310.
- Lee, D. S.; Ryoo, N. Y.; Lee, S. H.; Kim, S. and Kim, J. H. Basal luteinizing hormone and follicular stimulating hormone: is it sufficient for the diagnosis of precocious puberty in girls? Ann Pediatr Endocrinol Metab, 2013; 18: 196-201.
- Levis, S., & Griebeler, M. The Role of Soy Foods in the Treatment of Menopausal Symptoms. The Journal of Nutrition, 2010; 140(12): 23185-23215. Retrieved from <http://jn.nutrition.org/content/140/12/23185.long>.
- Markowski VP, Currie D, Reeve EA, Thompson D, Wise JP Sr. Tissue-specific and dose-related accumulation of arsenic in mouse offspring following maternal consumption of arseniccontaminated water. Basic Clin Pharmacol Toxicol, 2011; 108(5): 326-332.
- Pal, L. and Santoro, N. Age-related decline in fertility. Endocrinol Metab Clin North Am, 2003; 32: 669–688.
- Safila Naveed, Sidra Ghayas, Asra Hameed, Hormonal imbalance and its causes in young females, 2015.
- Safila Naveed, Zarafat Aisha., Kashif Aliya., Mansoor A., Sabir N., Farooqui S.S., Sidra.S.A. various aspects of acne in different age groups BPJ0000294 - World Research Journal of Pharmaceutical Research, 2013; 1 2, 025-027. http://www.bioinfopublication.org/jouarc_hive.php?opt=&jouid=BPJ0000294

15. Silva AP, Guimaraes DE, Mizurini DM, Maia IC, Ortiz-Costa S, Sardinha FL, et. al. Dietary fatty acids early in life affect lipid metabolism and adiposity in young rats. *Lipids*, 2006; 41(6): 535-541.