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**Assessment of Factors Affecting Utilization of Postnatal Care among
Reproductive Age Women Who Visit Jimma Health Center, Jimma, South
West Ethiopia**

Adugna Olani¹, Ebissa Bayana¹, Yonas Biratu¹, Admasu Belay¹

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¹School of nursing and midwifery, Institute of health, Faculty of health Sciences, Jimma
University, Jimma, Ethiopia

Corresponding Author

Adugna Olani (BSc, MSc)

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School of nursing and midwifery, Institute of health, Faculty of health Sciences, Jimma
University, Jimma, Ethiopia

Email: adugnaolani@yahoo.com or sanyiikee08@gmail.com

Abstract

Background: Knowledge on the determinants of postnatal care assists the policy makers to design, justify and implement appropriate interventions. The first hours, days and weeks after childbirth are a dangerous time for both the mother and newborn infant.

Objective: The main aim of this study is to assess factors affecting the utilization of postnatal care service at Jimma Health Center, Jimma zone.

Method and Materials: A cross-sectional study on 221 reproductive age women assessed factors affecting utilization of postnatal care service at Jimma Health Center in Ethiopia. Data was analyzed by using tally sheets and calculator. Association between variables were computed using chi-square (χ^2) test. Statistical significance was declared at p-value < 0.05.

Results: In this study 45.24% mothers utilized postnatal care service. Educational status of the mother, final decision maker on health care service utilization, number of pregnancies, place of delivery and being aware of at least one postpartum obstetric danger sign were found to be significantly associated with post-natal care service utilization.

Conclusion: proportion of postnatal care service was very small. Educational status, women's autonomy, number of pregnancies, place of delivery and knowledge of postpartum obstetric danger sign were the factors making a difference in utilizing post-natal care service.

Key Word: Postnatal, Utilization, Associated Factors, Jimma Health Center.

Introduction

Postnatal care (PNC) is the care provided to women and newborn in the first six weeks after birth [1]. A large proportion of maternal and neonatal deaths occur during 48 hours following childbirth. [2]. In Ethiopia, the proportions of mothers attended PNC service are very much lower than SSA. The great majority of women (92%) who had live birth in the preceding five years did not receive PNC service [3].

World Health Organization (WHO) recommends integrated postnatal care that includes prevention of maternal and newborn complications, provision of care to mother and newborn by skilled birth attendant, counseling for HIV and testing, counseling for contraception (birth spacing) and resumption of sexual activity, health promotion using health messages, referral of mother and newborn for special care when necessary [4]. The low coverage of postnatal care is causing to continuous high maternal and newborn morbidity and mortality. It is also challenge for planning and implementing of PNC as well as many opportunities are missed with low PNC coverage including exclusive breastfeeding, PMTCT, providing of family planning and maternal and new born care [5, 6, 7].

There is high maternal death that affects the family, new born even old children survival and increase number of orphans, decrease productivity of the households. Despite of the fact that high maternal and new born morbidity and mortality there has been low/little political and professional attention is given towards postnatal care [8].

There are discrepancies in access to maternal health care between the rich and poor, urban and rural and educated and uneducated societies, and also there is large gap in PNC coverage between developed and developing countries especially Ethiopia. Therefore, the study assessed factors affecting postnatal care utilization at Jimma Health Center, Jimma, South west Ethiopia.

Method and subjects

An institution-based cross-sectional study was conducted at Jimma health center from April 20-27, 2018 which is found in Jimma town located at 346 Km from Addis Ababa in Jimma Zone, Oromia Region, Southwest Ethiopia. The health center serves total population of 52, 036 of which 25, 604 are males and 26, 432 are females. The study population was comprised of all reproductive age women (15-49) who gave birth within one year prior to date of data collection visiting Jimma Health Center. The consecutive sampling method was used to select all study participants visiting Jimma Health Center during the study period

The sample size was determined by using a single population proportion formula considering the following assumptions: n= minimum sample size of the study subjects, p= prevalence of postnatal service utilization (50%), z= is standardized normal distribution curve/value for the 95% confidence interval (1.96) and d=the margin of error taken (0.05). The postnatal utilization before one year during similar period at Jimma health center 521 was taken as source population (N). since source population is less than 10,000 correction formula was used and the final sample size was adjusted for none response rate of 10% and the total sample was 221.

