PRACTICE OF HEALTHY TIMING AND SPACING OF PREGNANCY (HSTP), EXPERIENCE FROM A LOW RESOURCE SETTING

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ABSTRACT

Context: Healthy Timing and Spacing of Pregnancy (HTSP) refers to the optimal time that a woman should conceive for the healthiest outcomes for the mother and the baby.

Objective: This study assessed the adherence by Nigerian women of childbearing age to the WHO recommendations of optimal time to be observed by women before embarking on another pregnancy after child birth or a miscarriage.

Materials and Methods: This was a cross-sectional descriptive study of 400 consecutive women attending the antenatal clinic of the University of Abuja Teaching Hospital. Interviewer administered questionnaire was used to collect information relating to healthy timing and spacing of pregnancy. The data was analyzed using SPSS windows version 20. Chi square test was used to test for associations between categorical variables with the level of significance set at $p<0.05$.

Results: Two hundred respondents (50%) had birth to pregnancy interval of less than 24 months, while 14(3.5%) had birth to pregnancy interval of greater than 60 months. Overall, 249(62.2%) of women had an unhealthy timing or spacing of their pregnancies. Three hundred and forty (85%) were aware of at least a modern method of contraception but only 42(10.5%) had used contraceptives in the past. Awareness of normal inter-pregnancy interval of at least 24 months was seen in 271 (67.8%) women.

Conclusion: Non-adherence to WHO's concept of HTSP is high in Nigeria's Federal Capital Territory. Awareness of the benefits of contraceptive use and HTSP amongst women of child bearing age needs to be stressed.

Keywords: Healthy Timing and Spacing of Pregnancy, Antenatal Clinic, Abuja.

INTRODUCTION

Healthy Timing and spacing of Pregnancy (HTSP) is defined as "an approach to family planning service delivery that helps women and couples make an informed decision about delaying the first pregnancy until age 18, and timing (delay/limit) and spacing subsequent pregnancies for the healthiest outcomes for mother and baby".[1] It is an approach that helps women and families delay, space or limit their pregnancies. It also works within the context of free and informed contraceptive choice, and takes into account fertility intentions and desired family size.[1]

Timing, spacing and limiting of pregnancies are the three main outcomes of a planned family. For women who wish to have children, proper timing of first pregnancy and inter-pregnancy spacing are increasingly recognized as important for healthy outcomes of planned pregnancies.[2-5] Thus, HTSP

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encompasses a broader concept of the reproductive cycle-starting from healthiest age for the first pregnancy in adolescents, to spacing subsequent pregnancies following a live birth, stillbirth, miscarriage or abortion-capturing all pregnancy-related intervals in a woman's reproductive life.[6]

Globally, pregnancy and childbirth are events associated with both positive and negative significant health outcomes. Multiple studies have shown that adverse maternal and peri-natal outcomes are associated with early, late, closely spaced and high parity pregnancies.[7-11] Short(<18 months) and long(>60 months) inter-pregnancy intervals were shown to be associated with higher risks of adverse health outcomes like difficult deliveries, preterm birth, low birth weight and increased new born death.[12,13] After a miscarriage or induced abortion, pregnancy intervals less than 6 months are associated with adverse maternal and peri_natal outcomes.[14]

Although, other research findings advocate an inter-pregnancy interval of 2 years,[15] recent findings have shown that intervals of 3-5 years are safer for both the mother and baby.[16,17] However, too long birth intervals(>5 years) are associated with increased risk of complications such as pre-eclampsia as the mother looses protective effect from previous pregnancies.[16]

Zhu and colleagues suggested that physiological reproductive capacities gained during pregnancy begin to gradually decline after delivery. They reported that after an inter-pregnancy interval of 60 months or longer, peri-natal outcomes were similar to those of primigravid women.[18]

Sub-Saharan Africa is the region with the worst reproductive health indices and the lowest contraceptive use rate(23%).[19] These are as a result of three unhealthy behaviors of getting pregnancies too early, too many and too closely spaced.[20] The world's highest adolescent pregnancy rates are found in sub-Saharan Africa, where 1 in 4 girls has given birth by 18 years of age.[21]

