



doi 10.5281/zenodo.13291922

Vol. 07 Issue 05 May - 2024

Manuscript ID: #01456

CONTRACEPTIVES AS DETERMINANT OF MENSTRUAL DELAY AMONG FEMALE STUDENTS IN TERTIARY INSTITUTIONS IN SOUTH-SOUTH

¹Baridam G. D., ^{2*}Gbaranor K. B., ³Oreh Adaeze C., ⁴Bademosi A., ⁵Dimkpa B. M.,

⁶Mube A. W., ⁷Dimkpa C., ⁸Amaechi G., ⁸Biralo P. K

¹Department of Obstetrics and Gynaecology, Baze University, Nigeria

²Department of Human Physiology, College of Medical Sciences, Rivers State University, Rivers State, South-South, Nigeria

³Ministry of Health, Rivers State, South-South, Nigeria

⁴Department of Community Medicine, College of Medical Sciences, Rivers State University, Rivers State, Nigeria

⁵Department of Community Medicine, University of Port Harcourt Teaching Hospital, Rivers State, Nigeria

⁶Department of Obstetrics and Gynaecology, Madonna University, Rivers State, South-South, Nigeria

⁷Department of Paediatrics, College of Medical Sciences, Rivers State University, Rivers State, Nigeria

⁸Department of Family Medicine, College of Medical Sciences, Rivers State University, Rivers State, South-South, Nigeria

Corresponding author: Gbaranor, K. B.

Abstract:

Menstrual period is an important process in women who have attained the age of menarche. It is an important period in womanhood and must come every month except otherwise. It could come as normal flow, heavy flow or scanty flow. Young ladies attain menarche at different ages. The aim of this study is investigate contraceptives as a determinant of menstrual delay among female students in tertiary institutions in South-South. This was a cross-sectional study involving female's students in tertiary institutions across South-South who were within the age of less than 20 years to greater than 40 years. A well-structured questionnaire was administered to participants. Each participant had one questionnaire to fill appropriately and independently after instructions were given to them by the Research Assistants. Exclusion criteria were those female students that have not attain menarche. The study lasted for a period of 3 months. The study revealed that 74.3% of the students were not married and 98.8% of them have used contraceptives. Also, the study revealed that 98.4% of the respondents have used contraceptives for more than 5 years. The statistical analysis was carried out using Statistical Package for Social Science (SPSS) version 23.

Keywords:

Contraceptives, Determinant, Menstrual Delay, Female, Students, Tertiary Institutions



This work is licensed under Creative Commons Attribution 4.0 License.

Introduction

Menstrual cycle is a process that every woman who have attained puberty must undergo and this occur monthly in a normal physiologic pattern unless in some cases were certain factors may halt the monthly process. This cycle varies in individual (Gbaranor, et al., 2022). Every woman must pass through the periodic process of menstrual cycle as soon as they attain maturity and it continues until certain age when the menstrual cycle stops to set in another stage of life (Gbaranor, et al., 2022). The menstrual cycle begins on the first day of menstrual bleeding and end with the beginning of the next menstrual bleeding. However menstrual cycle commonly called menstrual period varies in individual in terms of duration of flowing, length of cycle, pattern of flowing, stability in periodicity and premenstrual syndrome (Gbaranor, et al., 2022). Menstrual cycle begins at puberty, ranging from the ages of 10 to 16, and stops at menopause at an average age of 51. (Rosner, et al, 2020; Coast, et al, 2019; Pan B, and Li J., 2019). Study by Yan et al, 2014 shows that demographic and lifestyle factors are associated with menstrual cycle features and that the patterns of effects are alike. Physical activity of 4 or more hours per week was associated with an increased cycle length (Yan et al, 2014), which could be due to a dampening of FSH pulses during the luteal follicular transition, leading to delayed maturation of the next cohort of follicles (Akaike H. A, 1974; De Souza, et al, 1997). Increased cycle length is associated with delayed ovulation and increased follicular phase length, since luteal phases are self-limited to 14 days (Vollman RF, 1977). Cycle length has been negatively associated with age because of shortening of the follicular phase (Harlow SD and Ephross SA, 1995; Dennerstein, et al, 1997; Yan et al, 2014). Harlow et al, (1991), revealed that overweight is associated with the occurrence of long cycles in college women. The major cause of menstrual cycle irregularity is functional hypothalamic amenorrhea linked with reduced gonadotropin-releasing hormone secretion and hypothalamic–pituitary–adrenal (HPA) axis dysregulation (Reindollar, et al, 1986; Loucks AB and Thuma JR, 2003; Liu JH, 1990; Berga S, Naftolin F, 2012). Study, revealed that smoking could cause hypoestrogenism (Westhoff , et al, 1996) and high stress has been demonstrated to affect the HPA axis activity (Westhoff , et al, 2014). Women who had BMI of 25–30 or ≥ 30 have high risk of developing irregular menstruation (Bae, et al, 2018).

