***Chapter 3***
Print ISBN: 978-93-89246-78-0, eBook ISBN: 978-93-89246-79-7

# Postpartum Sexual Abstinence and High Risk Sexual Behaviour Trends in African Settings

**J. O. Imaralu[1*]**

DOI: 10.9734/bpi/ctdah/v1

## ABSTRACT

**Aims:** To determine the prevalence of high risk sexual behavior and its relationship to the duration of coital sexual abstinence in husbands of postpartum women.
**Study Design:** Cross sectional descriptive study.
**Place and Duration of Study:** Ikenne Local Government Area, in Ogun State, South Western Nigeria between, December 2014 and May 2015.
**Methodology:** Data were obtained with the aid of semi-structured interviewee administered questionnaire from 771 husbands of postpartum women using the multi-stage sampling technique.
**Results:** The prevalence of High risk sex in the population was 10.6%. The duration of coital sexual abstinence was the most important risk factor (P<.001), while previous extramarital sexual relationship (P<.001, OR=41.70, 95%CI=18.07-96.07) and husband's knowledge of his own HIV status (P=.03, OR=1.71) were also significant determinants of this occurrence. Consistent condom use during unsafe sex was 6.1%, while STIs occurred in 3.7% of the participants. Significantly longer durations of coital abstinence (8.30 ± 6.24 months) were observed in men who were rural dwellers than in urban dwelling husbands (7.16 ± 6.01 months), P=.01. Violent behavior against the postpartum wife during the abstinence period was reported by 1.2% of the participants.
**Conclusion:** High risk male sexual behavior was a consequence of prolonged postpartum sexual abstinence and a predisposition to STIs among husbands of postpartum women.

*Keywords: Postpartum; male behavior; unsafe sex; networking; HIV; violence.*

## 1. BACKGROUND

In the past, polygamy was the predominant marriage pattern in most of Nigeria, such that a pregnant or postpartum woman was not often bothered by her husband, as his sexual needs were usually met by other mutually faithful wives.[1,2] Unlike in pregnancy where coital abstinence is relative, all Nigerian tribes practice some form of mandatory postpartum sexual proscription, the only difference being in the duration.[3,4] Although not widely recommended by obstetricians in pregnancy, some restriction is advised in the first few weeks of delivery to allow healing and prevent the occurrence of genital tract infection in the postpartum woman. [5]

Traditionally the Yoruba race practiced agriculture as a means of livelihood and post-partum sexual abstinence helped the women to cope with both the demands of being a mother at home and as a worker on the farm. The 'natural contraception' produced by this mandatory sexual abstinence made this possible. [6] The general belief deeply entrenched to uphold this practice among the Yoruba, was that a man should not have sexual relations with his wife when she is nursing a baby; the so-called lactation taboo.[3,4,7] It is also widely believed among the Yoruba that the semen may reach the breast milk and poison it, thus jeopardising the health of the new-born when intercourse occurs before the culturally recommended time. This abstinence period lasted until the child was weaned which may take up to two years or more.[3,4] Extra-marital sexual relations in men have been reported to be a

*[1]Department of Obstetrics and Gynaecology, Benjamin Carson (Snr) School of Medicine, Babcock University Teaching Hospital, Babcock University, Ilishan-Remo, Nigeria.*
**Corresponding author: E-mail: imaraluj@babcock.edu.ng;*

consequence of abstinence, whether during pregnancy or postpartum.[2,6,8] Unsafe sex has been shown to be a very potent mechanism for the spread of the HIV virus. Indeed, reports from some studies in Africa have shown that the greatest risk of HIV infection for married women lies within their marriage, and the greatest source of HIV infection is unprotected sex with their infected husbands. [9,10] Up to 80% of new HIV infections among heterosexual urban dwellers in Africa occur within marital or cohabiting relationships. Prior HIV infection in the husband before the marital union or HIV infection contracted through extra-marital sexual relationship while still being married is the pathway to infection.[10] The permissiveness of traditional African people in condoning or only minimally reprimanding male extra-marital sexual activity makes married men more likely than married women to engage in high risk sex. [11] In addition, concurrent multiple sexual relationships have been postulated to heighten the risk of HIV transmission; an occurrence which is commoner among African men than in men from other parts of the world.[12,13]

