

# Knowledge and Perceptions of the Billing's Ovulation Method of Natural Family Planning among Married Women in Lagos, Nigeria

Ibrahim Bidemi Abdullateef \*<sup>1</sup>, Abdulazeez Opeyemi Abdulganiyu<sup>2</sup>, Omolade Oyindamola Fanu<sup>3</sup>,  
Julie Alaere Atta<sup>4</sup>

<sup>1,2</sup>Department of Sociology, University of Lagos, Akoka, Lagos, Nigeria

<sup>3</sup>Department of Sociology and Anthropology, North Dakota State University, USA

<sup>4</sup>Department of Health Services Organization, University of Texas Health Science Centre, USA

\*Corresponding Author

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## ABSTRACT

**Background:** Based on existing literature, it was observed that modern contraceptives are the most widely used family planning methods in Nigeria, and that they have serious side effects for their users. Despite these effects, women of reproductive age have made little or no effort to embrace Billing's ovulation as an alternative family planning method. In order to better understand the dynamics surrounding the adoption of Billing's ovulation method, this study examined the knowledge, perceived effectiveness, and spousal attitude toward the use of Billing's ovulation as a method of natural family planning among married women in Lagos metropolis.

**Method:** To accomplish this, a pure qualitative methodological approach was used, with in-depth interviews (IDI) used to collect qualitative data from (20) married women. Manual content analysis was used to analyze the collected data.

**Results:** Findings showed that; high level of knowledge and awareness of BOM, positive perceptions of its efficacy, and a favorable spousal attitude toward BOM are indicators of the rate at which married women in Lagos metropolis use the Billing's ovulation method as their preferred family planning alternative.

**Conclusion:** The study then recommends that a rigorous sensitization program based on door-to-door intervention be launched to educate married women in Lagos metropolis on the need for Natural family planning as an alternative family planning method, particularly BOM, while teaching them the procedures and techniques in order to increase people's access to natural family planning.

**Keywords:** Family planning, Natural Family Planning, Billing's Ovulation, Married Women

## INTRODUCTION

Several contraceptive methods have been introduced into the health milieu over the years to protect women of reproductive age from unplanned pregnancies and the risk of child delivery, which can result in mother and infant mortality. These contraceptive methods are not the same as they vary in application and risk <sup>1</sup>.

Some of these methods require minimal surgical procedure, some only requires the bodily intake of some substance while some are naturally based and practiced through self-observation and examination of bodily changes within a woman menstrual cycle <sup>2</sup>. The naturally based method of family planning is becoming popular in some part of the world among women of reproductive age due to its inexpensiveness and low medical side effect <sup>3</sup>. The Billing's Ovulation Method (BOM) represent a huge aspect of Natural family planning method among the league of family planning methods due to its "easy-to-adopt style" which requires nothing more than the observation of mucus sign at some period of the month known as the ovulation period in order to abstain from sexual intercourse. The Billing's Ovulation method is a natural method of fertility management which requires women to recognize their body's natural signal of fertility through cervical mucus <sup>4</sup>

It is not surprising that the knowledge of BOM is limited in Africa and as such, the need to raise awareness of its adoptability among married couples specifically in Nigeria remains an urgent task for demographers, government and stakeholders alike <sup>5</sup>. In Nigeria, there is no doubt about the high level of awareness of family planning method especially the modern family planning methods <sup>6</sup>. Despite this awareness, women still find family planning uninteresting, maybe as a result of some social factors or some consequential variables <sup>7</sup>. In the literature, the measurable social factors identified as responsible for the low utilization of available modern family planning methods among women by Nigerian and non-Nigerian scholars are; cost, religious beliefs, spousal behavior, and the desire for a male child, while the consequential variables are limited to side effects such as hormonal imbalance, heavier bleeding during menstruation, infertility, and, at times, complication in childbirth.

