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# KNOWLEDGE AND UTILIZATION OF PRECONCEPTION CARE AMONG WOMEN OF CHILDBEARING AGE IN ADEOYO HOSPITAL, IBADAN

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## Abstract

**Background:** Care during the antenatal period has been the focus of improving maternal health and reproductive outcomes. Yet, evidences have shown that antenatal care alone is not enough. Initiating care before conception or preconception care (PCC) could be effective to further improve maternal health and reproductive outcomes. This study investigated the level of awareness, understanding and the utilization of components of preconception care among women of childbearing age in Adeoyo Maternity Hospital, Ibadan. The study constitutes a baseline attempt at generating information and gaps in this study area.

**Methodology:** A descriptive cross-sectional design was used for the study; purposive sampling technique was used to select 103 respondents, out of the 240 respondents that attended the clinic from 4<sup>th</sup>-7<sup>th</sup> March, 2019. The participants were pregnant women attending antenatal clinic in Adeoyo Maternity Teaching Hospital who consented to participate in the study. A structured self-administered questionnaire was used to collect data. The data were analysed using descriptive statistics.

**Results:** Fifty-six (54.4%) of the respondents have not heard about preconception care. Only, 26 (25.2%) of the respondents were able to define preconception care as the care given to a woman before pregnancy. Majority, 77 (74.8%) of the respondents claimed not to have utilized PCC. Even among those who have heard about preconception care, only 26 (25.2%) respondents claimed to have utilized it. Up to, 38 (36.9%) of the respondents were unable to identify available components.

**Conclusion:** The study has shown that awareness, knowledge and utilization of available preconception care components is quite low among respondents. The implications of these findings in low resource settings like Nigeria include the need for massive awareness and educational intervention and establishment of functional PCC units in our hospital and MCH settings, to enhance positive outcomes. Further research will also be needed in future to assess the impact of such interventions and how to sustain potential benefits.

**Keywords:** Knowledge, Availability, Utilization, Preconception care, women of childbearing age.

## **Introduction**

Motherhood is cherished by most women, yet this valued and precious part of life is among the most hazardous experiences that women often engage in without being aware of any risk or danger<sup>1,2</sup>. Many of the interventions used to improve maternal and perinatal outcomes are aimed at women who are already pregnant<sup>3</sup>. These interventions aim at minimizing exposure to maternal and foetal health risk factors during the antenatal period<sup>3</sup>. However, antenatal care exclusively may be inadequate at improving pregnancy and birth outcomes. This is because many complications emanate from lifestyles and life circumstances that precede pregnancy<sup>4</sup>. Despite this need, most health facilities do not have structured preconception care programmes, where available women do not utilize it<sup>5</sup>. In low-income countries, preconception care has not been widely implemented because its aims and objectives are not widely understood and accepted<sup>6</sup>.

Preconception care (PCC) is a component of comprehensive obstetric care. It can be described as a specialized form of care for women of reproductive age before the onset of pregnancy to detect, treat, or counsel women of childbearing age about the pre-existing medical and social conditions that may militate against safe motherhood and delivery of a healthy offspring<sup>7</sup>. Preconception care is one of the most important strategies of health care services for women in the reproductive age group<sup>8</sup>. It is a prevention-based strategy that aim at improving obstetric outcomes by identifying and modifying biomedical, behavioural and social risks in women's

health and pregnancy outcomes through preventive and management interventions prior to pregnancy.

The areas covered by the preconception care package include nutritional conditions including folic acid supplementation, mental health, genetic conditions, environmental health, vaccination, glycaemic control, infection prevention and treatment, smoking cessation, avoidance of alcohol and substance abuse, control of obesity<sup>9,10,11,12</sup>. The preconception care components as identified by WHO<sup>10</sup> are: Nutritional programmes; Vaccine programmes; Genetic counselling programmes; Environmental health/Occupational health; Infertility/sub-fertility programmes; Female genital mutilation programmes; Others include too early; unwanted and rapid successive pregnancies/Maternal and child health programmes; Premarital counselling programmes; Human immunodeficiency virus (HIV) testing and counselling programmes; Intimate partner and sexual violence programmes; Mental health programmes; Psychoactive substance use programmes; Tobacco use prevention and cessation programmes<sup>13</sup>.