In 2011, it was reported that 2.5 million new HIV infections and 1.7 million AIDS-related deaths occurred worldwide. Sub-Saharan Africa accounted for 1.8 million of these new infections and 1.2 million deaths, this region also accounts for about 76% of all HIV-positive women in the world.[14,15] Unprotected heterosexual intercourse has remained the main pathway of HIV transmission especially in this region.[16]

Pregnancy and the postpartum period have been reported as risk factors for risky male sexual behaviour with dire consequences such as STIs; which include HIV, HPV and hepatitis. Studies have also shown that most men who had extramarital sexual relations at this time did so mostly with non-regular partners and condom use was extremely low. [17] Mother- to- child transmission risk has been reported to be significantly higher among women with recently acquired HIV infection in pregnancy or postpartum; compared to mothers who have been HIV positive prior to pregnancy or the postpartum period. [18]

Sexual abstinence for couples in the past was possible in a polygamous context where temporary separation of spouses was frequent, particularly after childbirth, alternative sexual outlets were however provided in their other married mutually faithful wives. [7] What has changed in recent times is the increasing monogamous and nuclear society and adoption of new occupations and lifestyles, necessitated mainly by civilisation and in many instances religion. Clearly the challenges facing the average Nigerian family today is different and the increasing economic reality and formal education has greatly reduced the practice of polygamy. Modernisation also brings with it the benefit of better, more reliable and effective means of contraception, the better care of; and increasing survival of children, we are however currently faced with the reality of HIV, AIDS, hepatitis and other grave consequences of Sexual Transmitted Infections (STIs) such as infertility, cervical cancer and liver disease. [1] The belief in traditional prolonged postpartum sexual proscription still appears to have a strong grip and may produce sexual behaviour inimical to prevention of these diseases.

Recommended or demanded sexual abstinence are important reasons for violence and other anti-social behaviour against women. Pregnancy and lactation have been shown to be major factors in the occurrence of violence against women.[19,20].

## 2. THE NORMAL PUERPERIUM

The puerperium is defined as the time interval from the delivery of the placenta through the first few weeks after the delivery, it is the period of adjustments after delivery when anatomic and physiologic changes of pregnancy are reversed. This period is usually considered to be between 6 and 12 weeks in duration.[21,22] (By 6 weeks after delivery, most of the changes of pregnancy, labour and delivery have resolved and the body has reverted to the non-pregnant state.[22]

The pregnant term uterus (apart from the fetus, placenta, fluids, etc) weighs approximately 1000 grams. It recedes to the non-pregnant state, with a weight of 50-100 grams, within the first six weeks of delivery. The endometrial lining rapidly regenerates, so that by the seventh day the endometrial glands are already present. By the 16th day, the endometrium is restored throughout the uterus, except at the placental site. The placental site undergoes a series of changes in the postpartum

period. Immediately after delivery, the contractions of the arterial smooth muscle in addition to compression of the vessels by contraction of the myometrium result in hemostasis. The size of the placental bed decreases by half; these changes in the placental bed determine the quality and quantity of the lochia that is experienced. This lochia undergoes series of changes, initially from red (lochia rubra) to brownish red, with a more watery consistency, which is known as lochia serosa. Over a period of weeks, the discharge continues to decrease in amount and colour and changes to yellow, which is known as lochia alba. The time it takes for lochia experience varies, although it averages approximately 5 weeks, with a waxing and waning amount of flow and colour.[21,22]

The cervix also begins to rapidly revert to a non-pregnant state, but it never returns to the nulliparous state. By the end of the first week, the external os is reduced to less than a finger breadth. The vagina, which was distended to accommodate the baby, shrinks closer, but not completely to its pre-pregnant size. Resolution of the increased vascularity and edema occurs by 3 weeks, and the rugae of the vagina begin to reappear in women who are not breastfeeding. This is complete by 6-10 weeks post-delivery; appearance of vaginal rugae may be further delayed in breastfeeding mothers because of decreased estrogen levels. Most of the vaginal and perineal muscle tone is regained by 6 weeks, with more improvement over the ensuing few months. The muscle tone may or may not return to normal, depending on the extent of injury. [22]

