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# **Factors Associated with the Rate of Delayed First Antenatal Care Visits among Pregnant Women Attending Fort Portal Regional Referral Hospital Western Uganda**

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## **ABSTRACT**

In Uganda, only 25% of pregnant women-initiated ANC before 20 weeks gestation, and 48% of pregnant women did not complete 4 ANC visits. Therefore, the purpose of this study was to determine the prevalence of late initiation of ANC and associated factors among pregnant women attending Fort Portal Regional Referral Hospital (FPRRH). A cross-sectional study design using a quantitative research approach was employed for this study. A total of 200 participants were recruited for the study for the period of one month and were selected using a simple random sampling technique. Data were collected using interviewer-structured questionnaires which were filled by the researcher with the help of research assistants. Data were entered into the SPSS software application and descriptive analysis was done using SPSS version 22.0. Results of the study revealed that the socio-demographic factors associated with delayed initiation of the first ANC visit were the age of 20-30 years;  $p=0.002$  (OR=0.27) urban residence;  $p=0.016$  (OR=2.32) and monthly income level  $<0.5M$  UGX  $p=0.004$  (OR=2.70, 95). The current pregnancy-related factors included short distance from the health unit  $p<0.001$ ; (OR=0.13, cheap transport cost  $p=0.002$ ; (OR=0.25), planned pregnancy reduced  $p<0.001$ ; (OR=0.16) and violation by the husband  $p=0.026$ ; (OR=3.45). Previous pregnancy-related factors associated included recent caesarian section mode of delivery  $p$  value $<0.001$  (OR=0.14), use other contraceptive methods other than pills, injectables, and implants  $p$ -value=0.030 (OR=2.82), and history of any gynecological surgery had a  $p$  value=0.001 (OR=0.12). According to the study findings, factors associated with delayed initiation of the first antenatal care visit included age, residence, distance from the nearest health unit, cost of transport, planned pregnancy, violation by the husband, recent mode of delivery, difficulty in vaginal delivery, contraceptive method ever used, injectables and implants and history of any gynecological surgery. We recommend that the government through the Ministry of Health construct health centers that provide ANC within easily accessible distance by pregnant mothers.

**Keywords:** Pregnant women, Gynecological surgery, ANC, Caesarian section, Vaginal delivery.

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## INTRODUCTION

Antenatal care (ANC) is the care given to pregnant women in order to have a safe pregnancy and a healthy baby [1, 2]. The World Health Organization (WHO) recommends a minimum of four antenatal visits and the first one being not later than 12 weeks of gestation [3]. According to Uganda Clinical Guidelines (UCG) [4], the normal pregnancies for normal (uncomplicated) pregnancies, four routine antenatal care visits are recommended as follows: the first visit between 10–20 weeks of pregnancy; the second visit between 20–28 weeks of pregnancy; the third antenatal care visit between 28–36 weeks and fourth antenatal care visit after 36 weeks. Globally, 38% of pregnant women attended the WHO-recommended first antenatal visit late during 2010–2016 [5]. Early ANC visit is very low (24%) in low-income countries compared with 81.9% in developed countries [6]. Most women in sub-Saharan Africa, however, make their first ANC visits very late [7], which ranges from 53% to 89% [8]. In Uganda, only 25% of pregnant women-initiated ANC before 20 weeks gestation, and 48% of pregnant women did not complete 4 ANC visits [9]. The reasons for late initiation of the first ANC visit, although they vary a lot from context to context, include lack of awareness about the services, lack of women's decision-making power, unfavorable attitudes towards antenatal care services, and wrong perceptions about the purpose of the antenatal care services and their timing [10,11]. Some of the wrong perceptions about the timing of ANC are related to the women's low educational status, lack of knowledge of ANC, and cultural and traditional beliefs related to healthcare-seeking practices during pregnancy [12]. Existing evidence globally shows that the prevalence of poor utilization of antenatal care services was around 57%. The report showed that 85% of mothers in the developed region start their ANC follow-up earlier but it was 45% and less than 25% in the developing countries and sub-Sahara region respectively [13]. In Uganda, 79% of pregnant women attended ANC late with 48% of those who had early timing attending four times [14]. Although maternal mortality worldwide dropped by about 44% between 1990 and 2015, more than 800 women (99% of them are from developing countries) die daily due to preventable causes related to pregnancy and childbirth [15]. Some of the causes of maternal and newborn deaths that can be arrested by timely and adequate ANC are anemia, the transmission of HIV from mother to child, and other birth defects in neonates [16-21]. Given that some maternal and neonates mortality are preventable if pregnant women attend ANC on time, this study sought to determine factors associated with delayed initiation of the first antenatal care visit among pregnant women attending Fort Portal Regional Referral Hospital. The data generated will help guide the provision of health policies aimed at curbing maternal and neonatal mortality.

