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Socio-Demographic Determinants of Child Spacing Practice among Women of Reproductive Age in Dekina Local Government Area of Kogi State, North Central Nigeria

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Abstract
Child spacing practice plays a critical role in the life of reproductive women and their children in our society. The objective of this descriptive survey was to assess the socio-demographic determinants of child spacing practice among women of reproductive age in Dekina Local Government Area of Kogi State, North-central Nigeria. Relevant data for the study were gathered from 378 respondents through a self-administered structured questionnaire. The study was anchored on the Behavioural Model of Health Service Utilization of Andersen. The multi-stage sampling techniques were used to select the sample of 378 respondents within the age bracket of 15-49 years in the study area. Data for the study were analyzed statistically using the frequency distribution tables and percentage descriptive data and multiple regressions to test the only formulated hypothesis. Findings revealed that 80.4% of the respondents were aware of child spacing practice, but only few (26.2%) of them practice child spacing. Maternal age (73.8%), maternal educational attainment (72.2%), parity (70.1%), religious belief (31.2%) and income level (64.0%) were the socio-demographic variables determining child spacing practice found by the study. Finally, the study recommended more awareness on the need for child spacing practice; marriage for women at marriageable age; encouragement of women education by the Local Government Area; more work by policy makers, non-governmental organization, philanthropists, well-to-do Nigerians and religious leaders on the need to enlighten their subjects for child spacing practice by women of reproductive age in the study area.
Keywords: Child spacing, socio-demographic determinants, women of reproductive age, barriers of child spacing, Dekina Local Government Area.

Introduction

Childbirth which is a source of joy to many is also a source of ill-health and sometimes death of the mother, the child or both and other health challenges. One of the ways of curbing these problem is through the practice of child spacing. However, some factors such as

information/awareness and others that are socio-demographic in nature hinders these practice. According to Kio, et al. (2016), knowledge of the benefits and effects of lack of adequate child spacing is the commonly reported reasons why people do not practice child spacing. Lack of adequate awareness of benefits and effects birth control is among the major barriers of child spacing (Chukwuji, 2018). Although, even when some of these women of reproductive age are aware of child spacing they still do not practice it (Olaitan, 2011). Study conducted in a semi-rural community of North-West, Nigeria revealed that despite the high level of awareness and knowledge on the benefits of spacing childbirth only few women (29%) in the study area uses any method of family planning for spacing children (Ashimi, et al., 2016).

Parvathy, (2014) stressed that the age at which a girl get married and assume the responsibilities of home and reproduction shapes her reproductive and health behaviour. Martin (2013) in a study carried out in Malawi revealed age, educational qualification, number of living children, work status of women of reproductive age as some of the most important reason for non-practice of child spacing. Similar study conducted by Elias & Hailemariam (2015) in Southern Ethiopia presented that married women whose age is greater than 30 years, earn income and with more than five children alive adopts at least one of the methods of fertility control. Study conducted in Rwanda by Tuyishime, (2016) shows that aside the awareness and age, women with secondary or higher education, and those with pay jobs practices birth control compared to those without such qualities. According to Olaitan (2011), some religious believers might choose to avoid any methods such as birth control pill, in an effort to live their lives according to the teachings of their religion. Achana, et al. (2015) and Sharma, et al. (2016) in studies carried out in Ghana also asserted that age, religious belief, the level of education and socioeconomic class or wealth index as some of the predicators of birth control.

According to Ashimi, et al. (2016), average number of women of reproductive age in Nigeria still have six children and above in their life time due to cultural influence. Similarly, study by Adefalu, et al. (2018) in North-west Nigeria revealed that religious and cultural belief are barriers of child spacing practice. According to the study, any behaviour carried out to space pregnancy and childbirth contradict the women's religious and cultural beliefs. Furthermore, Olugbenga-Bello et al. (2011) in a study carried out in South-western Nigeria revealed that there is a strong relationship between the religion of the people and the practice of family planning to limit child birth. Ejembi, et al. (2015) posited that women who work for cash are found to be more significantly communicating with their spouses about family planning, thus

increasing the likelihood of contraceptive use to space pregnancy/childbirth. Similarly, Jane (2016) posited that participation of women in paid employment especially those pursuing demanding careers limit their fertility and either have relatively few children or none. Educational status and economic empowerment of women were revealed as some of the socio-demographic determinants of birth control among married women in rural South India (Rizwan, et al. 2012). Etokidem, et al. (2017) posited that women who are educated are more likely to understand and appreciate why they should have fewer children for whom they can provide better education than women who were uneducated. Women who have three children and above alive practice any form of birth control compared to those with less children alive (Hailu & Gulte, 2014). Henrik & Kishwar (2014) posited that women with parity of four and above are more likely to put a gap between the next birth than those with parity of one or two.

