

Utilization of Basic Essential Obstetric Care Services Among Bajun Women Attending Post Natal Clinic in Faza Division, Lamu County, Kenya

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ARTICLE	ABSTRACT
INFO	
Article history:	Purpose: The objective of the study was to establish the level of utilization of obstetric care services; to
Received Date:	establish factors promoting utilization of obstetric care services, and to identify factors hindering
28th May 2022	utilization of essential obstetric care services among Bajun women in the Faza Division.
Revised Date:	Methodology: The study was cross-sectional. Purposive and systematic sampling was used in getting
7 th June 2020	participants. The research instruments to be used were self-administered semi-structured questionnaires
Published Date	and Focused Group Discussions (FGDs). Chi-square values were used to test the significance of the
for Review:	association between the dependent and independent variables. Qualitative data from FGDs were
10 th June 2022	transcribed and analyzed by the thematic content analysis technique.
	Results: More than half of the respondents (95.6% (175)) indicated that obstetric services are important
	essential services while 4.4% (8) of them indicated that obstetric services are not important essential
Keywords:	services. More than half of the respondents, (74.4% (131)) indicated that they have ever been provided
Utilization level	with these services while 25.6% (45) of them indicated that they have never been provided with these
of essential	services. The findings also indicate that there was an insignificant association ($x^2 = 2.135a$, $p = 0.711$)
obstetric care	between age of the respondents, the level of education ($x^2 = 0.258$, $p = 0.612$) and ($X^2 = 1.144a$, $P =$
services,	0.887) between religion of the respondents and the utilization of essential obstetric care services. There
perceived	is thus, a high probability of utilization of essential obstetric care services (1.049, 2.045, 1.219 and 1.051
barriers	times respectively) for those women who have received the information about obstetric services from
hindering	mass media, the health care, parents and their teachers respectively compared to those who received
utilization of	information from their peers. For the women who were pregnant, the findings indicate a low probability
essential	of the utilization of essential obstetric care services for the women who sought pregnancy help from their
obstetric care	doctors and nurses/wives (0.357 and 0.102 times respectively). There is also a high probability of
services,	utilization of essential obstetric care services for those women who have ever been pregnant, those who
Labour and	have ever had complications during pregnancy, labour & delivery, those who seek help during their
Delivery	pregnancy complications and those who seek help from the hospital during their pregnancy
Experiences,	complications.
Pregnancy	Unique contributions to theory, policy and practice: Therefore, the study recommends the
experiences	intensification of knowledge to the women in Faza Division, Lamu County about the importance of
	utilization of essential obstetric services. This will help to reduce the cases of complications affecting
	mothers during pregnancy, labour and delivery and thus reduce the infant as well as the maternal
	mortality rate in the County.



1.0 INTRODUCTION

1.1 Background of the Study

Every day, an estimate of 830 women worldwide dies from preventable pregnancy and childbirth complications. Ninety-nine per cent of these deaths occur in low- and middle-income countries, with especially higher rates in the regions where women deliver at home without a skilled birth attendant (WHO, 2018). Although there has been an overall global decrease of 29% from the year 1990 to 2015, maternal mortality continues to be of concern, particularly in sub-Saharan Africa (Pande et al., 2015). In 2015, High-income countries had a maternal mortality ratio of 196 compared to 298 deaths in Low-middle income countries (Pande et al., 2015). For every maternal death globally, about 30 women suffer from an injury due to pregnancy complications, childbirth or abortion (Hussein et al., 2016; UNICEF, 2019). The latest estimate of the country's maternal mortality ratio as per the KDHS 2014 is 362 deaths per 100,000 live births. Lamu County is ranked among the five leading counties with over half of the deaths occurring during delivery (UNFPA, 2014).

The consequences of maternal mortality are profound ranging from an emotional loss to the family, poor nutrition, interrupted schooling and compromised neonatal and infant survival (WHO, 2013). A study done in western Kenya found that about 37% of live births to women who died of maternal causes survived till age 1 year, compared to 65% of live births to a matched sample of women who died of non-maternal causes and 93% of live births to surviving women (Pande et al; 2015). A qualitative study in Tanzania described the impact of maternal death on a range of survival, nutritional health and other intergenerational outcomes for children (Yamin et al., 2013). Most maternal deaths are preventable, yet women continue to die in the prime of their life (Hussein et al, 2012). This thesis aims to understand the utilization of essential obstetric care services in one part of rural Kenya.

The causes of maternal deaths are haemorrhage (25%), sepsis (15%), hypertensive diseases in pregnancy (12%), obstructed labour (8%), unsafe abortion (13%), other direct causes (8%), and indirect causes (20%) (Van Den Broek, 2007). Apart from these causes, the other influencing complications are physical accessibility, economic accessibility, quality of care and sociocultural factors (Lancet, 2014). These complications can be managed at any level of health care (Van Den Broek, 2007). The lifetime risk of a woman dying due to pregnancy or childbirth complications in Kenya is 1 in 38. The risk is unacceptably high as compared to that of other developing countries which stands at 1 in 180, and 1 in 4,900 in developed countries (WHO, 2018).

There have been several global, national and local initiatives to reduce maternal mortality. The international community has committed to improving maternal health by 2015 with millennium Development Goal (MDG) number five, which aims to reduce maternal mortality by three quarters. Even with this commitment, many countries have failed to implement effective programs to reduce maternal mortality; only 10 countries achieved MDG 5, Morocco being the only one in Africa (Lancet, 2016). Sustainable Development Goals (SDG) were adopted in 2015 to build on the momentum generated by MGDs and to position the global idea of maternal mortality within a continuum of programs aimed at improving maternal-child health (Lancet, 2016). In 1987, the safe motherhood initiative (SMI) was launched in Nairobi, Kenya. Its main goal was to reduce maternal



mortality and morbidity by one half by the year 2,000. The goal has not been achieved so far (Shiffman, 2006; Shiffman, 2007).

The Free Maternal Care program in public hospitals launched by the president in 2013 managed to reduce maternal mortality significantly (MOH, 2016). The beyond zero campaign was launched in 2014 by Kenya's First Lady to create awareness and raise funds to tackle maternal mortality and morbidity and improve child health (Mumah et al., 2014). Linda Mama program is the latest government initiative aimed at improving access and quality of maternal, newborn and child health care as well as attainment of sustainable Development Goals 1, 3 and 10 (MOH, 2016; Orangi et al., 2021). The Basic Emergency Obstetric Care services which include parenteral antibiotics, administration of oxytocic drugs, administration of anticonvulsants, manual removal of placenta, removal of retained products of conception and assisted vaginal delivery can significantly reduce maternal deaths in low resource settings if implemented effectively (Shiffman, 2007).

