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Research paper

Factors Influencing Utilization of Maternal Health Services by Adolescent Young Mothers Aged 15-19 Years in Kiryandongo General Hospital

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Abstract

Background: *In Uganda, 25 % of adolescents age 15-19 have already begun childbearing, 19 % have already given birth and another 5 % pregnant with their first child. Utilization of maternal health services is, therefore, an effective approach to reducing the risk of maternal morbidity and mortality. Low utilization of Maternal Health Services (MHS) has been registered in many parts of Uganda.*
Objective: To identify the key factors that influenced the utilization of MHS by adolescent young mothers aged 15-19years in Kiryandongo general Hospital
Methods: *A Cross Sectional analytical design, both quantitative and qualitative was used. A total of 98 adolescent young mothers were randomly selected. Data was collected using semi-structure questionnaires and analyzed using SPSS version 19.*
Results: *Level of utilization of MHS was 44.9%. The socio-demographic (personal) factors that significantly influenced MHS utilization were; maternal age (COR= 0.29; 95% CI: 0.13-0.67, p = 0.003), husband's education level (COR= 0.19; 95% CI: 0.08-0.47, p =0.000) and husband's monthly income (COR= 0.35; 95% CI: 0.15-0.80, p = 0.012). Health System factors that influenced MHS utilization included; Time for travelling to reach health facility (COR=2.39; 95% CI: 1.03-5.52, p = 0.040) and Cost of the health services (COR= 2.68; 95% CI: 1.17-6.15, p =0.019).*
Conclusion: *Strategies in addressing decision-making norms, engaging in massive community dialogue and designing appropriate communication strategies may help improve MHS utilization.*

Keywords*:Adolescent Young Mothers; Maternal Health Services (MHS); Utilization; Health System Factors; Kiryandongo General Hospital (KGH).*

1. Introduction

1.1. Background of the study

Eighteen Percent (18%) of the world population is adolescent individuals aged 10–19 years (UN, 2016). Generally, the global concern is on adolescents aged 15–19 years as they fall within the reproductive age group (15–49 years) (WHO, 2006). Around 16 million adolescent women (aged 15–19) give birth every year around the world and most of these births (about 95%) are concentrated in middle and low-income countries (WHO, 2014).Adolescent mothers contribute to 12% of global annual births, and they make up 10% of global annual maternal deaths (UNFPA, 2013).
Childbirth in adolescence is often risky and is associated with a host of life-threatening adverse health outcomes such as high risk of premature delivery, postnatal complications, unsafe abortion complications and obstetric fistula (Wilson, et al., 2012; WHO, 2007). Hence, it is not surprising that despite accounting for only 11% births worldwide, adolescent women carry 23% of overall burden of disease due to pregnancy and childbirth among women of all ages (Gore, et al., 2011). Complications of pregnancy and childbirth are also among the leading causes of death among women aged 15–19 years (WHO, 2014).
Despite a substantial improvement in maternal mortality in last two decades, the proportion of adolescent maternal deaths to total maternal deaths in Uganda is still around 10% (Rutaremwa, 2012). Most maternal deaths are preventable if mothers receive essential healthcare before, during, and after childbirth (Save the Children, 2013). Uganda bears a legal obligation to make sure that women do not die or suffer complications from preventable pregnancy-related causes (UN, 2000). The Government of Uganda has implemented several policies and programs such as Child Survival and Safe Motherhood Program, 1992; Reproductive and Child Health (RCH) Program, 1997; National Population Policy 2000; and National Urban Health Mission, 2013–2017 to reduce the burden of maternal mortality and improve maternal health.

