

## Original Research Article

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# Patients related factors influencing the clients' satisfaction on maternal healthcare services: a case of Rongai Sub-County Health Institutions of Nakuru County, Kenya

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## ABSTRACT

**Background:** Maternal health care (MHC) intervention and its quality is an important health service and its quality is an important concern in addressing the challenges of high maternal mortality experienced in many counties of Kenya. Objective of this study was to determine patients related factors that influence the satisfaction of clients receiving maternal healthcare in Rongai Sub-County health institutions of Nakuru County, Kenya.

**Methods:** The study adopted descriptive cross-sectional design with simple random sampling where the health care facilities were clustered according to administrative locations, the wards and the respective levels of care; hospitals, health centres and dispensaries. Simple random sampling was used to select the facilities for the study. Convenience sampling was applied to get 465 mothers and purposive sampling method used to get healthcare practitioners in charge of the selected healthcare facilities. A questionnaire was administered to women seeking maternal health care services in the facilities within Rongai Sub County to determine the clients' satisfaction.

**Results:** The finding of the study indicates that education level, employment status, level of income and distance from the healthcare facilities had significant influence on client satisfaction to maternal health services ( $p=0.040$ ,  $0.006$ ,  $0.0.023$  and  $0.031$  respectively).

**Conclusions:** The study recommends the need to organize community outreach to sensitize the community on issues pertaining to maternal healthcare. Additionally, there is need for adequate education and economic empowerment within Rongai Sub-county for proper provision and adoption of MHC Services.

**Keywords:** Clients satisfaction, Maternal healthcare, Maternal mortality, Patients related factors, Rongai sub-county

## INTRODUCTION

Globally maternal mortality rate has nearly halved in the last 25 years, but little progress has been made in the developing countries where the maternal mortality rate (MMR) is still unacceptably high.<sup>1</sup> Maternal health care (MHC) service provision and adoption is noted to have slightly improved in the past 10 years. However, a big variation in quality of maternal healthcare still exists in low and middle-income countries. This brings inequalities

in the MHC service delivery leading to inequalities in the outcomes of maternal health care and services.<sup>2</sup>

Regionally, Africa accounts for 62% of the global maternal deaths, with an MMR of 289: 100,000 births against 16: 100,000 births in the developed countries, the intraregional disparities in maternal health coverage clearly explain the disparities in the quality of maternal health care. According to, Africa as a region has large intraregional disparities in maternal healthcare.<sup>3</sup> For

instance, in South Africa by the year 2010, universal coverage was reported while in West Africa, only one thirds of pregnant women had received ante-natal care.

Quality of care is imperative in effective utilization of maternal health services in the developing countries including Kenya.<sup>4</sup> There are health policies, standards and guidelines to ensure quality healthcare delivery but the extent to which they are adhered to is still a big challenge since there are no measures put in place for consistency in its monitoring and evaluation.<sup>5</sup> Clients' satisfaction relates to a person's positive assessment regarding different aspects of healthcare and their opinion on the quality of services offered in that health facility. Clients' whose expectations were not met with healthcare services in a certain health facility will bypass the facility and are unlikely to seek treatment in that facility.<sup>4</sup> The demographics for patient namely; sex, age, cultural background, employment and health condition are associated with perceived satisfaction.<sup>6</sup> Socio-cultural factors, perceived benefit and need of antenatal care visits, skilled care at birth, postnatal care visits, and economic and physical accessibilities have a prominent role in the utilization of maternal health care services. A review in 2009 shows that the low utilization and limited access to maternal care services were the major causes of the high maternal morbidity and mortality in South East Asia and Sub-Saharan Africa regions.<sup>7</sup>

This paper was anchored on the health belief model (HBM) that describes and forecasts health behaviors of individuals. It is a reliable framework that is used to examine how people behave health wise. The models' components are considered to be factors that predict health behavior independently. This includes; threats considered to be high, obstacles to seeking health as well as expected benefits are considered to elevate the probability of individuals seeking health.<sup>8</sup> The possibility of a future gain is a catalyst to health seeking behavior among individuals. There must be a balance that ensures that the perceived future benefit of a service is feasible enough given the requirements and constraints in terms of time spent, costs incurred as well as other sacrifices made.<sup>9</sup>

