SOCIO-DEMOGRAPHIC BARRIERS TO UTILIZATION OF MODERN MATERNAL HEALTHCARE SERVICES (MHCS) AMONG REPRODUCTIVE AGE WOMEN UTILIZING THE SERVICES OF TRADITIONAL BIRTH ATTENDANTS (TBAS) IN SOUTHWESTERN NIGERIA

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Abstract

This study examines socio-demographic barriers to utilization of modern MHCS among 475 reproductive age rural and urban women utilising the services of TBAs for pregnancy-related care and childbirth in Osun State, Southwestern Nigeria using a multi-stage sampling technique. The study examined place of antenatal and delivery care among the respondents in the study area; determined the association between socio-demographic barriers to utilization of modern MHCS and knowledge of modern MHCS among the respondents and establish the association between socio-demographic variables and utilization of modern MHCS among the study population. A self-administered semi-structured questionnaire was used for data collection. Data were analysed using SPSS (version 25) for descriptive and inferential statistics with level of significant set at <0.05. Findings showed that all respondents in the study utilize the services of the TBAs for ANC; however, some of the urban women (22.7%) and rural women (17.7%) utilize modern MHCS for delivery care. There is no statistical significant association between age at marriage and knowledge of modern MHCS for the urban women ($p>0.05$), while a statistical significant association exist between age at marriage and knowledge of modern MHCS for the rural women ($p<0.05$). Socio-demographic barriers to utilization of modern MHCS in the study includes belief in supernatural protection of pregnancy, husband decision, religion, education and income, $p<0.05$. However, no statistical significant association exist between (age of mothers, marital status and occupation) and utilization of modern MHCS for both categories of respondents ($p>0.05$). Strategies to encourage utilization of modern MHCS among the respondents in the study area should include adequate information on Modern MHCS, public enlightenment, and partners'/husbands' involvement in maternal health planning.

Keywords: Barriers, Maternal Health Care Services (MHCS), Nigeria, Traditional Birth Attendants (TBAs), Utilization.

Introduction

The Sustainable Development Goals (SDG 3.1) includes an ambitious target of reducing the global Maternal Mortality Ratio (MMR) to less than 70 per 100 000 live births, with no country having a maternal mortality ratio of more than twice the global average (WHO, UNICEF, UNFPA, WORLDBANK GROUP, & the United Nations Population Division, 2019). Improving maternal health is therefore, one of World Health Organization's (WHO) key priorities to achieve SDG 3.1. To achieve this goal, United Nations and WHO work to contribute to the reduction of maternal mortality by increasing access to Skilled Birth Attendants (SBAs) through efficient use of maternal healthcare services (WHO, et al., 2019).

Despite this global commitment, the loss of women's lives due to pregnancy related complications have been on the increase in most sub-Saharan African countries, including Nigeria. Some of the reasons being that reproductive age women still patronize Traditional Birth Attendants for pregnancy-related care and childbirth (Aziato& Omenyo, 2018).Inaccessibility of reproductive age women to Skilled Birth Attendants (SBAs) and poor-quality care during pregnancy and childbirth (NPC & ICF International, 2014; World Health Organization, 2015; Adeyemi, 2018), and cultural barriers inhibiting reproductive age mothers to access maternal health care services (Olonade, Olawande, Alabi, & Imhonopi, 2019) also account for loss of women's lives during pregnancy and childbirth. Thus, resulting in the low utilization of maternal healthcare services, which incapacitates the strategy set by the UN to achieve healthy lives for all by 2030.

Traditional birth attendants are persons who assist mothers during childbirth, and these women have initially acquired some skills by assisting mothers to deliver babies or through apprenticeship to other TBAs (Smith, as cited in Adeyemi, 2018). Traditional Birth Attendants have existed before the advent of modern obstetric medicine and historically have been the major caregivers for women during childbirth (United Nations, 2008; Sullivan & Hirst, 2011). Although, it is expected that women in modern societies will give birth in health facilities,in Nigeria like many other developing countries, pregnant women continue to either give birth at home or with TBAs.

The high rate of MMR in Nigeria is evident as millions of women still die from preventable causes related to pregnancy and childbirth. In Nigeria for instance, MMR in 2017 was estimated at 917/100,000 live birth (WHO, UNICEF, UNFPA, WORLDBANK GROUP, & the United Nations Population Division, 2019). This figure is almost twice the MMR figure in 2013 which was estimated at 576/100,000 live birth (NPC & ICF International, 2014) and more than thirteen times and incomparable to the SDGs target by the year 2030. On a regional basis however, in Southwestern Nigeria, MMR is estimated at 166/100,000 live births (Osun State Ministry of Health, 2010). This figure is also more than twice the global targets for SDG come 2030.

Akokuwebe and Okafor (2015) noted that pregnancy-related death is the most critical health challenges confronting medical practitioners and Nigerians in general. Many of the Nigerian populace, especially women who are of the low socioeconomic background are constantly at the verge of being victims of maternal mortality. The poor socioeconomic condition makes reproductive age women, especially in rural areas susceptible to sickness and in most cases result in maternal death due to their inability to access good health services other than the services of the TBAs.

Nigeria is a country with high value for traditional healthcare, thus, to achieve SDG 3.1, it is essential for reproductive age women to have unhindered access to quality reproductive health services and be empowered to make decisions on issues affecting them, particularly, maternal health issues. Having unhindered access to comprehensive modern maternal healthcare services will encourage reproductive age women (especially clients of TBAs) to complement the care receive from TBAs during pregnancy and delivery with those offered in the healthcare facilities. This will increase women's chances of survival, and also give them the opportunity of having healthy children, hence, reducing maternal and neonatal mortality ratio in Nigeria.

Research on socio-demographic barriers limiting access to quality MHCS have been largely conducted on rural residents, neglecting the urban residents. Thus, there is a dearth of detailed studies on socio-demographic barriers limiting both rural and urban women in utilization of modern MHCS in Nigeria. This study therefore, sought to bridge this information gap by examining socio-demographic variables posing barriers to utilization of modern MHCS on both

rural and urban women in southwestern Nigeria, particularly among women utilizing the services of TBAs for pregnancy-related care and childbirth.

