

Factors Affecting Utilization of Child Delivery Services Among Multiparous Women in Oshana Region, Namibia.

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Abstract

Giving birth in a medical institution, under the care and supervision of trained health-care providers, reduces the risk of maternal mortality and promotes child survival. Despite efforts by the Namibian government, through the Ministry of Health and Social Services, to promote delivery at health facilities by pregnant women, a big number women still give birth at home. This study was conducted to investigate factors that might be affecting utilization of antenatal and delivery care services among multiparous women in three health facilities in Oshana region of Namibia i.e. Oshakati Intermediate Hospital, Ongwediva and Old Nick health centres.

Methods: This was a quantitative cross-sectional study. A total of 142 multiparous women were conveniently recruited while attending postnatal care services at Oshakati Intermediate hospital, Ongwediva and Old Nick health centres in Oshana region Namibia. A structural questionnaire comprising of two sections was used. Section A of the questionnaire focused on socio-demographic information while section B focused on obstetric characteristics. Epi-info version 7 was used to analyse the data.

Results: Of the 142 women who participated in the study 71 (50%) delivered in the health facilities and 71 (50%) delivered at home. The mean age of women who delivered at home was 28.13 years while the mean age of those who delivered in the health facilities was 33.15 years. 77.5% of the participants who delivered from health facilities had secondary or tertiary education. In comparison only 45% of participants who delivered at home had post-primary education. Only 32.4% of women who delivered at home had at least 4 antenatal visits, compared to 86% of those who delivered in the health facilities. Distance to the health facilities was the major factor affecting reproductive health services in this region of Namibia.

Keywords: Traditional birth attendant, reproductive health services, skilled birth attendant, multiparous women, home delivery, hospital delivery, antenatal care, postnatal care

1. Introduction

In almost all societies and throughout history, pregnancy and childbirth has been recognised as a time of increased vulnerability, during which mothers and babies require support, especially from skilled birth attendants or midwives. The midwife provides continuous care during labour and delivery, encouraging mothers to remain upright for labour and birth. She provides

continuous support throughout labour and birth process and massage for labour management (Cheyne, 2015). To fully benefit from these interventions, it is important that a pregnant woman enrol in ANC as early as possible during pregnancy preferably during the first trimester. The presence of skilled birth attendants and access to essential obstetric care during the delivery process has been shown to reduce global maternal mortality and morbidity rates, as well as neonatal mortalities and morbidities (Sialubanje et al, 2015). Maternal complications and poor perinatal outcome are highly associated with poor utilization of skilled maternal health care services and are considered to be the leading cause of deaths and disabilities for women aged 15-45 in developing countries (Sialubanje et al, 2015).

World Health Organization (WHO) estimates that more than half a million women lose their lives in the process of reproduction worldwide yearly, 99 percent of which often from developing countries. Sub-Saharan Africa is responsible for more than 50 per cent of maternal deaths occurring in developing countries. For every 26 mothers, one mother dies as a result of pregnancy and childbirth in Sub-Saharan Africa. Of the 40 countries with the world highest rate of maternal deaths, 30 are from Sub-Saharan Africa (WHO, 2016).

In some developing countries, including Namibia, many women's preferred place of delivery continue to be their homes, often with unskilled attendants in spite of the availability of institutional delivery services. This preference for home deliveries jeopardises these women's and their babies' lives and wellbeing (World Health Organisation (WHO), 2014). In Namibia the maternal mortality ratio was 200 per 100,000 live births in the year 2014 (WHO) and this reduced by only 5 to 195 deaths per 100,000 live births by 2017. Neonatal mortality is also high (19 deaths per 1000 live births) accounting for 52% of under 5 mortality (WHO, 2014).

Maternal and child health care services in Namibia are provided by the government through the Ministry of Health and Social Services (MoHSS) in the public health facilities and by private practitioners. Despite efforts by the Namibian government to promote delivery at health facilities by pregnant women, a big number of women still deliver at home. One can be concerned on about the underlying factors that hinder women from utilizing the available maternal and childcare services. At the global scale these factors include inadequate availability of health infrastructure and resources, societal norms and attitudes of community and service providers (Jat, Nawi & Sebastian, 2011). In India, women in urban areas reported high cost as the hindering factor, while women in rural areas felt that it is not necessary to deliver in health facilities (Digambar, Chimankar & Sahoo, 2011). In Africa, it was concluded that factors associated with low utilization of service delivery are poor quality health services, cost of health care, socio-cultural practices, and poor knowledge (Mulama, 2015).

