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Utilization of Postnatal Care Services at Timagi Health Center Three, Oyam District

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ABSTRACT

Postnatal Care (PNC) is known to significantly reduce maternal and infant morbidities and mortalities, yet its utilization remains suboptimal. Recent data shows that only 54.3% of women in Uganda receive PNC services from skilled healthcare providers. Factors influencing this underutilization have not been extensively investigated. This study aimed to identify the factors affecting the utilization of PNC services at Timagi Health Center III in Oyam District. A cross-sectional descriptive study was conducted, involving 200 mothers with children under 1 year of age, randomly selected from those attending Timagi Health Center III. Data was collected through structured questionnaires and analyzed using SPSS version 25.0. Relationships between variables were assessed using the chi-square test, with statistical significance set at $p<0.05$. The study found that the average age of participants was 23.9 years (standard deviation 5.5). The majority were married (83.5%), engaged in farming (83.0%), and only 6.0% had tertiary education. Utilization of PNC care was low at 41.5% and was influenced by marital status ($X2=11.19$; $P=0.004$) and the place of delivery ($X2=12.65$; $P=0.002$). A significant proportion (73.5%) of women who received PNC were married, while 74.4% of those who did not attend PNC had delivered in private health facilities. In conclusion, the study revealed a low utilization of postnatal care services in the area, with only 41.5% of women attending PNC at least twice. Predictive factors for PNC service utilization in this study were being married and delivering at a government hospital. The study recommends collaborative efforts between the Ministry of Health, Oyam District Health Team, and Timagi Health Center III to raise community awareness about the importance of PNC services. Healthcare workers should also actively inform clients about PNC services and schedule appointments. Further, a larger-scale study is needed to validate the determinants of PNC service utilization.

Keywords: utilization, postnatal care, health center

INTRODUCTION

Post-natal period is defined by World Health Organization (WHO) as the period one hour after the delivery of the placenta and includes the six weeks that follow. This period is called postpartum period when referring to the mother alone and post-natal when referring to both mother and baby. The services provided during this period are referred to as post-natal care (PNC) services [1]. However, it has been noted that many women who give birth at health facilities in the developing world are discharged within hours after childbirth without any indication where they can obtain further care or support [2-12].

The global Maternal Mortality Ratio (MMR) in 2015 was 216 maternal deaths per 100 000 live births, developing countries accounted for 99% of these deaths and Sub-Sahara alone accounting for 62% [13-23]. The adult lifetime risk of maternal death is highest in sub-Saharan Africa (at 1 in 31), in contrast to 1 in 3800 among women in developed countries [24].

Maternal health is a challenge and efforts need to be put in place to achieve the global goal of reducing the maternal mortality ratio to less than 70 per

Ogwang

100,000 live births by year 2030. In addition to maternal deaths, almost 40% of women experience complications after delivery and an estimated 15% develop potentially life-threatening problems [25-30].

The post-natal period is also very important for the newborn; of the approximately 130 million infants born annually, four million infants die in the neonatal period, representing almost 40% of deaths of children under 5 years of age and developing countries account for 98% of these deaths [31-41]. Africa accounts for 11% of the world's population but more than 25% of the world's newborn deaths (up to half a million African babies die on the day they are born), and the first week of life is the greatest risk of death for African babies [42-50]. Owing to the dramatically increased risk of newborn deaths in the first hours and the first days of life, newborns are recommended to receive post-natal healthcare immediately after delivery [51-56].

Early care enables health professionals to identify potential complications in newborns, and to provide treatments promptly as well as initiating vaccinations. Childhood mortality rates are identified as basic indicators of a country's socio-economic level and quality of life. The causes of neonatal deaths are preterm birth (40.8%) and intra-partum complications (27.0%) and nearly half of all deaths occur from infectious causes 47.6% [57-59].

Despite the importance of postnatal care, its utilization in Uganda has remained low. In the most recent country study, it was found to be at 54.3% for two days following delivery where as that of six weeks was not studied [60]. The same report shows that Oyam district was reported among the districts with the lowest postnatal care coverage (42 and 38 respectively). The low coverage of postnatal care causes many mothers to miss opportunities including exclusive breastfeeding education, EMTCT, providing of family planning, maternal and new born care.

