

References.

- Baluch, M.H., Mohsen, M.F.N., and Ali, A.I. (1983). Method of Weighted Residuals as Applied to Nonlinear differential equation. *Applied Mathematical Modelling*, 7(5), 362-365.
- Boyd, J.P. (1999). *Chebyshev and Fourier Spectral Method*. Dover Publications, USA.
- Cicelia, J. (2013). *Mathematical Methods in Thermal Engineering*, S&S Publication, India.
- Cicelia, J. (2014). Solution of Weighted Residual Methods by using the Galerkin Method. *Indian Journal of Science and Technology*, 17(35), 52-54.
- Desai, Y.M., Eldho, T.I., and Shah, A.H. (2011). *Finite Element Method with Applications in Engineering*. Pearson Educational Inc, Delhi.
- Ebiwareme, L., Godwin, M. (2020). The comparison of weighted residual methods of solving boundary value problems in science and Engineering. *African Scholars Journal of Pure and Applied Mathematics*. Vol. 18, No. 9, ISSN: 2278-1897.
- Finlayson, B.A (2013). *The Method of Weighted Residual Methods and Variational Principles*, Vol. 73, Philadelphia, SIAM.
- Franklin, J. (2010). *Advanced mechanics and General Relativity*. Cambridge University Press.
- Gerald, C.F. and Wheatley, P.O. (2014). *Applied Numerical Analysis*, seventh edition. Pearson Educational Inc, New York.
- Grandin, H. (1991). *Fundamentals of the Finite Element Methods*. Waveland Press, USA.
- Hatami, M. (2017). *Weighted Residual Methods: Principles, Modifications and Applications*. Academic Press, London, 2017
- Kaliakin, V.N. (2002). *Introduction to Approximate Solution Techniques, Numerical Modelling and Finite Element Methods*. Marcel Decker Inc, New York.
- Larry, J. (1982). The Galerkin and Sub domain forms of the weighted residual method are used to generate recursive equation in time for the numerical solution of a system of ordinary differential equations.
- Lindgren, L.E. (2009). *From Weighted Residual methods to Finite Element methods*. Technical Report.
- Locker, J. (1971). The Method of Least squares for boundary value problems. *Transaction of the American Mathematical Society*, 154: 57-68.
- Logan, D.L. (2011). *A First Course in the Finite Element Methods*, fifth edition. Cengage learning, Stamford, UK.
- Mills, P.I. (1982). Investigation of the method of weighted residual applied provide approximate solution to mixed (split) bounding value problem which are described by triple-server relations.
- Odejide, S.A. and Aregbesola, Y.A.S. (2011). Application of Method of Weighted Residual to Problems with Semi-infinite Domain. *Romanian Journal of Physics*, 56(1-2) 14–24.
- Salih (2016) study weighted residual method is a generic class of method developed to obtain approximate solution to the differential equation weighted residual method involves two major steps. 2016.

- Sheng-wei. C. (2013). Study of collocation method such as he is reproducing kernel collocation method (RKCM), addressed the domain integration issue in the Galerkin type weigh free method, such as the reproducing kernel practice method.
- Whu. (2007). Introduces the weighted radial basis collocation method for boundary value problems. We first show that the employment of least-square functional with quadrative rules constitutes an approximation of the direct collocation method.
- Zienkiewicz, O.C., and Taylor, R.L. (2000). *Finite Element Methods*, Vol. 1



**SOCIO-ECONOMIC DETERMINANTS OF UNMET NEED FOR
FAMILY PLANNING IN CRISIS-AFFECTED STATES OF
NORTHERN NIGERIA**

***ADEGOKE ADEMOLA ADEBAYO; & **ADEGOKE OLASUPO
MODUPE**

**Department of Demography & Social Statistics, Obafemi Awolowo University,
Ile-Ife, Osun State. **Department of Computer Science, Joseph Ayo Babalola
University*

ABSTRACT

This study was carried out to determine the socio-economic determinants of unmet need for family planning in crisis-affected states of Yobe, Benue, Kaduna, Zamfara, Borno, Plateau, all in Northern Nigeria. These states had been affected heavily by insurgency and banditry and is still a major challenge to the country. The target population is 15-49 years from the Nigeria Demographic Health Survey (NDHS) data of 2018. The weights provided by NDHS 2018 were used with a weighted total of 41, 821 women covered and 8, 846 women sampled. The socio-economic variables of education, state of residence, place of residence, occupation, religion, employment status, wealth quintile, partners' education, women autonomy and access to media were the variables of target. Thus, the study concluded that while some socio-economic factors have influence on unmet need in these crisis-affected states of Northern Nigeria. This work concludes that employment status and education played a much more significant influence to the high rate of unmet need in these states.

