Original Research Article

Magnitude and determinants of self-referrals among women seeking skilled birth attendance services: a cross-sectional hospital-based study in Marsabit County, Kenya

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ABSTRACT

Background: Self-referral to higher-level hospitals by women seeking skilled birth attendance services reflects in part their non-adherence to established referral pathways. This choice results in an inappropriate utilization of resources within health system. The Kenya Health Sector Referral Strategy aims at optimising the utilization and access of facilities. The aim of this study was to determine the prevalence and factors associated with self-referral among women seeking skilled birth attendance services in Marsabit County between 1st and 31st Oct 2019.

Methods: A cross-sectional study was adopted at the maternity department in the selected public hospitals in Marsabit County, by use of interviewer-administered questionnaires to collect information from 161 women, through systematic sampling between 1st and 31st Oct 2019. Chi-square and multiple logistic regression analysis were used to test for factors associated with self-referral at 95% confidence interval.

Results: Of the 161 women interviewed, 47.2% (n=76) were self-referrals. The odds of self-referral to the higher level health facilities were more likely among women: - aged 25-29 (AOR 5.174, CI 1.015-26.365, p-value 0.048); those referred for other ANC services (AOR 4.057, CI 1.405-11.720, p-value 0.010); and those, - who visited the referral facility before for delivery (AOR 5.395, CI 1.411 – 20.628, p-value 0.014). However, self-referral were less likely among women who perceived privacy and confidentiality of services at the referral hospitals (AOR 0.370, CI 0.138-0.990, p-value 0.048).

Conclusions: Almost half of women seeking skilled birth attendance were self-referrals, relates to a possible implication on an unprecedented increased workload at referral hospitals and underutilization of primary health facilities.

Keywords: Self-referral, Health system, Link facilities

INTRODUCTION

Globally, in the year 2017, it was estimated that over 810 women died from preventable causes related to pregnancy and childbirth every day, and majority (94%), of countries contributing to these high mortalities are in low-resource setting. Sub-Saharan Africa's poor maternal and child health outcomes in the year 2017 was approximately 86% of the estimated global maternal death, and this is a concern to the achievement of reducing maternal mortality ratios (MMR) in many African countries.[1,2] Adolescent girls under 15 years old have the highest risk of maternal mortality, and complication in pregnancy is most common among adolescent girls aged between 10-19 years

compared to 20-24 years.[3] Significant progress has been made in reducing Kenya's MMR, between 2008/09 and 2014, which declined from 520 to 362 maternal deaths per 100,000 live births. Despite this progress, Kenya's MMR remains above Sustainable Development Goals (SDGs) targets of 70 maternal deaths per 100,000 live births.[5,6]

In Kenya's health system, community level primary health care facilities, which are often run by trained nurses/midwives or clinical officers, are supposed to offer skilled birth services and appropriately refer women with childbirth related complications to hospitals categorized as referral hospitals.[7] This targets to improve efficiency and as a result, health service coverage expansion in systems that experiences health workforce and resource shortages.[8] Despite the low levels of health spending, through universal health coverage, there is a strong focus on improved accessibility to services through the government enacting policies to reduce financial barriers to access to basic health services.[9,10] Kenya household health expenditure and utilization survey (KHHEUS) found that bypassing nearest outpatient facilities is mainly motivated by a quest for a higher quality of care, with "medicine unavailable" (21%) as the major reason.[11]

In Marsabit County hierarchical health service delivery system is composed of five levels. Level I and II, are designated as the primary entry point of preventive and curative care, including uncomplicated delivery. Level 4 and Level 5 are secondary referral facilities at county level, offering a range of curative services.[13] "Access to health care is a major concern for the county residents. There are total of 93 health facilities spread across the county classified as: 1 county referral hospital, 2 sub-county hospitals; 18 health-centres, 58 dispensaries, 9 medical clinics, 2 private hospitals facilities and 4 nursing homes".[14]