Resumption of normal function by the ovaries is highly variable and is greatly influenced by the practice of breastfeeding. The woman who breastfeeds her infant has a longer period of amenorrhea and anovulation than the mother who does not. Ovulation occurs earlier in non-breastfeeding mothers and this has been observed as early as 27 days postpartum. Most women begin to menstruate by 12 weeks postpartum with a mean menstrual resumption interval of 7-9 weeks in many reports. In the breastfeeding woman, the resumption of menses is highly variable and depends on a number of factors, including how much and how often the baby is fed and whether the baby's feeding is supplemented with formula or not. The delay in the return to normal ovarian function in the lactating mother is caused by the suppression of ovulation due to elevated prolactin levels. Between 50 and 75% of women who breastfeed their babies, start menstruating within 36 weeks of delivery. [21]

Lactogenesis is initially triggered by the delivery of the placenta, which results in falling levels of estrogen and progesterone; this is sustained by increasing levels of prolactin. If the mother is not breastfeeding, the prolactin levels decrease and return to normal within 2-3 weeks. The milk continues to change throughout the period of breastfeeding to meet the changing demands of the baby.[23]

## 3. POSTPARTUM SEXUAL RESPONSE AND ACTIVITY

Sexual intercourse may resume when bright red bleeding ceases, the vagina and vulva are healed, and the woman is physically comfortable and emotionally ready.[5] Physical readiness usually takes about 3 weeks and contraception maybe required to prevent an unwanted pregnancy because the first ovulation is unpredictable.[22,24] Resumption of coital activity post-delivery has many challenges; tiredness, lack of sleep, and stress are commonly reported in the postpartum period.[24] Fatigue significantly contributes to diminished sexual activity 12 weeks after childbirth.[25] The traditional postponement of sex for 6 weeks after delivery in obstetric practice was based on fear of introducing infection through an open cervix and fear of disrupting vaginal and perineal sutures. This approach, did not, however, consider individual variability of interest and physical comfort and the actual experience of patients and concerns by the husband. Sexual activity may generally be resumed when the vagina, cervix and uterus have healed as indicated by cessation of lochia.[26]

In the first 6 to 8 weeks postpartum and during breastfeeding, the sexual response of mothers is physiologically reduced, the walls of the vagina are thinner, and orgasm is less intense.[27] The high levels of prolactin in lactating women suppress ovarian estrogen production, with consequent changes in vaginal lubrication and atrophy of the vaginal epithelium.[22,24] Three months postpartum or after breastfeeding has ceased, these changes regress; some women then experience orgasm which many times may be more than that experienced before pregnancy.[26]

The birth of a child unarguably alters a couple's relationship. Many mothers and fathers are afraid of the resumption of intercourse.[27] New fathers can be jealous of the neonate or become engrossed in the child to the exclusion of the mother.[26] The child is often in close proximity to the parents, and his presence may be a deterrent to coitus as they would not want to alarm him. On the other hand, keeping the child in a separate room raises concern of not being able to hear him crying, this may create a distraction and hinder spontaneity.[28]

Sexual function can be influenced by a woman's ability to adjust to motherhood. Often this transition period can be accompanied by concerns of confinement or lack of personal freedom. Many women are worried about the sexual satisfaction of their spouses. Studies show that up to 25% of young fathers begin an extramarital affair at that time; however, before the pregnancy, 15% of the men had already had affairs.[28] In the long run, the sexual relationship of at least 1/3 of couples is altered and sexual problems either worsen or are detected for the first time postpartum or the ensuing 3-4 years.[27] Postpartum depression occurs in about 10% of women and this can adversely affect a woman's sexuality and desire for intercourse. Some authors recommend that couples allow some time for both partners to adjust to the physical and psychological changes associated with pregnancy, delivery and parenthood before resuming sexual intercourse.[3,5,26]