Keywords: *Unmet Need for Family Planning, Family Planning, Banditry, Insurgency, Socio-Economic factors.*

INTRODUCTION

There is a strong signal that the population growth of Sub-Sahara Africa will continue to increase even in years to come (Cleland, Ndugwu, & Eliya, 2011). Study also has it that fertility and future projected population growth are much higher in Africa (Cleland, Ndugwa & Zulu, 2011). However, there are concerns that population not checked may hinder development and health goals as study (Curry, Rattern & Giri, 2012) reported that about 43 million women of sexually active women have experienced the negative consequences of conflict. Africa has experienced a series of chaotic situations in the form of wars, insurgencies & guerrilla warfare and these have resulted in people being displaced from their place of residence (Lyons, 2016). Nigeria as a nation is not an exemption. Insurgency can be related to as a rebellion of a movement through violence (Lyon, 2016). Insurgency in North-Eastern Nigeria is a Jihadist movement that began in 2009 intending to overthrow the federal government because of its hatred for the Western style of education and civilization. It is called Boko Haram (meaning Education Forbidden). The founder of the Islamic sect was Mohammed Yusuf and the impact of the insurgency has resulted to millions been displaced from their homes and had created health and reproductive challenges for the displaced. Family planning is a reproductive health issue that has affected millions in Boko Haram's affected areas. The United Nations Population Fund had made been series of effort to allow about 4.5 million crisis affected people to have access to reproductive health systems (UN Reports, 2017). In the same way, banditry has spread to some states in Northern Nigeria and had become a serious threat to security much like the Northeast where Boko Haram terrorists have carried out much destruction to human lives and properties (Abdullahi, 2019). The bandits have engaged in cruel acts of attacking, robbing of villagers and travelers, killing and abduction of people and cattle rustling. Thus, the Boko Haram and banditry have resulted in crisis and created the reason for unmet need in these crisis-affected states of Northern Nigeria.

STUDY OBJECTIVES

1. To examine the determining socio-economic factors on unmet need in crisis-affected states of Northern Nigeria;

2. To examine the relationship between socio-economic factors and unmet need in crisis-affected states of Northern Nigeria

RESEARCH QUESTIONS

1. To know the association between socio-economic factors and unmet need for family planning in these crisis-affected states of Northern Nigeria.
2. To know determining socio-economic factors of unmet need for family planning in these crisis-affected states of Northern Nigeria.

JUSTIFICATION FOR STUDY:

The spate of displacement and the settling of internally displacement camps if not carefully looked into could cause serious reproductive health and economic challenges for the nation (IDMC, 2018). McGini (2000) studied reproductive health of war-affected countries in rural area of Guinea and reported that about 500,000 Liberian and Sierra Leonean that were displaced because of internal crisis fled to Guinea in the early 1990 and this resulted to major obstetric intervention for the host population. Furthermore, providers and users of family planning in refugee settings should know the method to be used, its side effects, its effectiveness, and its safety; also the appropriateness of each method on breastfeeding mothers and duration between discontinuation of the method and its return to normal fertility (ICPD, 2014) Thus, the provision of available contraceptives could put a check to maternal deaths and enable women to plan the number of children they gave birth to, thereby preventing unwanted pregnancy (Chola, Mcgee, Tugendhaft, Buchmann, & Hofman, 2015).

LITERATURE REVIEW

The Literature review seeks to explain some of the socio-economic determinants associated with the unmet need for family planning in these crisis-affected states of Northern Nigeria.

Economic Reasons

Economic reasons for unmet need can be viewed from the point of the difference between the services evaluated necessary and the services received which stemmed from barriers of accessibility, availability, and acceptance

(UNHCR, 2017). There is a huge financial cost on the displaced Nigerian women. This huge cost has indirectly affected the capacity to reduce unmet need of family planning in crisis-affected states of Northern Nigeria; in actual statistics given that the budget for Nigeria situation in 2017 amounted to \$16.9 million and that an additional \$9.5 million was spent on need of people of concern displaced by the Boko Haram insurgency (UNHCR, 2017).