## METHODOLOGY

### Study design

A cross-sectional study design was employed for this study. This design was employed because data on the prevalence of delayed initiation of the first ANC and associated factors was collected at a specified period of time.

### Area of Study

Fort Portal regional referral hospital is located in western Uganda in Fort Portal City. The coordinates of the hospital are latitude 0.65509° or 0°39'18" and longitude 30.28129° or 30°16'53". The hospital is located approximately 294 km west of Mulago national referral hospital. Fort portal city is located in the western region of Uganda and is bordered by Kagadi district to the North, Kabarole district to the East, Bunyangabu district to the South, Kamwenge district to the South-East and Bundibugyo district to the West. It is a regional referral for Kabarole, Kagadi, Kyenjojo, Kamwenge, Bunyangabo, Ntoroko Kyegegwa, Kasese, and Bundibugyo districts.

### Study population

The study was conducted among pregnant women attending ANC at FRRH. The facility receives approximately 400 pregnant women attending ANC every month.

### Inclusion criteria

The study included all pregnant women that were present at the maternity wing of the facility and consented to participate at the time of data collection.

### Exclusion criteria

The study excluded all pregnant women who were critically ill and those with mental disorders. Those who did not consent to participate at the time of data collection were excluded from the study.

### Dependent variable

This was the practice of the late initiation of ANC.

### Independent variables

These included socio-demographic factors associated with late initiation of ANC like age, sex religion, marital status, and education level.

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### Sample size determination

The required sample size was determined using Slovin's (1960) formula with a precision of +/-5% at a confidence level of 95%. The formula was preferred because the study population size is less than 10000.

The formula was given by the expression below.

$$N = \frac{n}{1+n(E)^2}$$

Where;

N = Number of participants.

n = Target population, n=400 (Maternity ward receives about 400 pregnant women for ANC in a month).

E = Fixed error, E= 0.05

Therefore;

$$N = \frac{400}{1+400(0.05)^2}$$

$$N = \frac{400}{1+1}$$

$$N = \frac{400}{2}$$

N = 200, therefore 200 participants were recruited for the study for the period of one month.

### Sampling procedures

The respondents were selected by simple random sampling. In this procedure, codes of "0" and "1" were assigned on small chits of paper and placed in a box. Participants were allowed to pick only one paper at random without replacing it. All the participants who picked a "0" were considered for the study while those who picked a "1" were excluded from the study.

### Data collection methods and management

Data were collected using an interviewer-administered structured questionnaire modified from Yamashita *et al.* [22] which was filled by the researcher with the help of research assistants. All the questionnaires were filled out completely. Data were collected through oral interviews of the respondents. The filled questionnaires were checked carefully and thoroughly for completeness and validity before leaving the data collection area. After confirmation of validity, they were packed in the waterproof parcels to prevent soiling and they were transported to the area of storage where they were stored in a safe drawer and were locked with a padlock and the key kept by the researcher. Data were then picked for analysis and stored in the computer and the soft copy was protected using a password to avoid access by unauthorized people.

### Data analysis

Logistic regression analysis was used for inferential statistics. Quantitative statistical data was entered into SPSS software application and descriptive analysis and logistic regression were done using SPSS version 22.0. Variables that had a p-value < 0.2 in the bivariate analysis were used to fit a multivariate model that explains significant predictors of delay of initiation of first antenatal care visits among pregnant women. Results were presented in the form of tables, charts, graphs and narratives. The associated factors were determined using P- values, odds ratios, and confidence intervals.

### Quality control

The questionnaires were pre-tested among 20 pregnant women who were not part of the actual study for validity before the main study. Two research assistants were recruited. They were then adequately trained as per the requirements of the study and the objectives to be met. Data obtained were checked for consistency and where any uncertainties arose clarifications were sought.

### Ethical considerations

Permission to carry out the study was obtained from Kampala International University- Western Campus; after which permission from FRRH was obtained. Each respondent was given informed verbal and written consent after being told the purpose and procedures of the study. Culture was respected and all responses were kept confidential and anonymous. Both informed and written consent was also obtained from the selected participants before collecting data. Confidentiality was ensured through the use of signatures, not names to promote the anonymity of the respondents. For those that requested to drop out of the study due to personal reasons, they were allowed to do so although they were encouraged to complete the study.