1.2 Statement of the problem

The World Bank has estimated that 74% of maternal deaths could be averted if all women had proper access and utilization to interventions that address complications of pregnancy and childbirth, especially emergency obstetric care (The World Bank, 2019). It is estimated that more than 50% of women in low- and middle-income countries continue to deliver at home, only 41 per cent of these deliveries are attended by traditional birth attendants, and clinical proficiency among these attendants varies widely (Ueno et al., 2009). In Kenya, 70% of women live in rural areas, 63.8% of this is attended by unskilled persons and therefore putting their lives further at risk of obstetric complications (KPDS, 2011).

Antenatal services are available in the majority of health facilities in Kenya, with a high utilization rate of 92% of women attending antenatal clinics at least once during pregnancy (MOH, 2015). In 2017, the utilization rate of ANC services in Lamu East stood at 61%, while a total of 40.2% of women delivered and utilized BEOC services in the same year (CHRD, 2017). However, utilization of emergency obstetric care services in the country is still low and women continue to die because of obstetric complications (Bhutta et al; 2010). Studies reveal that an increase in the supply and availability of maternal health care does not necessarily result in increased access or utilization of maternal health care requires both access and utilization of skilled health care professionals (Bradley & McAuliffe, 2009). The (2008) Demographic and Health Survey found that the highest proportions of maternal deaths are recorded in rural communities (Essendi et al., 2015).

A qualitative study done in the Gambia to assess access to emergency obstetric care revealed that women do seek and utilize these services, but because of a variety of problems encountered, appropriate care is often delayed. Disorganized health care with a lack of prompt response to emergencies is a major factor contributing to the high mortality rate (Cham, Sundby & Vangen, 2005). This study focused mainly on the access and not the utilization of essential obstetric care. Another qualitative study done in the Karnataka State of India to assess the utilization of maternal health care services and their determinants showed that there was an increase in hospital deliveries following the government's financial and material incentives such as small remuneration and basic



items (medium kit) for the care of the newborn (Vidler et al., 2016). The study also was too general as maternal health care services are many.

A woman's decision to seek and utilize emergency obstetric care services is not dependent on one factor, but instead the result of a complex combination of potential barriers that form the content for her decision-making, cultural beliefs being one of them (Bradley et al., 2015). Vilbig (2015) found that a person's cultural background can have a profound impact on health care. As a result, many thinkers in health care provision across disciplines attribute poor health outcomes to factors that are beyond the control of care providers but largely to inaccessible cultural systems (Lancet Commissions, 2014).

Despite the clear lack of essential amenities needed to provide basic emergency obstetric care, there has been little research to understand the challenges faced by health providers and service users (Essendi et al., 2015). Also, not many studies concerning Bajun culture have been done. This study aims to identify obstacles to the utilization of emergency obstetric care in Lamu. This is important in the proper planning, implementation and development of policies governing Reproductive health services.

1.3 Research Objective

To assess the utilization of essential (emergency) obstetric care services among Bajun women in Faza Division, Lamu County.

1.4 Specific Objectives

- i. To establish the utilization level of essential obstetric care services, and use among Bajun women in Faza Division, Lamu County.
- ii. To establish factors promoting utilization of essential obstetric care services among Bajun women in Faza Division, Lamu County.
- iii. To identify perceived barriers hindering utilization of essential obstetric care services among Bajun women in Faza Division, Lamu County.

2.0 LITERATURE REVIEW

2.1 Global overview of Essential Obstetric Care services

Globally, nearly 830 young healthy women die each day due to complications of pregnancy and childbirth (WHO, 2018). In 2013, there were approximately 289,000 maternal deaths worldwide, with a maternal mortality ratio (MMR) of 210 maternal deaths per 100,000 live births (UNICEF, 2014). Maternal survival has been at the centre of attention for the last few decades. The efforts began with the global Safe Motherhood Initiative (SMI) of 1987 launched in Nairobi and the International Conference on Population Development in Cairo (ICPD). The World Bank has estimated that 74% of maternal deaths could be averted if all women had proper access to and utilization of interventions that address complications of pregnancy and childbirth, especially emergency obstetric care (Wagstaff et al; 2017).

While the above knowledge exists, it is often not available to those most in need (WHO, 2005). Every year, an estimated 529,000 women worldwide die from complications of pregnancy and childbirth; that is one every minute. At least 80% of these deaths result from haemorrhage, sepsis, eclampsia, obstructed labour and complications of abortions of which they can be treated (Van den



Broek & Graham, 2009). Although there has been an overall global decrease of 29% from the year 1990 to 2015, maternal mortality continues to be of concern particularly in Sub-Saharan Africa (Pande et al; 2015). Women in developing countries are 23 times more likely to die because of pregnancy or childbirth-related complications than women in the developed region. This is due to many factors influencing the utilization of obstetric care services (Hussein et al, 2012; UNICEF 2014).

2.2 Utilization Level of essential obstetric care services

Adequate maternal health care requires both access and utilization of skilled health care professionals such as doctors, nurses or midwives, as well as necessary maternal health services such as antenatal care, postnatal care, emergency obstetric care, safe abortion and skilled birth assistance (Adegoke & Broek, 2009; Bhutta et al, 2010). Recent studies reveal that an increase in supply and availability of maternal health care does not necessarily result in increased access or utilization of emergency obstetric care services (PMNCH, 2006; Kitui, Lewis & Davey, 2013). The MMR in Kenya reduced slightly from 488 to 362 deaths per 100,000 live births (KDHS, 2014). This failure in reducing the MMR is likely related to the decline in the number of deliveries attended by skilled health care professionals and consequently underutilization of emergency obstetric care services (CBS& MOH, 2011). A study done by Montagu estimated that more than 50% of women in low-income countries continue to deliver at home, and 41% of these deliveries are attended by TBAs, therefore missing out on emergency obstetric care packages (Montagu et al., 2011).

3.0 RESEARCH METHODOLOGY

The study was cross-sectional. Purposive and systematic sampling was used in getting participants. The research instruments to be used were self-administered semi-structured questionnaires and Focused Group Discussions (FGDs). Quantitative data from questionnaires were checked daily for completeness and coded for appropriate computer entry. Quantitative data analysis was conducted using IBM SPSS 26.0 and involved univariate and bivariate analysis. Chi-square values were used to test the significance of the association between the dependent and independent variables. Qualitative data from FGDs were transcribed and analyzed by the thematic content analysis technique.