Materials and Method

This was a cross-sectional study involving female's students in tertiary institutions across South-South who were less than 20 years of age to greater than 40 years of age. A well-structured questionnaire was administered to participants. Each participant had one questionnaire to fill appropriately and independently after instructions were given to them by the Research Assistants. The study lasted for a period of 3 months (from October to December, 2023).

Exclusion criteria: Was those female students that have not attain menarche

Inclusion criteria: Was those female students who have attained menarche

Results

The result on this research show that 34(13.30%) of the responders examined are <20 years; 13(5.10%) were within the ages of 20-24 years while 98(38.30%) were within the ages of 25-29 years. Finally, 47(18.20%) were within the ages of 30-34 years. The results of the study also indicated that 62(24.20%) of the respondents were married while 188(73.40%) were single (Table 1). The findings also shows that 247(98.80%) of the participants consented to contraceptives used and 3(1.20%) did not use it (Figure 1) and 246 (98.40%) of the participants agreed that they have used contraceptives for a more than five years (Figure 2).

Table 1: Marital Distribution of Respondents

Marital Status	Frequency	Percentage (%)
Married	62	24.2
Single	188	73.4
Total	250	100.00

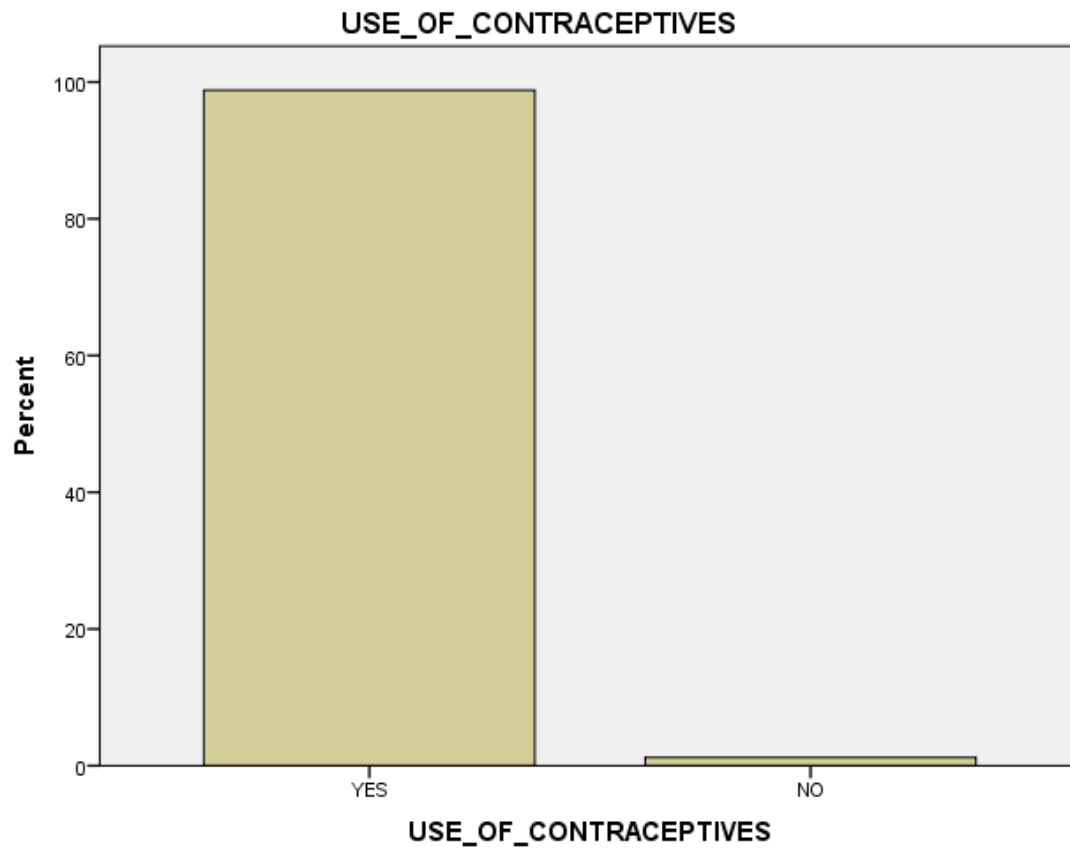


Figure 1. Use of Contraceptives

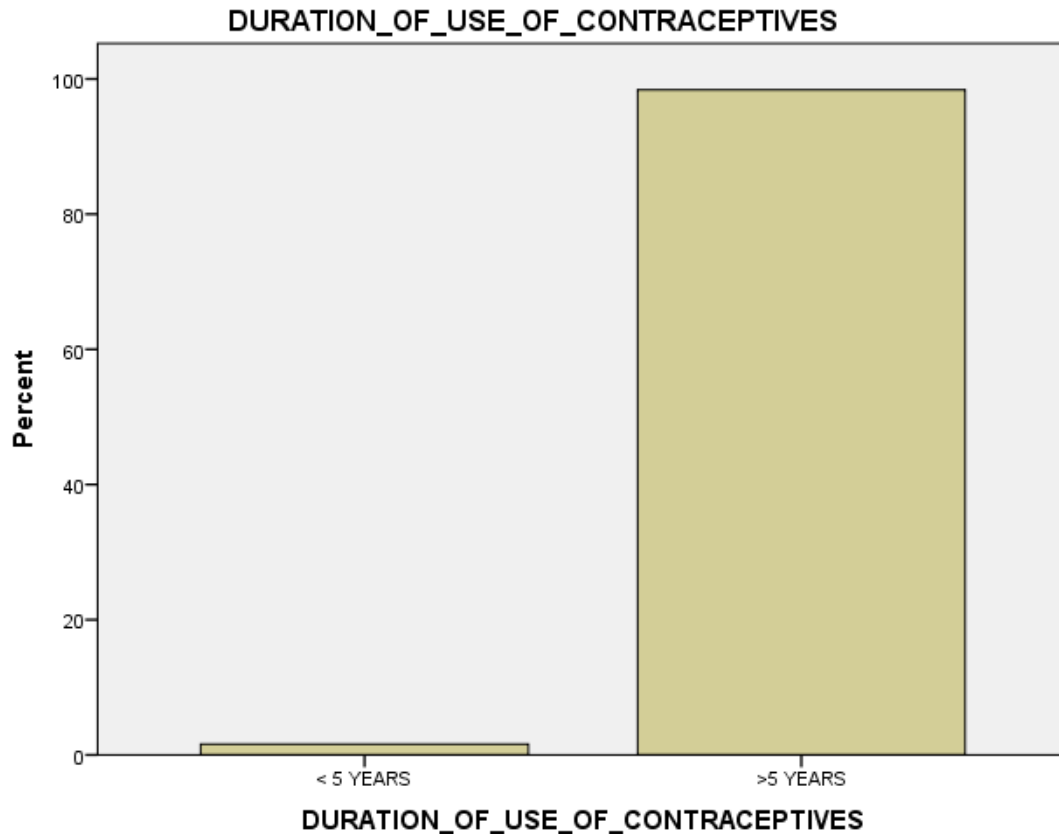


Figure 2: Duration of Contraceptives Used

Discussion