Study Hypotheses

The hypotheses for the study are stated thus:

1. There is no statistical significant association between age at marriage and knowledge of modern MHCS in the study area.
2. Urban women are not more likely to be knowledgeable on modern MHCS than the rural women
3. There is no statistical significant association between socio-demographic variables (mother's age, belief in supernatural protection of pregnancy, husband decision, religion, mother's education, occupation, and mother's income) and utilization of modern MHCS.

Reasons for the Persistent Use of the Services of Traditional Birth Attendants

Women's utilization of maternal health care services is an important health issue with regard to the wellbeing and survival of both the mother and her child during childbirth which has implications on the maternal and child mortality rate in human society. However, in most third world countries and Nigeria in particular, there are certain barriers to the utilization of MHCS during pregnancy and childbirth (Gazali, Falmata & Mahamoud, 2012).For women to have good maternal health, there must be availability and accessibility of these women to modern maternal health facilities (NPC & ICF International, 2014). Despite the introduction of modern health facilities, studies have shown that the births of majority of children in developing areas are facilitated by Traditional Birth Attendants (Ebuehi & Akintujoye, 2012; Aziato & Omenyo, 2018).

Owumi (2005) stressed the importance of culture in the nature and management of health care services. For instance, he maintained that in the pre-industrial era of the history of man, different communities had developed different methods to meet their health needs. Shamaki and Buang (2014) indicated that although, Islam recognises the right of women in seeking basic needs, including knowledge/education and healthcare, in many traditional societies. Where men are more dominant, women's right/needs are often denied. This explains why

millions of women in the world lack access to adequate care during pregnancy.

A study aimed at assessing community level interventions for the management of pre-eclampsia and eclampsia in Nigeria using an ethnographic framework, observed that women accessed the formal health care system when they perceived they were at risk. Especially, for delivery-related care, which are complicated by obstructed labour or retained placenta (Akeju, Oladapo, Vidler et al., 2016). In addition to obstetric complications which persuade women to seek care, the time of the day is also an important factor in decision-making. Often, health care facilities are closed at night due to human resource constraints; this unavailability causes women to deliver with traditional providers (Akeju et al., 2016).

Akeju et al. (2016), further observed that women delayed revealing their pregnancies as long as possible. It was believed that early disclosure may lead to miscarriage and other complications. This belief was connected to the notion that supernatural and diabolic forces had the potential to influence pregnancy outcomes. As a result, routine activities that could reveal pregnancy status, including antenatal care, are reportedly avoided. The study revealed that it was a common practice for women in the community to delay antenatal care until the seventh month of pregnancy. Some women chose to deliver with TBAs, as they associated hospitals with surgical interventions, and there was a strong cultural preference for unassisted deliveries.The traditional beliefs obviously have negative effects on the use of modern health care delivery.

Also, women under- utilize maternal health care services due to their poverty, illiteracy, general backwardness and adherence to superstitious belief concerning illness and diseases and concerning child delivery (Nwokocha, 2006).

In spite of the spread of formal health systems as well as the expansion of health services, one reason women by-pass the formal system in favour of folk medicine is due to their negative attitude towards the former. Opiah, Osaji, Afolayan, Adeyanju and Ute (2010), in a study among the Amassoma community, Southern Ijaw Local Government Area, Nigeria observed that 76% of women preferred home birth as a result of past experiences from modern health providers. The resulting death/complications are consequently associated

with the service providers at the clinic, hence the negative attitude towards it. In addition, women bypass the modern MHCS for the traditional providers because of socio-cultural belief among most societies in the third world countries which favours traditional medication as against modern orthodox health care system - with its personnel (doctors, nurses and midwives) derived from different socio-cultural backgrounds, religions and traditions; the services they provide are associated with foreign culture of the West etc.(El-Safty, 2000).

Socio-demographic Barriers to Utilization of Modern Maternal Healthcare Services

Knowledge of maternal healthcare services is crucial in the utilization of modern maternal healthcare services. Although,a study has shown that health-related knowledge does not translate to increase utilization of services in pregnancy(Akaba, Otubu, Agida & Onafowokan, 2013).A study conducted among 192 reproductive age women (15-45 years) to explore awareness and barriers to utilization of maternal health care services among the women in Amassoma community, Bayelsa State, Nigeria revealed that majority of the respondents (94.8%) had heard of maternal healthcare services but only few actually knew the main services rendered as maternal health care services (Onasoga, Osaji, Alade & Egbuniwe, 2014).

Religious practices play a vital role in coping with psychological difficulties in illness and in health-seeking behaviours (Hussen et al., 2014). According to Solanke et al. (2015, p. 2), "Spiritualizing health situation in the process of determining when to seek medical help or when to apply formal medicine shaped the utilization of health care by adherents of different religions." Religious practices sometimes deprives women of their rights to freedom of movement and right to take decision affecting them, including health decision. A study in Zimbabwe has shown that the faith-based healers also constitute a barrier to the utilisation of maternal healthcare services in most developing countries (Maguranyanga, 2011), as religious teachings, doctrine and regulations of the group emphasised faith healing and total devotion to church beliefs and practices which sometimes hinder seeking modern healthcare services. The Jehovah's Witnesses, a Christian sect also do not allow blood

transfusion based on the belief that certain Biblical passages prohibit blood transfusion (Loma Linda University, 2014).

The relevance of maternal age in utilization of modern MHCS has been demonstrated in research studies by Okutu(2011), Nwosu, Uramaand Uruakpa(2012), Yar'zever and Said(2013) andSolanke et al.(2015). These researchers reported that there is a significant association between maternal age and utilization of MHCS. In contrast, Aremu, Lawoko and Dalal(2011) noted that age was not significantly related to health facility delivery. On the other hand, Asiimwe (2010) found that in western Uganda, young mothers' maternal health care utilization is a function of affordability rather than age.