4.0 FINDINGS AND PRESENTATIONS

4.1 Response Rate

Table 1: Response Rate

Response	Frequency	Per cent (%)
Returned	202	71.89%
Unreturned	79	28.11%
Total	281	100.00%

Source: Research Data (2022)



A total of 281 questionnaires were administered to the eligible participants 202 of them responded to them correctly resulting in a 71.89% response rate. The returned questionnaires were eligible to be considered as data for the research.

4.2 Demographic Factors and the Utilization of essential obstetric care services

The study sought also to indicate the causal relationship between the variables. That is the extent of the effect of demographic factors on the utilization of essential obstetric care services.

4.2.1 Relationship between Age of the Respondents and Utilization of essential obstetric care services

The study sought also to indicate the causal relationship between the age of the respondents and the utilization of essential obstetric care services (Table 2).

Table 2: Relationship between Age of the Respondents and Utilization of essential obstetric care service

The religion of the Respondents	Utilization of essential obstetric care services			(OR)	$(\chi^2), P(\chi^2)$
_	Yes	No	Total	-	
Up to 18 years	11(8.5%)	7(15.6%)	18		2.135a, 0.711
19 - 25 years	473(6.2%)	14(31.1%)	61	0.468	
26 - 35 years	43(33.1%)	13(28.9%)	56	0.475	
36 - 45 years	24(18.5%)	9(20%)	33	0.589	
46 - 55 years	5(3.8%)	2(4.4%)	7	0.629	

The first category was used as a reference category Source: Research Data (2022)

The findings indicate that there was an insignificant association ($x^2 = 2.135a$, p = 0.711) between the age of the respondents and the utilization of essential obstetric care services. There is likewise a low probability of utilization of essential obstetric care services (0.468, 0.475, 0.589 and 0.629) times for those respondents who are between the years 19 and 25 years, 26 and 35 years, 36 and 45 years and the years 46 and 55 years respectively (Table 2).

4.2.2 Religion of the Respondents and the utilization of essential obstetric care services

The study sought also to indicate the causal relationship between the religion of the respondents and the utilization of essential obstetric care services (Table 3).

Table 3: Relationship between Religion of the Respondents and Utilization of essential obstetric care service

The religion of the Respondents	Utilization of essential obstetric care services			(OR)	$(\chi^2), \mathbf{P}(\chi^2)$
	Yes	No	Total	_	
No religion	2(1.5%)	1(2.3%)	3		1.144a, 0.887
Muslim	1(0.8%)	0	1	0.837	
Christian	8(6.1%)	3(6.8%)	11	0.754	
Traditional	118(90.1%)	40(90.9%)	158	0.999	



Hindu 2(1.5%) 0 2 0.571

The first category was used as a reference category Source: Research Data (2022)

The findings indicate that there was an insignificant association ($X^{2} = 1.144a$, P = 0.887) between the religion of the respondents and the utilization of essential obstetric care services. Those who are Muslims, Christians, Traditional and Hindus are less likely to utilize essential obstetric care services compared to those who have no religious affiliations (OR = 00.837, 0.754, 0.999 and 0.571 respectively (Table 3).

4.2.3 Education level and the utilization of essential obstetric care services

The study sought also to indicate the causal relationship between the education level of the respondents and the utilization of essential obstetric care services (Table 4).

Table 4: Relationship between	Education level an	d Utilization	of essential of	obstetric care
service				

Education level of Category the Respondents		Utilization of obstetric car	Total	(OR)	$(\chi^2), P(\chi^2)$	
	_	Yes	No	-		
Have you EVER attended school?	Yes	107(82.9%)	35(79.5%)	142	1	0.258, 0.612
	No	22(17.1%)	9(20.5%)	31	0.542	
Are you attending school now?	Yes	12(10.9%)	6(16.2%)	18	1	0.726, 0.394
	No	98(89.1%)	31(83.8%)	129	0.149	
What is the highest grade you completed?	less than grade 1	4(3.7%)	1(2.8%)	5	1	8.185, 0.085
*	Primary	42(38.5%)	21(58.3%)	63	1.208	
	Secondary	40(36.7%)	13(36.1%)	53	1.117	
	Technical	11(10.1%)	0	11	1.001	
	University	12(11%)	1(2.8%)	13	2.695	

The first category was used as a reference category Source: Research Data (2022)

The findings indicate that there was a significant association ($x^2 = 0.258$, p = 0.612) between the level of education and the utilization of essential obstetric care services. There is a low probability of the utilization of essential obstetric care services (OR = 0.542 and 0.149 times) for those respondents who have ever attended school and those who are currently attending school compared to those who are not in school and those who have never attended school. However, there is a high likelihood of utilization of essential obstetric care services by those respondents who have attained primary, secondary, technical and university education compared to those who have never attended school (OR = 1.208, 1.117, 1.001 and 2.695 respectively) (Table 4).



4.3 Knowledge of Essential Obstetric Services

The following section presents the findings on the knowledge of essential obstetric services among Bajun women in Faza Division, Lamu County. The discussion is in line to establish the factors promoting utilization of essential obstetric care services among Bajun women in Faza Division, Lamu County.

4.3.1 Have you ever heard of obstetric services?

Table 5 shows the findings of the respondents' knowledge of obstetric services. A total of 202 participants responded to the question.

Table 5: Have you ever heard of obstetric services?

Have you ever heard of obstetric services?	Frequency	Percent (%)
Yes	154	76.2
No	48	23.8
Total	202	100

Source: Research Data (2022)

More than half of the respondents (76.2% (154)) have ever heard of obstetric services while 23.8% (48) of them have never heard of obstetric services (Table 5).

4.3.2 What was the source of information on essential obstetric services?

Table 6 shows the findings of the respondents' source of information on essential obstetric services.

Table	7:	Have	vou	ever	heard	of	obstetric	services:	?
Lanc		IIu v C	you	CICI	ncara	UI	Obsterie	BUI VICUD	

What was the source of information on essential obstetric services?	Category	Frequency	Per cent (%)
Mass media	Yes	54	26.7
	No	148	73.3
Health care	Yes	59	29.2
	No	143	70.8
Peers	Yes	71	35.1
	No	131	64.9
Parents	Yes	13	6.4
	No	189	93.6
Schoolteacher	Yes	8	4
	No	194	96

Source: Research Data (2022)

Table 7 shows that 26.7% (54) of the respondents heard of obstetric services from mass media, 29.2% (59) of them heard of obstetric services from the healthcare they visited, 35.1% (71) of them heard of obstetric services from their peers, 6.4% (13) of them heard of obstetric services from their parents while 4% (8) of them heard of obstetric services from their school teachers.