The above background propelled this descriptive survey that seeks to assess the socio-demographic determinants of child spacing among women of reproductive age (15-49 years) in Dekina Local Government Area of Kogi State, North-Central, Nigeria.

Conceptual Analysis / Theoretical Framework

Conceptual Clarification

This segment provides clarification for some key concepts used in the study for the purpose of clarity. These concepts include the concept of child spacing, socio-demographic determinants, women of reproductive age and challenges/barriers of child spacing.

Concept of Child Spacing

Child spacing simply refers to as the gap or interval between one or more pregnancies and births. This term is usually referred to as birth control, which is an integral component of primary and preventive health care for most women. Child spacing according to Shachar (2018), is the decision on how soon a woman becomes pregnant or gives birth again after a prior pregnancy/birth. It can also be considered as an approach to family planning that provides women and families the opportunity to delay pregnancy for the purpose of achieving the healthiest outcomes (Karpagam & Shangeetha, 2014). Unarguably, longer period between births allows the next pregnancy and birth to be at full gestation and growth for years (Tsegaye, et al., 2017). Similarly, Asa & Daniel (2015) posited that fewer births and appropriate birth spacing reduces the risk of child mortality, stunting among children, and improves the health

status of mothers. Inference can therefore, be made from the above that birth interval of 24 months and above can be linked to maternal and child mortality as well as other numerous health challenges such as low birth weight, preterm birth and so on.

Socio-demographic determinants

The term Socio-demographic refers to a group defined by its sociological and demographic characteristics. It involves the combination of social and demographic factors. These socio-demographic determinants or factors according to Willers, et al. (2018) include characteristics such as sex, age, educational level, marital status, income level. Similarly, Mahmud, et al. (2017) presented that sociodemographic determinants includes age, gender, marital status as well as area of residence. Several factors perceived to be social and demographic in nature have the potential of influencing individual's perception and reports of their health status (Jalali-Farahani, et al., 2017).

Women of reproductive age

Women of reproductive age, according to Chivese, et al., (2016), are the women between the ages of 15 and 49 years. This age of reproduction influences the childbearing pattern of the women. Nilses (2000) posited that globally, women's childbearing patterns are influenced by their ages at menarche and marriage. However, a woman of reproductive age according to this study refers to the category of women between the ages of 15 and 49 years old in the study area.

Theoretical Framework

This descriptive study is anchored on the Behavioural Model of health service utilization of Andersen.

The Behavioural Model of Health Service Utilization

The Behavioural Model of Health Service (BMH) was originally known as the theory of Health Service Use. The model was developed in 1968 by Ronald, M. Andersen to explain the factors that determine the choice of health care utilization of people. The model is governed by the assumptions that three major factors affect the utilization of health care services. The factors include: the predisposing factors (age, gender, marital status, educational status, ethnicity, occupational status, and attitudes and behaviours related to health services), enabling factors (income, the existence of health insurance, the price of health services), and health care need

(Andersen, 1968 cited in Dilek, et al., 2021). The central application of this model to child spacing practice is that aside the existence of health service, other factors such as age, education, parity, religious belief and income plays key roles in determining the practice of child spacing by women of reproductive age. This is because the decision to space pregnancy/childbirth is based on these socio-demographic characteristics of the women of reproductive age.

Aim and objectives of the study

The aim of this study was to assess the socio-demographic determinants of child spacing practice among women of reproductive age in Dekina Local Government Area of Kogi State, North-Central Nigeria. The specific objectives include to:

1. assess if women of reproductive age in Dekina Local Government Area are aware of child spacing practice.
2. examine whether women of reproductive age in Dekina Local Government Area practices child spacing.
3. identify the socio-demographic variables that influence child spacing practice among women of reproductive age in Dekina Local Government Area.

Research hypotheses

The only null hypothesis formulated by the study was tested at 0.05 level of significance.

Hypothesis: There is no significant relationship between socio-demographic variables (maternal age, maternal education, parity, religious belief and income level) and child spacing practice among women of reproductive age in Dekina Local Government Area.