A study conducted among 182 expectant and lactating mothers in Ghana to explore the socio-cultural factors that inhibit women's access and use of skilled maternal and newborn healthcare services showed that despite these services being provided free, there were still cultural preferences for home births. The findings suggested that women's decision to seek skilled maternity care services depends not only on whether these services are readily available in close proximity and at an affordable price, but importantly on the cultural perception and acceptability of the service and a woman's self-efficacy to negotiate societal norms and discursive practices that regulate behaviour during pregnancy and child-birth (Ganle, Otupiri, Parker & Fitzpatrick, 2015).

Studies in Nigeria and Ghana (Ononokpono & Odimegwu, 2014; Ganle et al., 2015) have demonstrated that lack of women's autonomy to take decision concerning their health significantly influence utilization of modern MHCS. These studies gave credence to Jido, Sarkinfada, Galadanci & Garba (2004), whose study previously revealed that some prevailing traditional beliefs and practices among most communities hinder the full utilization of modern health facility in general and maternal health care services in particular, when they studied women in Shekar Maidaki village in Kano State. It was found that the main reasons for non-utilization of maternity care services amongst the women were spousal inhibition, access to experience traditional birth attendants, and the cost of institutional services.

Cultural belief about causes of diseases or illness is an important determinant of the place of delivery. Oke (1995) stressed the point that, among the Yoruba

of South–western Nigeria, the perception of illness or disease centres on three etiological factors. These are natural, supernatural/preternatural and mystical perception. These perceptions of illness causation according to Oke, often influence the choice of health care of the people. He further revealed that, one's choice of particular health care services is a function of one's belief and attitude about the effectiveness of a particular health care. A latter study in Zimbabwe further showed that though women are expected to attend an antenatal clinic in their eighth week of pregnancy, but they only start visiting a clinic at 26–27 weeks. Women in Zimbabwe felt that pregnancy had to be kept secret during its early stages (first three months which constitute uterus formation) for fear of witchcraft (Mathole, Lindmark, Majoko & Ahlberg, 2004). The pregnancy is protected from evil spirits which may be attacked by jealous people and who would bewitch the pregnant mother to give birth to a malformed infant or to suffer a miscarriage.

Although some studies have demonstrated a positive effect of education on health facility delivery, some researchers have questioned the strong independent effects of education on the utilization of maternal health care services and have argued that factors such as place of residence and socioeconomic status interact to confound the strong effect of education on maternal health care behaviour (Gage and Calixte, 2006).

Women employment status is an important variable to be considered in the study relating to utilization of modern MHCS as it empowers women to be able to take decision on issues affecting them, particularly, health-related issues. Studies conducted in the Philippines (Kozhimannil, Valera & Ross-Degnan, 2009) and in Ghana (Yakong, Rush, Basset-Smith, Bottorff & Robinson, 2010) reported that occupation strongly influence use of maternal services with civil servants and other professionals found to be more likely to use MHCS. Nonetheless, contrasting findings was reported in Kuwaitwhere having a paying job was found not to have any significant influence on the use of MHCS by women (Al-Kandari & Al-Qashan, 2010).

Theoretical Framework (The Andersen and Newman Behavioural model)

The Andersen healthcare utilization model is a conceptual model that provides systematic identification of factors that influence individual decision to use (or

not use) available Healthcare Services (HS). According to the model, usage of health services is determined by three major factors/characteristics: the individual characteristics which are likened to what Andersen and Newman called the predisposing factors. This includes the individual characteristics which influences the individual decision to utilize or not to utilize the HS. This factor constitutes the social structure which include (education, occupation, ethnicity, social networks, social interactions, and culture), health beliefs which include (attitudes, values, and knowledge that people have concerning and towards the health care system). For instance, a pregnant woman who believes that utilization of MHCS is an effective way of preventing pregnancy-related complications is more likely to utilize MHCS and vice versa. The predisposing factor further include the demographic characteristics of individual such as age and gender as emphasisedby Okutu(2011), Nwosuet al.(2012), and Yar'Zever and Said(2013), whose studies observed significant association between age and utilization of MHCS.

The second characteristics which determine utilization or non–utilization of MHCS according to this model is called the enabling factors. These are the logistical aspects of obtaining care. These could be family support which may include (the means and know how to access health services, access to health insurance (for example, National Health Insurance Scheme, NHIS), income, a regular source of care, quality of social relationship). Poor access to or low quality of professional care in the health care facility is one of the factors which discourage women in utilization of MHCS in developing countries as noted by Sullivan and Hirst(2011), andAziato & Omenyo(2018), hence, the continuous patronage of TBAs for pregnancy assistance and during childbirth

The enabling factor also comprises of some characteristics at the societal level, which include the health personnel, available facilities and the waiting time. Possible additions such as genetic factors and psychological characteristics also play some significant roles in utilization of maternal healthcare services according to this model.

The need factor is the third factor identified by Andersen and Newman (1973) to determine maternal use or non-use of healthcare facilities. This is considered as the most immediate cause of health service use, from functional and health

problems that generate the need for health care services. The need factors according to this model also comprises of two basic kinds of needs: the 'perceived need' and the 'evaluated need'.

> Perceived need help to understand care-seeking and adherence to a medical routine; while evaluated need is more closely related to the kind and amount of treatment that will be provided after a patient has presented to a medical care provider (Andersen, 1995).

In other words, the way women view their general health conditions, as well as perceived symptoms of ill-health regarding pregnancy will influence their decisions to seek professional care or not in the healthcare facilities. Additionally, their evaluations on the kind of treatment that will be offered to them in healthcare facilities will also influence the decisions to utilize MHCS or not.

