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Factors Influencing Utilization of Postnatal care Services among Women attending Alerek Health Centre III Abim District

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ABSTRACT

Postnatal care can help identify common life-threatening complications and reduce infection after child mortality. Despite the significant role postnatal care services play in improving maternal health, services are underutilized in most developing countries including Uganda. Hence, it is important to identify factors that facilitate or impede postnatal care service utilization. The aim of this study was to assess factors influencing postnatal care services utilization among mothers attending PNC at Alerek Health center III, Abim District. This was a cross-sectional study conducted on 96 mothers who had given birth to live babies a year prior to the study. Data were collected using structured questionnaires. Data were cleaned, coded and entered into Microsoft excel then analysed using SPSS v.20. Bivariate and multivariate logistic regression analysis was done to ascertain the relationship between dependent and independent variables. Descriptive statistics were presented in the form of frequency tables and figures. Out of 96 respondents that participated in the study, the majority of the study participants were aged 21-30 years (64.5%), had no formal education (75.0%) and were married (70.8%). Utilization of PNC according to the study was 44.8%. Knowledge of PNC and affordability were significantly associated with PNC utilization. The study further observed a significant association between distances to health center, waiting time at the health facility with utilization of PNC services among women. Utilization of postnatal care services is still low. Predictors of postnatal care utilization include knowledge of PNC, affordability, distance to the health centre and waiting time at the health facility.
Keywords: Postnatal care, Maternal health, Mothers, Live babies, Health facility.

INTRODUCTION

Postnatal care (PNC) services are preventive care practices and assessments that are designed to identify and treat complications of both the mother and the neonate. It is very important for the health and well-being of the woman and her newborn baby that they receive postnatal care. Postnatal care can help identify common life-threatening complications, reduce infection after childbirth, and reduce deaths from prematurity or low birth weight. During postnatal care, the focus is on routine assessments that will help identify and treat any issues for both mother and baby. These can include; assessments for bleeding and anemia, monitoring and treating infection identifying and managing postnatal depression support for breastfeeding support with nutrition counseling on birth spacing temperature and weight checks for baby vaccinations and referring babies with special needs for further care where necessary [1]. According to [1], PNC forms one of the major elements of continuum of essential obstetric care which includes focused ANC and skilled attendance at delivery required for the reduction of maternal and neonatal morbidity and mortality. Globally, more than 350,000 women and 2.9 million newborns perish due to delivery related complications with the vast majority of these deaths occurring in developing countries within the immediate postnatal period [1] and up to 99% of these deaths are reported in Africa where only 5% of mothers receive PNC services [2]. Following childbirth, the

woman and newborn should be examined within 24 hours by a health worker. At this time it was important to discuss with the woman and family the timing of subsequent visits and the immunization schedule for the baby. WHO recommends that the mother and baby be visited at home by a trained health worker, preferably within the first week after birth. If the facility does not carry out home visits, then the health workers ought to discuss with the mother how she will come to the facility or local clinic for these scheduled visits. These visits early in the postnatal period are important for the mother and baby. It is also an important opportunity to ensure the establishment of breastfeeding and address any difficulties with attachment and positioning [1]. A considerable number of mothers and their new-borns spend most of the first 6 weeks of their postnatal period at home. According to [1], this poses a great challenge for planning and implementing PNC for many mothers and newborns given the fact that, 18 million women in Africa do not give birth in health facilities, yet opportunities for timely access to PNC remains one of the key strategies to avert most of the preventable causes of maternal and neonatal morbidity and mortality [3], [4]. For the Sub-Saharan Africa to achieve its Sustainable Development Goals (SDGs) 3, strategies for reducing maternal and neonatal morbidity and mortality are needed in place, given that, up to 75% causes of maternal deaths occurring predominantly during the immediate postnatal period cannot be prevented by even the best pre-natal care services [4]. Even so, the situation in Uganda remains particularly worrying. Uganda's maternal mortality ratio stands at 336 maternal deaths per 100,000 live births, many women die from pregnancy and childbirth-related complications [2].