Two Diploma nurses of Jimma Health Center staff collected the data under the supervision of principal investigator after they were trained for one day on the objectives and tools by principal investigator. The collected data were checked for internal consistency. Associations between variables were computed using chi-square(χ^2) test. Statistical significance was declared at p-value < 0.05. The results were presented using tables, graphs, text and diagrams.

RESULTS

Sociodemographic characteristics of participants

The total of 221 reproductive age women visiting Jimma Health Center for any health problem were participated with a response rate of 100%. Majority of the respondents were at the age group 25-29 and live in urban. (Table 1)

Table 1 Distribution of respondents by their socio demographic characteristics at Jimma Health Center, Jimma town, southwest Ethiopia, May, 2018.

Variables		Frequency	Percent
Mothers' age	15-19	22	9.95
	20-24	79	35.74
	25-29	88	39.8
	30-34	18	8.14
	35-49	14	6.34
	Total	221	100
Residence area	Urban	188	85
	Rural	33	15
	Total	221	100
Marital status	Married	193	87.33
	Single	5	2.26
	Separated/divorced	16	7.23
	Widowed	7	3.20
	Total	221	100
Occupation of the	Government	26	11.76

mother	employee			
	House wife	109	49.32	
	Merchant	67	30.30	
	Laborer	11	5.00	
	others	8	3.65	
	Total	221	100	
Monthly in come	<400	11	4.97	
	400-833	39	17.64	
	834-1233	133	60.18	
	1234-1633	23	10.40	
	>1634	15	6.78	
	Total	221	100	
11	Educational status	Illiterate	11	4.97
		Read and write	24	10.85
		Primary school	110	49.77
		Secondary school	44	19.9
		College/ University	32	14.47
		Total	221	100
Ethnicity	Oromo	143	64.7	
	Tigre	0	0	
	Gurage	6	2.71	
	Amara	58	26.24	
	Others	14	6.33	
	Total	221	100	
Religion	Orthodox	72	32.57	
	Muslim	89	40.27	
	Protestant	42	19.00	
	Catholic	10	4.52	

Distance from health facility, Obstetric history and sources of information

Majority of the respondents were found 5-10kms from the health institution accounting for 173(78.28%) whereas only few of them 16(7.24%) were found at a distance greater than 10kms. Regarding parity of the study population, majority 98(44%) of the respondents were para 2-3 while only 11(5%) were para 6 and more. Looking at knowledge of the respondents, about 165(74.66%) of the mothers heard information about PNC, from those who heard information 122(74%) were provided the information during ANC visit from health facility while 34(20.6%) of them were provided by health extension workers.

Post-natal coverage and service provided

Among studied population, less than half 100 (45.20%) of mothers had postnatal visit after the delivery of their last child and of those who had PNC visit, about half 53(23.96%) of them went for neonatal immunization while 20(9.04%) and 12(5.43%) visited for family planning and regular checkup respectively. From the study result, mothers who had PNC visit were provided different PNC services including neonatal immunization, family planning, counseling, breast feeding education and others accounting for 53(53%), 20(20%), 25(25.25%), 10(10.10%) and others 17(17.17%) respectively. More than half 121(55) of respondents didn't go for PNC services after the delivery their last child. Majority 46 (38%) of the respondents mentioned that there was no need to have postnatal care service after delivery, 32(26%) said due to family matters, and minority 5 (4%) of mothers answered that waiting time in health facility was too long.

Antenatal coverage, Mode of delivery and Knowledge of danger sign

Majority 132(59.72%) of the respondents had Antenatal Care visit at least once during pregnancy of last delivery while the remaining 89(40.27%) didn't have ANC. The mode of delivery was CS in 66(29.86%) of cases and 142(64%) of mothers were delivered by spontaneous vaginal delivery (*Figure1*).

Concerning knowledge of postpartum danger sign, about three fourth 165(74.6%) of mothers know at least one postpartum danger sign. Half 82(50%) of them know excess bleeding, one fourth 42(25%) of them know uterine infection and the remaining one fourth know both of danger signs. Among 165(75%) respondents who know PNC, mothers were decision makers for PNC utilization in majority of the cases 120(73.13%).