Method of Research

Study Setting/Design

The descriptive survey was conducted amongst three hundred and seventy-eight (378) women of reproductive age in Dekina Local Government Area of Kogi State, North-Central, Nigeria. The study setting is the largest and one of the nine Local Government Areas in Kogi State named after the ancient town of Dekina with three major districts, namely; Biraidu, Okura and Dekina with twelve (12) council wards (Abocho, Anyigba, Ojikpadala, Dekina, Emewe, Odu I, Odu II, Egume, Iyale, Oganenigu, Ogbabede and Okura wards).

Study population

Sample Size and sampling techniques

A multistage sampling method was used. Firstly, five council words, that is, Abocho, Anyigba, Dekina, Egume and Okura-Olafia were purposively selected out of the twelve council words because of their geographical locations. Secondly, the systematic sampling was used to select the respondents from fift, tenth households and so on until the sample size of three hundred and seventy-eight women of reproductive age (15-49 years) were selected from each of five chosen council words in the study area. The estimated population of the study area is 384,530 with female population put at 190,928 (49.7%) and that of the male put at 193,604 (50.3%) (City-fact, 2020).

Sources of Data

The study used both primary and secondary data. The questionnaire is the primary source of data for the study. The Secondary source of data on the other hand includes textbooks, newspaper, journal web pages from the internet and magazines.

Instrument of Data Collection

The primary data were elicited through a pre-tested structured questionnaire designed. 384 copies of the questionnaire were distributed and 378 copies were duly filled and returned which formed the basis for data analysis.

Methods of Data Analysis

The study made use of descriptive and inferential statistics to analyze the data. These include: simple percentage for descriptive data, multiple Regression Analysis, Coefficient for correlations of independent sample and analysis of variance (ANOVA) for significant impact samples. Multiple Regressions was used to analyzed the joint influence of independent variables and the dependent variable. Furthermore, the coefficient was used to test the relationship between socio-demographic attributes while Multiple Regression analysis was used to test the impact of independent variable on dependent variables.

Inclusion criteria

Age and geographical location were the inclusive/exclusive criteria for selecting the respondents for the study. This means that, only women who fell within the reproductive age (15-49 years) and also within the geographical location of Dekina Local Government Area were captured by the study.

Questionnaire distribution and response pattern

The analysis reported here was based on a sample of three hundred and seventy-eight (98.4%) copies of the questionnaire dully filled and returned.

Demographic variables of the respondents

Table 1 shows the respondents' socio-demographic characteristics. The age of the respondents ranges between 15 and 49, with the majority (74.4%) in the 15-34 age bracket. Majority of the respondents (77%) were married, while, 23.1% of the respondents were either divorced, separated or were widows. Good number of them (47.9%) were Igalas, while more than half (52.2%) were either Yoruba, Ebira or other tribes not mentioned. Appreciable number of them (69.3%) were into economic activities such as trading, farming, civil service work, while, few of them (30.7%) are full time housewife or student.

Results of the Study

Table 1: Percentage distribution of Scio-demographic Characteristics of Respondents

Variables	Category	Frequency (N=378)	Percentage (%)
Age in years	15-24	153	40.5
	25-34	128	33.9
	35-44	72	19.1
	45-49	25	6.6
Marital Status	Married	291	77.0
	Divorced	32	8.5
	Separated	26	6.9
	Widow	29	7.7
Ethnic group	Igala	181	47.9
	Yoruba/Okun	21	5.6
	Ebira	24	6.4
	Others	152	40.2
Occupation	Trading	146	38.6
	Farming	73	19.3
	Civil service	43	11.4
	House wife	101	26.7
	Schooling	15	4.0

Source: Authors' Survey, 2020.

Table 2 revealed that the majority of the respondents (89.4%) earn between ₦18,000 and ₦59,000 as income, while, few (5.3%) earns from ₦60,000 and above as monthly income. Majority (92.8%) of them practices Islam and Christianity, while, few (7.1%) of them practices the African Traditional Religion (ATR). Majority (96.1%) have some forms of formal education, while only few (4.0%) have non-formal education.

Table 2: Socio-demographic Characteristics of Respondents cont'.

Variables	Category	Frequency (N=378)	Percentage (%)
Income level	₦18,000	191	50.5
	₦18,000-₦38,000	90	23.8
	₦39,000-₦59,000	57	15.1
	₦60,000 and above	20	5.3
Religion	Islam	183	48.4
	Christianity	168	44.4
	African Traditional Religion	27	7.1
Educational attainment	Primary	173	45.8
	Secondary	156	41.3
	Tertiary	34	9.0
	Non-formal	15	4.0

Source: Author's Survey, 2020.