Fagbamigbe, Afolabi & Idemudia (2018) on distribution, associated issues and barriers put it that those who are economically weak have a high tendency of having an unmet need. A study carried out in Greece (Pappa, Kontodimopoulos, Dopoulos, Tountas, Niakes, 2013) to assess the causes of the prevalence of unmet need from a cross-sectional study carried out in 2010 agreed that socio-demographic characteristics and health status are important to the explanation of the unmet need for family planning. Other scholars have attributed economic and cultural factors to be the cause of unmet need for contraception (Wullifan, Brenner, Jahn & Allegri, 2016). This research study added that economic power is needed to increase the decrease the unmet need demand. A study on the economic recession and family planning uptake based on the Nigerian health institution revealed that decline reduces contraceptive usage (Wright, Otun, Oyeboode, Sarma & Chung, 2018). Another dimension to substantiate the economic influence on unmet need for family planning in crisis-affected states of Northern Nigeria is a study on 'The effect of crisis on agricultural asset, investment and development in Mali and Nigeria which asserted that the distribution of supply and distribution of goods have created more unmet need. The study, therefore, suffice that political instability may influence unmet need for family planning in situation of crisis (Kimanyi, 2014).

Religious Influences

Karl Max (as cited by Yimaz, 2018) puts it that religion is the driving force that motivates people to take decisions. The influence of religion cannot be overestimated. Thus, real and recognized gifts between Muslim and Christians approaches to national education are a central problem for Nigeria (International Partnership on Religion and Sustainable Development, 2018). Studies have also proved that husbands are the primary decision maker that influences use of family planning services (Anasel & Milinga, 2014). The greatest challenge to the use of contraceptives is faith and tradition because it favours high fertility while education does not favour high fertility (The

Economist, 2015). Some terrorist groups (Boko Haram) adjudge contraception to be a product of infidelity and have taken it to be a western culture. The influence of religion and ethnicity on family planning on research findings from Western Kenya has attested to a series of evidence that religion can assist or hold back family planning uptake (Bakibinga *et al*, 2015). Study has demonstrated that there are differences in contraceptive use among denominations based on the Malawian experience (Yeatman & Trinitapoli, 2008).

Socio-religious influences among married women on family planning use in Rwanda inquired into the personality and background characteristics as factors that influence contraceptive use and future intentions to use contraceptives and the study comes to the conclusion that those who are Protestants among them and lived in the rural areas have tendency of having their need not met for family planning (Mahoro, 2015).

Education and Women Empowerment

The level of education is important when you want to address unmet need for family planning (Bamgboye & Ajayi, 2016). Study (Bamgboye & Ajayi, 2016) concluded that less-educated respondents have the highest level of unmet need. Also, that lower levels of education and income and uninsured women may not likely have access to family planning services (World Health Organization, 2006). Bamgboye & Ajayi (2016) added that a combination of adequate family planning and services is what is required to improve patterns of unmet need for family planning among women of reproductive age. A research work among women of reproductive age in the Nkwanta district of Ghana used as a case-control study concluded that there were strong awareness and knowledge of family planning but there is lack of education amid women of reproductive age (Eliason, Awoonor-Williams; Eliason & Aikins, 2014). The literature review further looks into the impact of family planning on women's educational advancement in Tehran, Iran and reveals that provision of family planning services should be undertaken as an integral element of development policies (Erfani, 2012).

The reproductive age group women in Eritrean refugee camps, Tigray, North Ethiopia from cross-sectional study put it that the lack of use of contraceptives is the product of lack of contraception (Gebrecherkos, 2018). Moreover, a representative sample study of the effect of unmet need on family planning in Burundi showed a strong influence that requires scaling-up male involvement, promotion of husband and wife communications, offering client-centered services, greater use of the media, and pro-poor policies (Nzokinshaka & Itua, 2018). Women's empowerment and men's involvement were recognized as the

attributed factor for effective family planning among married women in Botswana (Letamo, 2015).

Migration and Unmet Need

Migration status categories are significantly but differently related to contraceptive use (Omondi, 2019). There is a tendency for women who are in migration to make use of contraceptives than women who are not migrating (Omondi, 2019). Studies on contraceptive use among migrant and non-migrant women revealed that internal migration has significant penalty on individual's economic growth and their access to health facilities (Ochako, Askew, Temmerman, 2016). There is likelihood that people who lived in urban areas will have low unmet need for family planning (Ochako, Askew, Temmerman, 2016).

THEORETICAL FOCUS

The socio-economic challenge of unmet need for family planning and its effects on the crises affected states of Northern Nigeria is hinged on the 'Social Action Theory'. The determinants of unmet need for family planning are a social action because individual's perspective and reasons for having unmet need differs as viewed by Weber. The social action theory explains the traditional motive, emotional motive, and the rational motives that influences individuals' unmet need for family planning.