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Several studies from developing countries have recognized socio-economic factors and service delivery environment as important determinants of healthcare utilization. These include quality of care, distance to health facility, lack of transport, women's low social status, age, religion, educational level, economic status of the household, wealth quintile, media exposure and rural/urban residence, lack of autonomy and decision-making power and cultural norms (Edmond, Paul and Sibley, 2012; Gabrysch and Campbell, 2009; Joshi, et al., 2014; Masters, et al., 2013).
Bunyoro region is faced with a challenge of a rapidly growing population due to presence of Refugee camp and in-migration from other districts. Refugees from Southern Sudan, DR Congo, Rwanda, and Kenya find it favorable to settle in Kiryandongo. Bunyoro also has very poor SRHR indicators due to low utilization of maternal health services. The attendance of 4 or more ANC visits is at 44.5%, delivery by skilled attendants is at 57.7 % and the rate of early marriages at 10.6% (UBOS, 2016). It is critical to identify the key factors that influence the utilization of MHS by adolescent mothers in order to lay effective strategies to use in order to improve the level of utilization of MHS.

1.2. Background to the study area

Kiryandongo General Hospital is located 225 km along the Kampala-Gulu high way in Kikube parish, Kibanda county, Kirandongo District, about 50 km north-east of Masindi General Hospital. It is a 109-bed capacity, government owned, serving a population of over 400,000 people from areas of Kiryandongo District and parts of the Districts of Masindi, Nakasongola, Oyam, Apac, Amuru and Nwoya.

1.3. Problem statement

Sub-Saharan Africa has the highest rate of adolescent pregnancy in the world. While pregnancy during adolescence poses higher risks for the mother and the baby, the utilization of maternity care to mitigate the effects is low (Mekonnen, Dune &Perz, 2019). Around 16 million adolescent women (aged 15–19) give birth every year around the world and most of these births (about 95%) are concentrated in middle- and low-income countries (WHO, 2014). Adolescent mothers contribute to 12% of global annual births, and they make up 10% of global annual maternal deaths (United Nations Population Fund [UNFPA], 2013).
There is a low utilization of maternal health services in Bunyoro sub region as compared to other sub regions of the country. Bunyoro had a low percentage (45%) of women who have had four or more Antenatal care (ANC) visits, delivery by skilled attendants was at 57.7 %, the rate of early marriages at 10.6% and only 39% of women received a timely postnatal check (UBOS, 2016).
Many studies have been carried out on utilization of maternal health services across all age group but few among the age groups 15-19years. There was an information gap on adolescent mothers' utilization of maternal health services, especially in the region of Bunyoro. Kiryandongo General Hospital was strategically positioned to assess factors affecting MHS utilization in a rural areait has been recorded to be very.

1.4. Study objectives

The main objective of the study was to determine the factors influencing utilization of Maternal Health Services (MHS) among adolescent mothers aged group 15-19 years in Kiryandongo General Hospital.

1.5. Specific objectives

1). To assess the level of utilization of Maternal Health Services (MHS) by adolescent mothers aged 15-19years attending Kiryandongo General Hospital between January, 2018 and December, 2018.
2). To determine the Socio-demographic factors influencing utilization of Maternal Health Services (MHS) by adolescent mothers aged 15-19years attending Kiryandongo General Hospital between January, 2018 and December, 2018.
3). To establish the health system factors influencing the utilization of Maternal Health Services (MHS) by adolescent mothers aged 15-19years attending Kiryandongo General Hospital between January, 2018 and December, 2018.
4). To examine the Socio-cultural factors influencing utilization of Maternal Health Services (MHS) by adolescent mothers aged 15-19years attending Kiryandongo General Hospital between January, 2018 and December, 2018

2. Methods

2.1. Study design

This was an analytical cross-sectional study design, which employed both quantitative and qualitative methods.

2.2. Study population

The population for the study comprised of adolescent mothers attending Kiryandongo hospital, aged 15 - 19 years and Healthcare providers of MHS in Kiryandongo General Hospital.

2.3. Study unit

The study units were an adolescent mother aged 15-19 years attending Kiryandongo hospital and a healthcare provider of MHS in the facility.