Problems of early and closely spaced pregnancies are also common in Nigeria.[22] The Nigeria Demographic and Health Survey of 2013 showed that about 23% of adolescent women aged 15-19 years were already pregnant or mothers.[23] Sixty one percent of the women were married by 20 years of age in the Northern part of the country. The maternal mortality ratio was 576 per 100,000 live births while infant mortality and under five mortality rates were 69 and 128 /1000 live births respectively.[23]

The Policy brief of the World Health Organization in 2006 recommended that after live birth, interval of at least 24 months should be observed before attempting another pregnancy. Again after a miscarriage or induced abortion, 6 months should be recommended minimum interval before next pregnancy.[24] USAID incorporated a third component based on recommendations from WHO, UNICEF and UNFPA, that teenagers should delay first pregnancies until at least 18 years of age. These three recommendations form the basis for the key HTSP messages.[25]

There has been scanty literature on HTSP in Nigeria. A study carried out in Kano state by USAID in partnership with the Federation of Muslim Women Association of Nigeria (FOMWAN) revealed a high rate of early marriages below 18 years, early deliveries, short inter-pregnancy intervals and high parities.[22] Abuja is the Federal Capital Territory of Nigeria and the population is a microcosm of the Nigerian people. This study was therefore, to assess whether there is adherence to the WHO recommendations amongst the antenatal attendees.

MATERIALS AND METHODS:

Using the formula $n=z^2pq/d^2$ Where:

n = minimum sample size

z = standard deviation at 95% confidence interval = 1.96. p = prevalence of short birth interval less than 24 months, which is 38.3% from a study in Ekiti,

South West Nigeria[26]

$$q = 1 - p = 1 - 0.383 = 0.617$$

$$d = \text{measure of precision} = 0.05,$$

A sample size of 363 was calculated. Adding 10% attrition, approximate sample size of 400 was got. Four hundred pregnant women attending the antenatal clinic of the University of Abuja Teaching hospital, who had delivered before, were randomly selected between the month of August and December 2014. Semi-structured questionnaire containing both closed and open ended questions were administered by interviewer method. The questionnaire contained the socio-demographic data and previous birth to current interval in months. Questions on the optimal timing of getting pregnant after a previous delivery was asked. Awareness and previous usage of contraceptives, age at first marriage and age at first delivery were also found out. The data obtained was analyzed using SPSS windows 20. Chi square was used to test for associations at level of significance of $p<0.05$.

RESULTS:

Table 1 shows the socio-demographic characteristics. The mean age was 30.6±4.7 years. There were more respondents within the age group of 30-34 years {145(36.3%)}. Those aged 35 years and above were 86(22.3%). The youngest of the respondents was 18 years while the oldest was 45 years.

Literacy level was high as 145(36.3%) had secondary level of education while 221(55.3%) had tertiary level. That means 91.6% had at least secondary level of education. Christians were 277(69.2%) while 123(30.8) were moslems. Multiparas(Para 2-4) constituted the highest number(217, 54.3%) while grandmultiparas were 27(6.8%). The maximum parity was 7.

Table 2 shows the interval between the last childbirth and the current pregnancy(Birth to Pregnancy Interval:BPI). It also shows the awareness and usage of contraceptives amongst them. The highest number {186(45.5%)} had normal BPI of 24 – 60 months(2-5 years), while 14(3.5%) had BPI of greater than 60 months. In all, 200(50%) had BPI of less than 24 months. Thirty seven(9.3%) had BPI of less than 6 months.

Contraceptive awareness was high because 340(85%) were aware of one form of contraceptive or the other, but only 42(10.5%) had used any contraceptive method before. Twenty-four (6%) were married before the age of 18 years while 11 of these (45.8%, n=24) had their first pregnancy before the age of 18 years. Two hundred and seventy one were aware of normal BPI of 24 months.

Univariate analysis using Chi square test showed there was a significant difference between age and BPI ($X^2=1952.42$, $P<0.001$). There was no significant difference between contraceptive awareness and BPI($X^2=54.835$, $P<0.001$).