In consequent to the above, maternal health outcomes in Nigeria have continued to be of immense concern as uptake is still low with only 12% of women using modern method of family planning <sup>8 - 9</sup>. Maternal death is still high compared to what we have in the developed nation as Nigeria accounted for 512 maternal deaths per 100,000 live births <sup>8</sup>. There is also high unmet need for family planning in Nigeria with about 19% among married women <sup>8</sup>. This, in many cases has led to high fertility rate, rapid population growth and high maternal mortality and morbidity rate accompanied by poor socio-economic development <sup>10</sup>. The modern family planning method, which was intended to be a social antidote to maternal health, population growth, infant mortality, and unintended pregnancies, is now posing a serious side effect to its users, thereby causing a discontinuity among married women primarily because of issues related to side effects <sup>11</sup>.

From the foregoing, it can be observed that modern contraceptive is the most adopted family planning method (12%) compared to natural family planning methods (5%) in Nigeria <sup>8</sup>. And as such, there is still high rate of discontinuity and the fear of medical side effects as regards its adoption. In spite of these, little or no effort has been made by the government and stakeholders to sensitize married couples on the adoption of BOM as an alternative contraceptive approach. <sup>12</sup> BOM is uniquely advantageous in the sense that it serves as a means of communication between the spouses in order to grow their love. In the vast majority of African countries like Nigeria, the dominant culture is patriarchy, which gives the husband authority over his wife's reproductive decision. The learning of the BOM will change this existing idea to give the woman greater dignity in the eyes of her husband, and allow them to share more between themselves for the fulfillment of their reproductive aspiration and the biological well-being of their children. Much of the known scholarly literatures in Nigeria has depended far too heavily on modern family planning methods, with little focus on Billing's Ovulation method of natural family planning. Furthermore, it has been observed that these researches are quantitative in nature, removing the need to probe into the participants' subjective lived experiences. On the need to unravel the dynamics surrounding the adoption of BOM, it is pertinent to engage in a purposeful research effort as this to critically examine the knowledge and perceptions of Billing's ovulation as a method of Natural Family Planning among married women in Lagos metropolis.

## **METHODS**

Unlike other research conducted in more controlled settings with focus on modern family planning methods, this study is particularistic and focuses specifically on the Billing's Ovulation method of natural family planning utilizing a pure interpretive qualitative method within the natural settings of the participants.

### **Study population and Research Design**

The study population in this research consists of married women who are residents of some selected local government areas in Lagos State, Nigeria. The non-experimental research design was adopted under which the qualitative approach was used to implement the study. This means that the study focused exclusively on an interpretive/phenomenological philosophical framework. The rationale behind the choice of qualitative approach is to understand the knowledge, perceptions, meanings, interpretations, narratives, perceived effectiveness and spousal attitude of the participants on the Billing's Ovulation as a method of natural family planning. Thus, to understand how respondents interpret and conceive the adoption of Billing's ovulation method, the qualitative research approach is more appropriate and adoptable in this regard.

### **Recruitment of Participants and Sample Size**

Using a convenient sampling procedure, participants were selected on the basis of easy availability and access. Four local government areas in Lagos metropolis were selected based on the familiarity of the researcher and how easily accessible the participants were, a total number of twenty (20) respondents represented the sample size for this study by selecting (5) respondents in each area accordingly.

### **Data Collection Technique**

There is no doubt that data collection is the core element of an empirical research of this nature, thus it has been considered one of the most important methodological process of an empirical study. In this study, qualitative data was generated to empirically achieve the study objectives. More specifically, in-depth interview (IDI) was chosen as the major instrument for data collection. This instrument was chosen as a result of the nature of the study and also to prevent some important information about the study not to evade the researcher. The interview guide was divided into three parts following the study objectives. Thus, the interview guide had section on the knowledge surrounding Billing's ovulation method, examining the perceived effectiveness of BOM, assessing the spousal attitudes displayed towards the adoption of BOM.