Study Hypotheses

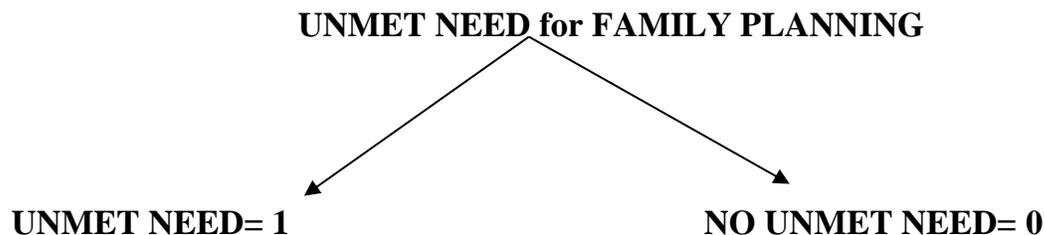
1. Employment status does not have significant effect on unmet need for family planning in crisis-affected states of Northern Nigeria.
2. Education level of partner does not have significant effect on unmet need for family planning in crisis-affected states of Northern Nigeria.

METHODOLOGY

The data for this study were sourced from the Nigeria Demographic and Health Survey (NDHS) of 2018. The target population was women of reproductive age of 15-49 years. These are women who have had the childbearing experience and girls of reproductive age that must have engaged in sexual activities.

The NDHS (2018) covered 41, 821 women in the survey. Thus this includes some women that are not relevant in the survey which means that there is need to extract the population of women from Zamfara, Yobe, Borno, Kaduna,

Plateau, and Benue which is actually needed. Also, women that are pregnant, sterilized or have been declared infecund are also excluded. This study is based on a sample size of 8,846 women.



Data Management and Analysis:

The statistical package STATA version 14 (StatCorp, 2015) was used for the data processing and analysis in the study. Ultimately, the data collected were analyzed at three levels of univariate, bivariate, and multivariate level of analysis and the association between the variables were either accepted or rejected depending on the p- value (0.05).

Ethical Considerations

The ethical consideration required in the collection of data had already been imputed into the NDHS (2018) and it had been approved for execution and use by the Federal Ministry of Health.

Socio-Economic Characteristics Variable Identification and Description

S/No.	Name of Variable	Description	Code
Outcome Variable			
1.	Unmet need for family planning	Non-use of contraception among women who want to limit childbearing or delay next pregnancy	1. Unmet need 0. No unmet need
Socio-Economic Characteristics			
2.	Employment Status	Whether respondent is engage in any activity that earns regular or occasional income	0 Not working 1. Working
3.	Occupation	Classification of type of economic activity of respondent	1. Not working 2. Agricultural 3. Non-agricultural
4.	Religion	The religious affiliation of the respondent	1. Islam 2. Christianity 3. Others

5.	Partner education	The educational attainment of respondent husband	1. None 2. Primary 3. Secondary 4. Higher
6.	Women autonomy	The extent to which women have final say on decision about own health, purchase of large household items, and visit to friends and relatives	1. Autonomous 2. Joint autonomy 3. No autonomy
7.	Access to mass media	Frequency of reading newspaper, listening to radio, and watching television at least once per week	1. Low 2. Moderate 3. High
8.	Place of residence	The type of community respondent reside	1. Urban 2. Rural
9.	Maternal education	The educational attainment of respondent	0. None 1. Primary 2. Secondary 3. Higher
10.	Household wealth quintile	Respondent household wealth category	1. Poorest 2. Poorer 3. Middle 4. Richer 5. Richest
11.	State of residence	The state where respondent resides and was covered in the survey	1. Zamfara 2. Yobe 3. Borno 4. Kaduna 5. Plateau 6. Benue

Socio-Economic Characteristics of Respondents in Selected States

Characteristics	Number of Women	Percentage
Maternal Education		
None	4,485	50.7
Primary	1,183	13.4
Secondary	2,487	28.1
Higher	691	7.8
State of Residence		
Zamfara	1,328	15.0
Yobe	1,327	15.0
Borno	1,469	16.6
Kaduna	2,493	28.2
Plateau	875	9.9