This study was undertaken to investigate the factors that might affecting utilization of child delivery care services among multiparous women in Oshana region, Namibia.

2. Research Design and Methods

2.1 Design: This was a quantitative, cross sectional study investigating factors related to utilization and non-utilization of health facility of giving birth by multiparous and grand-

multiparous women in the Oshana region of Namibia. Oshana region is in the northern part of Namibia.

2.2 Ethical Considerations: Ethical approval to carry out the study was obtained from the University of Namibia, and permission to carry out research on human subjects in public health units was obtained by the Ministry of Health and Social Services of Namibia. Confidentiality was ensured by using participants initial and not names and participation was voluntary.

2.3 Study Population: This study included multiparous and grand-multiparous women who attended maternal and child health care services at Oshakati Intermediate Hospital, Ou Nick health Centre and Ongwediva health Centre between March to August 2017 inclusive.

2.4 Inclusion criteria: All women who have attended postnatal services at the specified health facilities during the first six weeks after delivery and those who delivered at these health facilities as well as those who did not deliver at these health facilities but attended post-natal care services at these health facilities within the five months after delivery were enrolled into the study. The study also included multiparous who brought their children for other services.

2.5 Exclusion criteria: Women who could not consent to the study either because they are too sick or unwilling to participate in the study were excluded. The study also excluded mothers who did not have antenatal cards or child health passports. Those who attended post-natal services at other health facilities were also excluded.

2.6 Sampling and Sample size: Convenience sampling was used to enroll women as they attended post-natal clinics, for a period of six months (March-August 2017). The sample size was calculated using Epi info version 3.5 for cross-sectional descriptive design where a woman's experience/attitude (negative vs positive) with Institutional delivery is taken as exposure factor and place of delivery (health facility vs home) as outcome factor. With an expected frequency of the unfavorable outcome (home delivery) in the unexposed (positive experience) of 30% at an Unexposed to Exposed population ratio of 1:1, a total number of 142 multiparous women from 466 of target population were selected in order to get an odds ratio 2.5 with a study power of 80% at 95% confidence level.

2.7 Data collection: Structured questionnaire was used to collect the required information. The Data were collected by the researcher in English for those who could understand English. However, for the participants who could not speak English, they were interviewed in their local Oshiwambo language and the researcher interpreted and completed the questionnaire in English for them.

2.8 Data Analysis: The data entered by into a database created with Microsoft Excel 2010 version and analyzed using the Epi- info statistical package.

3. Results

The age range of participants was between 17-45 years with a mean age of 30.6 years and a standard deviation (SD) of 6.59 years. Women who had home delivery were in the age range of

17-43 years with a mean age of 28.13 years (SD 6.0 years) while those who delivered in the health facility were in the age range of 22-45 years, with a mean age of 33.15 years (SD 6.2 years).

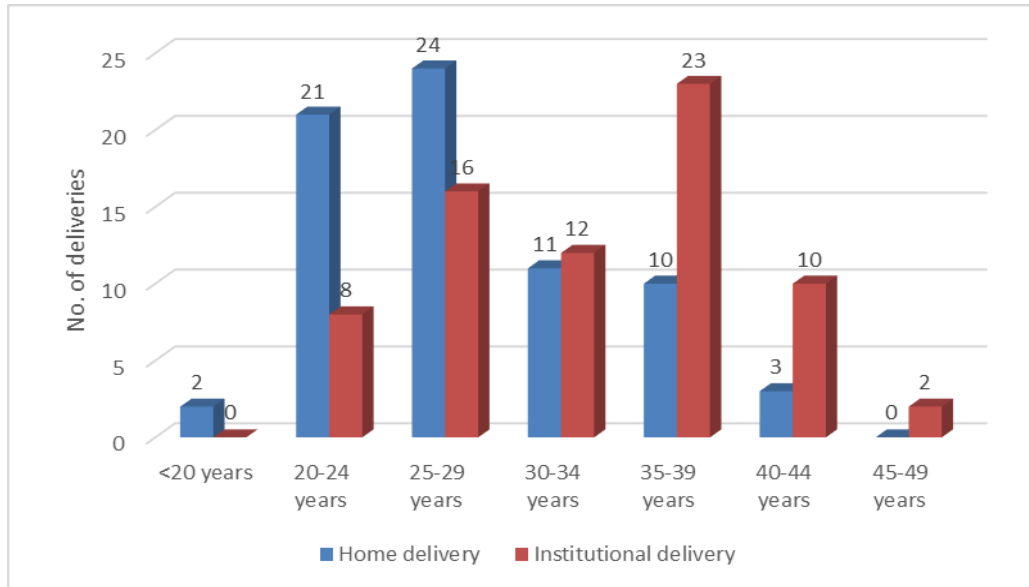


Figure 1: Age distribution of participants and place of delivery

Majority (33.8%) of the women who delivered at home were aged 25-29 years while majority (32.4%) of those who delivered in the health facilities were those aged 35-39 years. 38.7% (24) of women above the age of 30 years delivered at home.