### **Data analysis Plan**

Following the instrument selected for data collection, data was analysed to summarize the outcomes of the in-depth interviews in a manner that would answer the research questions. Since

the nature of data that was collected is typically qualitative, manual content analysis was adopted to analyse the collected qualitative data. This method of data analysis was applied in phases. The

first phase of data analysis was based on the listening and transcribing of the responses obtained

from the participants. This process involves the examination of the collected raw data to detect errors in audio quality that might have occurred during the interview processes and to correct those where possible. The second step of data analysis was the classification of the data. Classification was done according to the emerging attributes in the responses generated. This step involves going through the responses given by the participants in order to understand their meanings and interpretations. This enabled the researcher to develop

broad contextual meaning and interpretation out of the responses. The last step was the integration of the content and responses into the text of the report. All the above-mentioned steps or phases were diligently followed in the process of data analysis.

### **Patient and Public Involvement**

This study was informed by the experiences garnered from married women who have given birth within Lagos metropolis but the design and structure of this report did not involve these women. Although, some of the findings of this research was shared with involved participants through the platform created during the course of data collection.

## **RESULTS**

Undoubtedly, one of the essential aspects of empirical research is presenting original data to generate valid findings and reliable conclusions about the subject under study. Data analysis aids in the organization, interpretation, structuring, and presentation of data into useful information that provides context for the study. The relevant and valid responses that are in tandem with the research objectives are thereby presented and analysed in the subsequent sub-headings below:

### **Knowledge About Billing's Ovulation as A Natural Family Planning Method**

This part reported and analysed the respondents' knowledge of the Billings' ovulation procedure. In doing so, it was discovered that the majority of the participants were aware of Billing's ovulation method, indicating a significant step toward a high rate of future adoption of the method because many of them see it as a family planning alternative that they are aware of through friends, relatives, and health professionals. The responses vary accordingly and they are as follow:

*I am very much aware of ovulation method and I have been practising it for some years now. Although, I began practising the ovulation method immediately I got married not only to prevent pregnancy but for child spacing. I got to learn about the proper use of the method at the counselling section in my church and since then I have been teaching other married women in my community and at my workplace that are willing to adopt a natural family planning. (A 33-year-old civil servant, IDI)*

Another interview response that worth sharing at this level is that of a mother of four who claimed to have been practising ovulation method for over ten years. According to her:

*I understood virtually everything that has to do with ovulation method in preventing pregnancy because I have been practising this method for over ten years and it has always worked for me. As a mother of four who intends not giving birth to any child again, through my knowledge of ovulation method which I got to learn from a marriage counsellor prior to my marriage has helped me to determine when and when to conceive. For you to know how knowledgeable I am about this method, I do advise my husband to use condom during my fertile windows so as to help prevent pregnancy and child spacing. (A 35-year-old mother of four, IDI)*

The above interview response shows that the respondent is highly experienced on the subject of ovulation which further depicts her consistency and long term use of the method. Another interview participant who also commented on the on-going discussion responded thus:

*As regards ovulation method, for me, I think the most important thing is to be aware of your days of fertility because I know of couples who are very conversant with this method and yet they still conceive unplanned.*

*As for me, I won't say that I have started adopting ovulation method but I am very much aware of it which I got to know of from family members who have used it successfully in preventing pregnancy. Although, I might later become consistent with this method but for now I am still on my first child and not yet ready to fully go into family planning (A 28-year-old business woman, IDI)*

From the above interview response, it can be seen that some women of reproductive age do not give much regard to family planning at their first birth and as such; they do not think it is necessary to make any family planning decision at that time. Another interview response that is in line with the above opinion states that:

*I know about ovulation method and I am very much aware of it because it is part of the orientation we received from our family Doctor after my second delivery when he advised us about family planning and I told him that I can't go for modern family planning method due to infections and other side effects and he gave us orientation about ovulation method. Although, the number of children I have now which is just two does not encourage me to start practising ovulation method because to the glory of God we have the resources to cater for them and I think the reason why many couples practice or adopts one family planning method or the other is for economic reason. (A 27-year-old college proprietress, IDI)*