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## RESULTS

## Socio-demographic factors of the respondents.

Table 1: Distribution of socio-demographic characteristics of the respondents

Variable	Category	Frequency (n=200)	Percentage
Age	<20 years	27	13.5
	20-30 years	101	50.5
	>30 years	72	36.0
Religion	Catholics	118	59.0
	Moslems	37	18.5
	Anglicans	45	22.5
Tribe	Bathroom	132	66.0
	Bakiga	48	24.0
	Baganda	20	10.0
Residency	Rural	131	65.5
	Urban	69	34.5
Marital status	Single	28	14.0
	Married	140	70.0
	Divorced	28	14.0
	Co-habiting	4	2.0
Education level	Primary	44	22.0
	Secondary	66	33.0
	University/college	79	39.5
	None	11	5.5
Income level	<500000 ug	132	66.0
	≥500000 ug	68	34.0
Distance from the nearest health unit	Near	40	20.0
	Far	95	47.5
	Very far	65	32.5

According to the study findings, more than half 101(50.5%) of the respondents were aged 20-30 years. Also, more than half f of 118(59.0%) of the respondents were Catholics. Similarly, more than half 132(66.0%) of the respondents were Batooro. In addition to that, more than half 131(65.5%) of the respondents were residing in rural areas. Furthermore, the majority 140(70.0%) of the respondents were married. The majority 79(39.5%) of the respondents had a tertiary level of education. More to that, the majority 132(66.0%) of the respondents had monthly income less than 0.5M UGX. Also, the majority of 95(47.5%) of the respondents were coming far from the health unit for ANC as shown in Table 1 above.