Compared with the time before pregnancy, female sexual activity is reduced and may remain so for between 3 to 4 months postpartum.[29,30] It may remain low up to for up to 1 year postpartum.[30] Male sexual satisfaction is also generally diminished below pre-pregnancy levels.[30] Intercourse is resumed, on average, 6–8 weeks after delivery in the United States, Europe, the Middle East [31] and in some African tribes.[32] By the sixth week postpartum, about half of couples have resumed sexual intercourse by the second month, about two-thirds of couples have resumed coitus and by 1 year, almost all couples have resumed intercourse.[30-33] Recently in South-western Nigeria, over three-quarter of men that were included in a survey reported haven resumed coital sexual intercourse with their wives by the first year postpartum.[34] When compared with the pre-pregnancy period, coital frequency is reduced in most couples during the first year postpartum.[7] Non-coital sexual activities, such as oro-genital sex, also decline.[33]

Over 50% of all women experience dyspareunia at coital resumption postpartum. Six months postpartum, 36% of breastfeeding and 16% of the non-breastfeeding mothers still have painful coitus and at 13 months postpartum, 22% still have coital problems.[3] Dyspareunia may be secondary to low oestrogen levels, resulting from the inhibitory effect of high circulating prolactin levels in lactating mothers.[22,33] A poorly healed genital laceration or episiotomy site may also be the cause of dyspareunia. [29,33]

A direct relationship has been found between the severity of genital tract laceration or episiotomy morbidity and the interval between birth and resumption of sexual intercourse, the more severe the laceration, the later intercourse starts postpartum.[21,24] Caesarean section has been reportedly associated with earlier postpartum resumption of coital activity.[30,35] Breastfeeding has been reported in many studies to negatively affect postpartum sexual activity in women.[29,30] Women who breastfeed their babies have been shown to have longer intervals between delivery and resumption of coital activity.[27,32] They also have diminished libido and report diminished enjoyment of sexual intercourse Cessation of breastfeeding has been shown to have positive effect on sexual activity, although female orgasm may not be affected.[29,30,36]

## 4. COITAL SEXUAL ABSTINENCE IN THE POSTPARTUM PERIOD

It is a recognised practice for a Yoruba man to abstain from sexual intercourse when his wife has just delivered a baby, this period in the past, lasted between two and three years.[2] The median duration of coital sexual abstinence observed among husbands of postpartum women in a recent study in Ikenne South western Nigeria was six months with a range of 29.5 months.[34] That study also showed that men in the rural areas abstained for longer periods than those in urban towns. Historically, most societies in Africa survived on agricultural activities for their livelihood and postpartum sexual abstinence helped to achieve a balance between women's roles as procreators and agricultural producers through these long birth intervals. It was forbidden for a man to have

sexual relations with a wife who was still breast feeding a baby, this was hinged on the fear of the breast milk being poisoned and the baby falling ill or even dying.[3]

In traditional Africa, beliefs and superstitions have produced a form of regulation to childbirth for the family; wives were to refrain from sexual relations for three or more years after a birth to ensure survival of the child. This apparent contraception benefit of the belief was however negated as marriage in those times was mainly polygamous, creating an alternative sexual outlet for the husbands of postpartum women, who also pro-create through other wives.[1-3] A recent study in Nigeria found that no respondent had a partner who breastfed her baby for a duration lasting up to 3 years, as prescribed in traditional times.[34] This change maybe predicated upon changing lifestyles following urbanisation, modernisation, increasing adoption of monogamous marriages, highly skilled , non-agricultural occupations with increasing number of 'working class' postpartum wives and less dependence on extended family networks to provide support and monitoring in traditional abstinence settings. [37]

## 5. COPING WITH POSTPARTUM SEXUAL ABSTINENCE

Adaptations to mandatory or elective coital abstinence among African men are varied. Extramarital sexual relationship; a condition also referred to as sexual networking, is the practice of having sexual relations with two or more partners either serially or concurrently and within a specified time period.[38]

High risk sex is defined as the occurrence of currently married or cohabitating men reporting having had coital sexual relations with a woman who is not known or socially, culturally, legally or religiously accepted as a wife. [39] It also includes having had sexual intercourse with someone who was susceptible to or infected with an STI whether a condom was used or not.[40] This term is commonly used interchangeably with male sexual networking or extramarital sex.

