

## Prevalence and Factors Associated with Late Attendance of First Antenatal Care Visit at Fort Portal Regional Referral Hospital

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### ABSTRACT

This study aimed to identify factors influencing late antenatal care (ANC) attendance among women at Fort Portal Regional Referral Hospital. A descriptive analysis of 150 women revealed that 86% of them attended their first ANC visit late, particularly among those aged 25-29. The majority of women with no formal education had ANC late, and late initiation was more prevalent among those with a parity of 3-4. Additionally, 76% of women had planned their pregnancy. The study highlights the importance of providing health education on ANC timing among women within reproductive ages, with priority given to women with low levels of education, multiparous women, unplanned pregnancies, and urban dwellers. The findings underscore the need for improved antenatal health care services and improved maternal and neonatal health outcomes.

**Keywords:** Prevalence, risk factors, antenatal care

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### INTRODUCTION

Globally every year 529,000 maternal deaths occur, 99% of this in developing countries [1]. Sub-Saharan Africa- Uganda inclusive has high maternal and neonatal morbidity and mortality ratios, typical of many countries [2]. Recent findings reveal a maternal mortality ratio of 336 per 100,000 live births and neonatal mortality rate of 29 deaths per 1000 live births in Uganda and these still remain a challenge [3, 4]. Women in rural areas of Uganda are two times less likely to attend ANC than the urban women. Most women in Uganda have registered late ANC attendance, averagely at 5.5 months of pregnancy and do not complete the required four visits [2, 5]. The inadequate utilization of ANC is greatly contributing to persisting high rates of maternal and neonatal mortality in Uganda [6, 7].

Adequate utilization of antenatal health care services is associated with improved maternal and neonatal health outcomes [8]. The World Health Organization [9] recommends eight Antenatal care (ANC) contacts during pregnancy. Early and regular attendance of antenatal care by

pregnant women helps in determining the existing health status of the mother and the fetus as well as early detection of possible pregnancy and birthing complications [10, 11]. The first ANC contact is recommended to start within the first trimester of pregnancy because late initiation of first ANC leads to an increase in maternal, infant mortality and morbidity [12].

During antenatal care booking, assessments and tests are conducted on pregnant women, which include measuring of blood pressure to exclude pregnancy induced hypertension, urine testing to exclude proteinuria and weight monitoring to establish intrauterine growth restriction department of health [13]. Immunization against various infectious diseases such as tetanus, Human Immune virus (HIV) testing and counseling of pregnant women and if she tests positive, she will be initiated on antiretroviral therapy (ART) for elimination of mother-to-child transmission of HIV [14]. Despite all the recommendations, maternal mortality still remains a public health concern globally

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especially in developing countries [9]. In 2016, at the start of Sustainable Development Goals (SDGs), pregnancy-related preventable morbidity and mortality remain unacceptably high [15]. As a result, SGD three (3) calls for the acceleration of current progress in order to achieve a global Maternal Mortality Ratio (MMR) of 70 maternal deaths per 100,000 live births in 2030 [9]. It was noted that this global MMR reduction and positive pregnancy can only be realized if the ANC provided to women during pregnancy improves and they seek early ANC services [16].

In Sub Saharan Africa, it was indicated that early antenatal care contacts' coverage was less than 50% in 2013 and has the highest maternal mortality ratio (MMR) of 546 per 100,000 live births in 2015). The same

study found out that, less than half 46.8% of the pregnant women sought early antenatal care [17]. However, the number of pregnant women attending ANC has significantly remained very low especially in low income developing countries [18, 19]. In Uganda, currently the maternal mortality ratio stands at 336 deaths per 100,000 live births from 438 deaths per 100,000 life birth [20]. Women in rural areas of Uganda are two times less likely to attend antenatal care early than the urban women and, in some districts, ANC attendance coverage was low at 66% for the eight recommended ANC contacts [2]. It is also indicated that ANC attendance in the region has remained very low at (50%) despite the fact that WHO recommends eight ANC contacts during pregnancy [21].

## METHODOLOGY

### Study design

A descriptive [22] analytical cross section study was conducted in order to determine the prevalence and factors associated with late attendance of first antenatal care visit at Fort Portal Regional Referral Hospital.