2.4. Sample size

The sample size was calculated using Yamane's formula since the population size was known, level of precision at 5% and a confidence interval of 95% (Yamane, 1967).

$$n = \frac{N}{1+N(e)^2} = \frac{130}{[1+130(0.05^2)]} = 98$$

Where "n" was the sample size, "N" was the proportion size and "e" was the level of precision. Therefore, the sample size was 98respondents adolescent mothers aged 15-19years.A sample of 4 healthcare providers in MHS department were also selected.

2.5. Sampling techniques

The researcher obtained the list of adolescent mothers attending MHS at Kiryandongo Hospital with assistance of a health worker of the Hospital. The participants were randomly selected and approached for interview during working days of the week. Therefore, simple random sampling was used to obtain the required sample. The respondent health workers were purposively selected.

2.6. Data collection tools

Questionnaires: Questions were both closed and opened ended so that the respondents had ample time to express themselves adequately. The required data were audio recorded verbatim. The researcher carefully probed the respondents that enabled them understood the questions before answering and given appropriate information. The questionnaires were in English and interpreted into Luo and Lunyoro by research assistants to the respondent where necessary because these were the widely spoken languages by majority of the people of Kiryandongo District.
Key Informant interviews: Key informant interviews were conducted with 4 participants selected purposively based on their knowledge of the community and adolescent mothers' access to maternal health services personally or professionally. Factors of health service providers associated with use and non-use of maternal health services was considered. These included senior mid-wives, senior nursing officer, who were In-charges in Kiryandongo Hospital Maternity.
Focus Group Discussion: One focus group discussion with mothers aged 15-19years was held. There were 12 mothers in the group.

2.7. Data analysis

Data from each questionnaire was checked for completion, edited, coded where appropriate, categorized and summarized. Data was entered into the computer software, Statistical Package for Social Sciences (SPSS) program for analysis. Presentations of quantitative data results after analysis were in frequency tables, graphs charts. Graphical presentations were done by use of Excel Starter 2010 software.

2.8. Ethical consideration

An introductory letter from Uganda Martyrs University was used for introducing the researchers to the Kiryandongo General Hospital administration authorities, and thus ethical approval. Written consent was obtained from participants. Respondents were informed of their voluntary participation. The researchers observed confidentiality; the respondents' identities were anonymous on the questionnaires.

3. Results

3.1 Background characteristics of respondents

A total of 102respondents participated in this study including 98 adolescent mothers aged 15-19 and 4 health workers at Kiryandongo general Hospital. Their socio demographic characteristics were profiled in table 1 below:

Table 1: Socio-Demographic Characteristics of the Adolescent Mothers

Socio-demographics	Frequency (N = 98)	Percentage (%)
Age in years		
▪ 15-17	54	55.1
▪ 18-19	44	44.9
Education level		
▪ None	12	12.2
▪ Primary	63	64.3
▪ Secondary	22	22.4
▪ Tertiary	1	1.0
Marital status		
▪ Single	21	21.4
▪ Married	56	57.1
▪ Cohabiting	21	21.4
Religion		
▪ Catholic	42	42.9
▪ Protestant	38	38.8
▪ Muslim	11	11.2
▪ Others (Pentecostal, Adventist)	7	7.1
Occupation		
▪ Housewife	59	60.2
▪ Business lady	15	15.3
▪ Civil servant	1	1.0
▪ Student	2	2.0
▪ Peasant	10	10.2
▪ None	11	11.2
Monthly income (UGX Shs)		
▪ Less than UGX100,000/=	82	83.7
▪ UGX100,000/= - UGX200,000/=	7	7.1

▪ More than UGX200,000/=	9	9.2
Number of living children		
▪ None	13	13.3
▪ 1-3	85	86.7
Age at First birth		
▪ 15-17years	80	81.6
▪ 18-19years	18	18.4

Source (Primary, 2019).