Unsafe sex is considered as unprotected sexual intercourse between a susceptible person and at least one partner who had an STI, while the term 'hazardous sex' refers to unprotected sexual intercourse between a susceptible person and other susceptible persons or protected sex between a susceptible person and a partner who had an STI. [40]

In West Africa, extra marital relationships seems to be highly permissive and in fact, respondents, in a survey in Freetown were unperturbed by the threat of AIDS, with at least 73.8 per cent of married men found to be involved in extra marital relationships. [41] In a study on sexual networking in Ekiti, South west Nigeria; male extramarital relations were highest in monogamous marriages and culturally mandated postpartum sexual abstinence from their wives; was the main reason for this occurrence. [8] In Calabar, south east Nigeria, widespread extramarital sexual relationships with occurrence of unsafe sex was also reported in about 50% of men that were interviewed. Condom use was reportedly low and there was no significant change in respondents' number of partners before AIDS and since the coming of AIDS.[42] Similarly, more men in Ibadan had other sexual partners during their wives' postpartum period when compared with the period outside pregnancy and postpartum.[6] Risky sex with non-regular and multiple partners was also more commonly observed in the postpartum period than in pregnancy. Significantly more rural men in that study had multiple sexual partners when their wife was pregnant or during postpartum abstinence.[6]

## 6. EFFECTS OF RISKY SEXUAL BEHAVIOUR

High risk sexual behaviour in male partners of postpartum women has serious immediate and far-reaching social and medical consequences to the man, his wife, the new-born and the other members of the family.

Unprotected intercourse with infected individuals can result in a variety of sexually transmitted infections with micro-organisms such as Neisseria gonorrhoea, Chlamydia trachomatis, Syphilis, Herpes simplex infection, trichomoniasis, candidiasis, hepatitis, genital warts and HIV. Some of these may manifest in debilitating, painful disease states such as, purulent penile discharge, penile, scrotal

or groin ulcers and in the long term as urethral strictures which have grave consequences on the quality of life of the sufferers. [40]

HIV infection, with its medical and social consequences is yet another recognised grave result of unprotected intercourse with infected persons. Any of these infections can be transmitted to the postpartum wife who may in-turn infect the breastfeeding baby. Mother-to-child transmission risk during breastfeeding has been shown to be higher among individuals contracting the HIV virus for the first time in the postnatal period than in mothers who have been HIV positive before this time. [43] In addition, infection with some of these disease conditions also predispose to long term complications like cancer of the cervix from HPV infection. Hepatitis infection may result chronic liver disease and liver cancer. Infection with HIV may result into AIDS with its associated chronic organ disease and cancers. The STIs are known to adversely affect fertility as a large number of the pathogens cause damage to the fallopian tubes, endometrium and pelvic peritoneum.

Keeping more partners has its own social demands of time and a strain on resources of the man who indulges in them; this can lead to vices such as robbery and corrupt acts to keep up with these mostly financial demands, men also are at risk of dangerous alcohol dependence and substance abuse; conditions which are associated with their innate higher risk-taking tendencies. [44] Time demands on the man puts a strain on normal marital relationship with his wife and limits available resources for the care of the new-born and indeed other existing children; thus perpetrating the vicious duo of disease and poverty.

## 7. CONCLUSION

High risk sexual behaviour in still a consequence of periodic coital abstinence, efforts geared at reduction of STIs including HIV should encompass behaviour, cultural and social modulation to curb its prevalence.

## COMPETING INTERESTS

Author has declared that no competing interests exist.