Table 3: Awareness, practice and barriers of child spacing practice

Variable	Frequency=378	Percentage (%)
Are you aware of child spacing?		
Yes	304	80.4
No	74	19.6
Sources of child spacing awareness		
Antenatal/health workers	125	33.1
Friends	27	7.1
Relations	46	12.2
Mass media	80	21.2
Religious leaders	100	26.5
Do you practice child spacing?		
Yes	99	26.2
No	279	73.8
What method do you adopt?		
Modern methods (pills, injectable, implant, condom, withdrawal, abortion etc.)	29	7.7
Folkloric/Traditional	122	32.3
No method	227	60.1
How effective is the method?		
Very effective	131	34.7
Perfect	183	48.4
Not perfect	64	17.0
Do you have any challenge(s) in practicing child spacing?		
Yes	144	38.1
No	234	62.0

Source: Authors' survey, 2020.

Table 3 shows that majority (80.4%) of the respondents were aware of child spacing practice, only few (19.6%) of them are not aware of the practice. The highest number (33.1%) got the awareness through the antenatal/health workers, 7.1% of them got the awareness through friends, 12.2% got the awareness through relations, 21.2% got the awareness through the mass media and 26.5% got the awareness through the religious leaders. Few (26.2%) of them practice child spacing, while the majority (73.8%) does not despite the awareness. Few (7.7%) who practices child spacing adopts the modern methods such as contraceptive, injectable, condom, pills, implant and so on, good number of them (32.3%) adopts the traditional methods, while, majority (60.1%) are not using any methods of child spacing. Majority (83.1%) stated that the adopted methods is very perfect and perfect, while, few (17.0%) reported that the methods adopted was not perfect. Lesser number (38.1%) stated having challenges in practicing child spacing, while, the majority (62.0%) stated having no challenges.

Table 4: Socio-demographic determinants of child spacing practice

Variables	Yes (%)	No (%)	Total (%)
Age	279 (73.8)	99 (26.1)	378 (100)
Educational attainment	273 (72.2)	105 (27.8)	378 (100)
Parity (Number of live birth)	262 (70.1)	116 (30.7)	378 (100)
Religious belief	118 (31.2)	260 (68.8)	378 (100)
Income level	242 (64.0)	136 (35.9)	378 (100)

Source: Authors' survey, 2020

Socio-demographic determinants of child spacing practice

Analysis from table 4 revealed that age of most of the respondents (73.8%) determine child spacing practice, 72.2%) were determined by educational attainment, (70.1%) were determined by number of live births (parity), few (31.2%) were determined by religious belief, while large number (68.8%) were not determined by religion, and 64.0% were determined by income level.

Research Hypothesis

There is no significant relationship between socio-demographic variables on child spacing practice among women of reproductive age in Dekina Local Government Area of Kogi State.

Regression summary of the joint and relative contributions of socio-demographic variables.

Model Specification

The model specification is stated as;

$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + e$…… *(i)*

Represented as

$CSP = b_o + b_1\ MAI + b_2\ EAPI + b_3\ RBCS + b_4IL + e$ …… *(ii)*

Where;

Y = CSP (Child Spacing Practice), b_0 = constant, b_1= *MAI* (Maternal Age Impact), b_2=EAPI (Educational Attainment and Parity Impact), b_3 = RBCS (Religious Believe practices affect child spacing) b_4= IL (Income Level Affect Child Spacing Practice) and e = error of terms.

Dependent Variable: CSP

Method: Least Squares

Date: 05/15/21 Time: 16:39

Sample: 1 300

Included observations: 378

Table 5

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.102770	0.131050	-0.784200	0.4336
MAI	0.506838	0.058527	8.659929	0.0000
EAPI	-0.202387	0.040158	-5.039744	0.0000
RBCS	0.737501	0.071198	10.35845	0.0000
IL	0.060816	0.043213	1.407349	0.1604

R-squared	0.599908	Mean dependent var	1.989967
Adjusted R-squared	0.594464	S.D. dependent var	0.452324
S.E. of regression	0.288048	Akaike info criterion	0.365199
Sum squared resid	24.39359	Schwarz criterion	0.427079
Log likelihood	-49.59721	Hannan-Quinn criter.	0.389966
F-statistic	110.2076	Durbin-Watson stat	0.222701
Prob(F-statistic)	0.000000		