### **Some Perceived Effectiveness of Billing Ovulation as A Natural Family Planning Method**

To fulfill the second goal of this study, respondents were asked questions about the effectiveness of Billings' ovulation as a natural family planning method. In order to do this, the majority of participants referenced to the success of the ovulation method in avoiding pregnancy if used correctly and do not see any reason to abandon it. Many of the respondents even expressed their desire to advocate the method to others who are considering a natural family planning method. Some of the responses that confirmed this are presented thus:

*The effect is high o, hmmm, especially when you are conversant with your menstrual cycle. People who have adopted the ovulation method especially my friends in the UK claimed that they usually feel secured with the method and when we talk on phone they usually recommend this ovulation method to me and I don't think they are ready to disengage from it as their family planning method. As for me, I have not decided on whether to adopt this method based on its effectiveness as my friend usually narrate; because it has to do with abstinence from sex during ovulation period and this is the period in which women usually feel the urge for sex (A 29-year-old legal practitioner, IDI).*

In an attempt to inquire further about the perceived effectiveness of Billing's ovulation method, another participant commended thus:

*I think the ovulation method is safer compared to other family planning method if well practiced. As I have said earlier, it is safer and I usually feel secured using the method because I read a lot about family planning especially the natural ones like ovulation and this has made me recommend this method to a lot of my friends especially those with three or four kids with little spacing in between. (A 26-year-old stay-at-home mother, IDI)*

Based on the direction of the responses above, one could make a position that ovulation method has been effective in avoiding pregnancy. However, it would be wrong on the part of the researcher not to report the views of other married women who are sceptical of the authenticity of ovulation method. One of such responses could be presented thus:

*People usually make the claim that ovulation method is effective when you know how to calculate your menstrual cycle blah blah blah! As for me, I can't really say it is effective because I have seen a lot of*



women who in the cause of practising ovulation method to avoid pregnancy end up being pregnant and it is not as if these women are not knowledgeable about the techniques of the method. I won't discourage women generally from adopting the ovulation method all I know is that it is not 100% certain in avoiding pregnancy and that people can still get pregnant while adopting it. (A 33-year-old business entrepreneur, IDI)

Another participant within the same interview whose opinion is in opposition with the above response has this to say:

*As a woman with busy schedules, I have always wanted to give in for a family planning method that won't require visiting clinics at intervals and as a mother of three, I have then decided to opt in for ovulation method as my family planning choice which my husband agreed with and it has been working for us. So, I can say categorically that ovulation method is effective in avoiding pregnancy and we have been recommending this for family friends who has been complaining of the side effect they encounter on other family planning methods that are not natural. (A 35-year-old mother of three, IDI)*

### **Spousal Attitudes Displayed Towards the Adoption of Billing's Ovulation Method**

To achieve the last objective, the participants were asked to provide some views on the attitudes of their spouses towards the adoption of Billing's ovulation method. The goal of this objective was to investigate the agreement that occurs between married couples on family planning, specifically the attitudes of the male spouse toward the adoption of the Billing's ovulation method. In achieving this, the majority of the responses gathered indicated that the spouse is a central figure in the decision surrounding the techniques of ovulation method, indicating that spouses are fully involved and supportive of the adoption of ovulation as a natural family planning method. The participant's responses that confirmed this are as follows:

*My husband has always wanted a family planning method that will not require the insertion of anything into the vagina and on getting to know about ovulation method, he really liked it and immediately after our second child, we have both been a reminder to one another whenever the fertility window is approaching and he doesn't hesitate to abstain from sex during this period and I don't think he is willing to discontinue with this method because he really likes it. (A 31-year-old mother of two, IDI)*

In line with the above, another participant had this say regarding her spousal attitude towards the adoption of Billing's ovulation method:

*As a woman who is a lover of children, I don't see myself restricting the amount of children I can give birth to rather I just want to keep giving birth to children as much as I can. Although, I have got four children now but my husband has been disturbing me on family planning especially the one that has to do with ovulation and based on this, he has studied my menstrual cycle and has always abstain from sex during this period just to make me realise the need for family planning. so, I see my husband as someone who is very supportive and willing to fully adopt ovulation as our family planning preference if I am willing. (A 36-year-old mother of four, IDI)*

Another participant who has the same view with the above response commented thus:

*Since we have been introduced to ovulation as family planning method by our church family planning unit, my husband has always been the leader and coordinator of the techniques surrounding this method. He understood every signs and symptoms of ovulation and he is always at the forefront of abstaining from sex during my fertility window and I don't see him later disapproving of this method because he is just too focused and I am beginning to see ovulation as an effective family planning method especially with my*

*husband support involvement. (A 32-year-old secondary school principal, IDI)*

The above response depicts a positive spousal attitude towards the adoption of Billing's ovulation method and as such; it could be deduced that having such inclusive marital atmosphere in the practice of family planning can positively influence an effective family planning outcome.

## DISCUSSION OF FINDINGS

Billing's ovulation method as established in the literature, can only be practiced by women who ovulate at some point during their menstrual cycles in order to avoid pregnancy. However, this method could also be adopted by couples trying to conceive so as to determine the best time for intercourse. In this study, our concern is solely on the knowledge and perceptions of married women on the adoption of Billing's ovulation method in their family planning exercise. In doing so, a rich qualitative data has been collected and thoroughly analysed and the findings revealed the following in accordance to the stated objectives:

To understand the knowledge and perceptions of married women on the adoption of Billing's ovulation method as presented in the result section, it could be inferred from the first objective when participants were asked about their knowledge of Billing's ovulation in terms of their knowledge of the method, techniques of the method, and source of knowledge. The majority of married women interviewed attested to a high level of awareness of Billing's ovulation as a method of family planning. It could also be deduced that while the majority of married women are aware of its techniques, only a small percentage of them have little or no knowledge of its existence as a method of family planning. One of the interview responses that confirmed this can be presented thus: *...my awareness of Billing's ovulation method does not mean that I really know much about its techniques in preventing pregnancy or as a family planning method.* According to the responses gathered, the reason for the high knowledgeability rate could be that the majority of respondents have seen the need for family planning. When asked about their source of knowledge about the Billing's ovulation method, their responses varied significantly, and these differences could be attributed to friends and relatives, health professionals, family counsellors, and religious organizations. It can be seen from this discussion that married women within the metropolis of Lagos are aware and knowledgeable about the Billing's ovulation method and this could be responsible for the sizeable adoption rate recorded among the participants.

When the above result is compared to previous research, it is possible to conclude that many of these studies are in opposition to the current study. For example, understanding the BOM, like many other natural family planning techniques, entails knowledge of the method's existence as well as its processes, guiding rules, and everything else that must be learned in order to use it correctly. Scholars have argued that the understanding, knowledge and use of natural family planning methods, particularly the BOM, is limited in Nigeria in comparison to modern techniques<sup>13 14 12</sup>. According to a study conducted by Umar et al.<sup>14</sup>, lack of awareness was the primary barrier to the use of natural family planning techniques among the respondents in their study. As a result, for these scholars, modern contraceptive methods have surpassed natural methods in terms of awareness, with incorrect information even available on natural methods.

Inferring from the responses presented in the second objective of this study, when participants were asked about their perception of the perceived effectiveness of the Billing's ovulation method in avoiding pregnancy by probing their feeling of security while using the method, willingness to recommend the method, and thought of disengagement. It was empirically evident that the majority of participants alluded to the Billing's ovulation method's effectiveness in avoiding pregnancy and their willingness to recommend it to their friends and relatives, as well as their unwillingness to abandon this method. In 1998, the World Health Organization (WHO) claimed that the effectiveness of a method is determined by how effectively it