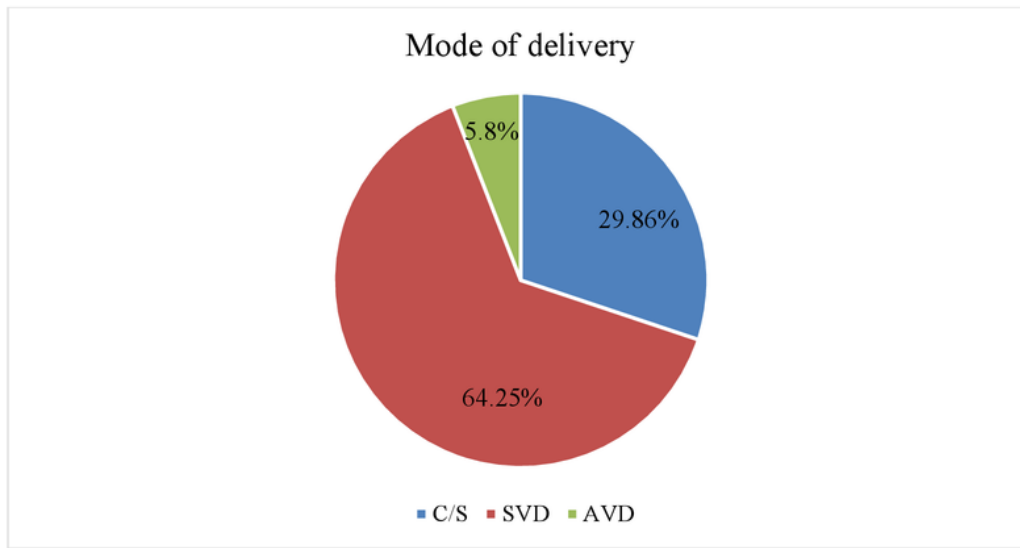


Figure1. Distribution by mode of delivery at Jimma Health Center, Jimma town, southwest Ethiopia, May, 2018

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Factors associated with postnatal service utilization

Being in the age group of 25-29, house wife in occupation, attending primary schools, parity 4-5, home delivery and poor decision-making practices are associate with low postnatal service utilization (Table 2)

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Table 2: Association between dependent and independent variables

Independent variables		Had PNC	Had no PNC	Total	Chi-square(χ^2), P value	df
Age of mothers	15-19	6	17	23	16.0443, 4	0.00296
	20-24	25	52	77		
	25-29	50	38	88		
	30-34	10	8	18		
	35-49	9	5	14		
	Total	100	121	221		
Residency area	Urban	90	97	187	4.068, 1	0.043703
	Rural	10	24	34		
	Total	100	121	221		
Occupation	Government employee	14	10	24	17.3131, 4	0.00168
	House wife	61	48	109		

	Merchant	20	47	67		
	Laborer	2	9	11		
	others	3	7	10		
	Total	100	121	221		
Monthly income	<400	2	9	11	14.238, 4	0.00657295
	400-833	20	19	39		
	834-1233	68	63	131		
	1234-1633	5	20	23		
	>1634	5	10	15		
Total	100	121	221			

11 Educational status	Illiterate	2	9	11	19.4873, 4	0.00063
	Read and write	7	15	22		
	Primary school	42	70	112		
	Secondary school	30	14	44		
	College/ University	19	13	32		
	Total	100	121	221		
Distance from HI	< 5Km	20	12	32	8.4172, 2	0.014867
	5-10Km	77	96	173		
	>10Km	3	13	16		
	Total	100	121	221		
Parity	Primipara	8	25	33	29.9546, 3	0.00001
	Para 2-3	65	35	100		
	Para 4-5	25	52	77		
	Para >=6	2	9	11		
	Total	100	121	221		
Knowledge on PNC	Knowledgeable	88	77	166	17.1787, 1	0.000034
	Not knowledgeable	12	44	55		
	Total	100	121	221		
ANC follow up	Yes	93	39	132	84.0567, 1	0.00001
	No	7	82	89		
	Total	100	121	221		
Place of delivery	Home	16	80	96	55.9685, 1	0.00001
	HI	84	41	125		
	Total	100	121	221		
Decision maker for PNC utilization	Mothers	90	30	120	38.1827, 1	0.00001
	Other	10	35	45		
	Total	100	65	165		