54 (55.1%) of the respondents were aged 15-17 years, 44 (49.9%) were 18-19 years. 63 (64.3%) had primary level of education while 12(12.2%) had none. Marital status; single were 21 (21.4%), cohabiting 21 (21.4%) and married 56 (57.1%). Religion; the study found that catholic at 42 (42.9%) were the majority; others (Pentecostal) 7 (7.1%) were the minority. The study also indicated that the occupation of the majority 59 (60.2%) were housewives, 11 (11.2%) had none. Majority 82 (83.7%) were earning less than 100,000/-, 9 (9.2%) could earn 200,000/- or more. Notably 85 (86.7%) of these adolescent mothers between the age of 15-19 had at least 1-3 children. Age at first birth; 80 (81.6%) had their first birth between the age of 15-17 years.

3.2. Level of utilization of MHS by adolescent young mothers

The level of utilization of Maternal Health Services (MHS) among adolescent mothers aged 15-19years was found to be 44.9% as shown in figure 2 below.

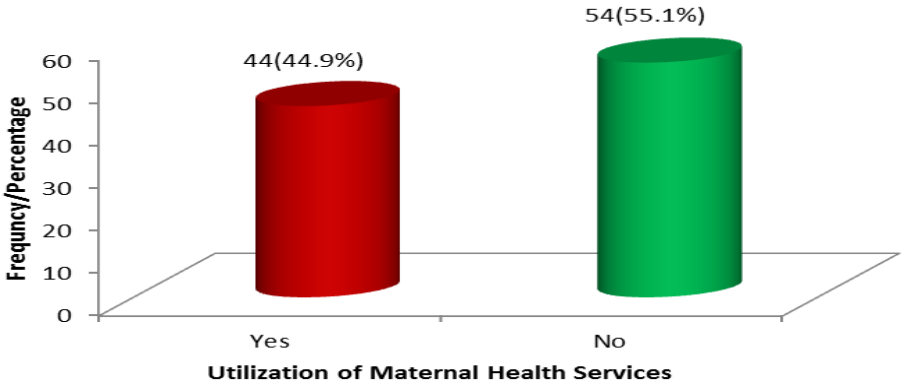


Fig. 1: Level of Utilization of MHS by Adolescent Mothers.

3.3: Socio-demographic factors influencing utilization of MHS.

Finding of the socio-demographic factors influencing utilization of Maternal Health Services (MHS) by adolescent mothers aged 15-19 years attending Kiryandongo Hospital are presented in tables 2 & 3 below. Table 2 is for univariate descriptive analysis while table 3 is for bivariate analysis.

Table 2: Univariate Descriptive Analysis of Socio-Demographic Factors

Personal factors	Frequency (N = 98)	Percentage (%)
Fear to disclose when pregnant		
▪ Yes, all time	45	45.9
▪ Yes, sometimes	34	34.7
▪ No, not at all	19	19.4
Feel guilty of getting pregnant		
▪ Yes, all time	42	42.9
▪ Yes, sometimes	39	39.8
▪ No, not at all	17	17.3
Knowledge about MHS		
▪ ANC	55	56.1
▪ Delivery	75	76.5
▪ PNC	27	27.6
▪ None	15	15.3
Perceived risk		
▪ Yes, if you don't attend all	28	28.5
▪ Yes, if you don't attend some	47	48.0
▪ No, not risky at all	23	23.5

Source (Primary, 2019).

Table 3: Bivariate Logistic Regression Analysis of Adolescent Mothers

Personal Variables	MHS Utilization Yes N (%)	No N (%)	COR (95% CI)	P-Value
1.Maternal age in years				
▪ 15-17years	17(31.5)	37(68.5)	0.29(0.13-0.67)	0.003**
▪ 18-19years	27(61.4)	17(38.6)		
2.Education				
▪ At most Primary	33(44.0)	42(56.0)	0.86(0.34-2.19)	0.747
▪ Post Primary	11(47.8)	12(52.2)		
3.Marital status				