### Study site and setting

The study was at Fort Portal Regional Referral Hospital in Fort Portal District, Western Uganda. Fort Portal Hospital lies within the city of Fort Portal, approximately 294 kilometres, west of Kampala, Uganda's capital and largest city. Fort Portal Hospital is a public hospital, funded by the Uganda Ministry of Health and general care in the hospital is free. There several departments which handle both curative and preventive healthcare. Among the services rendered in this hospital includes Antenatal care for all women. This.

### Study population

The study population was the expectant mothers seeking antenatal care from Fort Portal Regional Referral Hospital. Study population is representative subset of the target population from which the results could be generalized within the hospital.

### Inclusion criteria

It included all expectant mothers seeking antenatal care from Fort Portal Regional Referral Hospital during the study period.

### Exclusion criteria

- Pregnant women who were too ill to participate in the study as they won't be able to withstand the length of the time it would take to fill the questionnaire.
- Pregnant women whose disability may interfere with their participation in the study for example those with autism, down syndrome and the mentally challenged.
- Expectant mothers seeking antenatal care from Fort Portal Regional Referral Hospital who refused to participate in the study.

### Sample size determination

The sample size will be determined using the Kish Leslie's formula (1965)

$$n = \frac{(Za/2)^2 p(1-p)}{e^2}$$

Where n is the required sample size, p is the approximate prevalence rate of Late ANC attendance, and e is the permissible error in the estimate.

This formula was used to calculate N for this study, basing on the following evidence from studies carried out before. The confidence level of the researcher in this study was at 95% (Hence z =1.96). Late ANC attendance among pregnant women in Uganda is at 49.7% [2].

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Hence  $p = 0.497$ , the proportion,  $q (1 - p)$  will be  $1 - 0.479 = 0.503$  hence  $q = 0.503$  in this study. The degree of precision in the study was estimated at 5% (Hence  $d = 0.05$ ), substituting in the above formula:  $N = 384$ .

However, due to the limited time and financial constraints, the permissible error in this study was set at 0.08. Substituting in the formula gives a sample size of 150 respondents.

#### Sampling procedure

Purposive sampling was used to enroll participants in the study

#### Data collection method and tool

Data was collected using researcher administered questionnaire. Informed consent was obtained from the participants first by research assistants. The questionnaire was translated into local language to ensure consistency. On the other hand, observations were made for information related to key health facility resources.

#### Data analysis

The collected data was analyzed using Microsoft Excel version 2019 and was presented in form of tables and graphs.

#### Ethical considerations

Written introductory letter from KIU-WC presented to the administration at Fort Portal Regional Referral Hospital. Informed consent from the respondent was sought both verbally and in writing. Participants was assured of confidentiality and use of the information obtained only for the purpose of the research. The participants' names were not included while making and filling out the questionnaire to ensure privacy. Participation was fully explained the 'right and had the choice to participate or not to, or to pull out at any time, whenever they no longer felt comfortable to continue [23]. Their participation, or its lack thereof, would not in any way influence any treatment services they were already getting or are meant to get at any time from the hospital or staff involved.

### RESULTS

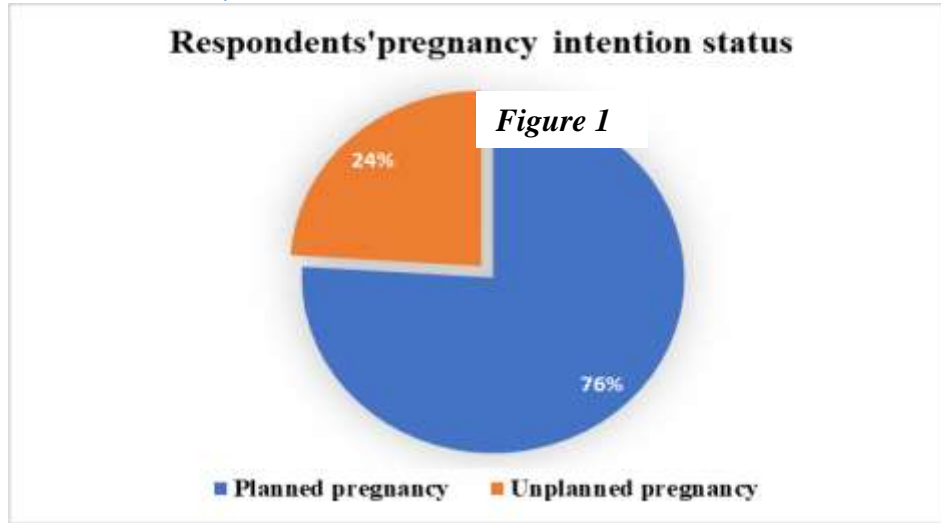
**Table 1: Socio-demographic factors of respondents**