4.3.3 Types of the essential obstetric services received

Table 8 shows the findings of the respondents who listed the types of essential obstetric services they received.

Table 8: What are those essential obstetric services?

What are those essential obstetric services?	Category	Frequency	Per cent (%)
Prevention of infections	Yes	35	17.3
	No	167	82.7
Prevention of conversion	Yes	9	4.5
	No	193	95.5
Prevention of bleeding	Yes	28	13.9
	No	174	86.1
Manual removal of placenta	Yes	7	3.5
	No	195	96.5
Removal of retained products	Yes	7	3.5
	No	195	96.5
Assisted vaginal delivery	Yes	15	7.4
	No	187	92.6
Blood transfusion	Yes	15	7.4
	No	187	92.6
Caesarean section	Yes No	24 178	11.9 88.1

Source: Research Data (2022)

Table 8 shows that 17.3% (35) of the respondents received obstetric services for the prevention of infections, 4.5% (9) of them received obstetric services for the prevention of conversion, 13.9% (28) of them received obstetric services for prevention of bleeding, 3.5% (7) of them received obstetric services about manual removal of placenta and removal of retained products respectively, 7.4% (15) of them received obstetric services about assisted vaginal delivery and blood transfusion respectively while 11.9% (24) of them received obstetric services about caesarean section.

4.4 Relationship between Source of information on essential obstetric services and Utilization of essential obstetric care services

The study sought also to indicate the causal relationship between the variables. That is the extent of the effect of labour and delivery experiences on the utilization of essential obstetric care services.

4.4.1 Source of information on essential obstetric services

The study sought also to indicate the causal relationship between the source of information on essential obstetric services and the utilization of essential obstetric care services (Table 9).



Source of information on essential obstetric	Categ	Utilization of essential teg obstetric care services			(OR)	$(\chi^2), P(\chi^2)$
services	ory	Yes	No	_		
Have you ever heard of obstetric services?	Yes	125(95.4%)	27(60%)	152	1	35.681a, 0.000
	No	6(4.6%)	18(40%)	24	10.689	
Mass media	No	94(71.8%)	32(71.1%)	126	1	.007a, 0.934
	Yes	37(28.2%)	13(28.9%)	50	1.049	
Health care	No	86(65.6%)	35(77.8%)	121	1	2.293a, 0.13
	Yes	45(34.4%)	10(22.2%)	55	2.045	
Peers	No	73(55.7%)	35(77.8%)	108	1	6.870a, 0.009
	Yes	58(44.3%)	10(22.2%)	68	0.497	
Parents	No	121(92.4%)	42(93.3%)	163	1	.046a, 0.831
	Yes	10(7.6%)	3(6.7%)	13	1.219	
School teacher	No	125(95.4%)	43(95.6%)	168	1	0.97, .001a
	Yes	6(4.6%)	2(4.4%)	8	1.051	

Table 9: Source of information on essential obstetric services

The first category was used as a reference category Source: Research Data (2022)

The findings indicate that there was a significant association ($x^2 = 35.681a$, p = 0.000) among Bajun women who have ever heard of obstetric services. There is a higher likelihood of utilization of essential services (10.689 times) by those women who have ever heard of essential services compared to those who have never heard of them. There is thus, a high probability of utilization of essential obstetric care services (1.049, 2.045, 1.219 and 1.051 times respectively) for those women who have received the information about obstetric services from mass media, the health care, parents and their teachers respectively compared to those who received information from their peers (0.497) (Table 9).

4.5 Utilization of essential obstetric care services

The following section presents the findings on the utilization of essential obstetric services among Bajun women in the Faza Division, Lamu County. This is in line to establish the utilization level of essential obstetric care services, and use among Bajun women in Faza Division, Lamu County.

4.5.1 Importance of the essential services

Table 10 shows the findings of the importance of essential services. A total of 183 participants responded to the question.



In your own opinion are essential services	Frequency	Percent (%)	Valid Percent (%)
important?			
Yes	175	86.6	95.6
No	8	4	4.4
Total	183	90.6	100
Non-responses	19	9.4	
Total	202	100	

Table 1: Are essential services important?

Source: Research Data (2022)

More than half of the respondents that is 95.6% (175) indicated that obstetric services are important essential services while 4.4% (8) of them indicated that obstetric services are not important essential services (Table 10).

4.5.2 Have you ever used/been provided with essential services?

Table 11 shows the findings of the respondents who have ever used/been provided with these services. A total of 176 participants responded to the question.

Have you ever used/been provided with these services?	Frequency	Per cent (%)	Valid Percent (%)
Yes	131	64.9	74.4
No	45	22.3	25.6
Total	176	87.1	100
Non-responses	26	12.9	
Total	202	100	

Table 11: Have you ever used/been provided with essential services?

Source: Research Data (2022)

More than half of the respondents, that is, 74.4% (131) indicated that they have ever been provided with essential services while 25.6% (45) of them indicated that they have never been provided with essential services (Table 11).

4.5.3 Influences of the use of essential services

Table 12 shows the findings of what influences the respondents' use of essential services.

Table 12: What influences the use of essential services?

What influences the use of essential services?	Category	Frequency	Percent (%)
Culture	Yes	60	29.7
	No	142	70.3
Accessibility	Yes	20	9.9
	No	182	90.1
Availability	Yes	10	5
	No	192	95
Affordability	Yes	18	8.9
	No	184	91.1



Quality of care	Yes	36	17.8
	No	166	82.2
Religion	Yes	40	19.8
	No	162	80.2
Peer pressure	Yes	16	7.9
	No	186	92.1
Mass media	Yes	20	9.9
	No	182	90.1
Lack of knowledge	Yes	84	41.6
	No	118	58.4

Source: Research Data (2022)

Table 12 shows that 29.7% (60) of the respondents indicated that culture influences their use of the essential services, 9.9% (20) of them indicated that accessibility influences their use of the essential services, 5% (10) of them indicated that availability influences their use of the essential services, 8.9% (18) of them indicated that affordability influences their use of the essential services, 17.8% (36) of them indicated that quality of care influences their use of the essential services, 19.8% (40) of them indicated that religion influences their use of the essential services, 7.9% (16) of them indicated that peer pressure influences their use of the essential services, 9.9% (20) of them indicated that peer pressure influences their use of the essential services, 9.9% (20) of them indicated that mass media influences their use of the essential services while 41.6% (84) of them indicated that lack of knowledge influences their use of the essential services.