## REFERENCES

1. Anzaku AS, Mikah S. Postpartum Resumption of Sexual Activity, Sexual Morbidity and Use of Modern Contraceptives among Nigerian Women in Jos. Ann Med Health Sci Res. 2014;4(2): 210-216.
2. Orubuloye IO. Sexual abstinence patterns in rural Western Nigeria;evidence from a survey of Yoruba women. Social Science and Medicine. 1979;13(6):667-72.
3. Sule-Odu AO1, Fakoya TA, Oluwole FA, Ogundahunsi OA, Olowu AO, Olanrewaju DM, Akesode FA, Dada OA, Sofekun EA. Postpartum sexual abstinence and breastfeeding pattern in Sagamu, Nigeria. Afr J Reprod Health. 2008;12(1):96-100.
4. Odar E, Wandabwa J, Kiondo P. Sexual practices of women within six months of childbirth in Mulago hospital, Uganda. Afr Health Sci 2003;3:117-23.
5. Adinma JI. Sexuality in Nigerian pregnant women: perceptions and practice. Aust NZ J Obstet Gynaecol. 1995;35(3):290-3
6. Lawoyin TAO, Larsen U. Male sexual behaviour during wife's pregnancy and postpartum abstinence period in Oyo State, Nigeria. J Biosoc Sci. 2002;34(1):51-63
7. Gueye M, Van de Walle E. Some joint determinants of fertility and infant and child mortality in sub-Saharan Africa. In: African Population Conference/Congres Africain de Population, Dakar, Senegal, November 7-12, 1988. Liege, Belgium, International Union for the Scientific Study of Population. 1988;3(3):1-16.
8. Caldwell JC, Orubuloye IO, Caldwell P. Perceived male sexual needs and male sexual behavior in Southwestern Nigeria Soc Sci Med. 1997;44(8):1195-1207.
9. Dunkle KL, Stephenson R, Karita E, Chomba E, Kayitenkore K, Vwalika C, et al., New heterosexually transmitted HIV infections in married or cohabiting couples in urban Zambia and Rwanda: an analysis of survey and clinical data, Lancet. 2008;371(9631):2183–2191.

10. Stephenson R. Community-Level Gender Equity and Extramarital Sexual Risk-Taking among Married Men in Eight African Countries. International Perspectives on Sexual and Reproductive Health. 2010;36(4):178-188.
11. Cornwall A, Spending power: love, money, and the reconfiguration of gender relations in Ada-Odo, southwestern Nigeria. American Ethnologist. 2002;29(4):963–980.
12. Hunter M, Cultural politics and masculinities: multiple-partners in historical perspective in KwaZulu-Natal, Culture, Health and Sexuality. 2005;7(4):389–403.
13. Baeten JM et al., Female-to-male infectivity of HIV-1 among circumcised and uncircumcised Kenyan men, Journal of Infectious Diseases. 2005;191(4):546–553.
14. UNAIDS World AIDS Day Report 2011 Joint United Nations Programme on HIV/AIDS Geneva; 2011.
Available:http://www.unaids.org/en/resources/publications/2011/
15. UNAIDS. UNAIDS report on the global AIDS epidemic Joint United Nations Program onHIV/IDS.Geneva; 2012.
Available: http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/
16. Nyamhanga TM, Frumence G. Gender context of sexual violence and HIV sexual risk behaviors among married women in Iringa Region, Tanzania. Glob Health Action. 2014;7:25346.
Available :http://dx.doi.org/10.3402/gha.v7.25346
17. Onah HE, Iloabachie GC, Obi SN, Ezugwu FO, Eze JN. Nigerian male sexual activity during pregnancy. Int J Obstet Gynecol. 2002;76(2):219-223.
18. Drake AL, Wagner A, Richardson B, John-Stewart G. Incident HIV during Pregnancy and Postpartum and Risk of Mother-to-Child HIV Transmission. A Systematic Review and Meta-Analysis. PLos Med; 2014.
DOI: 10.1371/journal.pmed.1001608.
19. Okemgbo CN, Omideyi AK, Odimegwu CO. Prevalence, patterns and correlates of domestic violence in selected Igbo communities of Imo State, Nigeria. Afr J Reprod Health 2002;6:10114.
20. Nasir K, Hyder AA. Violence against pregnant women in developing countries; a review of evidence. Eur J Public Health. 2003;105-7
21. Lipscomb K, Novy MJ. The Normal puerperium. In Current Diagnosis and Treatment in Obstetrics and Gynaecology. Decherney AH, Nathan L, Goodwin TM, Laufer N, (eds). 10th Edition. 2007;222-248.
22. Edmonds DK. Puerperium and Lactation. In Edmonds DK (ed). Dewhurst textbook of Obstetrics and Gynaecology for postgraduates. 7th edition. 2007;69-80.
23. Labbok MH: Health sequel of breastfeeding for the mother. Clin Perinatol. 1999;26:491.
24. Trutnovsky G, Haas J, Lang U, Petru E: Women's perception of sexuality during pregnancy and after birth. Aust NZ J Obstet Gynaecol. 2006;46(4):282-7.
25. De Judicibus MA, McCabe MP: Psychological factors and the sexuality of pregnant and postpartum women. J Sex Res 39: 2002;94.
26. Lewis JA, Black JJ: Sexuality in women of childbearing age. J Perinat Educ. 2006;15(2):29-35.
27. Von Sydow K. Sexuality during pregnancy and after childbirth: A meta-content analysis of 59 studies. J Psychosom Res. 1999;47(1):27-49.
28. Masters WH, Johnson VE: Human Sexual Response. Boston, Little Brown; 1966.
29. Glazener CM: Sexual function after childbirth: Women's experiences, persistent morbidity and lack of professional recognition. Br J Obstet Gynaecol. 1997;104(3):330-5.
30. Byrd JE, Hyde JS, DeLamater JD et al: Sexuality during pregnancy and the year postpartum. J Fam Pract. 1998;47(4):305-8
31. Al-Bustan MA, El-Tomi NF, Faiwalla MF et al: Maternal sexuality during pregnancy and after childbirth in Muslim Kuwaiti women. Arch Sex Behav. 1995;24:207.
32. Adinma JI: Sexual activity during and after pregnancy. Adv Contracept. 1996;12(1):53-61.
33. Barrett G, Pendry E, Peacock J et al: Women's sexual health after childbirth. Br J Obstet Gynaecol. 2000;107(2):186-95.
34. Imaralu JO, Ijadunola MY, Olaleye AO, Ani FI, Yusuf AO, Nwankpa CG et al, .Coital Abstinence and High Risk Sexual Behavior among Husbands of Postpartum Women, in Ikenne, South-western Nigeria. Int J Trop Dis & Health. 2016;19(1):1-11.
35. Hyde JS, DeLamater JD, Plant EA et al: Sexuality during pregnancy and the postpartum. J Sex Res. 1996;33(2):143-151