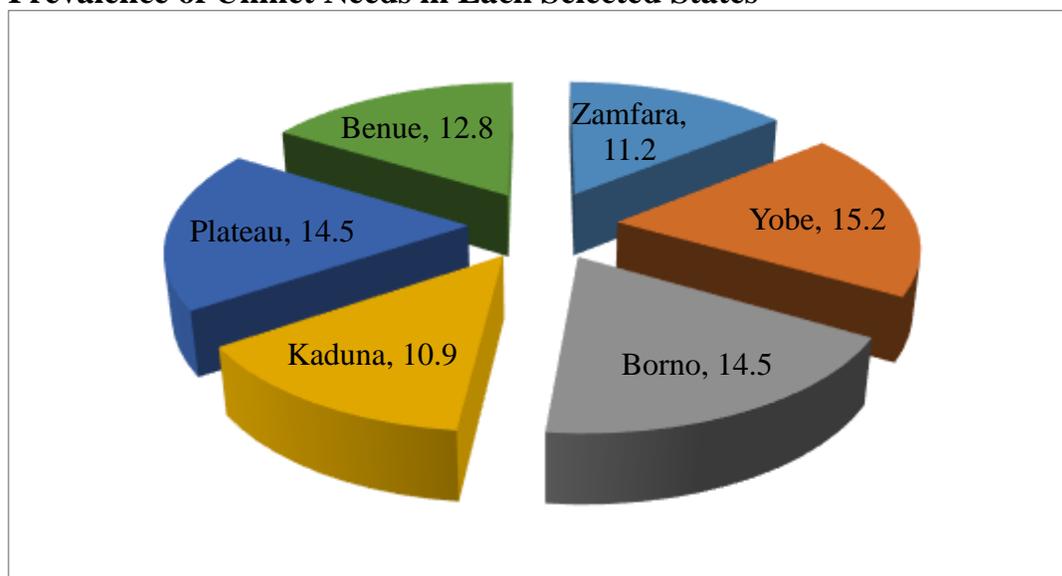
Benue	1,354	15.3
Place of Residence		
Urban	3,080	34.8
Rural	5,766	65.2
Occupation		
Agricultural	4,962	56.1
Non-agricultural	3,884	43.9
Religious Affiliation		
Islam	6,076	68.7
Christianity	2,756	31.2
Others	14	0.1
Work Status		
Not working	3,284	37.3
Working	5, 562	62.9
Household Wealth Quintile		
Poorest	2, 266	25.6
Poorer	2, 146	24.3
Middle	1,932	21.8
Richer	1,454	16.4
Richest	1,049	11.9
Partner Education		
None	5,565	62.9
Primary	777	8.8
Secondary	1,659	18.7
Higher	845	9.6
Female Autonomy		
Autonomous	129	1.5
Joint Autonomy	1, 258	14.2
No autonomy	7, 459	84.3
Access to Mass Media		
Low	3,951	44.7
Moderate	1,972	22.3
High	2,923	33.0
Total	8,846	100.0

Source: Analysis based on 2018 Nigeria Demographic and Health Survey

The religious distribution of the respondents showed that the majority of the respondents (68.7%) were Muslims while 31.2% were Christians. A small

proportion of the women were traditional religious worshippers. Almost two-thirds (62.9%) of the respondents were employed at the time of the survey while 37.1% of the respondents were not employed at the time of the survey. The proportions of respondents that belong either to the poorest or poorer wealth category were similar (25.6% vs. 24.3%). The middle wealth category consists of 21.8% of the respondents while 16.4% of the respondents were in the richer wealth category. The least proportion of 11.9% was observed in the richest wealth category. Almost two-thirds of respondents' partners (62.9%) did not have education but 8.8% of the respondents had primary education compared to the 18.8% who had secondary education and 9.5% who had higher education. The majority of the respondents (84.3%) did not have autonomy in household decisions while 14.2% had joint autonomy with their husbands. Nearly half of all respondents (44.7%) had low access to the mass media compared to 22.3% who had moderate access and 33.0% who had high access to the mass media

Prevalence of Unmet Needs in Each Selected States



BIVARIATE ANALYSIS: Socio-Economic Characteristics and Unmet Need for Family Planning

Characteristic	Unmet Need for Family Planning		UOR	p-value	95% CI
	No unmet Need (%)	Unmet Need (%)			
Education					
None ^{ref}	3,824 (85.3)	661 (14.7)	1.000	-	-
Primary	1,006 (85.0)	177 (15.0)	1.022	0.818	0.851-1.227