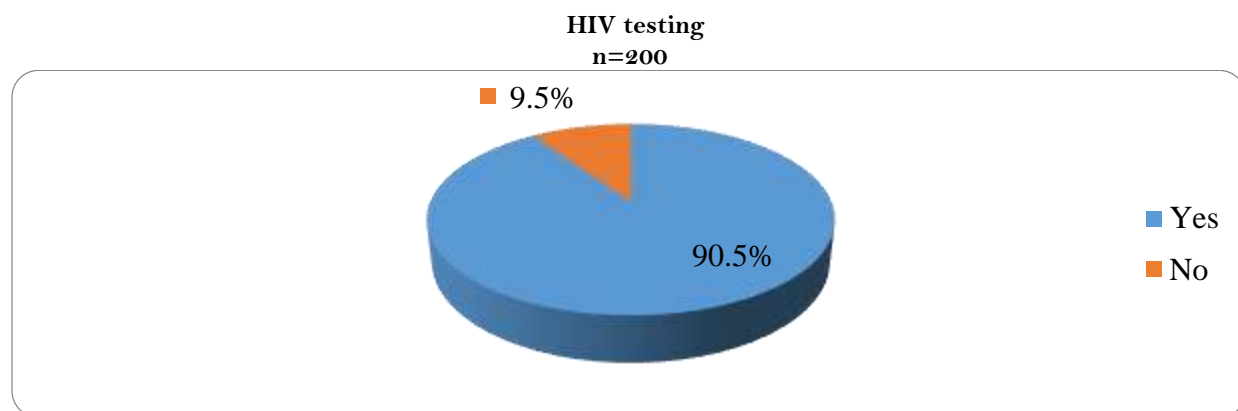


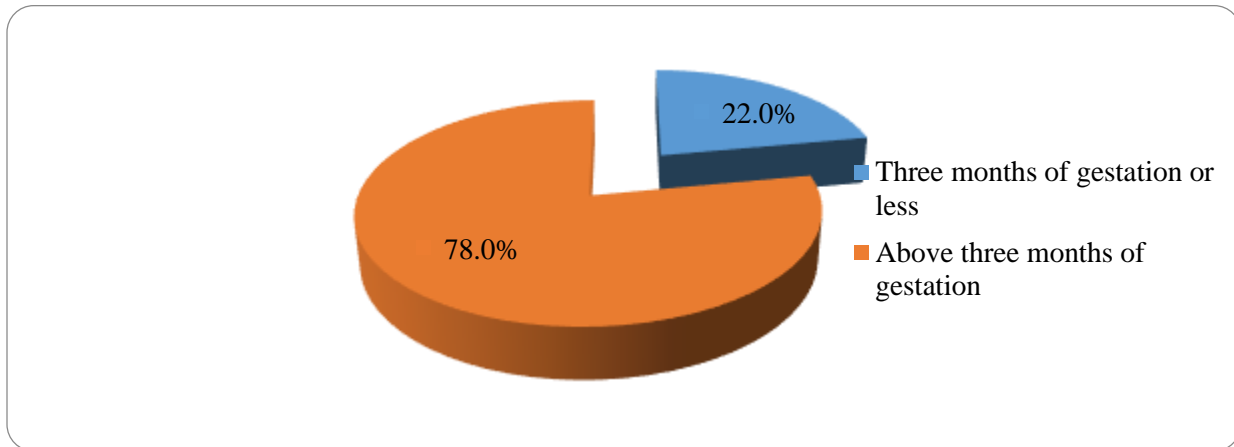
Figure 1: HIV testing

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As shown in Figure 1 above, the majority 181(90.5%) of the respondents had tested for HIV while only 19(9.5%) had never tested for HIV.

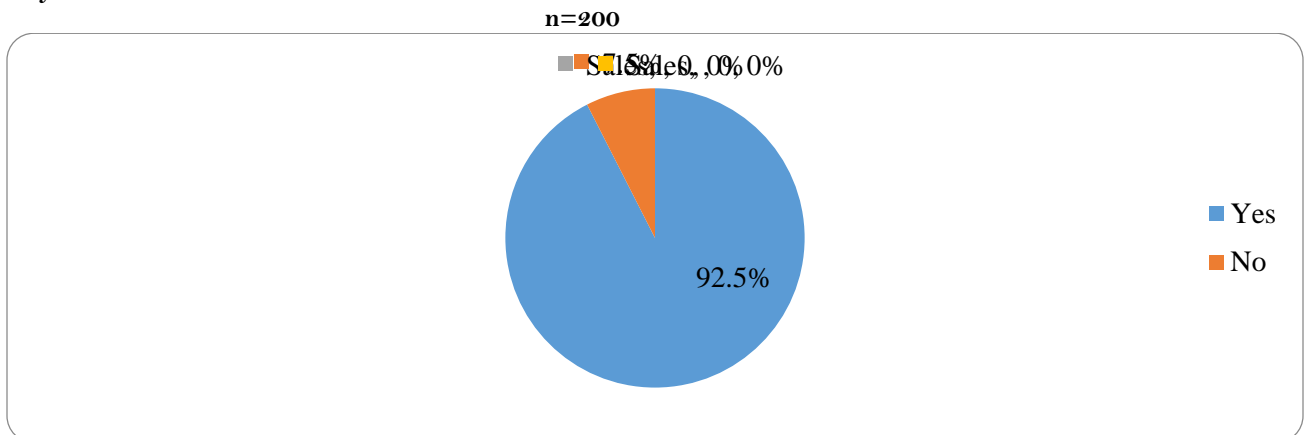
**Initiation of ANC**  
**Delayed initiation of first ANC visit**  
**n=200**



**Figure 2: Delayed initiation of first ANC visit**

As indicated in Figure 2 above, it was found that more than three quarters 156(78.0%) of the respondents had initiated their first ANC visit more than three months of gestation age whereas only 44(22.0%) of the respondents had initiated ANC three months of gestation or less.