4.5.4 Practices that hinder the utilization of these services

Table 13 shows the findings of what cultural practices hinder respondents' utilization of the essential services.

Which cultural practices hinder the utilization of these services?	Category	Frequency	Per cent (%)
Trust in TBA's	Yes	117	57.9
	No	85	42.1
Gender inequality	Yes	31	15.3
	No	171	84.7
Cultural conflicts	Yes	24	11.9
	No	178	88.1
Early marriages	Yes	20	9.9
	No	182	90.1
Labour outcomes	Yes	14	6.9
	No	188	93.1

Table 13: Which cultural practices hinder the utilization of these services?

Source: Research Data (2022)

Table 13 shows that 57.9% (117) of the respondents indicated that trust in TBAs hinders the utilization of the essential services, 15.3% (31) of them indicated that gender inequality hinders the utilization of the essential services, 11.9% (24) of them indicated that cultural conflicts hinder the utilization of the essential services, 9.9% (20) of them indicated that early marriages hinder the



utilization of the essential services while 6.9% (14) of them indicated that labour outcomes hinder the utilization of the essential services.

4.6 Labour and Delivery Experiences

This section presents the findings on the experiences the Bajun women in Faza Division, Lamu County has had during delivery and labour. This is in line to establish the perceived barriers hindering the utilization of essential obstetric care services among Bajun women in Faza Division, Lamu County.

4.6.1 Pregnancy experiences and utilization of essential obstetric care services

The study sought also to indicate the causal relationship between pregnancy experiences and the utilization of essential obstetric care services (Table 14).

Table 14: Relationship between pregnancy experiences and utilization of essential obstetric care services

Pregnancy Experiences	Category	Utilization of ess care se	Utilization of essential obstetric care services			$(\chi^2), P(\chi^2)$
		Yes	No			
Have you ever	No	3(2.3%)	7(15.6%)	10	1	
been pregnant?	Yes	128(97.7%)	38(84.4%)	166	1.789	10.999a, 0.001
Doctor	No	19(63.3%)	5(38.5%)	24	1	2.275a, 0.031
	Yes	11(36.7%)	8(61.5%)	19	0.357	
Nurse/midwife	No	6(6.9%)	2(9.5%)	8	1	.170a, 0.680
	Yes	81(93.1%)	19(90.5%)	100	0.102	
TBA	No	9(21.4%)	4(33.3%)	13	1	.724a, 0.395
	Yes	33(78.6%)	8(66.7%)	41	9.148	

The first category was used as a reference category Source: Research Data (2022)

The findings indicate that there was a significant association ($x^2 = 10.999a$, p = 0.001) among Bajun women who have ever been pregnant. There is thus, a high probability of utilization of essential obstetric care services (1.789) for those women who have ever been pregnant compared to those who have never been pregnant. For the women who were pregnant, the findings indicate a low probability of the utilization of essential obstetric care services for the women who sought pregnancy help from their doctors and nurses/wives (0.357 and 0.102 times respectively). However, there is a high probability of utilization of essential obstetric care services for the women who sought help from TBA (9.148 times) (Table 14).

4.6.2 Healthcare Complications During Pregnancy and Utilization of essential obstetric care services

The study sought also to indicate the causal relationship between healthcare complications during pregnancy and the utilization of essential obstetric care services (Table 15).



Table 15: Relationship between Healthcare Complications During Pregnancy and Utilization of essential obstetric care services

Healthcare Complications During	Category	Utilization of essential obstetric care services		Total	(OR)	$(\chi^2), P(\chi^2)$
Pregnancy	-	Yes	No	_		
Did you have any compilations during	Yes	50(40.7%)	7(18.9%)	57	1	5.857a, 0.016
your last pregnancy?	No	73(59.3%)	30(81.1%)	103	2.935	
Did you seek help for the complications?	Yes	47(92.2%)	8(72.7%)	55	1	3.411a, 0.065
-	No	4(7.8%)	3(27.3%)	7	4.406	
Where did you seek help?	Home	6(11.8%)	6(75%)	12	1	17.067a, 0.000
-	Hospital	45(88.2%)	2(25%)	47	0.004	
Where did you deliver following your last	Home	33(26.2%)	23(62.2%)	56	1	16.410a, 0.000
pregnancy?	Hospital	93(73.8%)	14(37.8%)	107	4.630	
Did someone help you during delivery?	Yes	120(96%)	34(91.9%)	154	1	1.026a, 0.311
	No	5(4%)	3(8.1%)	8	1.583	
Who helped you deliver?	Relative/friend	5(3.9%)	6(15.8%)	11	1	20.759a, 0.000
	TBA	32(25%)	20(52.6%)	52	0.538	
	Midwife/nurse/d octor	91(71.1%)	12(31.6%)	103	0.110	

The first category was used as a reference category

Source: Research Data (2022).

The findings indicate that there was a significant association ($x^2 = 10.999a$, p = 0.001) among Bajun women who have ever had any compilations during their last pregnancy. There was thus, a high probability of utilization of essential obstetric care services (1.789) for those women who have ever been pregnant compared to those who have never been pregnant. There was also a high likelihood of the utilization of essential services by the women who seek help during their pregnancy complications (4.406 times) compared to those who do not. There was also a high likelihood of the utilization of essential services by the women who seek help from the hospital during their pregnancy complications (4.630 times) compared to those who seek help at home.

There was also a high likelihood of the utilization of essential services by the women who seek help during their delivery (1.583 times) compared to those who do not. However, there is a low probability of the utilization of essential obstetric care services for the women who seek help during delivery from their TBA and midwife/nurse/doctor (0.538 and 0.110 times respectively) compared to those who seek help from their relatives and friends (Table 15).



4.6.3 Healthcare Complications During labour & delivery and Utilization of essential obstetric care services

The study sought also to indicate the causal relationship between healthcare complications during labour and delivery and the utilization of essential obstetric care services (Table 16).