Secondary	2,272 (91.4)	215 (8.6)	0.549*	0.000	0.464-0.649
Higher	608 (88.0)	83 (12.0)	0.652*	0.003	0.492-0.863
State of residence					
Zamfara^{ref}	1,180 (88.8)	148 (11.2)	1.000	-	-
Yobe	1,126 (84.8)	201 (15.2)	1.238	0.066	0.986-1.554
Borno	1,256 (85.5)	213 (14.5)	1.527*	0.000	1.223-1.907
Kaduna	2,220 (89.1)	273 (10.9)	0.892	0.328	0.709-1.122
Plateau	748 (85.5)	127 (14.5)	1.229	0.089	0.969-1.560
Benue	1,181 (87.2)	174 (12.8)	1.050	0.683	0.830-1.329
Place of residence					
Urban^{ref}	2,722 (88.4)	358 (11.6)	1.000	-	-
Rural	4,988 (86.5)	778 (13.5)	1.209*	0.011	1.045-1.397
Occupation					
Agricultural^{ref}	4,388 (88.4)	574 (11.6)	1.000	-	-
Non-agricultural	3,222 (85.5)	562 (14.5)	1.182*	0.012	1.038-1.346
Religious affiliation					
Islam^{ref}	5,304 (87.3)	773 (12.7)	1.000	-	-
Christianity	2,396 (86.9)	360 (13.1)	0.963	0.590	0.840-1.104
Others	11 (78.5)	3 (21.5)	1.153	0.822	0.335-3.966
Work Status					
Unemployed^{ref}	2,984 (90.9)	300 (9.1)	1.000	-	-
Employed	4,726 (85.0)	835 (15.0)	1.576*	0.000	1.369-1.815
Wealth Quintile					
Poorest^{ref}	1,916 (84.6)	350 (15.4)	1.000	-	-
Poorer	1,889 (88.0)	257 (12.0)	0.857	0.074	0.724-1.015
Middle	1,679 (86.9)	252 (13.1)	0.842	0.061	0.704-1.008
Richer	1,282 (88.2)	172 (11.8)	0.772*	0.015	0.626-0.952
Richest	943 (90.0)	105 (10.0)	0.589*	0.000	0.452-0.769
Partner Education					
None^{ref}	4,953 (89.0)	612 (11.0)	1.000	-	-

Primary	652 (83.9)	126 (16.1)	1.605*	0.000	1.295-1.989
Secondary	1,412 (85.0)	248 (15.0)	1.461*	0.000	1.243-1.717
Higher	694 (82.2)	150 (17.8)	1.640*	0.000	1.325-2.030
Female Autonomy					
Full autonomy ^{ref}	110 (85.5)	19 (14.5)	1.000	-	-
Joint autonomy	1,049 (83.4)	209 (16.6)	1.042	0.872	0.629-1.728
No autonomy	6,552 (87.8)	908 (12.2)	0.754	0.254	0.464-1.225
Access to mass media					
Low ^{ref}	3,423 (86.6)	529 (13.4)	1.000	-	-
Moderate	1,742 (88.3)	230 (11.7)	0.862	0.080	0.730-1.018
High	2,546 (87.1)	377 (12.9)	0.854*	0.041	0.734-0.993

Notes: ref is reference category, 95% CI is 95% confidence interval, * is $p < 0.05$ (significant)

State of residence showed that in the two selected states from Northwest Nigeria (Zamfara and Kaduna states), the prevalence of unmet need for family planning was lower (11.2% and 10.9%) compared to higher unmet need for family planning in the two selected states from Northeast Nigeria (Yobe and Borno states) where the prevalence of unmet need for family planning is 15.2% and 14.5%. Unmet need for family planning showed inconsistent prevalence in the two selected states from North Central Nigeria (Plateau and Benue states) because, in Plateau state, unmet need for family planning was high (14.5%) while it was lower in Benue state (12.8%). Though these results were supported by the unadjusted regression but the relationship between state of residence and unmet need for family planning was only significant in Borno state which confirmed that women in Borno state had higher odds of unmet need for family planning compared to women in Yobe state which was the reference category (UOR=1.527, $p < 0.05$; CI: 1.223-1.907).

The relationship between place of residence and unmet need for family planning was positive because there was a higher prevalence of unmet need for family planning among rural women compared to urban women (13.5% vs. 11.6%). This significance was confirmed by the unadjusted logistic regression with higher odds of unmet need for family planning among rural women compared to urban women (UOR=1.209, $p < 0.05$; CI: 1.045-1.397).

Similar relationship was observed in the association of occupation and unmet need for family planning with evidence of higher prevalence of unmet need for family planning among women in non-agricultural occupation compared to women in agricultural occupation (14.5% vs. 11.6%). This was also confirmed

by the unadjusted binary logistic regression which showed higher odds among women in the non-agricultural sector compared to women in the agricultural sector (UOR=1.182, $p < 0.05$; CI: 1.038-1.346).