DISCUSSION

This cross-sectional study with the objective of the assessment of factors affecting utilization of postnatal care services was conducted at Jimma Health Center, Jimma town, southwest Ethiopia. This research revealed that postnatal care service utilization was 45.24%. This was significantly higher than the previous report by EDHS 2014 which was 18%. This variation may be attributed to the fact that majority of respondents in this study were residing in urban area in contrast to majority of Ethiopian population who live in rural area. Studies conducted in Palestinian, Nepal and Uganda revealed that the post-natal care utilization was 30%, 34% and 58% respectively [9, 10,11]. While study carried out in North West Gondar, Sub-Saharan Africa, Bangladesh showed that the post-natal care utilization was 6.3%, 13%, 16.6% and EDHS 2011 showed 8% (12, 13, 14, 15) respectively.

According to this study, the majority of the respondents 88(39.8%) were found in the age group of 25-29 years. Mother's age 25-29 had higher PNC visits as compared to least frequency in age group 15-19. This is more or less similar to study done in Pakistan [16]. Birth order was another obstetric factor found to be significantly affecting the use of postnatal care service. This finding is in agreement with evidence from study conducted among mothers in rural Nepal [17].

Among the socio demographic factors, the key predictor for PNC utilization in this study was educational status of the respondents. Participants whose level of education was secondary school and above showed better utilization of PNC service as compared to illiterate women. This result is consistent with study conducted in Ethiopia, Indonesia, Uganda, and India [18,19,20, 21,22,23]. This could be explained by the fact that education has valuable input in enhancing female autonomy and help women develop greater confidence and capability to make decisions about their own health. Thus, literate women seek out higher quality health services and have greater ability to use health care inputs that offer better health outcomes.

The other major factor predicting postnatal care service utilization was place of delivery. Mothers who delivered their last baby in health institution utilized PNC services more likely when compared with those who delivered at home. This finding is nearly similar with evidence from India [24], demographic health survey result in developing countries [25], and Nepal [26]. This strong positive association of PNC services utilization with place of delivery can be attributed to the fact that women who gave their last birth in health institution have greater opportunity to get

exposed to health education related to PNC services at the time of delivery and thus get access to learn about the types, benefits and availabilities of PNC services during their stay in the health institutions.

Knowledge of postpartum obstetric danger signs was also found to be strong predictor of PNC utilization. Mothers who were knowledgeable to for at least one postpartum obstetric danger sign were more likely to utilize PNC service as compared to those who did not spontaneously mentioned any postpartum obstetric danger sign. This result is similar with the study conducted in Nepal, and Uganda [26, 22]. This can be explained by the fact that awareness of obstetric danger signs is an important factor in motivating women and their families to attend health care service at the earliest opportunity with the intention of prevention, early detection and getting managed their obstetric danger signs.

As to the final decision maker on PNC service utilization, mothers who decided themselves utilized PNC services more likely as compared to those whose health care decision is made by others. This evidence is in line with similar study conducted in Democratic republic of Congo, Mali, and Uganda [27, 28, 22]. This can be due to the autonomy of the women to take any action at any time to their health related issues. The other possible reason may be autonomous women can contact with the health professionals, and attend maternal related conferences without any interferences, and develop level of awareness about maternal health services, and then they started to use it

CONCLUSION

This study was conducted to assess factors associated with postnatal care service utilization among mothers who gave birth in the past one year prior to this survey. The finding of this study revealed that level of post-natal care service is under-utilized even though higher than most of results registered in majority of previous studies. Educational status of the mother, final decision-making power on health care service utilization, number of deliveries, place of delivery, occupation of the mother, and being knowledgeable about postpartum obstetric danger sign were found to be significantly associated with post-natal care service utilization.

Competing Interests

The authors declare no conflict of interest

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