 Table 16: Relationship between Healthcare Complications During labour & delivery and

 Utilization of essential obstetric care services

Healthcare Complications During		Utilization obstetric ca	of essential are services	-		
labour & delivery	Category	Yes	No	Total	OR	$(\chi^2), P(\chi^2)$
Were there any complications during	Yes	43(33.3%)	6(15.8%)	49	1	4.964a, 0.084
labour & delivery?	No	86(66.7%)	32(84.2%)	118	2.614	

The first category was used as a reference category Source: Research Data (2022)

The findings indicate that there was an insignificant association ($x^2 = 4.964a$, p = 0.084) among Bajun women who have ever had complications during labour and delivery. There was thus, a high probability of utilization of essential obstetric care services (2.614 times) for those women who have ever had complications during labour and delivery compared to those who have never had any complications (Table 16).

4.6.4 The type of healthcare complications during labour & delivery and Utilization of essential obstetric care services

The study sought also to indicate the causal relationship between the type of healthcare complications during labour and delivery and the utilization of essential obstetric care services (Table 17).

Table 17: Relationship between the type of healthcare complications during labour &	&
delivery and Utilization of essential obstetric care services	

Healthcare	Categ	Utilizat	Utilization of essential obstetric			(OR)	$(\chi^2), P(\chi^2)$
Complications	ory		care services			_	
During		C/%	Yes	No			
Pregnancy							
Heavy bleeding	Yes	С	9	2	11	1	5.249, 0.262
		%	100%	100%	100%		
	No	С	0	0	0	9.305	
		%	0.00%	0.00%	0.00%		
Prolonged	No	С	113	37	150		.634a, 0.426
labour >12hrs		%	90.40%	86.00%	89.30%		
	Yes	С	12	6	18	0.652	
		%	9.60%	14.00%	10.70%		
Vaginal tears	No	С	110	39	149		.188a, 0.665
		%	84.00%	86.70%	84.70%		
	Yes	С	21	6	27	0.640	



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36

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		%	16.00%	13.30%	15.30%		
Conversions	No	С	124	43	167		.056a, 0.813
		%	94.70%	95.60%	94.90%		
	Yes	С	7	2	9	0.910	
		%	5.30%	4.40%	5.10%		
Fever	No	С	127	44	171		.084a, 0.772
		%	96.90%	97.80%	97.20%		
	Yes	С	4	1	5	2.979	
		%	3.10%	2.20%	2.80%		
Stained liquor	No	С	126	44	170		.088a, 0.767
from the vagina		%	96.90%	97.80%	97.10%		
	Yes	С	4	1	5	1.489	
		%	3.10%	2.20%	2.90%		
Premature	No	С	127	43	170		.197a, 0.657
rupture of		%	96.90%	95.60%	96.60%		
membranes	Yes	С	4	2	6	4.925	
		%	3.10%	4.40%	3.40%		

The first category was used as a reference category Source: Research Data (2022)

The findings indicate that there was thus, a high probability of utilization of essential obstetric care services (9.305, 2.979, 1.489 and 4.925 times respectively) for those women who have had heavy bleeding, fever, stained liquor from the vagina and premature rupture of membranes respectively while there was a low probability of utilization of essential obstetric care services (0.652, 0.640 and 0.910 times respectively) for those women who have had prolonged labour >12hrs, vaginal tears and conversions respectively (Table 17).

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of the findings

5.1.1 Demographic characteristics

The findings also indicate that there was an insignificant association ($x^2 = 2.135a$, p = 0.711) between the age of the respondents and the utilization of essential obstetric care services. There was likewise a low probability of utilization of essential obstetric care services (0.468, 0.475, 0.589 and 0.629) times for those respondents who were between the years 19 and 25 years, 26 and 35 years, 36 and 45 years and the years 46 and 55 years respectively. Likewise, there was an insignificant association ($X^2 = 1.144a$, P = 0.887) between the religion of the respondents and the utilization of essential obstetric care services. Those who were Muslims, Christians, Traditional and Hindus were less likely to utilize essential obstetric care services compared to those who had no religious affiliations (OR = 00.837, 0.754, 0.999 and 0.571 respectively.

The findings indicate that there was a significant association ($x^2 = 0.258$, p = 0.612) between the level of education and the utilization of essential obstetric care services. There was a low probability of the utilization of essential obstetric care services (OR = 0.542 and 0.149 times) for



those respondents who have ever attended school and those who are currently attending school compared to those who are not in school and those who have never attended school. However, there is a high likelihood of utilization of essential obstetric care services by those respondents who have attained primary, secondary, technical and university education compared to those who have never attended school (OR = 1.208, 1.117, 1.001 and 2.695 respectively).

5.1.2 Knowledge of Essential Obstetric Services

More than half of the respondents have ever heard of obstetric services while of them have never heard of obstetric services. The findings also show that 26.7% (54) of the respondents heard of obstetric services from mass media, 29.2% (59) of them heard of obstetric services from the healthcare they visited, 35.1% (71) of them heard of obstetric services from their peers, 6.4% (13) of them heard of obstetric services from their services from their parents while 4% (8) of them heard of obstetric services for the prevention of infections, 4.5% (9) of them received obstetric services for the prevention of conversion, 13.9% (28) of them received obstetric services for prevention of bleeding, 3.5% (7) of them received obstetric services about manual removal of placenta and removal of retained products respectively, 7.4% (15) of them received obstetric services about caesarean section.

The findings indicate that there was a significant association ($x^2 = 35.681a$, p = 0.000) among Bajun women who have ever heard of obstetric services. There was thus, a high probability of utilization of essential obstetric care services (1.049, 2.045, 1.219 and 1.051 times respectively) for those women who have received the information about obstetric services from mass media, the health care, parents and their teachers respectively compared to those who received information from their peers (0.497).

5.1.3 Utilization of essential obstetric care services

More than half of the respondents (95.6% (175)) indicated that obstetric services are important essential services while 4.4% (8) of them indicated that obstetric services are not important essential services. More than half of the respondents, (74.4% (131)) indicated that they have ever been provided with these services while 25.6% (45) of them indicated that they have never been provided with these services.

The findings indicate that 29.7% (60) of the respondents indicated that culture influences their use of the essential services, 9.9% (20) of them indicated that accessibility influences their use of the essential services, 5% (10) of them indicated that availability influences their use of the essential services, 8.9% (18) of them indicated that affordability influences their use of the essential services, 17.8% (36) of them indicated that quality of care influences their use of the essential services, 19.8% (40) of them indicated that religion influences their use of the essential services, 7.9% (16) of them indicated that peer pressure influences their use of the essential services, 9.9% (20) of them indicated that peer pressure influences their use of the essential services, 9.9% (20) of them indicated that peer pressure influences their use of the essential services, 9.9% (20) of them indicated that mass media influences their use of the essential services while 41.6% (84) of them indicated that lack of knowledge influences their use of the essential services.

