MATERNAL AND REPRODUCTIVE HEALTH IN ZAMFARA STATE OF NORTHWEST NIGERIA: AN IMPACT EVALUATION OF HEALTH PROMOTION IN THE COMMUNITY

BY

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ABSTRACT

Northern Nigeria has one of the highest maternal mortality ratios in the world, including the Zamfara State. Zamfara State has a maternal mortality ratio of 1,029 per 100,000 live births as compared to the national average of 576 per 100,000 live births in 2013. The northern states also have several of the worst maternal and reproductive health indices and even worst in the Zamfara State, including family planning uptake (3% for all methods), antenatal care (ANC) visits (22%), delivery by a skilled provider (6%) and hospital deliveries (5%). This three phases study aimed at: 1. An ecological review of maternal and reproductive health indicators and the major causes of maternal mortality in Zamfara State using secondary data from the State Ministry of Health; 2. Exploratory analysis of the perception of Muslim religious leaders in Zamfara regarding Islamic perspectives on maternal and reproductive health and their roles on maternal and reproductive health improvement in Zamfara; 3. Evaluation on the impact of health promotion intervention in improving the selected maternal and reproductive health indicators in the selected communities in Gusau Local Government (LGA). In phase 1, desk review of secondary data was used to answer the objective 1, while in-depth interviews and focus-group discussions were used to answer objective 2 in the qualitative study of the second phase. For objective 3 in third phase, an intervention study was carried out where data was collected pre and post-intervention using a validated questionnaire administered to the pregnant mothers who were randomly selected from the health facilities in the study area. The secondary data from the health facilities was also compared. The analysis using MANCOVA and RM ANOVA were done with SPSS software version 22.0, to assess the effect and impact of the intervention given. Findings from the study highlighted the changes in maternal mortality statisitics in Zamfara State from 2013-2017 and a similar trend was observed in Gusau LGA where the maternal mortality dropped from 1017 per 100,000 live births in 2014 to 480 per 100,000 live births in 2017, which was post-intervention period. The Muslim religious leaders were able to identify their roles and the Islamic perspectives in maternal and reproductive health, thereby encouraged the followers and community members, especially men, to allow their wives to attend ANC visits and to deliver at health facility. There was a significant increase in ANC visits and skilled birth attendant deliveries between 2013 and 2016 (pre-intervention) with 2016 and 2017 (post intervention). This study also showed a statistically significant difference in the attendance of ANC and awareness regarding illness among pregnant women in the intervention as compared to the control communities. There was an improvement and increased uptake of family planning and postnatal care compared in absolute numbers. Also, the study witnessed significant changes in the intervention community in terms of infrastructural development including renovations of health facilities, supplies of ambulances and medicines and community participation. Overall, the health promotion and community level intervention showed an effect and able to improve the uptake and utilization of maternal health services.

Key Words: Maternal and reproductive health; health promotion; Islamic perspectives; community intervention; Zamfara State.