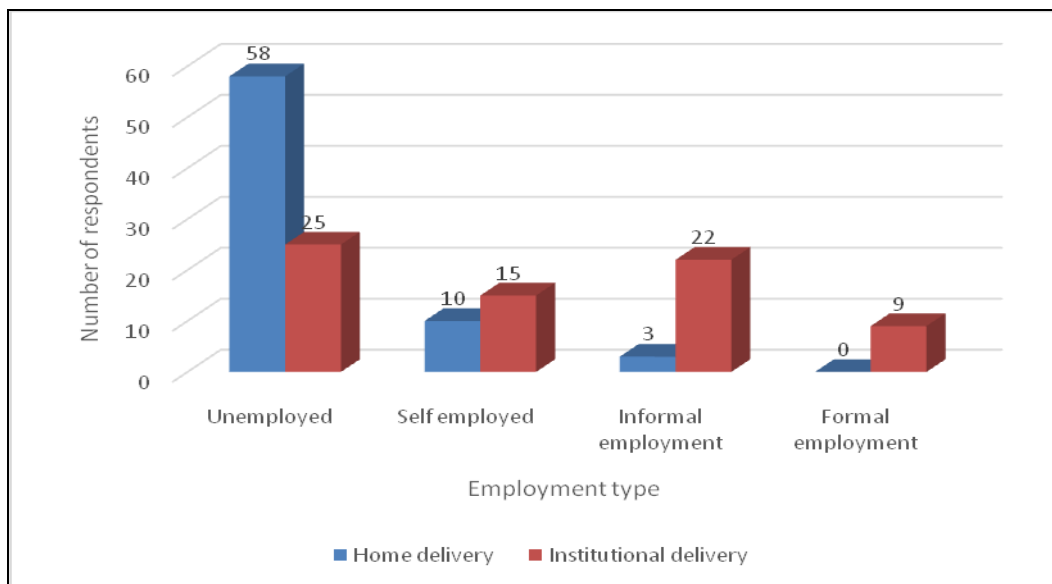


Figure 2: Employment categories of participants

Majority of the women 81.7% (58) who delivered at home were unemployed while the rest were either self-employed or employed in the informal sector and none of them had formal employment. 64.8% (46) of the employed women had their deliveries in health facilities