Other PCC strategies for women with medical conditions may include optimizing disease control, changing potentially teratogenic drugs to safer ones and provision of family planning services to delay or avoid unplanned pregnancy<sup>13</sup>. Several studies have shown that although the concept of PCC has been articulated for over a decade, however, it is yet to become part of the routine global practice, especially in low-income countries<sup>14,9,15</sup>. Thus, the availability and

utilization is quite low among women especially in Nigeria<sup>16,18</sup>. It is therefore, pertinent to evaluate the awareness about role of preconception in identifying health risks and access to available services in order to achieve good obstetric outcomes.

### **Objectives of the study**

The general objective of this study is to generate baseline information on knowledge, availability and utilization of preconception care among women of childbearing age in Ibadan, Nigeria.

The specific objectives are to:

1. Assess awareness of preconception care among women of childbearing age.
2. Evaluate knowledge of preconception care among women of childbearing age.
3. Identify components of preconception care available to the women of childbearing age.
4. Determine level of utilization of available preconception care among women of childbearing age.

### **Materials and methods**

The setting of this study was Adeoyo Maternity Teaching Hospital (AMTH) in Yemetu area of Ibadan. The study population for the study was pregnant women attending ante natal clinic (ANC). The hospital was formerly called Adeoyo State Hospital in which all medical and surgical cases were cared for. It was established in 1927. University College Hospital (UCH) started there before moving to its permanent site in 1957. It is situated within Ibadan North Local Government Area (LGA). It is now a state-owned tertiary

health facility that receives referral within and outside the State. The population for the study were 240 pregnant women met at the ANC while selection was made using even numbers.

The antenatal clinic of Adeoyo operates on every Mondays for booking, while Tuesdays, Wednesdays and Thursdays are for subsequent visits. The average number of pregnant women per visit is 155 to 180 on booking days, and 80 to 100 per return visit. Out of 240 pregnant women that attended the clinic on 4<sup>th</sup>-7<sup>th</sup> March, 2019, 103 respondents were finally selected

The study utilized purposive sampling technique to select 103 pregnant women. The purpose and objectives of the study was duly communicated to the respondents. Informed consent was obtained from the respondents through their signatures and thumb prints. The participants were given the right to decide to withdraw or refuse to provide any information.

A structured self-administered questionnaire developed by the researchers was used to elicit information from the respondents. It had 5 sections: Section A highlighted the socio demographic information of the respondent; Section B reflected on awareness of preconception care; section C elicited information about knowledge of preconception care; Section D evaluated the level of utilization of available preconception care and section E dealt with information on the components of preconception care.

Descriptive statistics was used for analysis and results were presented in tables, chart, frequency distribution and percentages.

## Results

Results concerning socio-demographic characteristics of the respondents were presented in Table 1. Majority of the women were in their active reproductive age, were married and from Yoruba ethnic group. Figure 1 revealed that 56(54.4%) of the respondents were not aware of preconception care only 47 (45.6%) claimed that they have heard about it.

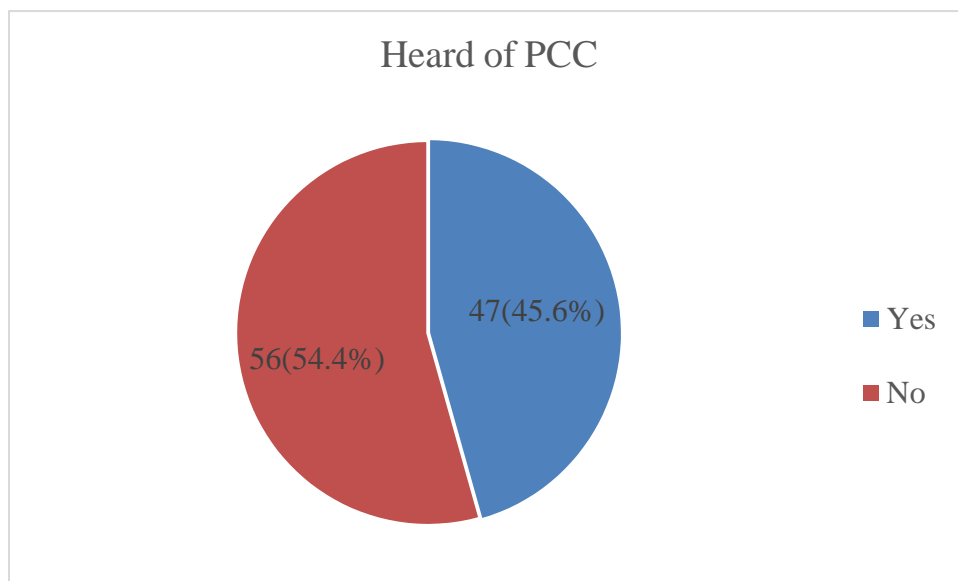
With regards to knowledge on preconception care majority of the respondents were not knowledgeable about the concept. Only very few respondents knew the correct answer as indicated on