However, there are concerns about the quality aspect of care available in dispensaries and health centres countrywide. "The right to the highest attainable standard of health in a hierarchical system can only be possible through an effective heath referral system."[13] Referral mechanism system strengthening and improvement of linkages between the various levels of the facility are key, to better health outcomes for both maternal and infant.[8,15] and overall functioning of the health care system.[16] Giving referral to women should be a medical decision, and it is essential to refer women considered to have high-risk pregnancies and obstetric complications to ensure meaningful reduction in maternal and newborn morbidity and death.[17,18]

At the implementation level, inappropriate referral such as self-referral is driven by a perception among clients that lower-level facilities offer poorer quality services and; delays in referrals, even in urgent cases.[19] Preferences for a particular higher level health care facility reveals itself through the magnitude of self-referral and higher self-

referral rates reduces the health system's efficiency and hinders the planned coverage of health services.[21,22]

Over the past decade, there has been strong appeal to promote institutional births, both at the national and county level in Kenya, which has resulted into significant rise in such births for instance 43% in 2009 to 62% in 2014.[5] However, Kenya Health Sector Referral Strategy 2014-2018 framework underscores a critical gap of lack of bypass policy.

The need to improve efficiency by the Ministry of Health, and monitor the general knowledge about challenges to referral, the gap about what influences these challenges has not been fully addressed.[23,24] An analysis of ANC attendance and records of hospital deliveries data for Marsabit County, between August 2018 to June 2019, established that approximately 78% of women who delivered in the selected study hospitals were not booked to deliver in those facilities.

In spite of its implication on delivery of maternal healthcare services, studies targeting the phenomenon of self-referral lack in Marsabit County. Therefore, it is crucial determine the extent of self-referral, as well as assess the factors influencing such practice among women seeking skilled birth attendance services in selected public hospitals in Marsabit County.

METHODS

Study design and setting

A descriptive cross-sectional study was conducted among women who delivered in the maternity unit of the selected referral hospitals in Marsabit County (Moyale and Marsabit referral hospitals).

Study population and sampling

A sample size of 177 was calculated using corrected Fishers formula (Mugenda 2003) using a precision of 5% at 95% confidence level. Systematic random sampling was used for selected women from the facility delivery register at the selected referral facilities between the period of 1st October to 31st October, 2019.

Data collection

Trained data collectors recruited women from the maternity delivery register and later administered questionnaires to women after delivery. Approximately five patients were interviewed at different times daily. Interviews were conducted using the respondents preferred language.

Data processing and analysis

Data was extracted from the questionnaires and entered into Excel sheets and then exported to SPSS Version 22 for

analysis. Descriptive statistics in the form of frequencies and percentages were used for categorical data while measures for central tendency were used for continuous data. The Pearson Chi-square test was used to determine association between dependent and independent variables. The multivariate logistic regression was used to test for associations between variables under study for p≤0.05 after bivariate analysis.

Ethics and permissions

Ethical clearance was granted by Kenyatta University Ethics Review Committee, and a research permit from National Commission for Science, Technology and Innovation (NACOSTI). Further permission was sought from health department in Marsabit County. Informed consent was sought prior to interview for all respondents.

RESULTS

Proportion of women self-referring

161 women were interviewed, with the mean age of 25.4 SD 5.6 (range16-45years). Forty-seven percent (n=76) practiced self-referral, whereas, fifty-two percent sought services at their designated hospitals (Figure 1).

Table 1: Frequency table of the socio-demographic characteristics, institutional and health system related factors among the study population.