ملخص البحث

تعتبر نسبة وفيات الأمهات في منطقة شمال نيجيريا من بين النسب الأعلى في العالم، بما في ذلك ولاية زامفرا. كما و يقدر معدل وفيات الأمهات في ولاية زمفارا ب ١٠٢٩ لكل ١٠٠,٠٠٠ مولود حي مقارنة بالمعدل الوطني الذي بلغ ٥٧٦حالة وفاة لكل ١٠٠,٠٠٠مولود حي عام ٢٠٠٣.وأيضا تمتلك الولايات الشمالية بعض أسوأ مؤشرات الأمومة ومؤشرات الصحة الإنجابية، و كانت الأسوأ في ولاية زامفرا، و تتضمن هذه المؤشرات ممارسات تنظيم الأسرة(٣%)، زيارات الرعاية ما قبل الولادة (٢٢%)، أولادة بواسطة أشخاص مدربين (٦%)، والولادة في المستشفيات(٥%). لقد هدفت هذه الدراسة عبر مراحلها الثلاث إلى : الأول استعراض بعض مؤشرات الأمومة والصحة الإنجابية والمسبب الرئيسي لوفيات الأمهات في زامفرا باستخدام بيانات ثانوية مزودة من وزارة الصحة؛ ثانيا كشف تصور ومفهوم الزعماء المسلمين في زامفرا من وجهة نظر إسلامية عن الأمومة والسلامة الإنجابية وتطبيق هذا المفهوم في تحسين حياة الأمومة والإنجاب في هذه الولاية ؛ثالثا: تقييم أثر التدخل الصحي في تحسين بعض حالات الأمومة ومؤشرات الإنجاب في بعض المجتمعات المحلية في منطقة غوساو.في المرحلة الأولى، تم استخدام البيانات الثانوية للإجابة على هدف البحث الأول، وفي المرحلة الثانية تحت الإجابة على الهدف الثاني للبحث من خلال دراسة نوعية باستخدام البيانات المستحصلة من مقابلات ومناقشات متعمقة. في المرحلة الثالثة من البحث تم الإجابة على الهدف الثالث من خلال إجراء دراسة تداخلية، حيث جمعت المعلومات قبل وبعد التدخل بتقديم استبيان للأمهات الحوامل من قبل الدوائر الصحية في تلك المنطقة، بالإضافة إلى ذلك فقد حللت المعلومات الثانوية المأخوذة من الدوائر الصحية وقورنت احصائياً باستخدام MANCOVA و ANOVA RM وذلك لتقييم أثر التدخلات المعطاة. هذا وقد أظهرت النتائج أن العوامل الرئيسية لوفيات الأمهات أظهرت تغيراً من سنة لأخرى، وأيضا، قد لوحظ تغيراً في مؤشر الوفيات في زامفرا بين ٢٠١٣و ٢٠١٧ ولوحظ نفس الاتجاه في غوساو LGA حيث انخفض معدل الوفيات من ١٠١٧حالة سنة ٢٠١٤ليصل إلى ٤٨٠حالة سنة ٢٠١٧و ذلك لكل ١٠٠,٠٠٠مولود حي. كما تمكن الزعماء المسلمون من تحديد دورهم ووجهة النظر الإسلامية من ناحية الأمومة والإنجاب والذي بدوره شجع أفراد المجتمع وخصوصاً الرجال على السماح لزوجاتهم بإجراء عمليات رعاية صحية في مرحلة ما قبل الولادة و إجراء عمليات الولادة في المرافق الصحية المتوفرة في المنطقة. كما وقد كان هناك ازدياد ملحوظ في معدلات زيارات الرعاية الصحية في فترة ما قبل الولادة وازدياد اجراء عمليات الولادة على أيدي متدربين مختصين وذلك بين ٢٠١٣و٢٠١٦ والتي تعتبر مرحلة ما قبل التدخل، وأيضاً، لوحظ هذا الارتفاع بين ٢٠١٦و٢٠١٧ والتي تعتبر في مرحلة ما بعد التدخل. كما أظهرات هذه الدراسة نوعاً من التقدم، بالإضافة إلى التباين الإحصائي الكبير في بعض امؤشرات صحة الأمهات وصحة الإنجابية في المجتمعات المتداخلة مقارنة مع الغير المتداخلة، هذا وأظهرت الدراسة وجودتباين إحصائي واضح من حيث حضور المؤتمر الوطني الافريقي والتوعية الصحيةالمتعلقة بالأمراض بين النساء الحوامل في مرحلة التدخل و ذلك بالمقارنة مع المجتمعات الضابطة. أظهرت الدراسة تحسن وزيادة من ناحية استيعاب وتنظيم الأسرة وحالات الرعاية بعد الولادة وذلك بأعداد كبيرة. كما شهدت الدراسة تغييرات كبيرة في المجتمع وخاصة في مرحلة التدخل من حيث تطوير البنية التحتية بما في ذلك تجديد المرافق الصحية، وتزويد سيارات الإسعاف والأدوية المساهمة من أفراد المجتمع. عموماً، فإن تعزيز الرعاية الصحية والتدخل على مستوى المجتمع المحلي له بعض التأثيرات الإيجابية والتي من خلالها يمكن تحسين وتعزيز خدمات الرعاية الصحية للأمهات.