METHODOLOGY

Research Design

This study utilized a descriptive cross-sectional study design. Quantitative data was collected.

Study area

The study was conducted, at Timagi Health Center three in Oyam District.

Study Population

The study population comprised of women aged 15–49 years attending Timagi health Center three.

Inclusion criteria

Women of reproductive age, previous delivery within the last six months and the infant more than two weeks old, and willing to consent for the study.

Exclusion criteria

Those who did not meet the inclusion criteria and those whose children had died during the period of study.

Sample Size determination

The sample size required for the study was calculated based on the formula by Kish to estimate a single population proportions (Gwet, 2010).

$$N = \frac{Z^2\, p(1-p)}{\delta^2}$$

Where,

N = estimated sample size, P = anticipated proportion of PNC utilization. Similar study in Eastern Uganda found PNC utilization at 15.4% so P will be taken to be0.154, Z = standard normal variation ant 95% confidence (1.96), δ = margin of error (5%).

Thus, calculated sample size will be, $\frac{1.96^2\, x\, 0.154(1-0.154)}{0.05^2}$ = 200 sample was taken.

Sampling Procedures

The study used simple random sampling.

Data analysis

Data was analyzed using SPSS version 25. Bivariate and multivariate analysis was computed to determine significant factors. A p-value of <0.05 was considered to be significant.

Ethical considerations

Permission to carry out the study was thought from KIU faculty of clinical

Ogwang
medicine and dentistry in form of introduction letter. Clearance for the study was given by the in charge of Timagi Health Centre three. Confidentiality was maintained, throughout the study and subsequent presentations.

RESULTS

Socio-demographic characteristics are summarized in table 1 below. The mean age of participants was 23.9 years (std. deviation 5.5). Majority were married (83.5%), peasants (83.0%) and only 6.0% had tertiary education.

Table 1: Socio-demographic characteristics of participants

Characteristics	Frequency	Percent
Age (years)		
≤20	68	34.0
21-30	107	53.5
≥31	25	12.5
Marital status		
Married	167	83.5
Never married	16	8.0
Divorced	17	8.5
Religion		
Muslim	1	0.5
Catholic	112	56.0
Protestant	65	32.5
Others (Born again, SDA, PAG)	22	11.0
Education level		
Non	89	44.5
Primary	80	40.0
Secondary	19	9.5
Tertiary	12	6.0
Occupation		
Self employed	24	12.0
Peasant	166	83.0
Employed	10	5.0
Number of children		
1-3	150	75.0
4+	50	25.0

In this study, a woman was considered to have utilized services if she was attended to, at a health facility at least twice in the post-natal period (within 42 days). Findings show that more than half of the participants (58.5%) had not utilized the PNC services as shown in figure 2 below.