Variable	Frequency (n)	Percentage (%)
<b>Age group</b>		
15 - 19	13	9
20 - 24	41	27
25 - 29	41	28
30 - 34	30	20
35 - 39	16	11
40 - 44	8	5
<b>Marital Status</b>		
Married	137	92
Single	11	7
Separated	1	1
Widowed	1	1
<b>Education Level of Respondents</b>		
Informal education	99	66
Primary	35	23
Secondary	9	6
Tertiary	7	5
<b>Education Level of Spouse</b>		
None	94	63
Primary	33	22
Secondary	14	9

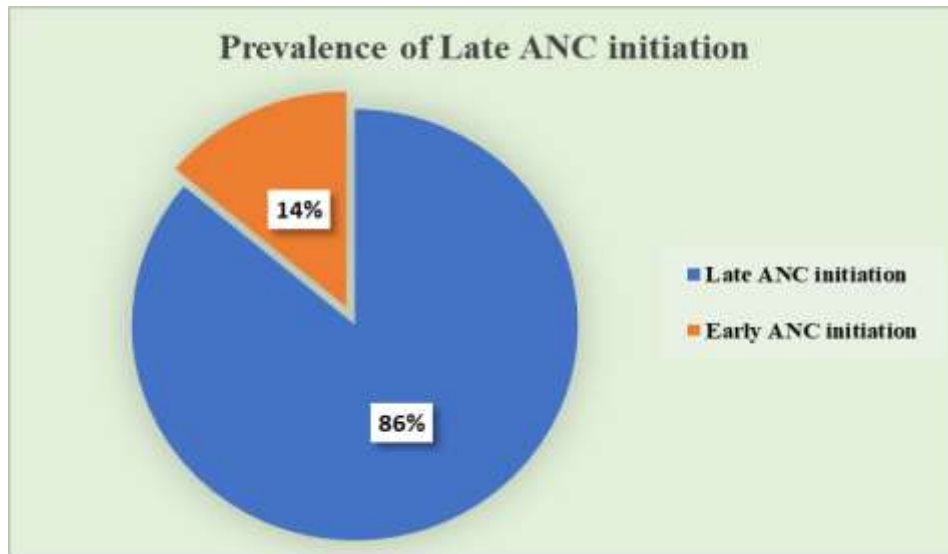
Tertiary	9	6
<b>Occupation of Respondents</b>		
Housewife	127	85
Informal employment	15	10
Formal employment	8	5
<b>Occupation of Spouse</b>		
Unemployed	124	83
Informal employment	18	12
Formal employment	9	6
<b>Religion</b>		
Catholic	86	57
Anglican	45	30
Muslim	8	5
Other	12	8
50,000 - 100,000	128	85
100,000 - 200,000	14	9
200,000 - 300,000	3	2
400,000 - 500,000	3	2
500,000 - 600,000	2	1

As depicted in the table above, majority of participants were aged between 25 - 29 years accounting for 28% of the sample population. Also, Majority of the respondents were living with spouses, housewives with no formal education, of catholic dominion and earning less than 100,000 shillings per month. Respondents' spouses were mainly unemployed. Also, the study found that the number of participants increased with an increase in age and reduced with a further decrease in age. Regarding marital status, the majority 137 (92%) of the women were married and the least being those separated and widowed. On education, more than half 99 (66%) of the women had no formal education.