APPROVAL PAGE

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DECLARATION

I hereby declare that this dissertation is the result of my own investigation, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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This dissertation is dedicated to my beloved parents

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This work is dedicated to many mothers, sisters, aunts and cousins that lost their life as result of bringing new life to this world. I pray that this little piece be a modest contribution to more understanding of the issue of maternal and reproductive health in northern Nigeria especially among the Muslim dominated areas where the problem of maternal deaths is most prevalent. May Allah accept this as sadaqat to humanity and put barakah in our future endevours, Aamin. Alhamdu lilLah!

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AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
APH	Antepartum hemorrhage
BEOC	Basic Essential Obstetric Care
CAC	Community Action Cycle
CCG	Community Core Group
CEOC	Comprehensive Essential Obstetric Care
CHV	Community Health Volunteers
CS	Ceasarian Section
DFID	Department for International Development
DHS	Demographic and Health Survey
EOC	Essential Obstetric Care
ELSS	Expanded Life Savings Skills
FGD	Focus Group Discussion
FMOH	Federal Ministry of Health
FP	Family Planning
GDP	Gross Domestic Product
HIV	Human Immune Deficiency Virus
HMIS	Health Management Information System
ICD	International Classification of Disease
IDI	In-depth Interview
IMNCH	Integrated Maternal, Neonatal and Child Health
LB	Live Birth
LGA	Local Government Area
LSS	Life Saving Skills
MCH	Maternal & Child Health
MD	Maternal Death
MDGs	Millennium Development Goals
MHI	Maternal Health Indicators
MHS	Maternal Health Services
M&E	Monitoring & Evaluation
MSS	Modified Life Saving Skills
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
MRH	Maternal and Reproductive Health
MRL	Muslim Religiuos Leaders
NACA	National HIV/AIDS Control Agency.
NASCP	National AIDS and STD Control Program.
NASG	Non-pneumatic Anti Shock Garment
NCE	National Certificate of Education
NDHS	Nigeria Demographic and Health Survey
PET	Pre Eclamptic Toxaemia
PHC	Primary Health Care
PIH	Pregnancy Induced Hypertension
PNC	Postnatal care

PPH	Postpartum Hemorrhage
PSG	Policy Study Group
RH	Reproductive Health
SAP	Structural Adjustment Programme
SBA	Skilled Birth Attendants
SDGs	Sustainable Development Goals
SES	Social Economic Status
SMI	Safe Motherhood Initiative
SMOH	State Ministry of Health
STIs	Sexually Transmitted Infections
TBA	Traditional Birth Attendant
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund
UNAIDS	United Nation AIDS Agency
USAID	United States Agency for International Development
VVF	Vesico Vaginal Fistulae
WHO	World Health Organization
FMC	Federal Medical Center
KFWCH	King Fahad Women & Children Hospital
YBSH	Yariman Bakura Specialist Hospital
FGHGH`	Farida General Hospital Gusau
DKWCH	Dr. Karima Women & Children Hospital
MDGH	Mada General Hospital
MDPHC	Mada Primary Health Center
SHPHC	Shagari Primary Health Center
WKPHC	Wanke Primary Health Center
MGGH	Magami General Hospital
MGPHC	Magami Primary Health Center

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Nigeria with about more than 185 million people and a population growth rate of 3.2 percent is the most populated country in Africa (National Population Commission, 2006). Nigeria, under a federal structure, is made up of a Federal Capital Territory (Abuja), 36 states and 774 Local Government Areas (LGAs). It has a very wide range of cultures, religions and social structures.