**Any ANC missed**



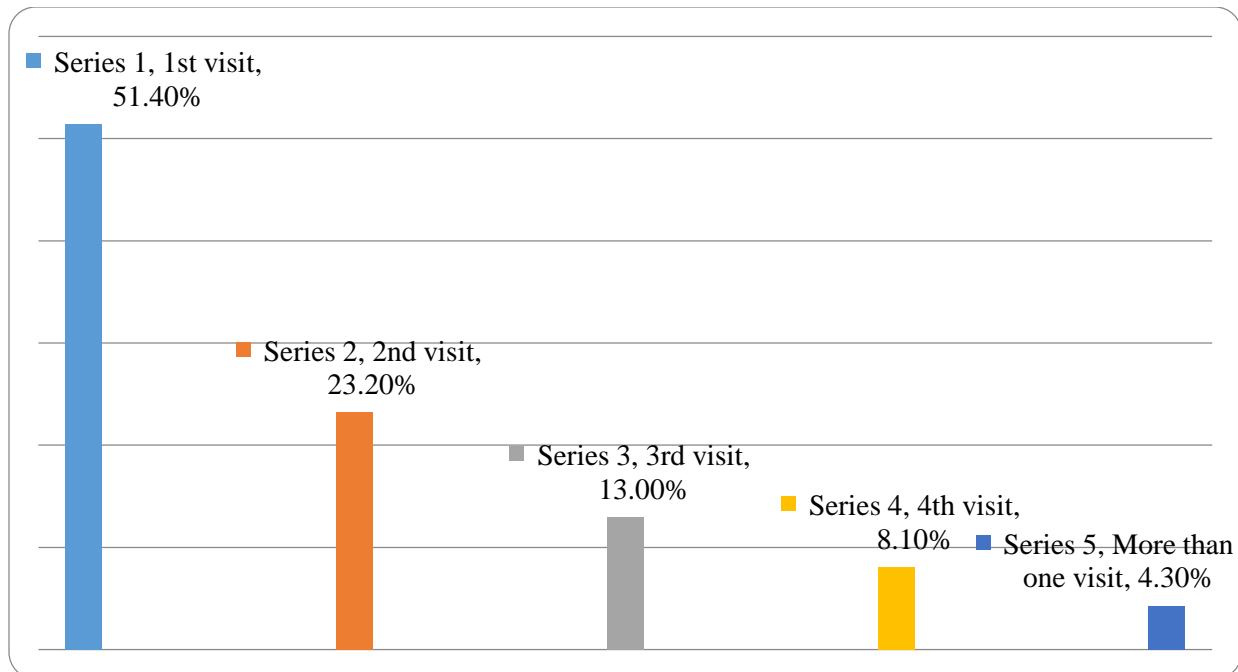
**Figure 3: Any ANC missed**

It was revealed that the majority 185(92.5%) of the respondents had ever missed an ANC visit while only 15(7.5%) of the respondents had never missed an ANC visit as shown in Figure 3 above.

**Missed ANC visits**  
**n=200**

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**Figure 4: Missed ANC visits**

The study revealed that the majority 103(51.4%) of the respondents had missed the first ANC visit whereas 9(4.3%) of the respondents had missed more than one ANC visit as shown in Figure 4 above.

**Factors associated with delayed initiation of first ANC visit.**

**Bivariate analysis of socio-demographic factors**

**Table 2: Bivariate analysis of socio-demographic factors**

Variable	Category	Delayed initiation of first ANC visit		X <sup>2</sup>	Df	P<0.05
		≤3months	>3months			
Age	<20 years	4(14.8%)	23(85.2%)	11.31	2	0.002
	20-30 years	32(31.7%)	69(68.3%)			
	>30 years	8(11.1%)	64(88.9%)			
Religion	Catholic	26(22.0%)	92(78.0%)	0.004	2	1.000
	Moslem	8(21.6%)	29(78.4%)			
	Anglican	10(22.2%)	35(77.8%)			
Tribe	Batorom	26(19.7%)	106(80.3%)	1.891	2	0.442
	Bakiga	14(29.2%)	34(70.8%)			
	Baganda	4(20.0%)	16(80.0%)			
Residency	Rural	22(16.8%)	109(83.2%)	5.997	1	0.019
	Urban	22(31.9%)	47(68.1%)			
Marital status	Single	0(0.0%)	28(100.0%)	13.520	3	0.005
	Married	40(28.6%)	100(71.4%)			
	Divorced	4(14.3%)	24(85.7%)			
	Co-habiting	0(0.0%)	4(100.0%)			
HIV testing	Yes	40(22.1%)	141(77.9%)	0.011	1	1.000
	No	4(21.1%)	15(78.9%)			
Participant's education level	Primary	0(0.0%)	44(100.0%)	19.238	3	0.000
	Secondary	14(21.2%)	52(78.8%)			
	University/college	26(32.9%)	53(67.1%)			
	Others	4(36.4%)	7(63.6%)			
	Primary	1(5.6%)	17(94.4%)			

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<b>Husbands education level</b>	Secondary	15(18.5%)	66(81.5%)	6.925	3	0.069
	Tertiary	27(29.3%)	65(70.7%)			
	None	1(1.11%)	8(8.9%)			
<b>Income level</b>	<500000 ug	21(15.9%)	111(84.1%)	8.393	1	0.004
	>500000 ug	23(33.8%)	45(66.2%)			

It was found that age, residency and income level had a p-value less than 0.2 and proceeded to multivariate analysis as indicated in Table 2 above. Page | 56