Variables	Self-referral		Non self-referral		Study population	
Age						
Mean	25.1	SD5.6	25.6	SD 5.7	25.4	SD 5.6
Median	24	IQR (16-40)	26	IQR (16-45)	25	IQR (16-45
Referred for other ANC services	**Num**	**Proportion**	**Num**	**proportion**	**Num**	**Proportion**
Yes	27	36%	17	20%	44	27%
No	49	64%	68	80%	117	73%
Visited facility before						
Yes	51	67%	41	48%	92	57%
No	25	33%	44	52%	69	43%
24 hrs of service delivery (n=137)						
Not Sure	20	26%	11	18%	31	23%
Agree	56	74%	50	82%	106	77%
Clean maternity (n=136)						
Disagree	1	1%	1	2%	2	1%
Not Sure	26	35%	17	28%	43	32%
Agree	48	64%	43	70%	91	67%
Privacy and confidentiality in services (n=137)						
Not Sure	26	34%	12	14%	38	28%
Agree	50	66%	49	58%	99	72%
Marital status						
Single	7	9%	7	8%	14	9%
Married	68	89%	77	91%	145	90%
Widowed	1	1%	1	1%	2	1%
Employment status						
Employed	20	26%	18	21%	38	24%
Unemployed	56	74%	67	79%	123	76%
Parity						
0	23	30%	28	33%	51	32%
1	14	18%	16	19%	30	19%
2	17	22%	16	19%	33	20%
3	6	8%	9	11%	15	9%
4	9	12%	5	6%	14	9%
5	7	9%	11	13%	18	11%
Means of transportation (n=160)						
Walking on foot	6	8%	15	18%	21	13%
Public/personal transport	68	91%	56	66%	124	78%
Facility/community referral transport	1	1%	14	16%	15	9%

Table 2: Factors associated with self-referral among women seeking skilled birth attendant services in Marsabit County (N=161 unless stated).

Variables	Self-referral		Non self-referral		P value
	N	%	N	%	
Age (years)					
≤ 19	11	14.5	16	18.8	
20-24	30	39.5	15	17.6	0.005, χ2 =12.899, df=3
25-29	17	22.4	37	43.5	
≥ 30	18	23.7	17	20.0	
Marital Status					
Single	7	9.2	7	8.2	
Married	68	89.5	77	90.6	0.973, χ2 =0.056, df=2
Widowed	1	1.3	1	1.2	
Employment status					
Employed	20	26.3	18	21.2	0.28[a], χ2 =0.0588, df=1
Unemployed	56	73.7	67	78.8	
Means of transportation (n=160)					
Walking on foot	6	8.0	15	17.6	
Public/personal transport	68	90.7	56	65.9	<0.001, χ2 =15.722, df=2
Facility/community referral transport	1	1.3	14	16.5	
Parity					
0	23	30.3	28	32.9	
1	14	18.4	16	18.8	
2	17	22.4	16	18.8	0.732, χ2 =2.791, df=5
3	6	7.9	9	10.6	
4	9	11.8	5	5.9	
5+	7	9.2	11	12.9	
24 hrs of services (n=137)					
Neutral	20	26.3	11	18.0	0.172[a], χ2 =1.316, df =1
Agree	56	73.7	50	82.0	
Cleanliness of maternity (n=136)					
Disagree	1	1.3	1	1.6	
Neutral	26	34.7	17	27.9	0.696, χ2 =0.725, df =2
Agree	48	64.0	43	70.5	
Privacy and confidentiality of services (n=137)					
Neutral	26	34.2	12	19.7	0.044[a], χ2 =3.542, df=1
Agree	50	65.8	49	80.3	
Referred for other ANC services					
Yes	27	35.5	17	20.0	0.021[a], χ2 =4.840, df=1
No	49	64.5	68	80.0	
Visited facility before					
Yes	51	67.1	41	48.2	0.017[a], χ2 =5.798, df=1
No	25	32.9	44	51.8	

[a]Fisher's exact test.

Table 3: Factors influencing self-referral among women seeking skilled birth attendant services in Marsabit county.