According to the Nigeria Demographic and Health Survey (NDHS) 2008 and 2013, the total fertility rate (TFR) in the country is 5.7 children per woman in 2008 5.5 in 2013 and 5.3 children per woman in 2018; however, it is significantly higher in rural areas (6.4 children per woman), than in urban areas, (4.6 children per woman), and in the northern compared to southern states (National Population Commission, 2019). Urban women are almost three times as likely as rural women to use a contraceptive method. For example the contraceptive prevalence rate (CPR) for modern methods is only 2% in Bauchi and 1.9 % in Sokoto and Zamfara States in the north; only 3% of women use any method of contraception in the northwest. Only 3 % of women without children are currently using family planning, compared with 13% with 1-2 children. There are also large numbers of women using traditional methods of contraception – the contraceptive prevalance rate for all methods are 14.6% in 2008 and 15.% in 2013 and for modern methods is only 9.7%. In general, about a fifth of girls under the age of 19 years old have given birth. According to the NDHS 2018, only about 23% of currently married women want to space births or want no more

children (National Population Commission, 2019). Births to the very young and adolescents as about 19% of girls aged 15-19 years had begun child bearing and closely-spaced births for women of all ages contribute to poor maternal, neonatal, infant and child health outcomes, straining family resources and leading to exacerbation of other health, economic and social problems (National Population Commission, 2019). However, there were little progress made according to the NDHS 2013, NDHS 2018 and Multiple Indicator Cluster Survey (MICS) 2016/2017.

In the 2008 report on the State of the World's Mothers, Nigeria ranked 70 out of 71 less-developed countries and 166 out of 179 in 2015 as one of the worst places in the world to be a mother with a lifetme risk of 1 in 31 as compared to Malaysia which is 1 in 1,600 (Save the Children, 2008; Save the Children, 2015). The maternal mortality ratio (MMR) in 2005 was estimated at 1,100, in a World Health Organization (WHO), United Nations Children Fund (UNICEF), United Nations Population Fund (UNFPA) and World Bank analysis and it is considered to be higher in the northern States, however the 2008 NDHS indicated that some progress was made in reduction of maternal mortality thus estimated the MMR to be 545 deaths per 100,000 live births which five years later increased to 576 per 100,000 live births in 2013 (WHO, 2005; National Population Commission, 2009; National Population Commission, 2013). Also according to the NHDS 2003, 47% of Nigerian women had four or more antenatal visits and 58% received antenatal care from a skilled provider (National Population Commission, 2004). The 2008 and 2018 surveys showed only 39% were attended at deliveries by a skilled provider, about one third of births or 35% occur in health facilities while 62% occur at home (National Population Commission, 2009; National Population Commission, 2019).

Northern Nigeria has one of the highest MMR in the world, approximately 1,000 women die per 100,000 live births , thus according to a study by Promoting and Revitalizing Routine Immunization in Northern Nigeria-Maternal Newborn and Child Health Programe (PRRINN-MNCH) project indicated that approximately 7,100 pregnant women die each year in Jigawa, Katsina, Yobe, and Zamfara States with 1% of 710,000 live births per year (PRRINN-MNCH, 2010; Doctor, et al., 2012). Northeast and northwest has higher maternal deaths figures compared to the southern part of Nigeria with estimated figures ranging from 890-1286 maternal deaths per 100,000 live births in a study in Kebbi State, northwest Nigeria (Gulumbe, Alabi, Omisakin, & Omoleke, 2017). Also in another study in the Kano State northwest Nigeria the MMR was between 1429 in 2010 to 960 per 100,000 live births in 2015 which are all higher than the average for the country (Muazu & Nguru, 2016).