The place of residence, ethnicity and religion, economic status, geographical regions are considered to be determinants of the utilization of maternal health care services. Studies further reveal that long distance to the health facilities, unfriendly provider's attitude, poor service delivery systems and physical facilities were prominent factors in the low utilization of maternal health care services. Other factors include education status, perceived attitude towards safer pregnancy, delivery and postnatal care, gender inequality, traditional socio-cultural practices, low decision-making power of women, low socio-economic status inhibits women from seeking maternal healthcare services. Women's access to financial and physical resources, freedom of movement and ability to make household decision are indicators of women

autonomy in India.<sup>10</sup> Women education and employment influence positively in their decision-making autonomy at household level and seeking maternal health care services in most developing countries.<sup>11</sup> Studies have also shown disparities in utilization of maternal health services in various high burden counties in Kenya by education level and economic status.<sup>12</sup>

Nakuru County has a proportion of 54% on hospital deliveries and 34% attendance of 4 ANC visits.<sup>13</sup> Kenya's maternal mortality has remained unacceptably high at 510:100,000 live births and Nakuru county's MMR stands at 367: 100,000 live births.<sup>14</sup> Rongai Sub County where the study was carried out is equally not doing well in the uptake of maternal health services, with the expected 7000 deliveries per year, only 36.5% of them manage to have the WHO recommended 4 antenatal care visits, and only 23.4% of the mothers deliver in the health facility.<sup>13</sup> This study sought to determine patients related factors which influence the satisfaction of clients receiving maternal healthcare in Rongai Sub-County health institutions.

Therefore this study was purposed to determine patients related factors that influence the satisfaction of clients receiving maternal healthcare in Rongai Sub-County health institutions of Nakuru County, Kenya. The study targeted all women of reproductive age (18-49) who had sought for maternal health care services in Rongai sub-county health facilities.

## METHODS

### *Target population*

The study population included all the expectant women attending antenatal care, delivery and postnatal care up to 42 days post-delivery, in the public (county) facilities in Rongai Sub County in the period of January to August 2019. The respondents included all women who are between the ages of 18 to 49 living in Rongai sub County. The desired target population is women of reproductive age, which is 15-49 but citing ethical issues such as not including those below 18 years in the study, hence selected ages between ages of 18 to 49 years. The target population for the study comprised of 19 health facilities, from which 19 healthcare practitioners in charge of the targeted facilities as well as 5305 expectant women. The distribution of the target population is shown in Table 1.

### *Sampling procedures*

Cluster random sampling was used to select the health facilities offering maternal healthcare services. They were clustered into the administrative wards in Rongai Sub-County namely; Menengai, Soin, Solai, Mosop and Visoi. The sample size in every cluster was calculated proportionally. Convenience and purposive sampling method were used to get the mothers who were attending

the health facilities on ANC, maternity care and postnatal care services and key informants respectively.

**Table 1: Ward population.**

Wards	Number of health facilities	Expected deliveries
<b>Menengai</b>	5	996
<b>Soin</b>	4	1401
<b>Solai</b>	3	672
<b>Mosop</b>	3	625
<b>Visoi</b>	4	1611
<b>Total</b>	19	5305

#### Sample size

The researcher adopted Fishers formula as described by 15, and expressed as

$$n = \frac{N}{1 + Ne^2}$$

Where  $n$  is the sample size,  $N$  (5306) the population targeted and (5%) the desired level of precision or confidence level. The calculations for the sample size are displayed as follows

$$n = \frac{5305}{1 + 5305(0.05)^2} = 371.95 \approx 372$$

To cater for the non-response which according 16 could be estimated to be 25%, it is advisable to expand the sample size. The sample size for the study was therefore 465 respondents. The researcher sampled 2 hospitals per ward, giving 10 key informants. The remaining 455 respondents comprised of women attending health facilities for maternal healthcare. The distribution of the sample size is shown in Table 2.

**Table 2: Sample size distribution.**

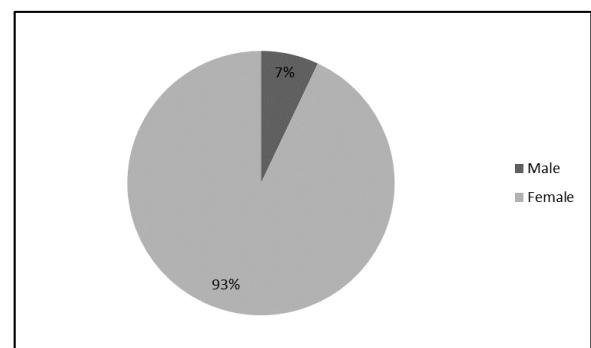
Wards	Target population	Proportion ( $N_i/\Sigma N$ )	Sampled clients	Sampled KI	Sample Size
<b>Menengai</b>	996	18.8	85	2	86
<b>Soin</b>	1401	26.4	120	2	122
<b>Solai</b>	672	12.7	58	2	60
<b>Mosop</b>	625	11.8	54	2	56
<b>Visoi</b>	1611	30.4	138	2	140
<b>Total</b>	5305	100	455	10	465

The study used semi-structured questionnaire administered on the women seeking maternal healthcare service in the health institutions in Rongai Sub-County and Statistical Package for Social Sciences (SPSS) version 22.0 was used to generate descriptive statistics. Karl Pearson's Chi square analysis was used to test the relationship between independent and dependent variables.