Statement of Problem

According to [5], Uganda like any other sub-Saharan country has a low postnatal care attendance with the Karamoja sub region having the least coverage with (38.9%). of the women having received postpartum care within the last 2 years. The uptake of postnatal care services remains low in Uganda even though interventions like care of the umbilical cord, special care for preterm, low birth weight and HIV-infected neonates screening have been offered to mothers after birth but efforts to emphasize the PNC utilization services are neglected combined with poor health seeking behaviors in Karamoja. Most maternal and infant deaths occur in the first six weeks after delivery, yet this remains the most neglected phase in the provision of quality maternal and newborn care. Sadly, records from Alerek Health Centre III shows that approximately 78% of mothers that give birth at the health centre only attend PNC in the first month after delivery and do not come back until the next ANC visit. Because of low uptake of PNC women and newborns miss the support and the careful monitoring required after birth hence the poor Ugandan MCH health maternal and child health indicators Uganda of MMR of 336/100,000 live births, U5 Mortality rate of 64/1000 live births, NNM rate of 43/1000 live births and teenage pregnancy rate of 25% which are among the poorest in the world [6]. The aim of the study was therefore to establish the utilization of postnatal care services in Alerek Health Centre III, Alerek Sub County Abim District.

METHODOLOGY

Study Design

The study was a descriptive cross-sectional study using quantitative data collection and analysis.

Area of Study

This study was conducted at Alerek Health Centre III, Alerek Sub-County, Abim District, Karamoja region. It is located within Abim District which is about 450km North-East of the capital city Kampala. It serves a number of parishes; which constitutes its catchment area, these are Olem, Otumpili, Loyoroit, Kathimong or, Koya and Okililing parishes.

Study population

In this study targeted postnatal women visiting the Maternal Child Health (MCH) at Alerek Health Centre III, Labwor County, Abim district were targeted. The study population was comprised 800 mothers

(MCH/FP monthly reports) within the postnatal period who were attending the postnatal Clinic during the month of data collection period.

Sample Size calculation

The sample was determined using Fisher's (1990) method in which the sample size is given by the expression

$$n = \frac{Z^2Pq}{d^2}$$

Where;
n= Desired sample size for a population greater than 10,000
Z= Standard normal deviation of 1.96 corresponding to 95% confidence interval
P= 12 % or 012, the reported uptake of PNC the health Centre of study
q=1-0.12=0.88
d =acceptable margin of 5 % (0.05)
Therefore, by substitution in the formula

$$n=\frac{1.96^2x0.88x0.12}{0.05x0.05} = 162$$

Therefore, n=162
But since the estimated number of postnatal women in Alerek Health Centre III's catchment area according to the health facility's records was 564 which is less than 10,000)
Therefore, to calculate sample size another formula, Nf =N/1+n/N was used
Where NF=required sample size for population less than 10,000
N=Target population
Therefore, NF=162/1+162/256=99.4
Therefore, the study targeted 100 respondents however the researcher used a sample of 96 participants.

Sampling Technique

The district and health facility for the study was purposely selected due to the observed high low uptake of PNC services according to the health facility annual work plan 2018/19. Then systematic random sampling was used where every 2nd postnatal woman in line of those attending clinical care at Alerek Health Centre III months was considered for the study till the required number was achieved.

Inclusion criteria

- Postnatal women seeking obtaining health services at Alerek Health Centre III.
- Postnatal women that were permanent residents of Alerek Health Centre III Abim District.

Exclusion criteria

Women were excluded from the study were;

- Non-permanent residents of Alerek Health Centre III's catchment area.
- Those who were not od sound mind.

Data Collection tools

Data from postnatal women was collected by use interviewer administered questionnaire with both closed and open-ended questions. The questionnaires contained questions related to the background information of respondents, the client's factors affecting the utilization of PNC services and the health system factors affecting the utilization of PNC services by mothers in Alerek Health Centre III Abim district.

Piloting the study

A pilot study involving 10 respondents was conducted at Kampala International University Teaching Hospital before the commencement of the actual study in order to pre-test the study instruments. The purpose of the pilot study was to validate the research instruments and assess their reliability. Through `piloting, the researcher identified data collection deficiencies and either modified or discarded inconsistent items. This helped the researcher to eliminate study methods that might not work.

Data Analysis

Data analysis was done using Microsoft excel program and results were presented form of tables, graphs and pie charts.