Zamfara State has a TFR of 7.5 and MMR of over 1000 per 100,000 live births as compared to the national average of 545/100,000 live birth in 2008 and 576 in 2013 (Doctor, et al., 2012; SMOH Zamfara State, 2009; National Population Commission, 2019). The current use of any modern family planning method in Zamfara among married women aged 15-49 years old is 2% and the percentage of women who gave birth in the last 5 years who received antenatal care from a skilled provider is only 18% and those with skilled attendant at delivery is 8% (National Population Commission, 2009). These demographics made but little changes in 2013 according to NDHS 2013 with the contraceptive prevelence use of 3% for all method and 1.3% for modern method of family planning, attendance of antenatal was 22.4%, delivery with skilled assisted attendant was only 6.1% while home delivery was 94.2% and TFR was 7.3 children per woman (National Population Commission, 2013). These statistics are some of the worst in the country. The Nigerian National Strategic Health

Development Plan (NSHDP) primarily focuses on improving population's health status by preventing and treating common treatable and preventable illnesses, so that the entire population can have a good life of health, wellbeing thus productively contribute to national and economic development in which the role of health promotion is significant in this direction (Federal Ministry of Health, 2010).

1.2 STATEMENT OF THE PROBLEM

The health status of women and children is extremely poor and Nigeria was not able to achieve the health-related Millennium Development Goals (MDGs) by 2015 though some progress has been made (National Bureau of Statistics, 2014). Strengthening the health sector and improving health indicators especially the reproductive and maternal health indicators are among the most important development issues facing Nigeria. The rise of maternal deaths in Nigeria is historic and remained worrisome. Annually, an estimated of 52,900 Nigerian women die from pregnancy related complications out of the global 529,000 maternal death which is 10% of the global total as of 2010 while it reduced to about 289,000 maternal deaths in 2013 (WHO, 2010, 2014; Adetoro, Campbell, Ogundeji, Lawoyin & Thomson, 2013; Kolo, Chutiyami & Ibrahim, 2017). Although most of these deaths are preventable, the quality and coverage of health care services continue to decline among the Nigerians especially the women despite the huge and substantial investments in the sector.

Northern Nigeria has one of the highest maternal mortality ratios in the world. Over 1,000 women die per 100,000 live births (1%), thus approximately 7,100 (1% of 710,000 live births per year) pregnant women die each year in Jigawa, Katsina, Yobe, and Zamfara (Doctor et al., 2012). While 15% of all pregnancies worldwide result in a maternal emergency thus approximately 106,500 women in the four states would need

to access emergency maternal and obstetric care facilities each year (PRRIN-MNCH, 2010). Another study in 2011 in the four northern states of Jigawa, Katsina, Yobe and Zamfara, it was estimated that there was 1,271 maternal death per 100,000 live births which confirms earlier speculations about the high maternal mortality figures in the northern Nigerian states (Doctor, Findley & Afeyandu, 2012). The comparative high rates of maternal deaths in northern Nigeria and Zamfara State in particular is an indicator of the failure to ensure that women have guaranteed lifelong access to quality health care based on equity including reproductive and maternal health services as compared to its sister States in Nigeria. Some developed and even developing countries where fewer women die of preventable causes during birth or due to pregnancy for example in Malaysia where MMR very low at 29 per 100,000 in 2007. Thus, the life time risk for pregnan women in developed countries was 1 in 400 against 1 in 51 in under-developed and developing countries such as Nigeria (Yadav, 2012; UNICEF, 2013; Department of Statistics Malaysia, 2015). Health promotion and education activities as well as improvement in reporting of maternal and reproductive health information contributed to the success recorded in Malaysia (Kaur & Singh, 2011; Yadav, 2012; Department of Statistics Malaysia, 2017). In places like Zamfara State in northwest Nigeria, a similar achievement may not be the case despite the efforts by government and other non-governmental organizations to improve maternal and reproductive health. The maternal mortality in Zamfara State is one of the highest in Nigeria, with very poor maternal reproductive health indicators as reported by the NDHS, 2008 and 2013. Therefore there is a need for more health promotion activities targeted at the women and the community on matters relating to maternal and reproductive health and maternal mortality in Zamfara State.