▪ Single	9(42.9)	12(57.1)	0.90(0.34-2.38)	0.832
▪ Married	35(45.5)	42(54.5)		
4.Religion				
▪ Christians	42(48.3)	45(51.7)	4.20(0.86-20.57)	0.059
▪ Muslims	2(18.2)	9(81.8)		
5.Occupation				
▪ Housewife	25(42.4)	34(57.6)	0.77(0.34-1.75)	0.536
▪ Others (Students, business, etc)	19(48.7)	20(51.3)		
6.Monthly Income				
▪ Less than UGX100,000/=	35(42.7)	47(57.3)	0.58(0.20-1.71)	0.318
▪ More than UGX100,000/=	9(56.2)	7(43.8)		
7.Husband's education				
▪ At most Primary	19(30.6)	43(69.4)	0.19(0.08-0.47)	0.000**
▪ Post Primary	25(69.4)	11(30.6)		
8.Husband's occupation				
▪ Peasant/Farmer	15(36.6)	26(63.4)	0.56(0.25-1.27)	0.161
▪ Others (Civil servants, business, etc)	29(50.9)	28(49.1)		
9.Husband's monthly income				
▪ Less than UGX100,000/=	19(33.9)	37(66.1)	0.35(0.15-0.80)	0.012**
▪ More than UGX100,000/=	25(59.5)	17(40.5)		
10.Number of children				
▪ None	3(23.1)	10(76.9)	0.32(0.08-1.25)	0.089
▪ 1-3	41(48.2)	44(51.8)		
11.Age at 1st birth				
▪ 15-17years	32(40.0)	48(60.0)	0.33(0.11-0.98)	0.040**
▪ 18-19years	12(66.7)	6(33.3)		
12.Fear to disclose that you were pregnant				
▪ Yes	37(46.8)	42(53.2)	1.51(0.54-4.24)	0.432
▪ No	7(36.8)	12(63.2)		
13.Feel guilty of getting pregnant				
▪ Yes	37(45.7)	44(54.3)	1.20(0.42-3.47)	0.734
▪ No	7(41.2)	10(58.8)		
14.Knowledge about MHS				
▪ Yes	42(50.6)	41(49.4)	6.66(1.41-31.36)	0.008**
▪ No	2(13.3)	13(86.7)		
15.Perceived risk				
▪ Yes	40(53.3)	35(46.7)	5.43(1.69-17.49)	0.002**
▪ No	4(17.4)	19(82.6)		

COR=Crude Odds Ratio, p-value=Probability value, **Significant at 5% level, CI=Confident Interval.

Findings show that at bivariate analysis level, maternal age of the adolescent mother in years (COR= 0.29; 95% CI: 0.13-0.67, p = 0.003), husband's education level (COR= 0.19; 95% CI: 0.08-0.47, p =0.000) and husband's monthly income (COR= 0.35; 95% CI: 0.15-0.80, p = 0.012) were socio-demographic (personal) factors that significantly influenced utilization of Maternal Health Services (MHS) in Kiryandongo hospital. Results show that at bivariate analysis level, the education level of the mother (COR= 0.86; 95% CI: 0.34-2.19, p = 0.747) did not significantly influence utilization of Maternal Health Services (MHS) in Kiryandongo hospital.
From the univariate analysis (table 2), most of the respondents feared to disclose their pregnancy (80.6%), which probably influenced the mothers in utilizing MHS, negatively or positively. Again, feeling guilty of getting pregnant (82.7%), similarly affected their ability to utilize MHS. When asked in a focus group discussion, the mothers had this to say;

> *"[…] Of course, I feared to say it out. How can you disclose and be spared? Impossible […]"*- ***(Mother 3 in FGD).***
>
> *"[…] My fear came but disappeared afterwards. I had to disclose to be helped […]"* ***-(Mother 5 in FGD)***
>
> *"I was really feeling very guilty […]"* ***-(Mother 8 in FGD)***
>
> *"Most of these mothers are very fearful and feel guilty to seek MHS, unless they are escorted by adults […]"* – ***(Key informant X)***

These views show that fear of disclosure, feeling of guilt and perceived risk probably affected utilization of MHS in one way or the other.