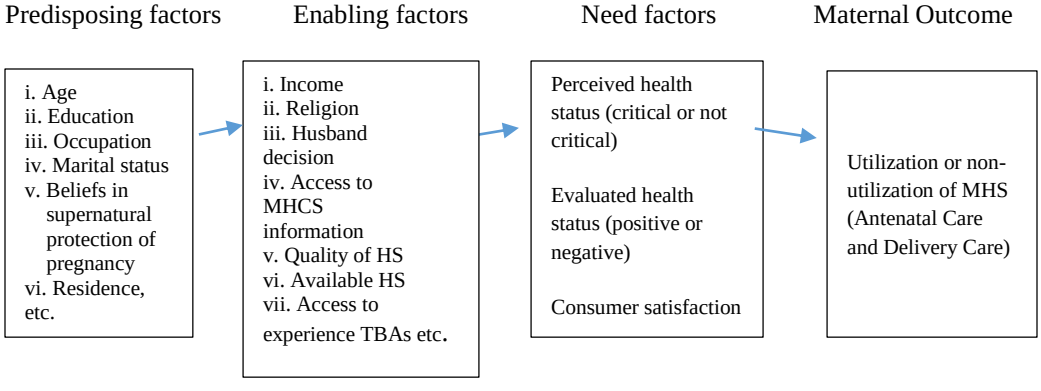

Figure 1: Maternal Healthcare Services Utilization model

Source: Adapted from Andersen and Newman, 1973.

Materials and Methods

The study was conducted in 3 rural and 3 urban communities of Osun State, South-western Nigeria. Osun State is one of the 36 States that made up Nigeria. Its capital is Osogbo. It is bounded in the north by Kwara State, in the east partly by Ekiti State and partly by Ondo State, in the south by Ogun State and in the west by Oyo State. Osun State is divided into three federal senatorial districts each of which is composed of two administrative zones. The state consists of thirty (30) Local Government Areas and Area offices, the primary (third-tier)

unit of government in Nigeria. The three senatorial districts in Osun state are: Osun central, Osun east and Osun west. Osun State is situated within the cocoa belt of South-western Nigeria in the tropical rain forest vegetation type and its residents are majorly of Yoruba ethnic group with sub-ethnic groups such as Ife, Ijesha, Oyo, Ibolo and Igbomina and other people from other parts of Nigeria who engaged in farming, petty trading, artisanship and civil service. Yoruba is the indigenous language of the people of Osun State. People of Osun State practice Islam, Christianity and their ancient religion, the traditional faith. (www.osun.gov.ng.).

There are eight hundred and fifty-three (853) public health care facilities in the State. Three (3) of these are Tertiary Teaching Hospitals, 51 are Secondary health care facilities owned and managed by Osun State Government (Osun State Hospital Management Board, 2016), 799 are Primary health care facilities owned and managed by the 30 LGAs plus 1 Local office(Osun State Ministry of Health, 2016).

Osun state total population in 2006 was estimated at 3,416,959 comprising of 1,734,149males and 1,682,810 females (National Population Census, NPC, 2006). Projecting this figure in 2016 leaves Osun State population at 4,705,800 (National Population Commission &National Bureau of Statistics, 2016). The populations for this study were reproductive age women (15-49 years) who were clients of Traditional Birth Attendants (TBAs) during the 4 months period of data collection.

Using cross-sectional design, this study adopted a multistage sampling technique comprising of stratified, purposive, snowball and simple random sampling techniques. At the first stage, Osun State was captured based on the 3 existing senatorial districts (Osun central, Osun east and Osun west). A local government area with the highest population as well as the availability of TBAs was purposively selected to represent each senatorial district. Thus, Osogbo, Ife east and Iwo LGAs were selected to represent Osun central, Osun east and Osun west respectively.

At the second stage, each of the LGA was stratified into rural and urban strata. In total, 6 sampling strata were identified (3 rural strata and 3 urban strata respectively). Snowball sampling technique was used to identify15 TBAs in each of the 3 selected rural strata and 10 TBAs from each of the 3 selected urban

strata. Hence, 45 TBAs and 30 TBAs were identified in 3 rural and 3 urban strata respectively. This gave a total of 75 TBAs identified for the study. Subsequently, 7 women who were clients of TBAs as at the time of the study were selected from the home of each of the TBA using simple random sampling technique. Thus, a total of 525 respondents were recruited for the study.

The study adopted quantitative method of data collection with the aid of a self-administered semi-structured questionnaire as research instrument. All necessary data relating to the objectives of the study including socio-demographic and economic data of respondents were elicited from respondents. Data on access to maternal healthcare services information, where they receive antenatal care and deliver their pregnancies were also obtained from the respondents.

Data collected from the field were analysed at two levels: univariate and bivariate levels in line with the study objectives. Data were analysed with the aid of software - 'Statistical Package for Social Sciences' (SPSS version 25). The analysis consisted of descriptive and inferential statistics (Chi-square test) with a level of the significant set at $p<0.05$.

Approval for the study was obtained from Health Research Ethic Committee (HREC) Institute of Public Health, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria (IPHOAU/12/646). TBAs and their clients (reproductive age women) were also informed about the purpose of the study and their permissions were sought in respect of the study. There was assurance of confidentiality and participation was made voluntary.

Research Findings/Results

Five hundred and twenty five (525) reproductive age women utilizing the services of Traditional Birth Attendants (TBAs) for pregnancy-related care and childbirth were recruited for the study from the home of TBAs, out of which 475 women voluntarily participated in the study. The research instrument (questionnaire) was self –administered with the support of field workers. Thus, the whole 475 were dully filled and used to analyse the data, giving a response rate of 90.5%.

Table 1: Socio-demographic and Economic Characteristics of Respondents

Variable	Urban (N= 198)	%	Rural (N= 277)	%
Age				
15-19				
20-24	13	6.2	26	9.4
25-29	53		87	
30-34	69	25.2	102	31.4
35-39	27		37	
40-44	20	34.8	16	36.8
45-49	11		05	
	05	13.6	04	13.4
		10.1		5.8
		5.6		1.8
		2.5		1.4
Marital Status				
Single				
Married	18	9.1	24	8.7
Widowed	157		222	
Divorced	09	79.3	09	80.1
Separated	01		09	
	13	4.5	13	3.2
		0.5		3.2
		6.6		4.7
Religion				
Christianity				
Islam	55	27.8	53	19.3
Traditional	134		208	
	09	67.7	16	75.1
		4.5		5.8
Educational Qualification				
No formal education				
Primary	20	10.1	25	9.0
Secondary	45		79	
Tertiary	70	22.7	91	28.5
	63		82	
		35.4		32.8
		31.8		29.6
Number of children				
0-0				
1-3	30	15.2	22	7.9
4-6	65		70	