Ethical Consideration

A letter of authorization was obtained from the Dean Faculty of clinical medicine and dentistry. This letter introduced the researcher to the local District health officer Abim district, who then introduced the researcher to the Incharge of Alerek Health Centre III. The in charge then permitted him conduct of the study in the facility. Verbal consent was sought from each respondent by first explaining the objectives and relevance of the study. The participants were assured of anonymity; confidentiality was assured and ensured. Selected respondent was at liberty to

participate or to opt out of the study confidentiality was assured and ensured while respondents' names would neither be asked nor recorded.

RESULTS

Socio-demographic characteristics of the study participants

Table 1: Socio-demographic characteristics of the respondents

Age groups (years)	Frequency(N=96)	Percentage (%)
15 - 20	15	15.6
21-30	62	64.5
31-40	17	17.7
>40	02	2.0
Level of education		
None	72	75
Primary level	15	15.6
Secondary level	07	7.3
Tertiary level	02	2.1
Marital Status		
Married	68	70.8
Divorced	O2	2.1
Single parent	20	20.8
Widowed	06	6.3
Occupation		
Peasant	83	86.4
Teachers	02	2.1
Business	11	11.5
Religion		
Muslim	5	5.2
Roman catholic	40	41.6
Protestants	44	45.8
SDA	11	11.6
Parity		
1 child	19	19.8
2-3 children	32	33.3
>3 children	45	46.9
Spouses occupation		
Peasant	18	18.8
Petty business	56	58.3
Formal employment	22	22.9
Wealth status		
Lowest	62	64.6
Middle	22	22.9
Highest	12	12.5

Majority of the study participants were aged 21-30 years (64.5%) Had no formal education (75.0%) and were married (70.8%).86.4% of the participants were peasants,45.8% were protestants and 46.9% had parity >3. Majority of the respondents (58.3%) had spouses doing business while only 12.5% had high wealth status as shown in the table 1 above.

Level of Utilization of Postnatal Care Services among Mothers

N=96

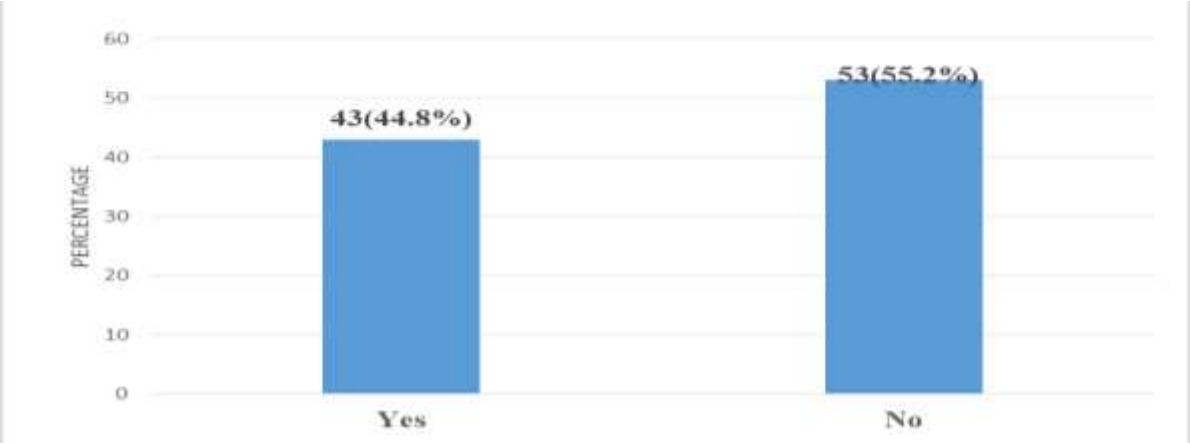

Figure 1: Utilization of postnatal care

In this study, a woman was deemed to have utilized services if she was attended to at the health facility at-least twice in the postnatal period. Utilization of PNC at Alerek Health centre III was 44.8% as shown in figure 1 above.