3.4. Health system factors influencing the utilization of MHS

Finding of the health system factors influencing utilization of Maternal Health Services (MHS) by adolescent mothers aged 15-19years attending Kiryandongo Hospital are presented in tables 4 & 5 below. Table 4 is for univariate descriptive analysis while table 5 is for bivariate analysis.

Table 4: Univariate Descriptive Analysis of Health System Factors

Health system factors	Frequency (N = 98)	Percentage (%)
Distance to health facility		
▪ At most 5Km	54	55.1
▪ More than 5km	44	44.9
Nature of the road		
▪ Tarmac	26	26.5
▪ Marum	71	72.4
▪ Footpath	1	1.0

Mode of transport to health facility		
▪ Bicycle	11	11.2
▪ Motor cycle	47	48.0
▪ Car	13	13.3
▪ Others (Footing)	27	27.6
Time travelling to health facility		
▪ At most 1hour	58	59.2
▪ More than 1 hour	40	40.8
Waiting time at health facility		
▪ At most 1 hour	36	36.7
▪ More than 1 hour	62	63.3
Possession of insurance cover		
▪ Yes	9	9.2
▪ No	89	90.8
Cost of the health services		
▪ Yes, always	54	55.1
▪ Yes, but not always	38	38.8
▪ No, not affordable	6	6.1
Health care providers hospitable		
▪ Yes, always	62	63.3
▪ Yes, sometimes	29	29.6
▪ No, not at all	7	7.1
Heard rumours of rude health care providers at nearest health facility		
▪ Yes, often	14	14.3
▪ Yes, not often	40	40.8
▪ No, none	44	44.9

Source (Primary, 2019).

Table 5: Bivariate Logistic Regression Analysis for the Health System Factors

Health System factors	MHS utilization Yes N (%)	No N (%)	COR (95% CI)	P-Value
Distance				
▪ At most 5Km	24(44.4)	30(55.6)	0.96(0.43-2.14)	0.920
▪ More than 5km	20(45.5)	24(54.5)		
Mode of transport				
▪ Automobile	30(50.0)	30(50.0)	1.71(0.75-3.94)	0.202
▪ Others (Bicycle, foot)	14(36.8)	24(63.2)		
Time for travelling to reach health facility				
▪ At most 1hour	31(53.4)	27(46.6)	2.39(1.03-5.52)	0.040**
▪ More than 1 hour	13(32.5)	27(67.5)		
Waiting time for health care provider to attend to you				
▪ At most 1hour	17(47.2)	19(52.8)	1.16(0.51-2.65)	0.724
▪ More than 1 hour	27(43.5)	35(56.5)		
Cost of the health services				
▪ Always affordable	30(55.6)	24(44.4)	2.68(1.17-6.15)	0.019**
▪ Sometimes unaffordable	14(31.8)	30(68.2)		
Attitude of health care providers				
▪ Always hospitable	30(48.4)	32(51.6)	1.47(0.64-3.40)	0.362
▪ Not always hospitable	14(38.9)	22(61.1)		
Rumors of rude health care providers in the health facility				
▪ Yes	21(38.9)	33(61.1)	0.58(0.26-1.30)	0.185
▪ No	23(52.3)	21(47.7)		

COR=Crude Odds Ratio, p-value=Probability value, **Significant at 5% level, CI=Confident Interval.

Findings showed that at bivariate analysis level, Time for travelling to reach health facility (COR=2.39; 95% CI: 1.03-5.52, p = 0.040) and Cost of the health services (COR= 2.68; 95% CI: 1.17-6.15, p =0.019) were the Health System factors that significantly influenced utilization of Maternal Health Services (MHS) in Kiryandongo hospital.