7 and above	84	32.8	151	25.3
	19		34	
		42.4		54.5
		9.6		12.3
Occupation				
Housewife				
Trading	27	13.6	26	9.4
Farming				
Artisans	28	14.1	24	8.7
Civil Service	13		148	
	83	6.6	67	53.4
	47		12	
		41.9		24.2
		23.7		4.3
Mother's income/annum (~~N~~)in 000's				
None				
	27	13.6	26	9.4
60-150,999				
	64	32.3	169	61.0
151-241,999				
	50	25.3	33	11.9
242-332,999				
	12	6.1	09	3.2
333-423,999				
	18	9.1	15	5.4
424-514,999				
	13	6.6	15	5.4
515-605,999				
	07	3.5	08	2.9
606 -696,999				
	07	3.5	02	0.7

Source: Field survey, 2016

Table 1 presents the socio-demographic data of the respondents. Larger percentages of the respondents for both urban and rural were within the age ranges of 25 and 29 years (34.8% for urban and 36.8% for rural). The study presents the mean age of the urban and rural women as 28 years and 26 years respectively with minimum of 15 and maximum of 49 years. Majority of the study population were currently married (79.3% for urban and 80.1% for rural women). Majority practice Islam (67.7% for urban and 75.1% for rural), with 89.9% of urban women and 91% of rural women having received some formal education. Majority of urban women (90.4%) had 6 children and below

compared to 87.7% of rural respondents. Larger percentages of the urban women (41.9%) were artisans while the largest percentages of the rural women(53.4%) were farmers. Larger percentage of the respondents were within the income ranges of ₦60,000 and ₦150,999 for both categories of respondents (32.3% for urban and 61% for rural).

Table 2: Respondents' Place of Antenatal care and Delivery

Variable	**Urban Frequency**	**%**	**Rural Frequency**	**%**
	N=198		**N=277**	
Uses only TBA for ANC & at delivery	82	41.4	118	42.6
Use both TBA & modern MHCS for ANC but deliver with TBA	71	35.9	110	39.7
Use both TBA & modern MHCS for ANC but deliver in health care facilities	45	22.7	49	**17.7**
Total	**198**	**100**	**277**	**100**

Source: Field survey, 2016

ANC= Antenatal Care
TBA= Traditional Birth Attendant
MHCS= Maternal Health Care Services

Respondents' place of antenatal care (ANC) and delivery were investigated. Table 2 revealed that less than half of the urban women (41.4%) and of rural women (42.6%) made use of only the services of TBAs for both ANC and at delivery, 35.9% of the urban women and 39.7% of rural women complement the services of TBA with modern MHCS for ANC but delivered with TBAs. Nonetheless, 22.7% of the urban women and 17.7% of the rural women made use of both the services of TBAs and MHCS for ANC but deliver their babies using the modern health care services.

Table 3: Socio-demographic Factors Influencing Knowledge of Modern MHCS among Reproductive Age Women in Osun State, Southwestern Nigeria

Variables	Had knowledge of modern maternal health care services							
	Urban (n= 198)				Rural (n=277)			
	Yes	%	No	%	Yes	%	No	%
Age at 1st marriage in years								
15-17								
18-20	05	83.3	01	16.7	75	65.2	40	34.8
21-23	15	71.4	06	28.6	39	42.4	53	57.6
24 &above	35	55.6	28	44.4	15	34.9	28	65.1
	58	53.7	50	46.3	06	22.2	21	77.8
Statistics	χ^2= 4.015, df = 3, p>0.05				χ^2 = 24.885, df =3, p<0.05			
Parity								
None	17	56.7	13	43.3	15	68.2	07	31.8
1-3	35	53.8	30	46.2	29	41.4	41	58.6
4-6	47	55.9	37	44.1	71	47	80	53
7 & above	14	73.7	05	26.3	20	58.8	14	42.2
Statistics	χ^2 = 2.461, df = 3, p>0.05				χ^2 = 6.389, df =3, p>0.05			
Marriage type								
Single mothers								
Monogamy								
Polygyny	09	50	09	50	10	41.7	14	58.3
	51	68	24	32	43	47.3	48	52.7
	53	50.5	52	49.5	82	50.6	80	49.4
Statistics	χ^2 = 5.888, df =2, p>0.05				χ^2 = 0.790, df = 2, p> 0.05			

Source: Field survey, 2016

Table 3 revealed socio-demographic variables influencing knowledge of modern MHCS among the women in the study area. Mother's age at marriage is an important factor influencing knowledge and utilization of maternal healthcare services, particularly, the age at which girls get married play significant role in their health seeking behaviour. It is an important variable in understanding the level of utilization. Mothers' ages at 1st marriage are well known to influence health seeking behaviour which include place of antenatal, choice of place of delivery and knowledge of available maternal healthcare services.

Findings showed that within maternal age 15-17 years, 83.3% of the urban women had knowledge of modern MHCS as against 65.2% of the rural women, while within age group 18-20 years, 71.4% of the urban women had knowledge of MHCS with only 42.4% of the rural women having knowledge of modern MHCS. Also, within the age group of 21-23 years, 55.6% of the urban women had knowledge of modern MHCS as against 34.9% of the rural women. And within the age group of 24 years and above, 53.7% of the urban women had knowledge of modern MHCS as against 22.2% of the rural women. This result implied that urban women are more knowledgeable of MHCS than the rural women. The result further translate to also imply that there is a negative

relationship between age at first marriage and knowledge of modern MHCS for both the urban and rural women because as age at first marriage increases for both categories of respondents, knowledge of modern MHCS decreases. Thus, this translates to imply that age at first marriage negatively influence knowledge of modern MHCS among the study population. However, the chi square test for the urban women showed no statistical significant association between age at marriage and knowledge of modern MHCS (χ^2= 4.015, p>0.05). On the contrary, chi square test for the rural women showed a statistical significant association between age at marriage and knowledge of modern MHCS among the study population (χ^2 = 24.885, p<0.05).