Similarly, more than half 94 (63%) of the spouses to the women also had no formal education. Primary education was the level attained by the majority of the respondents and their spouses. Concerning occupation, the majority 124(83%) of the women were housewives and only 9 (6%) were in formal employment. In terms of religion, the majority 86 (57 %) of the women were Catholics, 45(30%) were Anglicans while only 8 (5 %) being Muslims. Looking at pregnancy intention status, the majority 114 of the women reported that their pregnancy was intended or planned (*Figure1*).



**Figure 1:** Prevalence of Late ANC initiation



**Figure 2:** prevalence of late ANC initiation

The study found that the majority 129 (86%) of the women went for their first antenatal care visit late at the health facility visited.

**Table 2: Socio-demographic factors and late ANC initiation**

<b>Variable</b>	<b>Frequency (n)*</b>	<b>Percentage (%)</b>	<b>Late ANC attendance</b>		
<i>Age group</i>			<i>Frequency</i>	<i>%(n=*)</i>	<i>%(n=150)</i>
15 - 19	13	9	11	80	7
20 - 24	41	27	35	86	23
25 - 29	41	28	39	94	26
30 - 34	30	20	29	95	19
35 - 39	16	11	15	93	10
40 - 44	8	5	0	1	0
<b>Marital Status</b>					
Married	137	92	124	90	82
Single	11	7	10	90	6
Separated	1	1	1	100	1
Widowed	1	1	1	100	1
<b>Education Level of Respondents</b>					
Informal education	99	66	93	94	62
Primary	35	23	28	82	19
Secondary	9	6	8	89	5
Tertiary	7	5	6	86	4
<b>Education Level of Spouse</b>					
None	94	63	87	92	58
Primary	33	22	30	89	20
Secondary	14	9	12	89	8
Tertiary	9	6	7	81	5
<b>Occupation of Respondents</b>					
Housewife	127	85	114	90	76
Informal employment	15	10	14	90	9
Formal employment	8	5	7	87	5
<b>Occupation of Spouse</b>					
Unemployed	124	83	114	92	76
Informal employment	18	12	14	82	10
Formal employment	9	6	6	75	4
<b>Religion</b>					
Catholic	86	57	76	89	51
Anglican	45	30	45	100	30
Muslim	8	5	8	100	5
Other	12	8	0	0	
<b>Average Monthly Income</b>					
50,000 - 100,000	128	85	114	89	76

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100,000	-	14	9	14	100	9
200,000						
200,000	-	3	2	3	100	2
300,000						
400,000	-	3	2	2	67	1
500,000						
500,000	-	2	1	2	100	
600,000						

The study also shows that among women aged 25 - 29, the majority (86%) of them sought ANC late. Overall, across all the age categories, most of the women sought ANC late. In terms of marital status, similarly, most of the women who were married, single, divorced and widowed constituted the great majority of those who sought ANC late. Regarding education level, majority of the women with no formal education had ANC late.

On occupation of the respondent, the study indicates that out of 127

housewives, 114 (90%) had attended ANC late. This study found that out of 128 women who reported earnings from 50,000 - 100,000 Uganda Shillings, the majority 114 (89%) sought late ANC. Looking at parity, late initiation of ANC was more prevalent among those with parity of 3 - 4 followed by those with 1 - 2. In terms of pregnancy intention status, three quarter 76% of the women reported that they had planned their pregnancy.

#### DISCUSSION

This study found that the majority (86%) of the women went for their first antenatal care visits late at the Fort Portal RRH. The World Health Organization (WHO) recommends pregnant women to start the first ANC in the first trimester of pregnancy which helps to ensure the best care and health outcomes for women and their fetus. However, in this study, these findings imply that most of the women miss key interventions which are recommended for them to receive as a package throughout their pregnancy period. The above prevalence was very high unlike in developed countries like in United Kingdom where the prevalence of late ANC attendance was low as well as in Ireland that stood at 26.6% [24]. Another study conducted in Ethiopia, found out that the majority (82.6%) of pregnant women-initiated ANC at or after four months of gestation [10]. However, [25] found another prevalence of delayed ANC in Ethiopia at 64%.