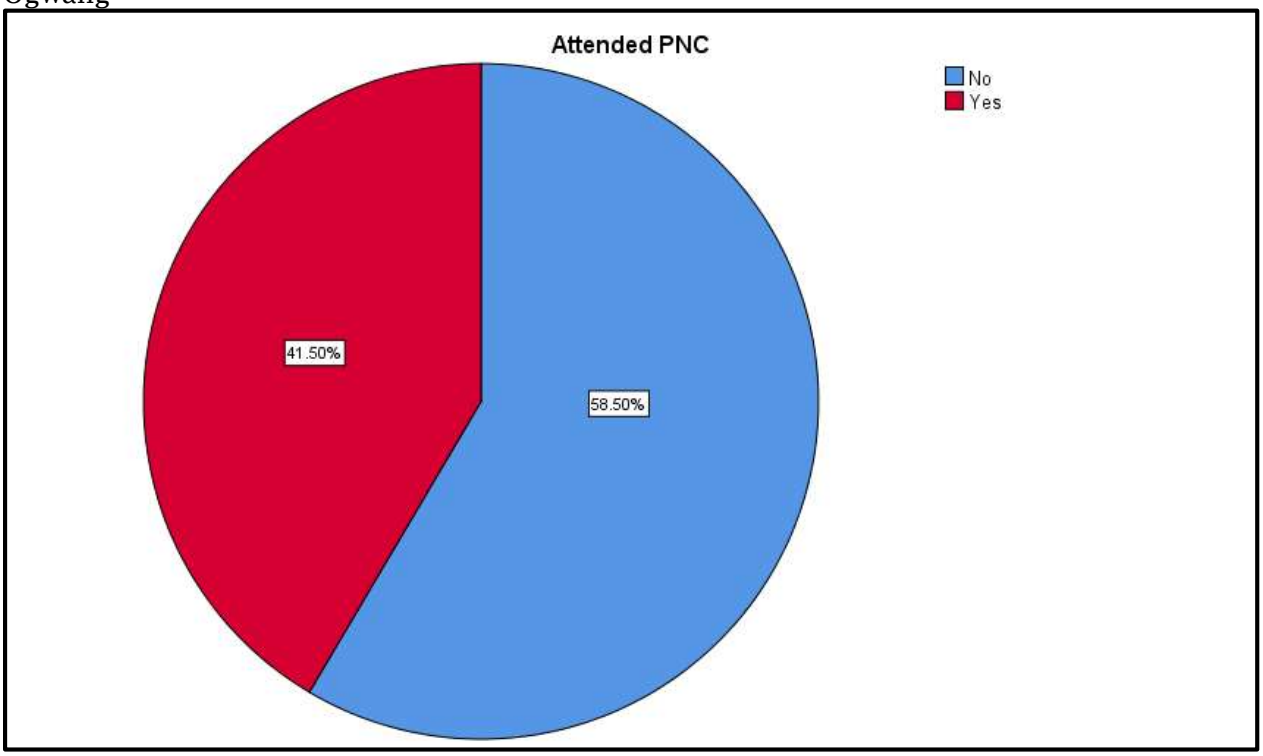

Figure 1: Postnatal care utilization

The major reason why some women did attend PNC was being busy with family matters 104 (88.9%) while a few 3(2.6%) claimed of not being aware of the services.

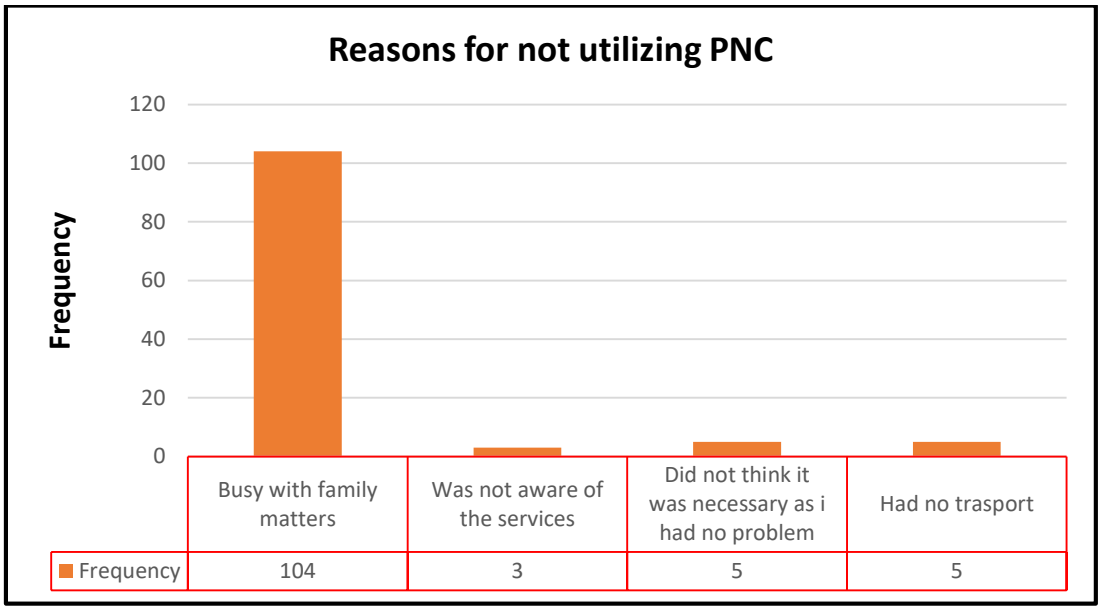

Figure 2: Reasons for not utilizing PNC

Analysis shows that only marital status was statistically significant (X^2=11.19; P=0.004). highest number of women who did not utilize PNC were married (90.6%).