is comprehended and used. It was also evident in another study that the ineffectiveness or failure of the Billing's ovulation arises from the inability of the couple to follow through with the instruction and rules of the method. That is; if couples are well acquainted with the techniques surrounding this method, there would be high level of effectiveness recorded in the future to come among married couples<sup>15</sup>. However, it would be wrong on the part of the researchers not to report the views of other married women who are skeptical of the authenticity of ovulation method. One of such responses could be presented thus: ... *As for me, I can't really say Billing's ovulation method is effective because I have seen a lot of women who in the cause of practicing ovulation method to avoid pregnancy end up being pregnant.* This assumption coincides with the study of Ruhukwa who discovered that although some of the participants in his study approved of the efficacy of natural family planning, they are not likely to practice it due to their fear of unwanted pregnancy as a result of inadequate knowledge about the methods<sup>15</sup>. Thus, lack of knowledge of the method could hinder the practice of the method even when it is approved and perceived as being effective.

According to the responses presented in the third objective of this study, when participants were asked about their spouse's attitude towards the adoption of the Billing's ovulation method while probing them on their spouse's support and involvement in the techniques surrounding its use, their spousal willingness to abstain from sex during the fertile period, and spousal continuous approval of the method. It was concluded that the majority of participants mentioned their spouses as a supporting mechanism for their effective practice and adoption of the Billing's ovulation method. Looking critically at their responses, one could detect positive narratives that positioned the spouses as supportive and fully involved in the calculation of menstrual cycles and the changes that occurred thereafter. Notwithstanding, some brief responses were also gathered on the rule-breaking nature of some spouses, based on how they have not been consistent in abstaining from intercourse during the ovulation period. One of the responses that confirmed this can be presented thus: ... *I am willing to adopt billing's ovulation as my family planning preference but I am not sure my husband will be in support of this because whenever he's less busy he doesn't joke with sex. So, definitely he won't subscribe to ovulation method.* However, the majority of participants expressed satisfaction with their spouses' support for and participation in the Billing's ovulation method adoption<sup>16</sup>. This means communication between married partners is a key predictor of fertility-based methods like the BOM. It enables more equitable gender roles and shared decision-making, and it also serve as a good indicator for reproductive health decision among married couples. Various other studies have shown that providing men with information and involving them in counseling sessions can help them to be more supportive of any family planning type.

## CONCLUSION AND RECOMMENDATION

To cap it up, factors such as a high level of knowledge and awareness of BOM, positive perceptions of its efficacy and a favourable spousal attitude toward BOM influence the rate at which married women in Lagos metropolis sees the Billing's ovulation method as their preferred family planning alternative. It could also be concluded that the majority of the married women interviewed were willing to recommend the Billing's ovulation method to others and were unwilling to abandon its use. Based on the findings and conclusion generated from the data analysis, it could be recommended that natural family planning programs and counselling should not only be a woman concern, it should be an exercise that will involve both spouses so as to have a successful family planning practice and reproductive health decision. Family counsellors, Health professionals, Reproductive health experts and policy makers should see the learning of Natural family planning especially Billing's Ovulation as a couple-based exercise and should not be restricted to women alone. In order to meet the need for family planning practice and adoption, men's involvement in and awareness of programs surrounding natural family planning methods should actually be given more serious consideration. As a result of this study, Billing's ovulation should be viewed as an alternative family planning preference for women of reproductive age, while also providing them with a consistent learning model on how to effectively navigate the intricacies surrounding their menstrual cycles for effective mastery of BOM.



## DECLARATION

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**Competing Interest:** No competing interest.

**Ethics Approval and Consent to Participate:** An informed consent was obtained from all the participants and they were made to understand that they have the liberty to withdraw from the research exercise. The study protocol was approved by the Department of Sociology, University of Lagos Research Ethics Committee and all methods were carried out in accordance with relevant guidelines. The instrument used for data collection was presented and reviewed by the Department of Sociology, University of Lagos Research Ethics Committee and approval was granted to proceed to data collection stage.

### Consent for publication

Not applicable

### Data availability

Data will be available on reasonable request

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