## RESULTS

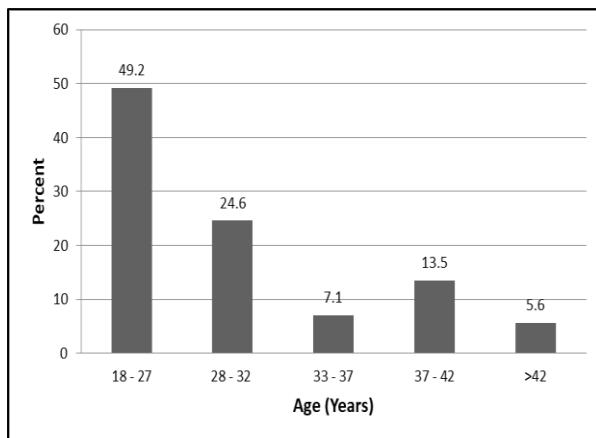
### Influence of gender, age and pregnancy history on clients' satisfaction

The results (Figure 1) indicate that majority (93.7%) of the respondents who participated in the study were females, with only 7% being males. This shows that only a few men are accompanying their wives as they go to seek maternal health services. Through Chi-Square test results ( $\chi^2 (2, n=364) = 5.232, p=0.073 > 0.05$ ), it indicates no significant relationship between the gender on the client satisfaction. This implies that the gender of the respondents has no positive effect on respondent's satisfaction.



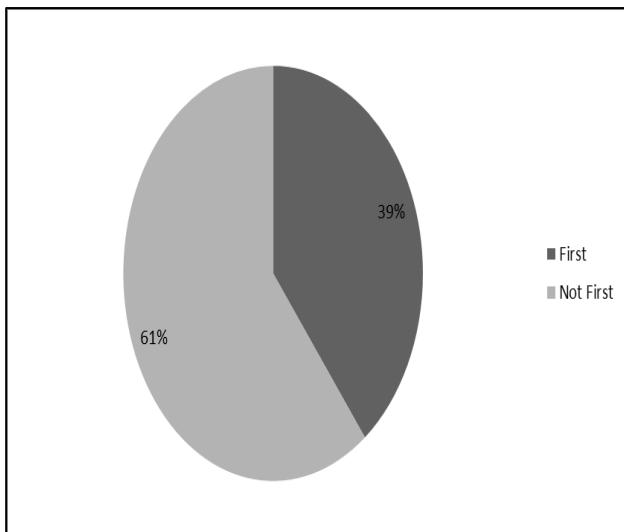
**Figure 1: Gender of respondents.**

The response was categorized into five groups namely; 18–27, 28–32, 33–37, 37–42 and >42 years. The results in (Figure 2) show that majority (49.2%) of the respondents who were attending the health facility to seek maternal health services were 18–27 years in age, 24.6% were aged between 28–32 years while only 5.6% of the respondents were more than 42 years in age. Based on the Chi-square results ( $\chi^2 (2, n=364) = 9.963, p=0.268 > 0.05$ ), there was no significant difference between the age of the respondents on the level of satisfaction. This implies the age of respondents has no significant contribution on the client's satisfaction ( $p > 0.05$ ).



**Figure 2: Age of respondents.**

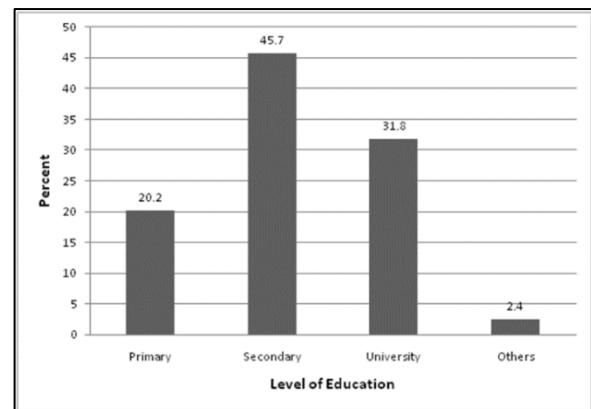
Additionally, the findings indicate that majority (61%) of the respondents were not first-time parents, with 39% being first time parents (Figure 3). This showed that a considerable number of women get their children at age of twenties. Through Chi-Square analysis result ( $\chi^2 (2, n = 364) = 1.895$ ,  $p$  value=0.388>0.05), implies that the pregnancy history of respondents has positive effect on respondents' satisfaction, but not significant at 5% levels of significance.