Parity (number of children) is one of the demographic factors responsible for pregnancy complications in women (Adeniran, Fawole, Fakeye, Ijaiya & Adesina, 2014; Muniro, Tarimo, & Mahande, et al., 2019).Table 3 shows that 73.7% of the urban women who have had seven children and above had knowledge of modern MHCS as against 58.8% of the rural women who have also had seven and above. However, the result of chi- square test for the urban women (χ^2 = 2.461, p>0.05) and rural women (χ^2 = 6.389, p>0.05) showed no statistical significant association between parity and knowledge of modern MHCS.

The study also investigated how marriage type (monogamy or polygyny) influences knowledge of modern MHCS. Table 3 showed that 68% of the urban women in a monogamous relationship had knowledge of modern MHCS compared to 47.3% of their rural counterparts. However, (50.5%) of the urban women in a polygamous relationship had knowledge of modern MHCS. This percentage is a bit less than the percentage of their rural counterpart (50.6%) also in a polygamous relationship. The chi-square test result for the urban women (χ^2= 5.888, p>0.05) and for the rural women (χ^2=0.790, p>0.05) showed no significant association between marriage type and knowledge of MHCS.

Table 4: Socio-demographic Barriers to Utilization of Modern Maternal Healthcare Services among Reproductive Age Women in Osun State, Southwestern Nigeria

Variable	Utilize Maternal healthcare Services			
	Urban		Rural	
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
	Yes	No	Yes	No
Mother's age				
15-19	10 (76.9)	03 (23.1)	18 (69.2)	08 (30.8)
20-24	33 (62.3)	20 (37.7)	51 (58.6)	36 (41.4)
25-29	40 (58)	29 (42)	57 (55.9)	45(44.1)
30-34	17 (63)	10 (37)	17 (45.9)	20 (54.1)
35-39	05 (25)	15 (75)	10 (62.5)	06 (37.5)
40-44	08 (72.7)	03 (27.3)	03 (60)	02 (40)
45-49	03 (60)	02 (40)	03 (75)	01 (25)
Statistics	χ^2= 12.530, Df = 6, p>0.05		χ^2=4.313, Df=6, p>0.05	
Belief in supernatural protection of pregnancy				
Yes	79 (62.7)	47 (37.3)	100 (52.4)	91 (47.6)
No	31 (47.7)	34 (52.3)	57 (73.1)	21 (26.9)
	χ^2= 3.953, Df =1, p<0.05		χ^2=9.785, Df=1, p<0.05	
Husband decide for MHCS				
Yes	76 (67.9)	36 (32.1)	121	49
No	40 (46.5)	46 (53.5)	38	69
Statistics	χ^2= 9.135, Df= 1, p<0.05		χ^2=34.155, Df=1, p<0.05	
Marital status				
Single mothers	12 (66.7)	06 (33.3)	13 (54.2)	11 (45.8)

Currently married	83 (58)	60 (42)	120 (56.6)	92 (43.4)
Widowed	05 (55.6)	4 (44.4)	06 (66.7)	03 (33.3)
divorced	01 (100)	0 (0)	05 (55.5)	04 (44.4)
Separated	8 (61.5)	05 (38.5)	10 (76.9)	03 (23.1)
	χ^2=1.263, Df=4, p>0.05		χ^2= 1.700, Df= 4, p>0.05	
Religion				
Christian	40 (72.7)	15 (27.3)	27 (50.9)	26 (49.1)
Islam	75 (56)	59 (44)	129 (62)	79 (38)
Traditional worshipers	01 (11.1)	08 (88.9)	03 (18.8)	13 (81.3)
	χ^2=13.271, Df = 2, p<0.05		χ^2= 12.493, Df = 2, p<0.05	
Mother's education				
No formal education	02 (10)	18 (90)	10 (40)	15 (60)
Primary	18 (40)	27 (60)	40 (50.6)	39 (49.4)
Secondary	40 (57.1)	30 (42.9)	53 (58.2)	38 (41.8)
Tertiary	56 (88.9)	07 (11.1)	56 (68.3)	26 (31.7)
	χ^2=49.769, Df= 3, p<0.05		χ^2=8.580, Df= 3, p<0.05	
Occupation				
Housewives	12 (44.4)	15 (55.6)	10 (38.5)	16 (61.5)
Trading	15 (53.6)	13 (46.4)	16 (66.7)	08 (33.3)
Farming	06 (46.2)	07 (53.8)	87 (58.8)	61 (41.2)
Artisan	53 (63.9)	30 (36.1)	39 (58.2)	28 (41.8)
Civil service	30 (63.8)	17 (36.2)	07 (58.3)	05 (41.7)
	χ^2= 4.826, Df=4, p>0.05		χ^2= 4.795, Df= 4, p> 0.05	
Mother's income/annum (₦)in 000's				
None	12 (44.4)	15 (55.6)	10 (38.5)	16 (61.5)
60-150,999	55 (85.9)	09 (14.1)	101 (59.8)	68 (40.2)
151-241,999	23 (46)	27 (54)	26 (78.8)	07 (21.2)
242-332,999				

333-423,999	06 (50)	06(50)	04 (44.4)	05 (55.6)
424-514,999	07 (38.9)	11 (61.1)	07 (46.7)	08 (53.3)
515-605,999	07 (53.8)	06 (46.2)	09 (60)	06 (40)
606 -696,999	03 (42.9)	04 (57.1)	02 (25)	06 (75)
	03 (42.9)	04 (57.1)	0 (0)	02 (100)
	χ^2=30.014, Df=7, p<0.05		χ^2= 17.868, Df = 7, p<0.05	

Source: Field survey, 2016

Table 4 revealed the socio-demographic barriers to utilization of modern MHCS in the study area. Maternal age is a significant factor influencing utilization of modern maternal healthcare services in most developing countries including Nigeria. The largest number of respondents who had utilized modern MHCS among the women were within the age ranges of 25 and 29 years (58% for urban and 55.9% for rural). The test of chi-square results for urban women (χ^2= 12.530, p>0.05) and rural women (χ^2= 4.313, p>0.05) implied that there is no statistical significant association between maternal age and utilization of modern MHCS for both categories of respondents in the study area.