57.9% (117) of the respondents indicated that trust in TBAs hinders the utilization of the essential services, 15.3% (31) of them indicated that gender inequality hinders the utilization of the essential



services, 11.9% (24) of them indicated that cultural conflicts hinder the utilization of the essential services, 9.9% (20) of them indicated that early marriages hinder the utilization of the essential services while 6.9% (14) of them indicated that labour outcomes hinder the utilization of the essential services.

5.1.4 Labour and Delivery Experiences

More than half of the respondents that is 95% (192) indicated that they have ever been pregnant while 5% (10) of them indicated that they have never been pregnant (Table 4.18). More than half of the respondents that is 95% (192) indicated that they have ever been pregnant while 5% (10) of them indicated that they have never been pregnant (Table 4.19). The findings indicated that 33.5% (62) indicated that they have ever had any compilations during their last pregnancy while 85.3% (58) indicated that whenever they had compilations during their last pregnancy, they sought help for the complications.

The findings indicated that the majority of the respondents (82.1% (160)) indicated that they experienced live births, with 10.3% (20) of them experiencing stillbirths (Table 4.28). In the event of compilations during pregnancy, 23.4% (15) of the respondents that are indicated that they sought help from home while 76.6% (49) indicated that they sought help from hospitals. 41% (77) indicated that they delivered their last babies at home while 59% (111) indicated that they delivered their babies in hospitals. Likewise, 94.7% (178) of the respondents that are indicated that they got help during their delivery while 76.6% (49) indicated that they sought help from their homes (Table 4.22). The findings also indicated that 28.6% (55) of the respondents have ever had any compilations during their labour & delivery while 71.4% (137) indicated that have never had any compilations during their labour & delivery.

For the respondents who indicated the presence of complications during labour & delivery, 7.9% (16) of them indicated that they have ever had compilations related to heavy bleeding, 15.8% (32) indicated that they have ever had compilations related to prolonged labour that is more than 12 hours, 5% (10) indicated that they have ever had compilations related to vaginal tears, 2.5% (5) indicated that they have ever had compilations related to convulsions, 3% (6) indicated that they have ever had compilations related to premature rupture of membranes (2) indicated that they have ever had compilations related to premature rupture of membranes (Table 4.26). To that extent, only 0.5% (1) of the respondents indicated that they received essential services related to the prevention of bleeding, 1% (2) indicated that they received essential services related to the prevention of bleeding, 1% (2) indicated that they received essential services related to assisted vaginal delivery, 0.5% (1) indicated that they received essential services related to blood transfusion and caesarean section respectively.

The findings indicate that there was a significant association ($x^2 = 10.999a$, p = 0.001) among Bajun women who have ever been pregnant. There was thus, a high probability of utilization of essential obstetric care services (1.789) for those women who have ever been pregnant compared to those who have never been pregnant. For the women who were pregnant, the findings indicate a low probability of the utilization of essential obstetric care services for the women who sought pregnancy help from their doctors and nurses/wives (0.357 and 0.102 times respectively).



However, there was a high probability of utilization of essential obstetric care services for the women who sought help from TBA (9.148 times).

The findings indicate that there was a significant association ($x^2 = 10.999a$, p = 0.001) among Bajun women who have ever had any compilations during their last pregnancy. There was thus, a high probability of utilization of essential obstetric care services (1.789) for those women who have ever been pregnant compared to those who have never been pregnant. There was also a high likelihood of the utilization of essential services by the women who seek help during their pregnancy complications (4.406 times) compared to those who do not. There was also a high likelihood of the utilization of essential services by the women who seek help from the hospital during their pregnancy complications (4.630 times) compared to those who seek help at home. There was also a high likelihood of the utilization of essential services by the women who seek help at home. There was also a high likelihood of the utilization of essential services by the women who seek help at home. There was also a high likelihood of the utilization of essential services by the women who seek help during their delivery (1.583 times) compared to those who do not. However, there is a low probability of the utilization of essential obstetric care services for the women who seek help during delivery from their TBA and midwife/nurse/doctor (0.538 and 0.110 times respectively) compared to those who seek help from their relatives and friends.

The findings indicate that there was an insignificant association ($x^2 = 4.964a$, p = 0.084) among Bajun women who have ever had complications during labour & delivery. There was thus, a high probability of utilization of essential obstetric care services (2.614 times) for those women who have ever had complications during labour & delivery compared to those who have never had any complications. The findings also indicate that there was thus, a high probability of utilization of essential obstetric care services (9.305, 2.979, 1.489 and 4.925 times respectively) for those women who have had heavy bleeding, fever, stained liquor from the vagina and premature rupture of membranes respectively while there was a low probability of utilization of essential obstetric care services (0.652, 0.640 and 0.910 times respectively) for those women who have had prolonged labour >12hrs, vaginal tears and conversions respectively.

5.2 Conclusions

The study concludes that there is a high level of knowledge about obstetric services as indicated by the 76.2% level of awareness. This is also supported by knowledge from mass media, healthcare, their peers, parents and their school teachers. The study, therefore, concludes that there is a higher likelihood of utilization of essential services by those women who have ever heard of essential services compared to those who have never heard of them. There is also a high probability of utilization of essential obstetric care services for those women who have received the information about obstetric services from mass media, the health care, parents and their teachers respectively compared to those who received information from their peers.

Given the 74.4% level of utilization of essential obstetric care services in the county, the study concludes that there is a higher utilization rate of essential obstetric care services. This is because the majority of the women in the County perceive, obstetric services to be of importance However, this leaves room for more exploration to optimize the utilization of essential obstetric care services. Furthermore, the study concludes that trust in TBAs, gender inequality, cultural conflicts, 9 early marriages and labour outcomes are among the factors that hinder the utilization of the essential services.



The study also concludes that about 33.5% of the women have ever had any compilations during their last pregnancy while 28.6% of them have ever had any compilations during their labour & delivery. The majority of the women who get pregnancy compilations always seek help with the majority of them seeking help from the nurses/midwives and TBA during their ANC attendance. However, the majority of them seek help from their homes. Some of the complications had during pregnancy and delivery include heavy bleeding, prolonged labour vaginal tears, conversions, fever and stained liquor from the vagina as well as premature rupture of membranes.