Variables	P value	AOR	95% C.I.	
			Lower	Upper
Age (in years)				
≤19	Referent			
20-24	0.243	0.442	0.112	1.740
25-29	0.048	5.174	1.015	26.365
≥30	0.251	2.938	0.467	18.471
Means of transport				
Walking by foot	Referent			

Variables	P value	AOR	95% C.I.	
			Lower	Upper
Public/private transport	0.888	0.808	0.042	15.708
Facility/community referral	0.239	0.187	0.011	3.043
Privacy and confidentiality				
Neutral	Referent			
Agree	0.048	0.370	0.138	0.990
Visited Facility before				
No	Referent			
Yes	0.014	5.395	1.411	20.628
Referred for other ANC services				
No	Referent			
Yes	0.010	4.057	1.405	11.720
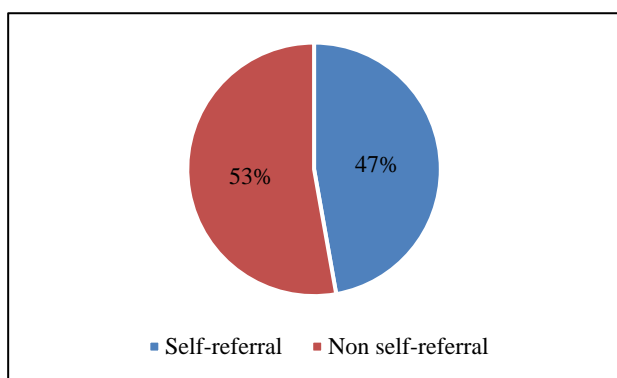
Figure 1: Magnitude of self-referral among women seeking skilled birth attendance services in the study area (n=161).

Socio demographic characteristic of the study population

The mean age among self-referred and the non self-referred women were 25.1 (SD 5.6) and 25.7 (SD 5.7) respectively. Majority of the study participants n=126, (78.3%) were below 30years of age. Majority of the self-referrals and non self-referrals were married (89%, 91%), unemployed (74%, 79%) respectively.

More self –referred women used public/private means of transport (91%) than non-self-referred (66%). Thirty percent among the self-referred women were parity zero (n=76), similar to among the non-self-referred women at 33% (n=85) (Table 1).

Subjective ranking of institutional related factors

Self-referred women ranked highest the following institutional factors related to quality of the referral hospitals; 24-hours-a-day service delivery at 74%, cleanliness of labour ward at 64%, and privacy and confidentiality at 66% (Table 1).

Health system related factors: Thirty six percent of women who self-referred had been initially referred for other ANC services during clinic attendance, while most (67%) of the self-referred women had visited the referral facility initially for skilled birth attendance (Table 1).

Bivariate analysis showed significant association between self-referral and; - Age p=0.005, means of transport p≤0.001, women who were referred for other ANC services p=0.021, having visited the referral facility before for delivery p=0.017 perceived privacy and confidentiality of delivery services offered, p=0.044 (Table 2).

Multivariable analysis established that the odds of self-referral to the selected hospitals, were more likely among women; aged 25-29 (AOR 5.174, CI 1.015-26.365, p-value 0.048), referred for other ANC services (AOR 4.057, CI 1.405 - 11.720, p-value 0.010), who had visited the referral facility before for delivery (AOR 5.395, CI 1,411- 20.628, p value 0.014).

Self-referral was less likely among women who perceived availability of privacy and confidentiality of services (AOR 0.370, CI 0.138 - 0.990, p-value 0.048) at the referral facilities (Table 2).

DISCUSSION

This study showed that 47% of women self-referred themselves to the referral health facilities for skilled birth attendance services in Marsabit County, thus it implies that a significant number of women bypass their designated nearest primary health facilities and do not get into the referral system through any referral process. This finding is similar to the proportion reported from Pwani Tanzania of 40%, but slightly above the findings in India 37.7% women self-referred to their nearest facility for childbirth. [25,26] This finding shows remarkable lack of adherence to referral structures and is likely attributed to lack of knowledge about referral, such as lack of understanding on hierarchy, capacities and limitations of each health care facility level as highlighted by Afari.[27] However, a KwaZulu Natal based study by Pillay, established that there is no significance between self-referral and awareness of the referral procedure.[28] Conversely, our finding is significantly lower than those reported in Nepal, Nigeria and South Africa that established a self-referral

rate at 70%, 93%, and 88.9%, respectively.[29-32] The respective organization of health systems, referral facilities location and distribution, and study designs in each study settings could contribute to these differences with our study findings. Non-adherence with referral pathways can have multiple implications on healthcare system in its totality and specifically for service delivery.