Ogwang

Other variables like age, religion, education and occupation were not statistically significant. Table 2.

Table 2: Socio-demographic factors influencing uptake of PNC services

Variables	Attended PNC		Chi square (X^2)	P value
	No	**Yes**		
Age			5.14	0.076
≤20	36 (30.8%)	32 (38.6%)		
21-30	70 (59.8%)	37 (44.6%)		
≥31	11 (9.4%)	14 (16.9%)		
Marital status			11.19	**0.004**
Married	106 (90.6%)	61 (73.5%)		
Never married	4 (3.4%)	12 (14.5%)		
Divorced	7 (6.0%)	10 (12.0%)		
Religion			12.75	0.005
Muslim	0 (0.0%)	1 (1.2%)		
Catholic	68 (58.1%)	44 (53.0%)		
Protestant	30 (25.6%)	35 (42.2%)		
Others (Born again, SDA, PAG)	19 (16.2%)	3 (3.6%)		
Education level			2.64	0.450
Non	49 (41.9%)	40 (48.2%)		
Primary	51 (43.6%)	29 (34.9%)		
Secondary	9 (7.7%)	10 (12.0)		
Tertiary	8 (6.8%)	4 (4.8%)		
Occupation			9.63	0.008
Self employed	20 (17.1%)	4 (4.8%)		
Peasant	89 (76.1%)	77 (92.8%)		
Employed	8 (6.8%)	2 (2.4%)		

Table 3 below shows summary of analysis of health system factors influencing PNC. Place of delivery was found to be statistically significant (X^2=12.65; P=0.002). It was found out that majority women who had delivered from private health facility (74.4%) did notutilize PNC services. Distance to the health facility and whether the woman attended ANC were not statistically significant.

Table 3: Health systems factors influencing uptake of PNC services

Variables	Attended PNC		Chi square (X2)	P value
	No	Yes		
Distance to health facility			2.85	0.241
≤5 KM	107 (91.5%)	74 (89.2%)		
6-10	10 (8.5%)	7 (8.4%)		
≥11	0 (0.0%)	2 (2.4%)		
Attended ANC during last pregnancy			0.46	0.49
Yes	114 (97.4%)	82 (98.8%)		
No	3 (2.6%)	1 (1.2%)		
Place of delivery for last pregnancy			12.65	**0.002**
Government health facility	23 (19.7%)	16 (19.3%)		
Private health facility	87 (74.4%)	48 (57.8%)		
home delivery	7 (6.0%)	19 (22.9%)		

DISCUSSION

In this study, less than half of the women (41.5%) attended PNC at least twice as recommended by the Uganda ministry of health during the first 42 days post-delivery. Although this attendance level is lower than the national level of 54.3% [60], it is higher than the 15.4% reported in Eastern Uganda [61].

Poor rates of PNC attendance have been previously reported in other African states. For instance, a study conducted in West African countries found that an average of 40% of all women with a live birth in the previous five years did not receive any postpartum care check-ups [62]. The poor up-take of PNC services means that for many mothers, the continuum of care is disrupted during this critical period, when lack of appropriate care could result in significant ill health and even death. The similarity in low PNC attendance could be attributed to similar socio-economic background and similar methodology between these studies.

The study revealed that only marital status was statistically significant. 75.0% of women who were never married had utilized the PNC services than their counterparts. Similarly, 90.6% of women who had not attended PNC services were married. This finding concurs with findings by Seymour et al. [63] whose study in Malawi found the same. The similarity of the findings could have resulted from the methods of data collection and sampling used. However, it contradicts the findings by Izudi and colleague in Eastern Uganda who found that married women were three times more likely to attend PNC than unmarried ones [61].

Unlike other study of Nouraei Motlagh *et al.* [64] which found a significant association between ANC attendance and PNC utilization, this study did not find any significant association. This may have been due to the fact that ANC attendance in Uganda is almost universal. Perhaps a large-scale population-based study would help to show the difference.

CONCLUSION

The study found a low utilization of postnatal care in the study area as only 41.5% of women received a postnatal care at least twice within 42 days after delivery. The predictive factors for utilization of PNC services in this study were; marital status (being married) and place of delivery (Hospital delivery).

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Ogwang
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