To that effect, there is a high likelihood of the utilization of essential services by the women who seek help during their pregnancy complications compared to those who do not. There is also a high likelihood of the utilization of essential services by the women who seek help from the hospital during their pregnancy and delivery complications compared to those who seek help at home. However, there is a low probability of the utilization of essential obstetric care services for the women who seek help during delivery from their TBA and midwife/nurse/doctor compared to those who seek help from their relatives and friends.

5.3 Recommendations

Since the findings found that more than half of the respondents have ever heard of obstetric services, there was a case of 25.6% indicating a lack of utilization of essential obstetric services among Bajun women in Faza Division, Lamu County. Therefore, the study recommends the intensification of knowledge to the women in Faza Division, Lamu County about the importance of utilization of essential obstetric services. This will help to reduce the cases of complications affecting mothers during pregnancy, labour and delivery and thus reduce the infant as well as the maternal mortality rate in the County. The study recommends the Ministry of Health and healthcare practitioners in Lamu County intensify the programmes about the importance of essential services to women. These services can also be made available to the women in their homes to help them maximize the benefits of healthy birth outcomes.

REFERENCES

- Adegoke, A. A., & Van Den Broek, N. (2009). Skilled birth attendance lessons learnt. *BJOG: An International Journal of Obstetrics & Gynaecology*, 116, 33-40.
- Bradley, S., & McAuliffe, E. (2009). Mid-level providers in emergency obstetric and newborn health care: factors affecting their performance and retention within the Malawian health system. *Human resources for health*, 7(1), 1-8.
- Bradley, S., Kamwendo, F., Chipeta, E., Chimwaza, W., de Pinho, H., & McAuliffe, E. (2015). Too few staff, too many patients: a qualitative study of the impact on obstetric care providers and quality of care in Malawi. *BMC pregnancy and childbirth*, *15*(1), 1-10.
- Cham, M., Sundby, J., & Vangen, S. (2005). Maternal mortality in rural Gambia, a qualitative study on access to emergency obstetric care. *Reproductive health*, 2(1), 1-8.
- Essendi, H., Johnson, F. A., Madise, N., Matthews, Z., Falkingham, J., Bahaj, A. S., ... & Blunden,
 L. (2015). Infrastructural challenges to better health in maternity facilities in rural Kenya: community and health worker perceptions. *Reproductive health*, 12(1), 1-11.



- Free maternal care program. (2016). *Free maternal care program*. https://www.health.go.ke/wp-content/uploads/2018/11/implementation-manual-softy-copy-sample.pdf
- Hussein, J., Hirose, A., Owolabi, O., Imamura, M., Kanguru, L., & Okonofua, F. (2016). Maternal death and obstetric care audits in Nigeria: a systematic review of barriers and enabling factors in the provision of emergency care. *Reproductive health*, *13*(1), 1-11.
- Kitui, J., Lewis, S., & Davey, G. (2013). Factors influencing place of delivery for women in Kenya: an analysis of the Kenya demographic and health survey, 2008/2009. *BMC pregnancy and childbirth*, 13(1), 1-10.
- Lancet (2016). *Maternal Health 2016 The Lancet*. https://www.thelancet.com/series/maternalhealth-2016
- Montagu, D., Yamey, G., Visconti, A., Harding, A., & Yoong, J. (2011). Where do poor women in developing countries give birth? A multi-country analysis of demographic and health survey data. *PloS one*, *6*(2), e17155.
- Orangi, S., Kairu, A., Ondera, J., Mbuthia, B., Koduah, A., Oyugi, B., ... & Barasa, E. (2021). Examining the implementation of the Linda Mama free maternity program in Kenya. *The International Journal of Health Planning and Management*, *36*(6), 2277-2296.
- Pande, R. P., Ogwang, S., Karuga, R., Rajan, R., Kes, A., Odhiambo, F. O., ... & Schaffer, K. (2015). Continuing with "... a heavy heart"-consequences of maternal death in rural Kenya. *Reproductive health*, 12(1), 1-12.
- Shiffman, J. (2007). Generating political priority for maternal mortality reduction in 5 developing countries. *American journal of public health*, 97(5), 796-803.
- Shiffman, J., & Garcés del Valle, A. L. (2006). Political history and disparities in safe motherhood between Guatemala and Honduras. *Population and Development Review*, *32*(1), 53-80.
- The World Bank. (2019). *Maternal mortality ratio (modelled estimate, per 100,000 live births)*. https://data.worldbank.org/indicator/SH.STA.MMRT
- Ueno, E., Adegoke, A. A., Masenga, G., Fimbo, J., & Msuya, S. E. (2015). Skilled birth attendants in Tanzania: a descriptive study of cadres and emergency obstetric care signal functions performed. *Maternal and child health journal*, *19*(1), 155-169.
- UNICEF (2019). *Maternal mortality*. https://data.unicef.org/topic/maternal-health/maternal-mortality/
- Van Den Broek, N. (2007). Life-saving skills manual: essential obstetric and newborn care. RCOG.
- Van den Broek, N. R., & Graham, W. J. (2009). Quality of care for maternal and newborn health: the neglected agenda. *BJOG: An International Journal of Obstetrics & Gynaecology*, *116*, 18-21.
- Vidler, M., Ramadurg, U., Charantimath, U., Katageri, G., Karadiguddi, C., Sawchuck, D., ... & Mallapur, A. (2016). Utilization of maternal health care services and their determinants in Karnataka State, India. *Reproductive health*, *13*(1), 55-65.



- WHO (2018). *Maternal mortality WHO / World Health Organization*. https://www.who.int/news-room/fact-sheets/detail/maternal-mortality
- WHO (2014). *Global Maternal Newborn, Child and Adolescent Health policy indicator database.* https://www.who.int/data/maternal-newborn-child-adolescent-ageing/national-policies
- World Health Organization. (2003). *Managing complications in pregnancy and childbirth. Integrated management of pregnancy and childbirth. Geneva:* WHO.
- World Health Organization. Pregnancy, childbirth, Postpartum and Newborn Care. A Guide for Essential practice. Integrated management of pregnancy and childbirth. Geneva: WHO; 2003
- Yamin, A. E., & Boulanger, V. M. (2013). Embedding sexual and reproductive health and rights in a transformational development framework: lessons learned from the MDG targets and indicators. *Reproductive Health Matters*, 21(42), 74-85.