Results show that at bivariate analysis level, distance to health facility (COR= 0.96; 95% CI: 0.43-2.14, p = 0.920), Waiting time for health care provider to attend to you (COR= 1.16; 95% CI: 0.51-2.65, p =0.724), do not significantly influence utilization of Maternal Health Services (MHS) in Kiryandongo hospital.

When asked in focus group discussion and informant interviews, the following responses were noted;

> *"Here we have poor road, and so coming to health facility takes longer than 1hour. But we struggle to go for help […]"*- ***(Mother 2 in FGD]***

> *"[…] Yes, they have to meet some cost when they come because sometimes, supplies are out of stock. We ask them to prepare some money when they come for delivery. Government cannot provide everything but […]" –* ***Key informant 4***

Those views further illustrate how distance to health facility and health care cost could have affected utilization of MHS.

3.5. Socio-cultural factors influencing utilization of MHS

Finding of socio-cultural factors influencing utilization of Maternal Health Services (MHS) by adolescent mothers aged 15-19years attending Kiryandongo Hospital are presented in tables 6 & 7 below. Table 6 is for univariate descriptive analysis while table 7 is for bivariate analysis.

Table 6: Univariate Descriptive Analysis of Socio-Cultural Factors

Socio-cultural Variables	Frequency (N = 98)	Percentage (%)
Decision maker in seeking maternal health services		
▪ My friends	7	7.1
▪ My Parents	33	33.7
▪ My spouse	29	29.6
▪ Myself	29	29.6
Cultural beliefs	13	13.3
▪ Pregnant women should seek medicine from traditionalists		
▪ Herbs better than hospital medicine	25	25.5
▪ Eating clay or bumba is good for pregnancy	34	34.7

Source (Primary, 2019).

Table 7: Bivariate Logistic Regression Analysis for Socio-Cultural Factors

Socio-cultural Variables	MHS utilization Yes N (%)	No N (%)	COR (95% CI)	P-Value
Spouse support you in seeking health services				
▪ Yes always	22(59.5)	15(40.5)	2.60(1.12-6.02)	0.024**
▪ Not always	22(36.1)	39(63.9)		
Decision maker in seeking health services				
▪ Self	17(47.2)	19(52.8)	1.16(0.51-2.65)	0.724
▪ Others (Parents, spouse, friends)	27(43.5)	35(56.5)		
Traditional beliefs in your culture about women that are pregnant				
▪ Yes	24(35.8)	43(64.2)	0.31(0.13-0.75)	0.008**
▪ No	20(64.5)	11(35.5)		

COR=Crude Odds Ratio, p-value=Probability value, **Significant at 5% level, CI=Confident Interval.

Findings showed that at bivariate analysis level, Spouse support you in seeking health services (COR=2.60; 95% CI: 1.12-6.02, p = 0.024) and Traditional beliefs in culture about women that are pregnant (COR=0.31; 95% CI: 0.13-0.75, p =0.008) were the socio-cultural factors that significantly influenced utilization of Maternal Health Services (MHS) in Kiryandongo hospital.
In FGD, a mother reported as follows;

> *"[…] Yes, we have cultural beliefs but we don't follow them so much these days because […]"*- ***(Mother 6 in FGD)***

Table 8: Multivariate Logistic Analysis for All the Factors Influencing Utilization of MHS