Table 2. In addition, the overall utilization of the concept showed that only very few respondents utilized the nutritional aspect of preconception care on Table 3. The components identified by the respondents were grouped into themes for ease of analysis. By their own understanding of preconception care they identified 29 components. Of these 29 components only two (2) which are nutrition and HIV testing and counselling programme can be said to be correct in respect to the actual 13 components as shown on Table 4.

**Table 1: Demographic characteristic of respondents**

| <b>Variable</b>             | <b>Frequency</b> | <b>Percentages</b> |
|-----------------------------|------------------|--------------------|
| <b>Age Group (in years)</b> |                  |                    |
| 18-25                       | 37               | 35.9               |
| 26-30                       | 47               | 45.6               |
| 31-35                       | 16               | 15.5               |
| 36 and above                | 3                | 2.9                |
| <b>Religion</b>             |                  |                    |
| Islam                       | 56               | 54.4               |
| Christianity                | 45               | 43.7               |
| Traditional                 | 2                | 1.9                |
| <b>Level of Education</b>   |                  |                    |
| Primary                     | 10               | 9.7                |
| Secondary                   | 65               | 63.1               |
| Tertiary                    | 28               | 27.2               |
| <b>Marital Status</b>       |                  |                    |
| Single                      | 6                | 5.8                |
| Married                     | 97               | 94.2               |
| <b>Ethnicity</b>            |                  |                    |
| Yoruba                      | 92               | 89.3               |
| Hausa                       | 6                | 5.8                |
| Igbo                        | 5                | 4.9                |

**Figure 1: Respondents' awareness of preconception care (PCC)**



**Table 2: Respondents' understanding of preconception care**

| Responses                               | Fr (n= 103) | %    |
|---|-------------|------|
| None                                    | 20          | 19.5 |
| Care given to a woman before pregnancy* | 26          | 25.2 |
| A process before getting pregnant       | 3           | 2.9  |
| Taking care of self                     | 15          | 14.5 |
| Care given to infertile couples         | 30          | 29.2 |
| Opportunity to improve health           | 3           | 2.9  |
| Having regular sexual intercourse       | 6           | 5.8  |

\*Correct Answer

**Table 3: Respondents' utilization of the components of preconception care**

| Response  | Fr (n= 103) | %    |
|---|-------------|------|
| None  | 77          | 74.8 |
| Nutrition   | 17          | 16.5 |
| Screening for diabetes mellitus, hypertension and cardiac disease | 1           | 1.0  |
| Counselling   | 2           | 1.9  |
| Avoiding smoking, alcohol and drug intake                         | 6           | 5.8  |

**Table 4: Respondents’ perceived components of preconception care**

| Perceived components                                     | Fr (n= 103) | %    |
|--|-------------|------|
| Nil  | 38          | 36.9 |
| Family history   | 15          | 14.6 |
| Laboratory investigation                                 | 3           | 2.9  |
| Treatment of infection in both spouses before conception | 9           | 8.7  |
| Living a healthy lifestyle                               | 3           | 2.9  |
| Nutrition  | 16          | 15.5 |
| Environmental sanitation                                 | 1           | 1.0  |
| Risk assessment  | 1           | 1.0  |
| Medical and psychological interventions                  | 4           | 3.9  |
| Counselling on blood group and genotype                  | 12          | 11.7 |
| HIV test   | 1           | 1.0  |