The current study finding was higher than findings in the past by [26] in Ghana accounting for 73.6% of the late ANC attendance. Further still, [18] in Tanzania also found that the majority of pregnant women-initiated ANC at or after 17weeks.

In Uganda, Ministry of Health recommends a simplified ANC of four visits whereby, the first contact is to occur in the first trimester between (10 - 20) weeks of pregnancy, second visit scheduled close to week 26 (20 - 28), third visit around week 32 (28 - 36) and lastly final visit between 36 and 38 (>36) of pregnancy [27]. However, a Ugandan study in 2015 indicates that most women registered late for ANC attendance on average at 5.5 months of pregnancy. It was noted that in addition to the late seeking of ANC, some of the women even fail to complete the required eight contacts [3].

In this study, the majority 99 (66%) of the women had no formal education and among these, (94%) had late ANC. In addition, women with no formal education actually increased late ANC attendance by 74%, meaning that not attending formal education is a barrier for seeking early ANC among pregnant women. Furthermore, women who attained the primary level of education were also found to be 2 times more likely to seek late ANC compared to those with a tertiary level of education. Studies have found that higher level of education of the mothers is positively associated with late ANC



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initiation. This is possibly because education gives an opportunity for mothers to develop greater confidence, to make better choices and to make decisions regarding their own health as well as their children. It is also more likely that educated women demand higher quality service and pay more attention to their health in order to ensure better health for themselves [16, 28, 18, 13, 29, 15].

This study is also in agreement with other studies in Tanzania and Ghana in which women who had lower education or none booked later than those with higher education [28, 13]. Furthermore, the present study is also in conformity with the findings in the study carried out in Ethiopia about factors associated with late antenatal care attendance among pregnant women which indicated that women with higher education levels were more likely to initiate ANC early compared to those without [10]. This could be a result of exposure of information in the media which is usually availed of this is a big challenge to women with low level of education. In addition, educated mothers have better jobs compared to the uneducated ones which improve on their financial capacity leading to seeking for care independently. In addition, educated women tend to have better level of knowledge in areas of health. In Uganda, a cross sectional study determining attendance noted that lack of knowledge about dangers of not seeking ANC and delivery at health facility, including inability to make independent decisions were major barriers to seeking health care among pregnant women in Uganda [30].

In this study, the occupation status of the women was found to have no significant association with late ANC attendance. Although women whose spouses were unemployed had were less likely to seek

late ANC, but having unemployed spouse increases late ANC attendance by 25% compared to those in formal employment [2]. In disagreement with this was a study conducted by [31] who found no association between seeking ANC care and husband's occupation. In addition, other studies also showed that women whose husbands were either unemployed or were farmers were less likely to receive ANC [15]. This study is in conformity with study by [13] who also found that parity was also associated with seeking of late ANC. The result further indicates that multigravida women were more likely to seek late ANC compared to other levels of gravity. They noted that multigravida women may have perceived themselves to have more experience about pregnant issues hence could not value the significance of making an early and timely booking. In addition, [32] also found that an increase in parity decreases the likelihood of uptake of ANC. This could be due to the fact that women who had been pregnant many times were less motivated to go for ANC visits due to experience gained from previous pregnancies and births.

Regarding religion, overall, there was a relationship between religion of the women and late ANC attendance. The current study shows that all of the Anglican and Muslim women attended ANC late. Overall, a significant association between religion of the women and late ANC attendance has been noted [2, 29, 15]. A recent study showed that the Anglican women were found to be about 2 times more likely to seek late ANC compared to the Muslims, though the numbers of Muslims were only two [2]. However, another study in Uganda found that religion does not influence ANC attendance [33].

## CONCLUSION

The majority (86%) of the pregnant women sought late antenatal care services at the health facility. Overall, across all the age categories, most of the women sought ANC late. In terms of marital status, similarly, most of the women who were married, single, divorced and widowed constituted the great majority of those who sought

ANC late. Regarding education level, majority of the women with no formal education had ANC late. Lack of community sensitization and health promotion programs by the Ugandan Ministry of Health may have led to a decline in early antenatal care seeking.



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