Menstrual period is an important process in women who have attained the age of menarche. It is an important period in womanhood and must come every month except otherwise. It could come as normal flow, heavy flow or scanty flow. Young ladies attain menarche at different ages. Menstrual delay can bring psychological trauma to females who were not ready to face such condition. Contraceptives are frequently used by majority of the female students during their study years to avoid unwanted pregnancy. These contraceptives used could be herbs or orthodox medicine and when use for a long period could cause temporary amenorrhea. The study revealed that majority of the students were between 25 to 29 years of age and there were still in school. This implies that these students employ the use of contraceptives to prevent any occurrence of pregnancy while still in school. As you know, these are University students who have decision in their hands choose when to start dating and some are dating already. The study also shows that 73.4% of the respondents are single and the preferred reason they depend on contraceptives since they can not avoid sex while still single and 98.8% of the students have used contraceptives as a mean of protecting themselves from having unwanted pregnancy so that their education will not be aborted. Furthermore, the research revealed that majority of the students have used contraceptives for a period greater than five (5) years. Females. This chronic dependence on contraceptives delayed their monthly menstrual period. Some these contraceptives interfere with the hypothalamus where gonadotropin-releasing hormone (GnRH) are produced and this in turn affect the anterior pituitary where follicle-stimulating hormone (FSH) and luteinizing hormone (LH) are all suppressed and this will affect the monthly menstrual period experienced by the females. It could be that most of these female students are not aware of the effects of long use of contraceptives on the hormonal system.