**Multivariate analysis of socio-demographic factors**  
**Table 3: Multivariate analysis of socio-demographic factors**

Variable	Category	OR(95%CI)	P-value
<b>Age</b>	<20 years	0.72(0.20-2.62)	0.616
	20-30 years	0.27(0.12-0.63)	<b>0.002</b>
	>30 years	Ref	
<b>Residency</b>	Rural	2.32(1.17-4.59)	<b>0.016</b>
	Urban	Ref	
<b>Marital status</b>	Single	1.00(0.0-.)	1.000
	Married	0.00(0.00-.)	0.999
	Divorced	0.00(0.00-.)	0.999
	Co-habiting	Ref	
<b>Participant's education level</b>	Primary	-	0.997
	Secondary	2.12(0.54-8.29)	0.279
	University/college	1.17(0.31-4.34)	0.820
	Others	Ref	
<b>Income level</b>	<500000 ug	2.70(1.36-5.36)	<b>0.004</b>
	>500000 ug	Ref	

In this study, the socio-demographic factors associated with delayed initiation of the first ANC visit were age whereby the age of 20-30 years had a p=0.002; (OR=0.27, 95%CI: 0.12-0.63), residence whereby rural residence had p=0.016; (OR=2.32, 95%CI: 1.17-4.59) and monthly income level <0.5M UGX p=0.004; (OR=2.70, 95%CI: 1.36-5.36) as indicated in table 3 above.

**Current pregnancy factors associated with late initiation of ANC**

**Table 4: Bivariate analysis of current pregnancy factors associated with delayed initiation of first ANC visit.**

Variable	Category	Delayed initiation of first ANC visit		X <sup>2</sup>	Df	P<0.05
		≤3months	>3months			
<b>Distance from the nearest health unit</b>	Near	19(47.5%)	21(52.3%)	20.45	2	0.000
	Far	18(18.9%)	77(81.2%)			
	Very far	7(10.8%)	58(89.2%)			
<b>Cost of transport</b>	Cheap	19(38.0%)	31(62.0%)	14.75	1	0.000
	Expensive	25(16.7%)	125(83.3%)			
<b>Length of time taken to attend to at the facility</b>	<1 hour	7(20.6%)	27(79.4%)	3.32	2	0.194
	1-2 hours	12(33.3%)	24(66.7%)			
	>2 hours	25(19.2%)	105(80.8%)			
<b>If pregnancy was planned for</b>	Yes	36(35.3%)	66(64.7%)	21.4	1	0.000
	No	8(8.2%)	90(91.8%)			
<b>Satisfaction with ANC services provided</b>	Yes	40(23.4%)	131(76.6%)	1.33	1	0.335
	No	4(13.8%)	25(86.2%)			
<b>Violation by the husband</b>	Yes	4(9.1%)	40(90.9%)	5.48	1	0.022
	No	40(25.6%)	116(74.4%)			
<b>Length of time at work</b>	Don't work	11(20.8%)	42(79.2%)			

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	<6 hours	4(36.4%)	7(63.4%)	1.63	3	0.667
	6-12 hours	14(19.7%)	57(80.3%)			
	> 12 hours	15(23.1%)	50(76.9%)			
<b>Episode of PID</b>	Yes	4(40.0%)	6(60.0%)	1.99	1	0.231
	No	40(21.1%)	150(78.9%)			

According to the study findings, the current pregnancy factors associated with delayed initiation of the first ANC visit included distance from the nearest health facility, cost of transport, length of time taken to be attended to at the facility, planned pregnancy, violation by the husband and episode of PID as shown in table 4 above.

**Table 5: Multivariate analysis of current pregnancy factors associated with delayed initiation of first ANC visit.**

Variable	Category	cOR(95%CI)	P-value
<b>Distance from the nearest health unit</b>	Near	0.13(0.05-0.36)	<0.001
	Far	0.52(0.20-1.32)	0.167
	Very far	Ref	
<b>Cost of transport</b>	Cheap	0.25(0.12-0.52)	0.002
	Expensive	Ref	
<b>If pregnancy was planned for</b>	Yes	0.16(0.07-0.37)	<0.001
	No	Ref	
<b>Violation by the husband</b>	Yes	3.45(1.16-10.24)	0.026
	No	Ref	.

According to the study findings, the current pregnancy factors associated with delayed initiation of first ANC visit included distance from the nearest health unit whereby those living near p<0.001; (OR=0.13, 95%CI: 0.05-0.36), cost of transport whereby cheap transport had p=0.002; (OR=0.25, 95%CI: 0.12-0.52), planned pregnancy p<0.001; (OR=0.16, 95%CI: 0.07-0.37) and violation by the husband p=0.026; (OR=3.45, 95%CI: 1.16-10.24) as shown in table 5 above.