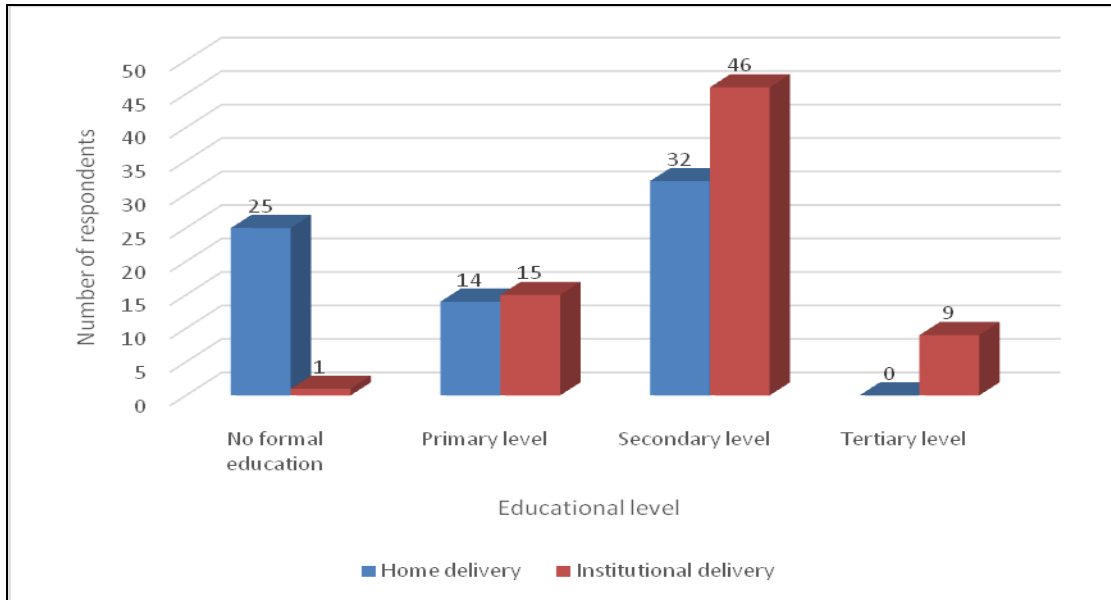


Figure 3: Education level of participants and place birth

96.2% (25) of women who delivered at home had no formal education; 60.3% (70) of women who delivered in health units had at least primary education, 47.4% (55) of whom had secondary education and above.

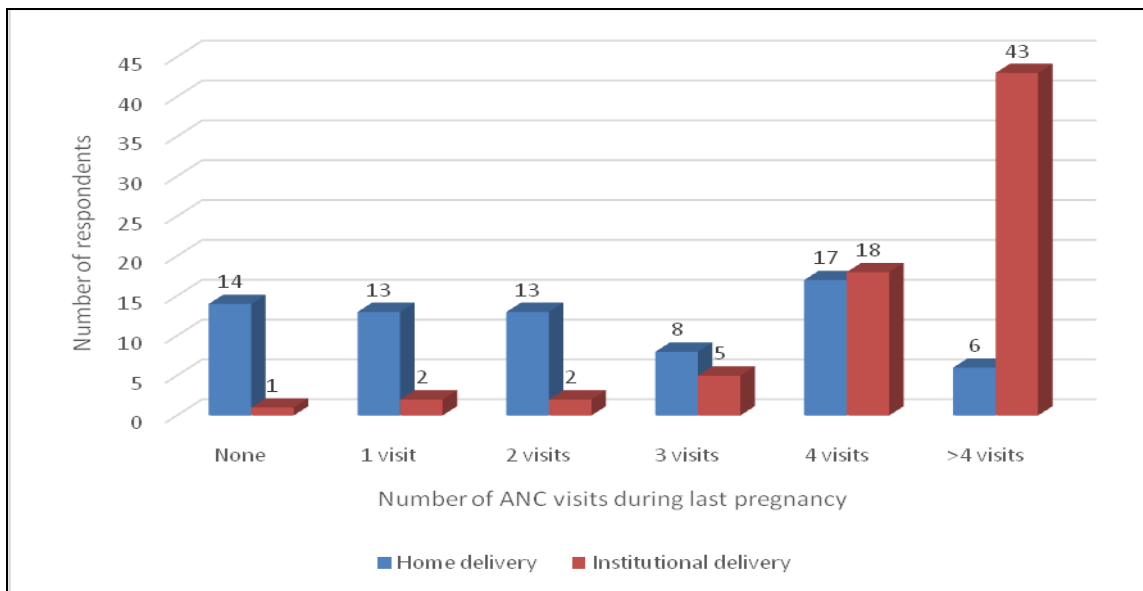


Figure 4: Number of ANC visits in relation to place of delivery

82.8% (48) of women who had less than 4 antenatal visits delivered at home of whom 31.3% (15) did not attend antenatal clinic at all. 27.4% (23) of women who attended ANC at least 4 times delivery at home.

Characteristic	Strata	Home delivery		Institutional delivery		Total	
		No.	%	No.	%	No.	%
Attendant at last delivery	Skilled	3	4.23	62	87.32	65	45.77
	Semi-skilled	7	9.86	9	12.68	16	11.27
	Unskilled	47	66.20	0	0	47	33.10
	No attendance	14	19.72	0	0	14	9.86
	Total	71	100	71	100	142	100
Type of delivery	Normal vaginal delivery	68	95.8	61	85.9	129	90.8
	Caesarian section	0	0	10	14.1	10	7.0
	Assisted delivery	3	4.2	0	0	3	2.1
	Total	71	100	71	100	142	100

Table 1: Type of delivery, place of delivery and attendant at delivery

		Place of delivery of last pregnancy					
		Home		Health facility		Total	
		Number	%	Number	%	Number	%
Place of previous deliveries	Home	6	8.5	0	0	6	4.2
	Health Facility	45	63.4	60	84.5	105	73.9
	Both	20	28.2	11	15.5	31	21.8
Total		71	100	71	100	142	100