Client characteristics

Table 2: Client characteristics

Variable	Alternative	Frequency (%)
Ever heard about PNC	Yes	96(100%)
	No	-
Affordability of postnatal care	Yes	66(68.8)
	No	30(31.3)
In your culture, do you belief postnatal care is beneficial?	Yes	78(81.3)
	No	18(18.8)
Timing	Within 6 weeks	72(75.0)
	After 6 weeks	24(25.0)

From table 2 above, all (100%) of the study participants had ever heard about PNC, majority (68.8%) could afford,81.3% had the cultural belief that postnatal care is important and 75.0% sought postnatal care services within 6 weeks.

Health service characteristics

Table 3: Health service characteristics

Items	Variable	Frequency	Percentages (%)
Distance to Health center	1-5 km	30	31.25
	6-10 km	16	16.6
	>10 km	50	52.1
Reception the health facility	Good	52	54.2
	Poor	44	45.8
Waiting time health facility	Less than 30 min	22	22.9
	30 min-1 hour	31	32.3
	.>Hour	43	44.8

The majority of the participants, 52 (54.2%) stated that the reception at the health facility was friendly, residing a distance of >10km from the health center (52.1%), and reported a waiting time of more than an hour (44.8%) as shown in table 3 above.

Bivariate analysis of Client factors influencing postnatal care utilization

Table 4: Bivariate analysis of client characteristics

Variable	Alternative	N (%)	PNC utilization n(%)	cOR(95%CI)	P-Value
Ever heard about PNC	Yes	90(93.8)	43(47.8)	3.40(1.02-6.71)	0.04
	No	06(6.3)	-	Reference	
Affordability of postnatal care	Yes	66(68.8)	38(57.6)	2.31(0.80-4.56)	0.14
	No	30(31.3)	05(16.7)	Reference	
In your culture, do you belief postnatal care is beneficial?	Yes	78(81.3)	39(50.0)	1.22(0.71-3.00)	0.34
	No	18(18.8)	04(22.2)	Reference	
Timing	Within 6 weeks	72(75.0)	40(54.1)	0.96(0.49-2.07)	0.15
	After 6 weeks	24(25.0)	03(12.5)	Reference	

Table 4 above shows that ever heard about PNC, affordability of postnatal care and timing were significant at bivariate analysis and were therefore considered for Multivariate analysis.

Multivariate analysis of client factors influencing utilization of postnatal care

Table 5: Multivariate analysis of client factors influencing PNC utilization

Variable	Alternative	N (%)	PNC utilization n(%)	aOR(95%CI)	P-Value
Ever heard about PNC	Yes	90(93.8)	43(47.8)	2.01(0.82-4.55)	0.001
	No	06(6.3)	-	Reference	
Affordability of postnatal care	Yes	66(68.8	38(57.6%)	1.20(0.60-3.62)	0.023
	No	30(31.3)	05(16.7%)	Reference	
Timing	Within 6 weeks	72(75.0)	40(54.1%)	0.53(0.22-1.74)	0.062
	After 6 weeks	24(25.0)	03(12.5%)	Reference	

Knowledge of PNC and affordability were significantly associated with PNC utilization as shown in table 5 above.

Bivariate analysis of Health-related factors associated with PNC utilization

Table 6: Bivariate analysis of Health service factors associated with PNC utilization

Items	Variable	N	PNC utilization n(%)	cOR(95%CI)	P-Value
Distance to Health center	1-5 km	30	21(70.0)	2.00(0.70-10.20)	0.03
	6-10 km	16	10(62.5)	1.23(0.56-3.80)	0.01
	>10 km	50	12(24.0)	Reference	
Reception at the health facility	Good	52	33(63.5)	2.89(0.69-8.44)	0.14
	Poor	44	10(22.7)	Reference	
Waiting time health facility	Less than 30 min	22	16(72.7)	4.56(1.34-7.88)	0.002
	31 min-1 hour	31	17(54.8)	2.17(0.96-7.32)	0.004
	.>1Hour	43	10(23.3)	Reference	

Distance to the health center, reception at the health facility and waiting time had p-values<0.2 and therefore considered for multivariate analysis as shown in table 6 above.