DISCUSSION:

Women and families want to know the safest time to become pregnant. When pregnancies occur (timing and spacing of pregnancies) is important for healthy mothers and healthy babies.[27]

This study has shown that majority of the patients were within the accepted age limit of 18-34 years as recommended by the WHO, although substantial number were still pregnant above the age of 34 years. The mean age of 30.6±4.7 years is similar to 29.2±5.1 years found in a study of HTSP amongst antenatal patients in Dar es Salam, Tanzania.[28] Several studies have shown that pregnancies at the extremes of age (<18 years and >34 years) are fraught with risks to both the baby and the mother.[29,30] A small percentage of them had their first pregnancies at age less than 18 years in this study. This is in contrast to the findings from the North Western part of this country where 23% of married adolescent women aged 15-19 years

were already mothers or pregnant.[22]

The literacy level was very high in contrast to the study from Dar es Salam where 63.5% had at least secondary school level of education. Despite the high literacy level and high awareness about contraceptives, majority of them had BPI of less than 24 months. The prevalence of BPI less than 24 months of 50% is higher than in the United States where the inter-pregnancy interval of less than 18 months was 30%.[31] However, BPI between 24-60 months of 46.5% is similar to BPI 18-59 months of 50% found in the USA.[31]

Birth spacing as a concept is the focal point of reproductive health/family planning, however, few countries have policies on birth spacing. In many developing countries, there is a huge unmet need for birth spacing services.[32] Even though contraceptive awareness in this study was high, the usage rate was very low. The Nigeria Demographic and Health Survey of 2013 showed low prevalence of contraceptive usage amongst married women.[23] Other studies from Nigeria also showed low contraceptive usage despite high awareness of them.[33,34]

Short birth intervals do not allow women to have adequate time to replenish nutritional stores, leading to "maternal depletion syndrome".[35] This can lead to low birth weight children, preterm birth, stunting, maternal malnutrition and change in breast milk content. In addition, stopping breast feeding is strongly associated with increased mortality for children in the first two years of life.[36] Some of the reasons why women in Nigeria have short inter-pregnancy interval is preference for male children and high infant mortality rate.[37]

Access to family planning can benefit the economy of a nation or individuals by improving general health and reducing total fertility.[38] It reduces the number of high risk births for women of very young maternal age (<18 years) and women of high parity. It also improves birth spacing, which can benefit the health of mothers and children, thereby reducing maternal and child mortality.[30] It is estimated that 1.8 million under five deaths could be prevented if pregnancies were spaced at healthy intervals. Millions more maternal and infant deaths could be prevented if women, men, girls and boys practiced all of the healthy pregnancy timing and spacing behaviors recommended by WHO.

CONCLUSION:

None adherence to WHO's concept of HTSP amongst married women in the Federal Capital Territory is high, possibly because of high unmet needs for family planning. Behaviour change communication activities can help families understand that newborns and children are healthier with longer intervals between births, when

pregnancies are conceived between ages 18-34 years and when families have fewer children (less than 5). Increasing awareness of the benefits of HTSP among Policy makers, Providers and Community members can contribute to efforts to increase the use of modern contraceptive methods if we are to reduce the high maternal and infant mortality rates in Nigeria.

Table 1: Socio demographic characteristics (n=400)

Age distribution		
Age group	Number	Percent
15 – 19	5	1.3
20 – 24	28	7.0
25 – 29	136	34.0
30 – 34	145	36.3
35 – 39	73	18.3
40 – 45	12	3.0
45 – 49	1	0.3

Mean age = 30.6±4.7

Educational status		
None	4	1.0
Primary	30	7.5
Secondary	145	36.3
Tertiary	221	55.3
Religion		
Christianity	227	69.2
Islam	123	30.8
Parity		
Primipara	156	39.0
Multipara	217	54.2
Grandmultipara	27	6.8

Table 2: Birth to Pregnancy Interval (BPI), Contraceptive Awareness and Usage (n=400).

BPI (months)	**Number**	**Percent**
< 6	37	9.3
6 - < 12	28	7.0
12 - < 18	83	20.8
18 - < 24	52	13.0
24 – 60	186	46.5
? 60	14	3.5
Contraceptive Awareness		
Yes	340	85.0
No	60	15.0
Previous contraceptive usage		
Yes	42	10.5
No	358	89.5

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