Table 2: Relationship between places of delivery of last pregnancy to place of delivery of previous pregnancy

Characteristics	Strata	Home deliveries		Institutional deliveries		Odds Ratio	95% CI	Sig. test and p-value
		No.	%	No.	%			

Age	<= 29	47	66.2	24	33.8	3.8	1.9-7.7	14.8, p-value <0.01
	30+	24	33.8	47	66.2			
	Total	71	100	71	100			
Marital status	Unmarried	48	67.61	39	54.93	1.71	0.86-3.41	2.39, p-value = 0.06
	Married	23	32.39	32	45.07			
Residence	Rural (village)	59	83.10	25	35.21	8.88	4.10-20.21	33.46, p-value < 0.01
	Urban/ Peri-urban (Town/Shacks)	12	16.9	46	64.79			

Table 3: Relationship between individual socio-demographic characteristics and place of birth

Characteristic	Strata	Home delivery		Institutional delivery		Odds Ratio	95% CI	Sig. test value
		No.	%	No.	%			
Parity	2-3	49	69.01	38	54.29	1.87	0.94 – 3.76	3.21, p-value = 0.038
	4+	22	30.99	33	45.71			
ANC visits last pregnancy	None	14	19.72	1	1.41	16.94	2.87-371.79	12.51, p-value <0.01
	At least one	57	80.28	70	98.59			
Place of previous delivery	Home	6	8.45	0	0	1.61	Undefined	6.22, p-value = 0.007
	Health facility/ both	65	91.55	71	100			
Type of delivery	Normal vaginal delivery	68	95.77	61	85.92	3.68	1.02-17.31	4.11, p-value = 0.02
	Caesarian section/Assisted delivery	3	4.23	10	14.08			
Distance from health facility at time of delivery	<=5km	18	25.35	47	66.20	0.18	0.08 – 0.36	23.69, p-value <0.01

Table 4: Relationship between previous obstetric history and place of delivery

The parity of the woman at the time of the pregnancy was classified into two strata: those with 2-3 previous pregnancies and those with 4 or more previous pregnancies. Analysis revealed that the odds ratio was 1.87, with 95% confidence interval 0.94-3.76 and a p-value 0.038. Based on

the confidence interval of the odds ratio it can be concluded that there was no significant relationship between the parity of the woman and the choice of place of delivery.

4. Discussions

Effect of age: Majority (33.8%) of the women who delivered at home were aged 25-29 years while majority (32.4%) of those who delivered in the health facilities were those aged 35-39 years; **Figure 1.** Two of the mothers who had home delivery were younger than 20 years. Pregnancy outcome of young mothers (<20 years) is usually poor with higher rate of maternal and perinatal mortality and morbidity and delivering at home poses even bigger problems. Teenage pregnancy is common in Namibia and presents challenges to the health system. According to the 2014 UNFPA report teenage pregnancy is a crisis as it complicated by factors like interrupted education or career pursuits, and lack of family acceptance or paternal support complicated by increased medical risks during pregnancy and premature birth. The immature physique of teenagers might cause obstetric emergencies and these women should deliver their babies at health care facilities (Otto, 2015). Young mothers may also experience a lot of emotions, like worrying about telling parents and anxiety about pregnancy and childbirth which probably contribute to delivering at home or alone (NHS, 2015). In her study in Uganda, Aminah (2010) concluded that a woman's age might influence her decision on how soon to initiate maternal reproductive services.

38.7% (24) of women above the age of 30 years delivered at home. However according the results the number of women having home deliveries decreases with advancing maternal age. Women, aged 35 and older, should deliver their babies in the hospital or clinics, because women with advanced maternal age are more prone to getting obstetric complications than their younger counterparts. Fraser, Cooper and Nolte (2014) maintained that if the maternal age exceeds 35, especially if coupled with parity five or greater, poses increased risks of perinatal mortality and obstetric complications, including post-partum hemorrhage. If women fail to deliver at health care institutions, they are unable to make use of timely referrals health care facilities which render the required emergency obstetric care that might save these women's and/or their newborn babies lives to prevent maternal neonatal morbidities (WHO, 2015).

Effect of unemployment: Majority of the women 81.7% (58) who delivered at home were unemployed while the rest were either self-employed or employed in the informal sector and none of them had formal employment. 64.8% (46) of the employed women had their deliveries in health facilities; **Figure 2.** This means that the employment status of the woman greatly has a bearing on either deciding on the place of birth or the ability to reach a health facility. This was supported by the Namibia Population & Housing Census main report of 2011, Oshana region high rate of unemployment with 26,073 of 70,150 employable population being unemployed (Namibia 2011 Population & Housing Census main report).