**Discussion**

The findings of this study reveal that a little less than half of the respondents were aware of PCC. This implies that they are less likely to utilize this service since awareness is very likely to influence utilization of any service as one may not utilize what she is not aware of. The result was in line with the findings of <sup>15</sup>in South Eastern Nigeria where they found out that only 43.1% of their respondents have heard about PCC. Also<sup>17</sup> recorded a low level of awareness as 41.2% of their respondents were aware of PCC. The present findings were also supported by<sup>18</sup>, in Iran which reported a low level of awareness of 40% among the respondents. It was further supported by <sup>19</sup>from a study in Abakaliki, South East Nigeria among childbearing women which revealed that 42.2% were aware of PCC. On the contrary, study conducted in Australia by<sup>20</sup>, indicated a high level of awareness on PCC. Also, findings of<sup>21</sup>in Ile-Ife, Nigeria also showed that awareness was also on the high side (63.5%).

The respondents had low knowledge of the concepts of PCC as 26 (25.2%) of them mentioned correctly that PCC is care given to a woman before pregnancy. This result was informed by low level of awareness among the respondents. This goes to show that PCC as a concept is not well known among the women in this study. This result was also in line with the study by<sup>19</sup>, which reported that only 31.7% of their respondents had good knowledge of PCC. The study in Ethiopia <sup>22</sup>reported that about 27.5% reported had knowledge of PCC. On the contrary<sup>15</sup>reported that 64.4% of their respondents defined the concept of PCC correctly, similarly<sup>23</sup> showed that 61% of their respondents had moderate knowledge about PCC. Also, high level of knowledge on PCC 76% was recorded by <sup>24</sup> among low-income Mexican, findings by <sup>21</sup>in Ile Ife, also showed higher percentage of 63.5% of their respondents had knowledge about PCC.

The current study revealed that over 70% did not utilize PCC. This is because



knowledge is thought to influence utilization. Out of the 26 (25.2%) who utilized some components, 17 (16.5%) of them utilized the nutritional aspect of preconception care. The finding was in agreement with a study by<sup>20</sup> among primigravida women in Australia the result presents similar proportion of women reported taken a vitamin containing folic acid daily. It can be deduced from this study, that PCC is not well utilized by women. This could be expected as their awareness and knowledge were quite low.

The result indicated that only a few respondents listed counselling as components of PCC. This finding tends to agree with finding of a group of researchers<sup>25</sup> in which they acknowledged that only a few of the women received counselling for pregnancy preparation. Findings from this present study also agrees with<sup>13</sup>, they discovered that 15% of Oklahoma women claimed to have received counselling prior to pregnancy. The findings on the available components of PCC revealed that 16 (15.5%) respondents identified nutrition as a component. This study was at variance with a study by<sup>11</sup> where it was found that 65.9% of the respondents utilized a sub-component of nutrition that is folic acids supplementation and other healthy nutrients.

### **Conclusion**

The outcome of this study has shown that there is little awareness on preconception care despite the importance. Many conditions that result in various challenges during pregnancy emanate from lifestyles and life circumstances that precede

pregnancy. The pregnant women tend to present to hospitals when they are pregnant and foetal parts had already developed. This could explain why some risky conditions lead to various complications and the chance of control before pregnancy was not utilized through preconception care.

Nevertheless, most health facilities do not have structured Preconception care programmes. It was therefore important to identify level of awareness and availability of preconception care services in order to ensure prompt identification of health risks. Early identification of at-risk women will facilitate proper management before conception thereby reducing complications that may adversely affect good obstetric outcomes. This study has therefore buttressed the need for a structured Preconception care programme in Health Facilities. There is need to investigate and identify possible factors responsible for such low utilization rate among the women of childbearing age generally.

### **Recommendations**

- The implication of these findings is that there is the need for all women of childbearing age or all concerned to hear about the concept of PCC.
- There should be policies that will support the provision of structured routine preconception care for the childbearing families.
- Though some respondents were able to identify many components, there is the need to educate them on the correct components as means of

- increasing their awareness and knowledge about it and for a possible
- Women should be aware of available facilities where such services can be sourced

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