The study also showed that age was significantly associated with self-referral. Women aged between 25-29 years were more likely to self-refer, hence bypassing their nearest primary health facilities in search for the similar services at the selected referral hospitals. Similar result from a study conducted in Limpopo supported the inference that younger individuals aged between 20-39 bypass lower level of care more (59%) frequently.[33] This finding is also consistent with study by Magoro, who found out that the age group 21-30 years was the largest 54.7% of the other age groups among self-referrals to Dilokong Hospital in South Africa.[34] This study findings possibly attributes that women thirty years and above likely feel they have limited risk during child birth as a result of their increased experience with pregnancy and delivery as it was also found out by the Burkina Faso study.[35] However, this is equally contradicted by our finding that showed no significant association between self-referral and parity (p=0.732). This study established no significance between women status of employment and self-referral (p=0.28); however, there was significant association between self-referral and means of transport. This is in contradiction to a Kenyan study that attributed patients from higher socio-economic groups to infrequently utilize higher level of care.[36] This difference is likely due to limited access to private health facilities at our study setting as compared to the latter study, which was conducted in settings with higher access to private health services. Similarly, this study is in concurrence with the result of a study in India that showed hired transport to reach the health facility increased the odds of bypassing nearest health facility.[37]

On health system related factors, the study established that, women referred for other ANC services during clinic attendance, and those who visited the referral facility before for delivery were associated to self-referral. This is similar to a Tanzania study findings that established that the main reason given for self-referral was lack of diagnostics at primary health care facilities.[38] The experience that patient got during the first contact with health care providers does influence their perception of quality of services given and will determine whether the patient will subsequently comply or switch to another provider.[39,40] Similarly, Audo,12 found out in his study that the reason women bypass municipal facilities in Kenya were mostly due to poor care, lack of laboratory services, and lack of drugs; and this likely explains the reason why women would prefer higher level facilities due to previous experience and perception of better quality.

On institutional related factors, the study showed that an element of quality of services such as perceived privacy

and confidentiality of services offered were significantly associated with self-referral. This finding is similar to those established in a study investigating referral patterns in Namibia, which found out that patient sought treatment outside of their district for better quality of care.[41] The concern of quality of care by pregnant women often take center stage over other concerns including cost and distance, as well as other studies link self-referral (bypassing) and patients' perceived quality of care.[25,29,42,43]

Health systems with health facilities still referring for ANC services, and women sticking with their initial facility preferences together with the biased perception of better quality services at the referral hospitals increases the likelihood of self-referral. Therefore, much awareness creation efforts from the healthcare sector are required to change the "status quo" whereby women stick to their previous preferences even when similar services are brought nearer.

Limitations

Strict measures were undertaken to ensure that the study remained scientifically sound and limitations minimized at every stage, nonetheless the following limitation were encountered. First, the researcher acknowledges the risk of measurement bias due to among other things reluctance of participants to disclose all information as they may have felt it may affect the services offered to them. Secondly, in addition to conducting the study over a period of one month, our study did not look at the obstetric care functionality of the respective primary healthcare facilities to corroborate with the self-referral.

CONCLUSION

Although slightly more than half of women (53%) were appropriately seeking skilled birth attendant services at their designated nearest link facility, four out of 10 women self-referred during the study period. Self-referral to higher-level health facilities can be costly both for women and for the health system. A significant positive association was established between self-referral and age (25-29 years), being referred for other ANC services and having visited the referral facility before for delivery. This association provides a useful reference to inform policy formulation and design of interventions targeting to improve adherence to referral procedures and effective utilization of referral hospitals. Investing on availability, accessibility and networking strategy for ANC services and conducting awareness campaign among pregnant women in the County can reduce the burden of self-referral and improve general health systems efficiency.

ACKNOWLEDGEMENTS

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