Effect of education: the results of this study indicate that 96.2% (25) of women who delivered at home had no formal education; 60.3% (70) of women who delivered in health units had at least primary education, 47.4% (55) of whom had secondary education and above, **Figure 3.** Having

secondary or tertiary education was found to be a significant predictor to use institution as a place of delivery (OR 29.92, p-value<0.01). Women who had secondary or tertiary education might be better exposed to the health education programmes on the need for delivery at health facilities and understand better the dangers of home delivery. Education does not only determine someone's opportunity to get an employment but also whether she will be able to read and interpret information on leaflets given in antenatal clinics. Hence the place of delivery is largely determined by the woman's education status (Otto, 2015).

Effect on number of ANC visits: In this study it was found that 82.8% (48) of women who had less than 4 antenatal visits delivered at home of whom 31.3% (15) did not attend antenatal clinic at all. Only 27.4% (23) of women who attended ANC at least 4 times delivered at home; **Figure 4 and table 4.** The number of ANC visits may as well be determined by someone's financial ability to reach the health facility which is confounded by education and employment factors. The rationale of antenatal care is to detect early signs of, or risk factors for disease followed by timely intervention. Non-attendance of ANC therefore means that many problems in pregnancy are never detected up to the end of the pregnancy period. This, in addition to other factors, has contributed to the high maternal mortality experienced in most developing countries particularly those in the sub-Sahara region. WHO recommends 8 antenatal visits, 1 in the first trimester before 12 weeks, 2 in the second trimester at 20 and 26 weeks and 5 visits in the third trimester at 30weeks, 34 weeks, 36 weeks, 38 weeks and 40 weeks (WHO Recommendations on Antenatal Care for Positive Pregnancy Experience).

Effect of distance to health facility: The finding from this study has indicated that majority (74.6%) of those who delivered at home lived more than 5 kilometers from the nearest health facility while majority (66%) of those who delivered in the health facilities lived within 5 kilometers of the nearest health facility; **Table 4.** Distance from the health facility has a bearing on the cost of transport to the health facility bearing in mind that most of the participants in this study were unemployed. Governments therefore should make available health units with maternity services such that they are within 5km reach to every individual. Alternatively governments should make available maternity waiting homes for mothers who are near term. The same experience was also found in Kenya, where the women find it impossible to walk for hours or taking the taking the only readily available transport, so they were left with no option but home birth (Carter, 2010).

Previous pregnancy experience: Women who previously delivered at home were more likely to deliver at home (OR 6.22; p-value=007); **Table 4.** Women who delivered at home and their babies experienced more neonatal morbidity and mortality and maternal complications compared to those who delivered at health facility.

Attendant during home delivery: In this study most deliveries that occurred at home were either attended by non-skilled providers, or had no attendants at all. On the other hand 87% of deliveries in the health facilities were by skilled attendants and the remainder by semi-skilled attendants. When women deliver in the health facilities, they are most likely to benefit from

skilled attendants at delivery and the incidents of maternal and neonatal morbidity and mortality is significantly minimized. As already noted, more of the women who reported home delivery also reported that their babies had complications or died soon after delivery (n=10 (14%) than those women who had delivered in the health facilities (n=2 (2.8%) under the supervision of skilled attendants. This procedure is generally allowed to be done in health facilities, and it will result in improving physical and mental health postpartum depression, similar observations were reported from Kenya (Gjerdingen, Froberg & Fontaine, 2015).

5. Conclusions

Although the adoption of the safe motherhood programme in Namibia in 1998 increased number of women delivering in health units, there is need for more health education as there is still a big number of them having home deliveries. Non-attendance of ANC was found as one the significant factors leading to home delivery. The study did not aim at finding reasons why women do not attend ANC. There is therefore need to carry out another study to identify why women in Oshana region and possibly other regions of Namibia do not attend ANC.

A great deal of research has been done in the area of maternal health, as there is still a continued challenge for the achievement of the third sustainable development goal in sub-Saharan countries, including Namibia. However, even though much effort has been made to realize this objective in the developing countries, many deliveries still take place at homes. Improving access to health facilities through construction of more health facilities in the rural areas and making use of the health extension workers to attend to pregnant women in the local communities will go a long way in improving pregnancy outcomes in Namibia.

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