Multivariate analysis of health care related factors associated with PNC utilization

Table 7: Multivariate analysis of health care related factors associated with PNC utilization

Items	Variable	N	PNC utilization n(%)	aOR(95%CI)	P-Value
Distance to Health center	1-5 km	30	21(70.0)	1.54(0.51-8.32)	0.014
	6-10 km	16	10(62.5)	0.75(0.33-2.59)	0.001
	>10 km	50	12(24.0)	Reference	
Reception at the health facility	Good	52	33(63.5)	2.04(0.42-6.00)	0.052
	Poor	44	10(22.7)	Reference	
Waiting time health facility	Less than 30 min	22	16(72.7)	2.16(1.02-5.50)	0.035
	32 min-1 hour	31	17(54.8)	1.60(0.44-4.96)	0.002
	.>1Hour	43	10(23.3)	Reference	

According to the study, there was a significant association between distance to health center, waiting time at the health facility with utilization of PNC services among women as shown in table 7 above.

DISCUSSIONS

Utilization of PNC Services

The study assessed utilization of PNC services and factors that influence its utilization. It was based on a sample size of 96 respondents. Less than half of women (44.8%) utilized PNC services, at Alerek Health Centre III, in Abim district while 55.2% did not utilize PNC. This is far from the recommended universal access of maternal services as advocated by the [7]. This finding is comparable with the study by [8] that reported 43.2% low utilization of postnatal care services in Uganda. Nationally 53% of mothers received postnatal checkup in the first 2 days after their last live birth. This confirms that PNC services are poorly utilized especially in the maternal neonate continuum of care in this health facility. This study also agrees with one done in Jabitena district by [9], Ethiopia, on factors affecting utilization of postnatal care services where it was demonstrated that that few delivering mothers got PNC services b found out that very few mothers utilize postnatal care services.

Client's factors affecting the utilization of PNC services

Most of the mothers were young with a mean age of 26.94. This implies that these mothers might produce more children in future hence the need for information about PNC services so that they're able to use them appropriately in future.

With respect to education level of the mothers three quarters, 72(75.0%) were not educated followed by primary level with 15(15.6%). This low level of education of mothers partly explains their low levels of utilisation of PNC services. In recent study by [10], to explore the mother-related factors, affecting PNC utilization high education level was significantly associated with PNC utilization. Most of the mothers, 83(86.4%) were peasants by occupation while the majority, 62(64.6%) belonged to the lowest wealth categorisation. Employment is synonymous with empowerment, which may affect families' wealth status and in-turn motivates health service utilization. In many studies by [11] and [12], wealth status has been found to be a predictor of utilization of services with respondents from lower and middle class being less likely to be utilizers that those in the highest wealth status. Regarding knowledge about PNC, the majority had heard about PNC but few were able to tell the timing and number of times needed for proper PNC. Limited knowledge about PNC could partly explain the low utilization of

PNC in the health Centre. A recent study by [13], indicated that there is a significant interrelationship between knowledge and utilization of maternal healthcare services. Among the women who didn't attend PNC services, lack of awareness about PNC services was highly mentioned by 60.1% as an inhibitive factor followed by the reasoning that the visit was unnecessary. This further emphasizes the need for rising awareness about PNC among mothers in the study area.

Health system factors affecting Utilization of PNC services

Our study observed that (54.2%) of the participants had a friendly reception at the health facility and (20.8%) had poor attention by health workers, stated that their reception was slow, worked on in a hurried manner and talked to rudely.at the health facility. Perceived quality of services has been to found to be predictive of PNC utilization with bias for good services. In many studies respondents who rated services as well were 53% more likely to utilize the services compared to those who rates services as poor according to studies by [14] and [15]-[20]. This implies that promptness of care, competence of health workers, desire for privacy, perceived availability of equipment, friendliness of staff were all determinants of utilization of health services. Another health system challenge faced by mothers reported was long distance since the majority were staying longer than the recommended 5km radius of a health facility. A recent study by [13], established that long distance from the health facility contributes to poor PNC [21], [22]. A few other studies have investigated early postnatal care attendance in developing countries such as Bangladesh [16] Nepal [17], Sudan [18], and Zambia [19], [23] and revealed that proximity to health facilities was associated with use of PNC.

CONCLUSION

Utilization of postnatal care services is still low. Predictors of postnatal care utilization include knowledge of PNC, affordability, distance to the health center and waiting time at the health facility.

Recommendations

Provision of health care education to mothers about the significance of postnatal care

Decentralization of postnatal health care services.

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