Variables	MHS utilization Yes N (%)	No N (%)	AOR (95% CI)	P-Value
Maternal age in years				
▪ 15-17	17(31.5)	37(68.5)	0.73(0.23-2.33)	0.590
▪ 18-19	27(61.4)	17(38.6)		
Age at 1st birth				
▪ 15-17years	32(40.0)	48(60.0)	0.36(0.08-1.65)	0.188
▪ 18-19years	12(66.7)	6(33.3)		
Husband's education				
▪ At most Primary	19(30.6)	43(69.4)	0.21(0.07-0.63)	0.005**
▪ Post Primary	25(69.4)	11(30.6)		
Husband's monthly income				
▪ Less than UGX100,000/=	19(33.9)	37(66.1)	0.83(0.30-2.29)	0.717
▪ More than UGX100,000/=	25(59.5)	17(40.5)		
Time for travelling to reach health facility				
▪ At most 1hour	31(53.4)	27(46.6)	0.87(0.28-2.64)	0.800
▪ More than 1 hour	13(32.5)	27(67.5)		
Cost of the health services				
▪ Always affordable	30(55.6)	24(44.4)	1.58(0.56-4.45)	0.391
▪ Sometimes unaffordable	14(31.8)	30(68.2)		
Spouse support you in seeking health services				
▪ Yes always	22(59.5)	15(40.5)	1.73(0.60-4.97)	0.307
▪ Not always	22(36.1)	39(63.9)		
Traditional beliefs				
▪ Yes	24(35.8)	43(64.2)	0.26(0.09-0.75)	0.013**
▪ No	20(64.5)	11(35.5)		

AOR=Adjusted Odds Ratio, p-value=Probability value, **Significant at 5% level, CI=Confident Interval.

Table 8 above indicates that after subjecting to a multivariate analysis, the education level of the husband influenced the utilization of Maternal Health Services (MHS) (AOR = 0.21; 95%CI= 0.07-0.63; p= 0.005). The odds of utilizing maternal health services were 0.21 times among adolescent mothers whose husbands had studied up to primary education level compared to those whose husbands had studied past primary level.

4. Discussion

The findings showed that there was low utilization of maternal health services by adolescent mothers (44.9%). This finding was consistence with other which showed that adolescent women were less likely to seek delivery services in a health facility than older women (Edmond, Paul and Sibley, 2012; Godha, Hotchkiss and Gage, 2013; Kamal, 2013).

According to the bivariate analysis results, age at first birth (p=0.040) significantly influenced utilization of MHS by adolescent mothers. This agreed with (Haque, 2008) who found that mother's age at delivery was a significant determinant of using Post-natal care (PNC) services. In addition, maternal age of 15-17 years (p=0.003), husband education level (p=0.000), husband income (p=0.012), age at first birth (0.040), knowledge (p=0.008) and perceive risk (p=0.002) significantly influenced utilization of MHS. In a related study, the bivariate analysis of factors affecting attendance of ANC indicated that age of women, education of women, health education on maternity, presence of health facility in the area and means of transport to the nearest health facility, among others, were found to be significant predictors of ANC utilization (Roy, Sahoo and Sarangi, 2017). Controlling the effect of other variables, the predictive power of women's educational level, wealth index was positively associated with antenatal care and also delivery care (Chimankar, 2017).

Time for traveling to reach the heath facility (p=0.040) and cost of health services (p=0.019) were the only health system factors that significantly influenced utilization of MHS. The distance to health facility and waiting time for health care provider to attend to them did not influence utilization of MHS. Another study discovered that health education, presence of health facility and means of transport influenced MHS utilization (Roy, Sahoo and Sarangi, 2017).

Spouses support (p=0.024) and traditional beliefs in culture about women who are pregnant (p=0.008) significantly influenced MHS utilization. After being subjected to the multivariate analysis, the education level of the husband (p=0.005) and traditional beliefs (p=0.013) significantly influenced utilization of MHS. However, to note, little has been found about these findings in other studies.

5. Conclusion

This study discovered a number of factors that influenced utilization of MHS among adolescents aged 15-19years.ANC utilization was a strong predictor of having Skill Birth Attendance. Adolescent mothers with secondary and higher education are significantly more likely to utilize the desirable maternal health care package compared to those who have none. In addition, fear of disclosure of pregnancy and feeling of guilt, amongst others strongly affected utilization of MHS. Hence, women who are likely to utilize the ideal package of maternal health services are the rich and those who have a secondary and higher educational level. Any strategies to improve utilization of MHS should be aimed at empowering adolescent girls, promoting the girl child education and promote health education towards the less educated young adolescent girls.

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Declaration

The authors declare not conflict of interest.

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