The prevalence of unmet need for family planning was higher among Christian women compared to Moslem women (13.1% vs. 12.7%). However, the relationship between religious affiliation and unmet need for family planning did not show a significant relationship. Women's work status and unmet need for family planning had a significant relationship (UOR=1.576, $p < 0.05$; CI: 1.369-1.815) with higher odds of unmet need for family planning among women who were working compared to women who were not working (15.0% vs. 9.1%). The prevalence of unmet need for family planning was higher among women in the poorest wealth group compared to women in other wealth groups. This was confirmed by the unadjusted odds ratio which showed that women in all other wealth groups had lower odds of unmet need for family planning compared to women in the poorest wealth group.

Also, results showed that educated women regardless of the level of education attained had a higher prevalence of unmet need for family planning compared to uneducated women. This was confirmed by the unadjusted odds ratios which were higher for educated women compared to uneducated women.

The prevalence of unmet need for family planning was higher among women who had joint autonomy with their husbands compared to women who either had no autonomy or were totally autonomous. However, the relationship between women's autonomy and unmet need for family planning did not show significance.

**MULTIVARIATE LEVEL OF ANALYSIS:
SOCIO-ECONOMIC CHARACTERISTICS ON UNMET NEED FOR
FAMILY PLANNING IN CRISIS-AFFECTED STATES OF
NORTHERN NIGERIA**

Variable	Odd ratio	p- value	95% CI
EDUCATION			
Primary	.80001170	0.064	.6316121 – 1.01331
Secondary	.4669352	0.000	.3531819 - .6173263
Higher	.5558946	0.006	.3665939 - .8429459
RESIDENCE			
Yobe State	1.160631	0.433	.7984564 – 1.687985
Borno State	1.467891	0.076	.9608985 – 2.242385
Kaduna State	.984421	0.938	.6608301 – 1.466466
Plateau State	1.363357	0.161	.8828877 – 2.105299

Benue State	1.034183	0.874	.6811119 – 1.570278
PLACE OF RESIDENCE	.9623357	0.798	.7158956 – 1.29361
OCCUPATION	.9544747	0.659	.7753873 – 1.174925
EMPLOYMENT	1.705555	0.000	1.328153 – 2.190197
WEALTH QUINTILE			
Poorer	.7764936	0.051	.6019541 – 1.001642
Middle	.8321889	0.215	0.6221377 – 1.113159
Richer	.7439148	0.149	.4975853 – 1.11219
Richest	.6290386	0.034	.4100258 - .9650358
PARTNERS EDUCATION			
Primary	1.446715	0.020	1.060673 – 1.97326
Secondary	1.735844	0.000	1.414546 – 2.130121
Higher	2.610576	0.000	1.91712 – 3.554868
ACCESS TO MASS MEDIA			
Moderate	.9249869	0.467	.7490277 – 1.142282
High	1.146458	0.255	.9056301 – 1.451327

From the above (table 4.3.1) secondary education is statistically significant as a predictor of unmet need for family planning in the crisis-affected states of Northern Nigeria.

However, both primary and higher level of education is not predictors of unmet need for family planning in these states. The prevalence of unmet need (odd ratio, $p < 0.05$) is almost half chance of having an unmet need compared to others with primary and higher education; also higher level of education (odd ratio = 0.006, $p > 0.05$) is less likely than no education (RC) to influence unmet need for family planning.

Partners level of education (primary, secondary and higher level of education (odd ratio = 1.446715, $p < 0.05$; odd ratio = 1.735844, $p < 0.05$; odd ratio = 2.610576, $p < 0.05$) are all predictors of unmet need for family planning in all these crisis-affected states of Northern Nigeria respectively.

Furthermore, wealth quintile (for the poorer category) is a significant predictor (odd ratio = 0.7764936, $p < 0.05$) of unmet need for family planning in these states.

But, residence, occupation, and access to media are not significant predictor ($p > 0.05$) of unmet need for family planning in these crisis affected states.

SUMMARY

Critically looking at the multivariate (third-level of test carried out) carried out, education at the secondary and higher level had a strong relationship or

influence on the unmet need for family planning in crisis-affected states of Northern Nigeria. But, the partner's education at all levels of education is a strong contributory factor to unmet need in crisis-affected states of Northern Nigeria. Also, employment and the wealth status of individuals affects the high rate of unmet need in these unstable states in Nigeria.

However, access to media, residence, and occupation are not determinants of unmet need in crisis-affected states of Northern Nigeria.

CONCLUSION

The study concludes that employment status and educational level are strong contributory factors to the unmet needs of family planning in some of the crisis-affected states of Northern Nigeria.