#### Previous pregnancy factors associated with late initiation of ANC.

**Table 6: Bivariate analysis of the previous pregnancy factors associated with delayed initiation of the first ANC visit.**

Variable		Delayed initiation of ANC		X <sup>2</sup>	Df	P-Value
		≤3months	>3months			
<b>Pregnancies carried 28 weeks</b>	One	32(33.0%)	65(67.0%)	18.84	3	0.000
	Two	8(25.8%)	23(74.2%)			
	Three	4(7.3%)	51(92.7%)			
	More than three	0(0.0%)	17(100.0%)			
<b>Any pregnancy-related problems encountered</b>	In previous pregnancies	4(36.4%)	7(63.7%)	2.47	2	0.261
	In previous deliveries	0(0.0%)	4(100.0%)			
	None	40(21.6%)	145(78.4%)			
<b>Recent mode of delivery</b>	SVD	16(16.3%)	82(83.7%)	22.94	3	0.000
	Assisted vaginal delivery	4(25.0%)	12(75.0%)			
	Caesarian section	15(57.7%)	11(42.3%)			
	None for primigravidas	9(15.0%)	51(85.0%)			
<b>Difficulty in vaginal delivery</b>	Yes	8(40.0%)	12(60.0%)	4.20	1	0.050
	No	36(20.0%)	144(80.0%)			
<b>Antepartum bleeding before</b>	Yes	0(0.0%)	4(100.0%)	1.15	1	0.578
	No	44(22.4%)	152(77.6%)			
<b>Contraceptive method ever used</b>	Pills	0(0.0%)	30(100.0%)	26.94	4	0.000
	Injectables	0(0.0%)	24(100.0%)			
	Implants	8(30.8%)	18(69.2%)			

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	Others	7(17.1%)	34(82.9%)			
	None	29(36.7%)	50(63.3%)			
<b>Gynaecological surgery</b>	Yes	8(66.7%)	4(33.3%)	14.84	1	0.001
	No	36(19.1%)	152(80.9%)			

It was found that recent mode of delivery, difficulty in vaginal delivery, contraceptive method ever used, and history of any gynecological surgery had a p-value less than 0.2 progressed to multivariate analysis as shown in Table 6 above.

**Table 7: Multivariate analysis of the previous pregnancy-related factors associated with delayed initiation of the first ANC visit.**

Variable		Delayed initiation of ANC		OR(95%CI)	P-Value
		≤3months	>3months		
<b>Pregnancies carried 28 weeks</b>	One	32(33.0%)	65(67.0%)	-	0.998
	Two	8(25.8%)	23(74.2%)	-	0.998
	Three	4(7.3%)	51(92.7%)	-	0.998
	More than three	0(0.0%)	17(100.0%)	Ref	
<b>Recent mode of delivery</b>	SVD	16(16.3%)	82(83.7%)	0.90(0.37-2.20)	0.825
	Assisted vaginal delivery	4(25.0%)	12(75.0%)	0.53(0.14-2.01)	0.351
	Caesarian section	15(57.7%)	11(42.3%)	0.14(0.05-0.37)	0.001
	None for primigravidas	9(15.0%)	51(85.0%)	Ref	
<b>Contraceptive method ever used</b>	Pills	0(0.0%)	30(100.0%)	-	0.998
	Injectables	0(0.0%)	24(100.0%)	-	0.998
	Implants	8(30.8%)	18(69.2%)	1.31(0.51-3.38)	0.583
	Others	7(17.1%)	34(82.9%)	2.82(1.11-7.16)	0.030
	None	29(36.7%)	50(63.3%)	Ref	.
<b>Gynecological surgery</b>	Yes	8(66.7%)	4(33.3%)	0.12(0.03-0.42)	0.001
	No	36(19.1%)	152(80.9%)	Ref	.

It was found that the previous pregnancy-related factors associated with delayed initiation of the first ANC visit were recent caesarian section mode of delivery had a p value<0.001 (OR=0.14, 95% CI: 0.05-0.37), use other contraceptive methods other than pills, injectables and implants had a p value=0.030 (OR=2.82, 95% CI: 1.11-7.16)), history of any gynecological surgery had a p value=0.001 (OR=0.12, 95% CI: 0.03-0.42) as indicated in table 7 above.

## DISCUSSION

### Socio-demographic characteristics of the respondents

In a study that involved 200 participants, more than half 101(50.5%) of the respondents were aged 20-30 years whereas only 27(13.5%) of the respondents were less than 20 years. Also, more than half 118(59.0%) of the respondents were Catholics whereas 37(18.5%) of the respondents were Moslems. Similarly, more than half 132(66.0%) of the respondents were Batooro while only 20(10.0%) of the respondents were Baganda. In addition to that, more than half 131(65.5%) of the respondents were residing in rural areas whereas 69(34.5%) were residing in urban centers. Furthermore, the majority 140(70.0%) of the respondents were married whereas 4(2.0%) of the respondents were cohabiting. The majority 79(39.5%) of the respondents had a tertiary level of education while only 11(5.5%) had no formal education. More to that, the majority 132(66.0%) of the respondents had a monthly income of less than 0.5M UGX whereas 68(34.0%) of the respondents had a monthly income of more than 0.5 M UGX.