Table 4 also revealed the influence of beliefs in supernatural protection of pregnancy on utilization of modern MHCS among the study population. However, larger percentage of the urban women (62.7%) and the rural women (52.4) reported that despite the belief in supernatural protection of pregnancy, they still utilize the modern maternal healthcare services for pregnancy-related care and childbirth. The chi square statistic showed a significant association between beliefs in supernatural protection of pregnancy and utilization of modern MHCS for both categories of respondents with urban women statistics showing (χ^2= 3.953, p<0.05) and for rural women (χ^2=9.785, p<0.05).

Women's relative lack of power and freedom to make decisions regarding pregnancy and childbirth is another barrier which influences utilization of modern MHCS among the urban and rural women. The chi square statistic indicates significant association between husband decision and utilization of modern MHCS for both categories of respondents with urban women statistics showing (χ^2= 9.135,p<0.05) and rural women revealing (χ^2=34.155, p<0.05).
The test of chi square for this study had shown no statistical significant

association between marital status of the women and utilization of modern maternal healthcare services in the study area. Chi square result revealed χ^2= 1.263, p>0.05 for the urban women, and χ^2=1.700, p>0.05 for the rural women.

Religion also play significant influences in utilization of modern MHCS in the study area. The chi square test showed a statistical significant association between religion and utilization of modern MHCS among the study population. Chi square results for the urban and rural respondents are χ^2= 13.271, p<0.05 and χ^2=12.493, p<0.05 respectively.

A significant association also exist between mother's education and utilization of modern MHCS among the study participants. The chi square results for the urban and rural women were χ^2=49.769p<0.05 and χ^2= 8.580, p<0.05 respectively, which implied that educational status of women in the present study is a socio-demographic barrier to utilization of modern MHCS among the study population.

Occupation of women was found not to have significant association in utilization of modern MHCS in the study for both categories of respondents with urban women statistics revealing(χ^2=4.826, p>0.05) and χ^2= 4.795, p>0.05 for rural women.The statistic in table 4, also confirmsa significant association between income and utilization of modern MHCS for both categories of respondents in the study. The chi square results revealed (χ^2=30.014, p<0.05) and (χ^2=17.868, p<0.05) for urban and rural women respectively. This also indicated an influence in utilization of MHCS among the women as earlier reported that low socioeconomic status of women is a major cause of maternal mortality, as it prevents many women from getting proper and adequate medical attention due to their inability to afford good antenatal care (Okeshola & Ismail, 2013).

Test of Research Hypotheses

The assumption underlying the test of hypothesis is that when p-value is less than 0.05, the null hypothesis denoted as H_0 is rejected, and the alternative hypothesis denoted as H_1 is accepted and we therefore conclude that there is a significant relationship between the variables tested. But when p-value is greater than 0.05 (p>0.05), the null hypothesis denoted as H_0 is accepted, and

the alternative hypothesis denoted as H_1 is rejected and we therefore conclude that there is no significant relationship between the variables tested.

Test of Hypothesis 1

H_0: There is no statistical significant association between age at marriage and knowledge of modern MHCS among the study population.
H1: There is statistical significant association between age at marriage and knowledge of modern MHCS among the study population.

The chi square test for the urban women on age at marriage and knowledge of modern MHCS as shown in table 3, showed (χ^2= 4.015, p>0.05). This implied a rejection of the alternative hypothesis, and acceptance of the null hypothesis for the urban women. Therefore, the study concluded that there is no statistical significant association between age at marriage and knowledge of modern MHCS for the urban women. On the contrary, chi square test for the rural women on age at marriage and knowledge of modern MHCS showed (χ^2 = 24.885, p<0.05). In this case, the alternative hypothesis denoted as H_1 is accepted, while the null hypothesis (H_0) is rejected, and thus, study conclude that a statistical significant association exists between age at marriage and knowledge of modern MHCS among the rural population

Test of Hypothesis 2

H_0: Urban women are not more likely to be knowledgeable on modern MHCS than the rural women
H1: Urban women are more likely to be knowledgeable on modern MHCS than the rural women

Findings in table 3 present this result. The findings showed that within maternal age 15-17 years, 83.3% of the urban women had knowledge of modern MHCS as against 65.2% of the rural women, while within age group 18-20 years, 71.4% of the urban women had knowledge of MHCS with only 42.4% of the rural women having knowledge of modern MHCS. Also, within the age group of 21-23 years, 55.6% of the urban women had knowledge of modern MHCS as against 34.9% of the rural women. And within the age group of 24 years and

above, 53.7% of the urban women had knowledge of modern MHCS as against 22.2% of the rural women.This result implied that urban women are more knowledgeable on MHCS than the rural women (table 3).

Test of Hypothesis 3

$H_{0:}$ There is no statistical significant associations between socio-demographic variables such as (mother's age, belief in supernatural protection of pregnancy, husband decision, religion, mother's education, occupation, and mother's income) and utilization of modern MHCS.
$H_{1:}$ There is a statistical significant association between socio-demographic variables (mother's age, belief in supernatural protection of pregnancy, husband decision, religion, mother's education, occupation, and mother's income) and utilization of modern MHCS.

The p-value for mother's age, marital status and occupation of respondents for both urban and rural women in the study is greater than 0.05 ($p>0.05$). This implied that there is no statistical significant association between these variables (mother's age, marital status and occupation) and utilization of modern MHCS. On the other hand, p-value for the variables (beliefs in supernatural protection of pregnancy, husband decision, religion, education, and income) for both urban and rural women were ($p<0.05$). It is thus concluded that a statistical significant association exist between these variables and utilization of modern MHCS. Data in table 4 presents the test of this hypothesis.

Discussion of Findings

Global effort to reduce maternal mortality is expected to occur through effective use of maternal healthcare services. This study examined the socio-demographic barriers to utilization of modern MHCS among reproductive age women utilizing the services of Traditional Birth Attendants (TBAs) in Southwestern Nigeria. Some major findings emerged from the analysis. First, all the women sampled used the services of TBAs, especially for Antenatal care (ANC), supporting earlier studies which reported that despite the available maternal health care services, reproductive age women in developing countries still patronize the services of TBAs (Ganle et al., 2015; Aziato and Omenyo,

2018) and indicating that TBAs have roles to play in reproductive health care in developing countries.