Conclusion

Menstrual period is the pride and identity of a healthy woman and when not flowing as usual, it is a concern to them. The study reported that majority of the female students used contraceptives for a period greater than 5 years and these contraceptives interfere with the hormones responsible for the regular menstrual flow.

Acknowledgments

We acknowledge Nazor Barinua-Gbaranor, Nuazor V. Barinua-Gbaranor, Kedumle S. Barinua-Gbaranor and Tuamene E. Barinua for the joy and support, understanding encouragement during this period of research.

Funding: No funding source

Conflict of interest: None declared

Ethical approval: Not require

References

- Akaike H. A new look at the statistical model identification. *IEEE Trans Automat Control*, 1974; 19: 716–23
- Berga S, Naftolin F. Neuroendocrine control of ovulation. *Gynecol Endocrinol*, 2012; 28(1): 9–13
- Coast E, Lattof SR, Strong J. Puberty and menstruation knowledge among young adolescents in low- and middle-income countries: a scoping review. *Int J Public Health*, Mar., 2019; 64(2): 293- 304. [PMC free article] [PubMed]
- De Souza MJ, Miller BE, Sequenzia LC, et al. Bone health is not affected by luteal phase abnormalities and decreased ovarian progesterone production in female runners. *J Clin Endocrinol Metab*, 1997; 82: 2867–76.
- Dennerstein L, Gotts G, Brown JB. Effects of age and nonhormonal contraception on menstrual cycle characteristics. *Gynecol Endocrinol*, 1997; 11: 127– 33.
- Gbaranor K. B., Mube W. A., Gilbert U. D., Nonju T. I, Daka I.R, Amadi Hebinchi, Wami-Amadi C. F., Nonju I. I., Oriji E. I., Amadi N. C., Emeghara G. I., Nwosu G. N. and Ajumoke O.O (2022). Physiological Variation of Menstrual Cycle Amongst Female Students In Tertiary Institutions Of Rivers State. *World Journal of Pharmaceutical and Medical Research*. 8(1), 17 – 20
- Harlow SD, Ephross SA. Epidemiology of menstruation and its relevance to women’s health. *Epidemiol Rev.*, 1995; 17: 265–86
- Harlow SD, Matanoski GM. The association between weight, physical activity, and stress and variation in the length of the menstrual cycle. *Am J Epidemiol*, 1991; 133: 38–49
- Liu JH. Hypothalamic amenorrhea: clinical perspectives, pathophysiology, and management. *Am J Obstet Gynecol*, 1990; 163: 1732–6
- Loucks AB, Thuma JR. Luteinizing hormone pulsatility is disrupted at a Maniam J, Antoniadis C, Morris MJ. Early-life stress, HPA axis adaptation, and mechanisms contributing to later health outcomes. *Front Eendocrinol*, 2014; 5: 73
- Pan B, Li J. The art of oocyte meiotic arrest regulation. *Reprod Biol Endocrinol*, Jan 05, 2019; 17(1): 8. [PMC free article] [PubMed]
- Reindollar RH, Novak M, Tho SP, McDonough PG. Adult-onset amenorrhea:
- Rosner J, Samardzic T, Sarao MS. StatPearls [Internet]. StatPearls Publishing; Treasure Island (FL): Oct 6, 2020. Physiology, Female Reproduction. [PubMed] secretion in reproductiveage women. *Am J Epidemiol*, 1996; 144: 381
- Westhoff C, Gentile G, Lee J, Zacur H, Helbig D. Predictors of ovarian steroid Yan Liu, Ellen B. Golld Bill L. Lasley, Wesley O. Johnson4. Factors Affecting Menstrual Cycle Characteristics. *American Journal of Epidemiology*, 2014; 160: 2