E-view 10 Output

Regression analysis Results shows 59.9% significant variation between the independent variable (MAI, EAPI, *RBCS* and IL) and the dependent variable (CSP) indicates that about 59.9% of child spacing practice in the study area is being determined by (MAI, EAPI, *RBCS* and IL). The result further compared with error in calculation still shows 59.4 in variation. ANOVA result (F-statistics) of 110.20 (0.000) shows that the overall regression result is significant. This further explains that the impact of demographic attributes on child spacing practice in the study area cannot be ignored. While MAI shows a coefficient value of 50.6 to CSP this implies that a unit increase in MAI will lead to 50.6-unit increase in CSP and this is statistically significant at P-value-0.000. On the other hand, EAPI shows a negative significant impact with the value of -0.20 to CSP. This implies that a unit decrease in EAPI will generate a -.0.20-unit decrease in CSP and this is statistically significant at 0.000. Also, RBCS shows a coefficient value of 73.7 to CSP, this implies that a unit increase in RBCS will lead to 73.7 increases in CSP and this is statistically significant at 0.000. IL shows a coefficient value of 60.8, this implies that a unit increase in IL will lead to 60.8 increases in CSP and this is not statistically significant.

The results of the hypothesis showed that the demographic characteristics such as maternal age, maternal educational attainment, parity, religious belief and income level determined child spacing practice in the study area. The implication of the findings is that if demographic attributes are not taking into consideration in discussing child spacing practice, all efforts in child spacing will be in futility.

Discussion

The outcome of this study revealed that the proportion (80.4%) of the respondents were very much aware of the practice of child spacing, only that 19.6% of them were not aware of it. This finding is in agreement with the stands of Kio et al. (2016), Chukwuji, (2018), and Tuyishime (2016). The study also revealed that only 26.2% of the respondent practices child spacing, the majority (73.8%) are not. This confirmed the finding of Olaitan, et al. (2011), Ashimi, et al. (2016). However, this contradict the views of Kio, et al. (2016) who stated that lack of awareness and knowledge of the benefits and adverse effects of inadequate child spacing practice is the most commonly reported reasons why people do not practice child spacing. On the socio-demographic variables, the results from table 4 and 5 revealed maternal age (73.8%), maternal education (72.2%), parity (70.1%), religious belief (31.2) and the income level (64.0%) of the respondents as the socio-demographic determinants of child spacing practice. This outcome has symmetrical stance with the findings of Parvathy (2014), Martin, (2013), Elias &Hailemariam, (2015), Tuyishime, (2016), Olaitan, (2011), Achana, et al. (2015) and Sharma, et al. (2016), Ashimi, et al. (2016), Adefalu, et al. (2018), Olugbenga-Bello et al. (2011), Ejembi, et al. (2015), Jane (2016), Rizwan, et al. (2012), Etokidem, et al. (2017), Hailu & Gultie (2014), Henrik & Kishwar who in their separately studies posited that maternal age, maternal education, parity and income level determines the practice of child spacing. However, even though religious belief is found to have a statistical significance, the impact on child spacing practice is a weak one. This outcome is in tandem with the finding of Olaitan (2011).

Conclusion

This study was carried out to assess the socio-demographic variable that determine the practice of child spacing among women of reproductive age in Dekina Local Government Area of Kogi State. The result of this study has led to three basic conclusions. The first one is that very good number of the respondents are aware of child spacing practice even though majority still did not practice it. Secondly, the five socio-demographic variables (mater age, maternal education, parity, religious belief and income level) considered by the study jointly have a significant impact on the practice of child spacing and thirdly, even though the religious believe of the women of reproductive age in the study area is shown statistically to have a significant impact it impact is a weak one (31.2%) as shown on table 4. The study also discovered lack of adequate information/awareness, fear of side effect, cultural influence, personal beliefs/convictions, lack of adequate accessibility, and religious belief as some of the perceived barriers of child spacing

practice. Finally, the study has made novel contribution to the existing literature on the socio-demographic determinants of child spacing practice among women of reproductive age.

Recommendations

Based on the findings, the study made the following recommendations:

1. The need for more awareness targeted at encouraging the respondents in the study to practice child spacing. This should be carried out through community orientation and focus group discussions that would involve not only the women of reproductive age but to include the men on the benefits of practicing child spacing.
2. Women of marriageable age should be encouraged to go into marriage; female education should be encouraged; high fertility among the women of reproductive age should be discouraged and government, policy makers, philanthropist and well-to-do Nigerians should invest in the study area to boost the economic well-being of the people at the grass root.
3. Finally, even though the religious belief of respondents has weak impact on the practice of child spacing, more sensitization on the need for child spacing should be carried out by the religious leaders in the study area.

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