### Initiation ANC

Results of the study revealed that more than three quarters 156(78.0%) of the respondents had initiated ANC above three months of gestation age whereas only 44(22.0%) of the respondents had initiated ANC three months of gestation or less. It was revealed that the majority 185(92.5%) of the respondents had ever missed an ANC visit while only 15(7.5%) of the respondents had never missed an ANC visit. These findings revealed that the majority of the respondents had initiated ANC late at Fort Portal regional referral hospital. Our findings were congruent with UDHS 2011; whereby only 21% of women in Uganda made their first ANC visit before the fourth month of pregnancy and the median duration of pregnancy at the first ANC visit was 5.1 months (5.0 months in urban areas

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and 5.2 months in rural areas) [14]. These results were also congruent with those of a study in Nigeria which showed that only 77.2% of the women who received ANC booked late [23]. Results were also the same as those of in Kwa-Zulu- Natal, South Africa whereby most women 98.6% attended the antenatal clinic during their pregnancy of which only 8.4% of women reported starting ANC in the first 3 months of pregnancy [24].

### **Factors associated with late initiation of ANC among pregnant women attending Fort Portal regional referral hospital**

In this study, the socio-demographic factors associated with delayed initiation of the first ANC were age whereby the age of 20-30 years had reduced chances of delayed initiation of ANC compared to those above 30 years. Our findings disagreed with Nketiah-Amponsah *et al.* [25], who found that the young age of women is a predisposing determinant for early utilization of ANC services and Zhao *et al.* [26] who found that women older than 30 were more likely to adequately initiate antenatal care early than younger women in China. Another socio-demographic factor was place of residence whereby rural residents had increased chances of initiating ANC late compared to those residing in urban areas. This can be argued as due to difficulty in accessing health care since most of the health facilities providing ANC are located in urban areas which are distant from their places of residence. The current pregnancy-related factors associated with delayed initiation of the first ANC visit included distance from the nearest health unit whereby those living near had reduced odds of delayed initiation of ANC compared to those leaving very far and cost of transport whereby cheap transport had reduced odds of delayed initiation first ANC visit compared to the expensive cost of transport. These results were in agreement with those of Yamashita *et al.* [22] whose study revealed that general healthcare utilization for every kind of service is affected by distance from those services. Likewise, other studies have also found that an increase in distance to the nearest health facility led to fewer antenatal visits [27]. In trying to explain the association, the researchers argue that many pregnant women find it distressing to walk long distances or take two or more taxis to a health facility; therefore, they tend to utilize ANC services less regularly than those who live close [28]. Another factor was planned pregnancy which reduced the odds of delayed initiation of the first ANC visit compared to unplanned one. This was in agreement with previous studies which revealed that women with unplanned pregnancies booked four times late compared to respondents with planned pregnancies [29,30]. However, the findings were incongruent with Tarekegn *et al.* who found that the wantedness of the index pregnancy did not have any significant association with the use of ANC [31]. Also, violation by the husband increased the odds of delayed initiation of the first ANC visit among pregnant women attending FRRH. The findings in this study were congruent with Gross *et al.* who found that having a spouse or partner who is not supportive was reported to be associated with initiating ANC late for both adolescents and adult women [32]. Similarly, the results were consistent with those of Rosliza and Mohamad who found that the utilization of ANC was almost nine times more likely for women who reported their husbands to approve of ANC than women with those whose husbands did not approve of ANC service [33].

### **CONCLUSION**

According to the study findings, it was concluded that the majority of the women at FRRH had initiated their antenatal care late. There were multiple factors affecting the late initiation of antenatal care which included age, residence, distance from the nearest health unit, cost of transport, planned pregnancy, violation by the husband, recent mode of delivery, difficulty in vaginal delivery, contraceptive method ever used, injectables and implants and history of any gynecological surgery.

### **RECOMMENDATION**

We, therefore, recommend that health workers at Fort Portal regional referral hospital increase sensitization and increase awareness of the benefits of early initiation of ANC among pregnant women. Also, we recommend that the government through the Ministry of Health construct health centers that provide ANC within easily accessible distance by pregnant mothers.

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