REFERENCES

- Abdullahi, A. (2019). Rural Banditry, Regional Security and Integration in West Africa. *Journal of Social and Political Sciences*, vol. 2 (3). <https://ssrn.com/abstract=3437773>
- Bakibingo, P., Mutombo, N., Mukura, C., Kamande-Ezeh, A. & Musa, R. (2015). The influence of religion and ethnicity on family planning approval: A case for women in rural western Kenya. *J. Religious Health*, [https:// doi: 10.007/510943-015-0030-9](https://doi.org/10.007/510943-015-0030-9)
- Bangboye, E., A. & Ajayi, I. (2016). Changing patterns of unmet need for family planning among women of reproductive age in Nigeria. *Dept. of Epidemiology & Medical Statistics*, Faculty of Public Health, University of Ibadan
- Chola, L., McGee, S., Tugendhaft, A. & Hofman, K. (2015). Scaling up family planning to reduce maternal and child mortality: The potential costs and benefits of modern contraceptive use in South Africa. <https://www.ncbi.nlm.nih.gov/pmc/PMC4468244/>
- Cleland, J. G., Ndugwa, R. P. & Zulu, E. M. (2011). Family Planning in Sub Saharan Africa: progress or stagnation. *Bulletin of the World Health Organisation*, 89: 37-143. doi:10.2471/BLT.10.077925
- Curry, D., Rattan J., & Giri, K. (2015). Delivering high quality family planning services in crisis-affected settings. *Global Health Science and Practice*.
- Eliason, S., Awoonor-Williams J. K., Eliason, C. & Aikins, M.(2014). Determinants of modern family planning use among women of reproductive age in the Nkwanta District of Ghana: A case-control study. *Reproductive Health 2014*
- Erfani, A. (2012). The Impact of Family Planning on Women's Educational Advancement in Tehran, Iran. *International Centre for Research on women Fertility Empowerment Network, Paper series 008-2012-ICRN-FE, 1-27*
- Fagbamigbe, A. F., Afolabi, R.A., & Idemudia, E. S. (2018). Demand and Unmet Need of Contraception Among Sexually Active In-Union Women in Nigeria: Distribution, Associated Characteristics, Barriers, and Program Implications. *Sage Journals*, <https://doi.org/10.1177/2158244017754023>
- Gebrecherkos, K.(2018). Contraception and associated factors among reproductive age group women in Eritrean refugee camps, Tigray, North Ethiopia: A cross-sectional study, 2016. *BMC Research Notes*
- Internally Displaced Monitoring center(IDMC-Nigeria). www.internal-displacement.org/co.....

- Kimanyi, N., Adibe, J., Djire, M., Jirgi, A. J., Kergina, A., Derassa, T.T, Pupliese, J. E., Westbury, A. (2014). The impact of conflict and political instability on agricultural investments in Mali and Nigeria. *Africa Growth Initiative Working Paper 17, July 2014*.
- Lelamo, G. & Navaheatham, K.(2015).Banj Open.. <https://bnjopen.bmj.com>
- Lyons, T. (2016). The importance of winning: victorious insurgent groups and authoritarian politics. *Comparative Politics*, 48(2), 167-184. <https://www.jstor.org/stable/24886171>
- Mahoro, J. (2005-2015).Unmet need among married women: examining socio-religious influences on family planning use in Rwanda, 2005-2015. *International Journal of Human Rights in Healthcare*
- Nzokirishaka, A. & Itua, I. (2018). Determinants of unmet need for family planning among married women of reproductive age in Burundi: A cross-sectional study. <https://www.nabi.nlm.nih.gov>
- United Nations High Commission for Refugees (2017). Nigeria situation. <https://www.unhcr.org...>
- Wulifan, J.K., Jahn, A., Hien, H., Liboudo, P.C., Robyn, P. J., Hamadou, S., Haidara, O. & De Allegri, M. (2017).Determinants of Unmet Need for Family Planning in Rural Burkina Faso: A multi-level logistic regression analysis. *BMC Pregnancy and Childbirth*, 17(1), 426. doi: 10.1186/s12884-017-1614-z
- Yeshlatem, E., Ali, R. & Edoja, D. (2018). Determinants of long acting and family planning utilization among women of reproductive age in Ilu Aba Bor Zone, South West Ethiopia, 2016 (2018). *Journal of Medical Research and Health Education*
- Yimaz, Z. (2018). Religion as the opium of the people. *KRISIS-Journal for Contemporary Philosophy*, 2