The adoption of TBAs' services especially for ANC, further suggests the possibility of exposure of the women to experience TBAs, which shape their reproductive health decision making as earlier documented in a research study (Jido et al., 2004). The consequence of continuous patronage of TBAs for pregnancy-related care and childbirth is low or non-utilization of modern MHCS in developing countries.

This study revealed that while bivariate analysis showed statistical significant associations between certain socio-demographic variables (belief in supernatural protection of pregnancy, husband decision, education, etc.) and utilization of modern MHCS among the reproductive age women, as earlier reported in other studies in developing countries, including Nigeria by Mathole et al.(2004), Ononokpono & Odimegwu, (2014), Ganle et al.(2015), andAkeju et al.(2016), bivariate analysis also showed no statistical significant association between someother variables such as (maternal age, occupation) and utilization of modern MHCS, as also indicated by Aremu et al (2011), and Al-Kandari & Al-Qashan (2010). This indicates that not all socio-demographic variables serve as predisposing or enabling factors to utilization of modern MHCS as suggested by Andersen and Newman behavioural model.

Husband's decision significantly influences utilization of modern MHCS in the present study. The result is consistent with a study in Nigeria and Ghana (Ononokpono & Odimegwu, 2014; Ganle, et al.,2015). This finding suggests the need to improve women's status and autonomy to make decision concerning them, particularly health decision.

A lack of understanding of cultural beliefs and practices results in a lack of support for the health system, thus, contributing to low utilization of maternal healthcare services as well as encouraging home delivering in the study area. Beliefs in supernatural protection of pregnancy which cannot be obtained in modern healthcare facilities significantly influence the women in this study as earlier documented in Zimbabwe and Nigerian studies (Mathole et al., 2004; Akeju et al., 2016).

Education is the key factor for improving quality of maternal health care and

access to and utilization of MHCS. Majority of the women for both categories of respondents had some formal education, however, not all the women had knowledge of modern MHCS, nor utilize the services. Thus, there is a need for guidance and counseling of the respondents on how to improve their health status during pregnancy and at delivery.

The study is consistent with previous studies (Shamaki& Buang, 2014; Solanke,et al., 2015) that showed significant association between religion and utilization of MHCS. But contrary to a study in North-Central Nigeria, which observed no significant association between religion and utilization of MHCS (Al-Mujtaba, et al., 2016).Religious practices sometimes deprive women of their rights to freedom of movement and right to take decision on issues affecting them(Pathfinder International, 2013), including health decisions, thus, limiting their access to MHCS. Religious beliefs offer greater opportunities to TBAs (Jido, et al., 2004) and faith-based healers (Maguranyanga, 2011) on matters relating to pregnancy and childbirth. This indicates that religion may be significant to the life of all the women, and negatively affectthe utilization of modern MHCS.

As earlier discussed, not all the socio-demographic variables showed significant association with utilization of modern MHCS in the study. This present study showed no statistical significant association between maternal age and utilization of modern MHCS for both urban and rural women in the study, $p>0.05$, and is consistent with a previous study (Aremuet al., 2011), whose finding reported no significant association between maternal age and facility delivery. But in contrast with other studies by Okutu (2011), Maguranyanga (2011), Nwosu et al (2012), Yar'zever & Said (2013), and Solanke et al (2015), whose findings reported significant association between maternal age and utilization of MHCS.The maternal age variable in modern health care utilization, not showing statistical significant association with utilization of modern MHCS in the study, may be attributed to the fact that majority of the respondents for the study were adults, and as a result have autonomy to take decisions relating to their health.

The study also showed no significant association between occupation of women and utilization of modern MHCS. This is consistent with a study conducted in

Kuwait where occupation was reported not to have significant influence on the use of MHCS by women (Al-Kandari & Al-Qashan, 2010). But contrary to studies in the Philippines (Kozhimannil, Valera & Ross-Degnan, 2009) and in Ghana (Yakong, Rush, Basset-Smith, Bottorff & Robinson, 2010)which revealed significant association between occupation and use of maternal services with civil servants and other professionals found to be more likely to use MHCS. Reasons for non-significant association between the occupation of the respondents and utilization of modern MHCS could be attributed to the fact that majority of the urban women were artisans, while the rural women were farmers. The occupation of both categories of respondents gave them the independence to decide whether to utilise or not to utilise modern MHCS at will, without any constraint which may result from work supervisor or boss as suggested by Andersen and Newman.

In spite of the patronage of the TBAs for pregnancy related cases and childbirth, some of the women still embark on utilization of modern MHCS. More than half of both the urban and the rural women complement the services of TBAs with modern health care services. Therefore supporting early findings that one's choice of particular health care service, is a function of one's belief and attitude about the effectiveness of the particular health care (Ganle et al., 2015). This finding also gave credibility to previous study which observed that some women took pre-natal care in the health care facilities and deflected to places where they could get free delivery, in churches, traditional birth attendants, among others (Iyaniwura & Yussuf, 2009).

A number of socio-demographic variables have significant associations with utilization of modern MHCS in this study (belief in supernatural protection of pregnancy, husband decision, religion, mother's education and income). However, maternal age, marital status, and occupation of women showed no significant association between these variables and utilization of modern MHCS. Therefore, achieving SDG 3.1 of improving health for all, particularly reducing MMR, through effective use of MHCS require effort to design maternal health programmes which will help to eliminate some of or all of these barriers.

Conclusion and Recommendation

The study showed that more than half of the urban women and of the rural women utilize more than a care giver for pregnancy-related care and delivery care, with more preference for TBAs. Based on these results, the study recommends public enlightenment of modern MHCS available in health institutions, and motivation of reproductive age women particularly, clients of TBAs in developing countries, on the need to utilize these services in order to improve their health, neonates and to avoid complications during pregnancy and at delivery. Finding also revealed patriarchal influence in utilization of MHCS, thus, the underlying barriers (husband decision) need to be addressed by involving husbands in maternal healthcare planningin order to educate them on appropriate health care seeking behaviour during their wives' pregnancies and at delivery.

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