36. Forster C, Abraham S, Taylor A et al: Psychological and sexual changes after the cessation of breast-feeding. Obstet Gynecol. 1994;84(5):872-6
37. Awusabo-Asare K, Anarfi JK. Postpartum sexual abstinence in the era of AIDS in Ghana: prospects for change. Health Transition Review. 1997;Suppl. 7:257-270.
38. Havanon N, Bennet A, Knodel J. Sexual networking in provincial Thailand. Stud. In Family Planning. 1993;24(1):1-17.
39. Mitsunaga TM, Powell AM, Heard NJ, Larsen UM. Extramarital Sex Among Nigerian Men Polygyny and Other Risk Factors. J Acquir Immune Defic Syndr. 2005;39(4):478-488.
40. Slaymaker E, Walker N, Zaba B, Collumbien M. Comparative risk assessment: Unsafe sex . In: Comparative Quantification of Health risks: Global and Regional Burden of Disease due to selected major risk factors. Ezzati M, Lopez, Rodgers A, Murray C (Eds). 2004;1177-1254. Geneva.
41. Adegbola B, Oni G. Health Transition Review.1993;Suppl;5:81-112.
42. Ogbuagu S, Charles JO. Survey of sexual networking in Calabar. In Health Transition Review.1993;suppl;3:105-119.
43. De Schacht C et al. High HIV incidence in the postpartum period sustains vertical transmission in settings with generalized epidemics: a cohort study in Southern Mozambique. J Int Soc AIDS. 2014;17(1):18808.
Available:http://www.jiasociety.org/index.php/jias/article/view/18808/,http://dx.doi.org/10.7448/IAS.17.1.18808
44. Courtenay WH, Key Determinants of the Health and the Well-Being of Men and Boys. Int J Men's Health.2003;2(1):1-27.



**DISCLAIMER**
This chapter is an extended version of the article published by the same authors in the following journal with CC BY license.
International Journal of TROPICAL DISEASE & Health, 19(1): 1-11, 2016.

**Reviewers' Information**
(1) Odigie, Bolaji Efosa, University of Benin, Benin City, Nigeria.
(2) Anonymous, Federal University of Technology Owerri, Nigeria.