**Figure 3: Pregnancy history of respondents.**

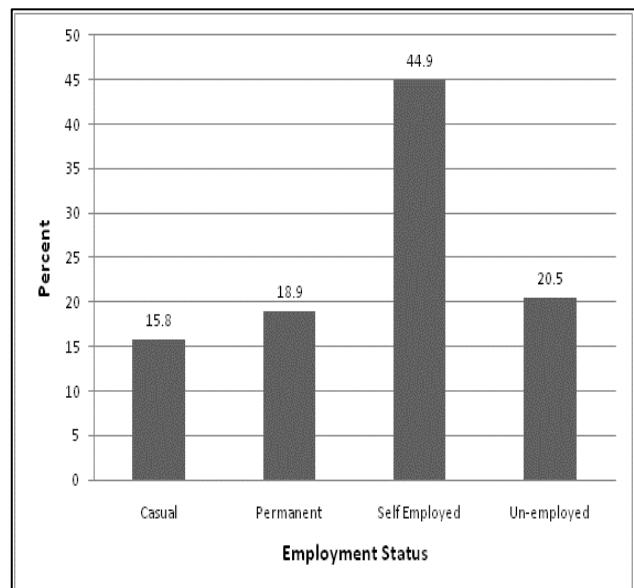
#### **Influence of education, employment and income status on client' satisfaction**

Based on the results presented in Figure 4, majority (45.7%) of the respondents had acquired secondary education, 31.8% university education with only 20.2% having primary education and 2.4% having postgraduate qualification. The Chi-Square result ( $\chi^2 (6, n=364) = 16.138$ ,  $p=0.040 < 0.05$ ) implies that the level of education of the respondents had a significant positive effect on respondents' satisfaction.



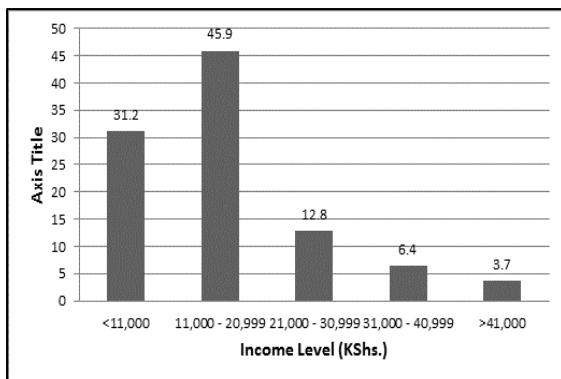
**Figure 4: Level of education of respondents.**

On the influence of employment status on client' satisfaction, the study findings revealed that majority (44.9%) of the respondents were self-employed, 18.9% on permanent employed, 15.8% casual workers whereas 20.5% not employed (Figure 5). There was a significant relationship between employment status and client satisfaction as indicated by Chi square result ( $\chi^2 (6, n=364) = 21.499$ ,  $p$  value=0.006<0.05)



**Figure 5: Employment status of respondents.**

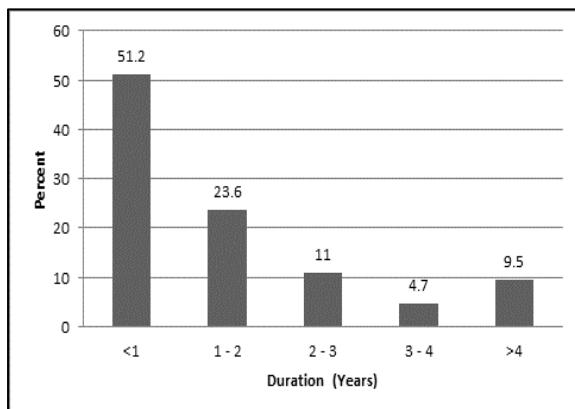
The income level was categorized into five categories of; <11,000, 11,000-20,999, 21,000-30,999, 31,000-40,999 and more than 41,000 Kenya Shillings. The majority (45.9%) of the respondents earn less than 21,000 Kenya Shillings, 31.2% earning 11,000 and 45.9% earning between 11,000 to 20,999. However, 12.8% earn 21,000-30,999, 6.4% 31,000-40,999 whereas only 3.7% earn more than 41,000 Kenya Shillings (Figure 6). From the Chi square test ( $\chi^2 (8, n=364) = 17.780$ ,  $p=0.0.023 < 0.05$ ) results, the income level of respondents has a significant positive effect on clients' satisfaction level.



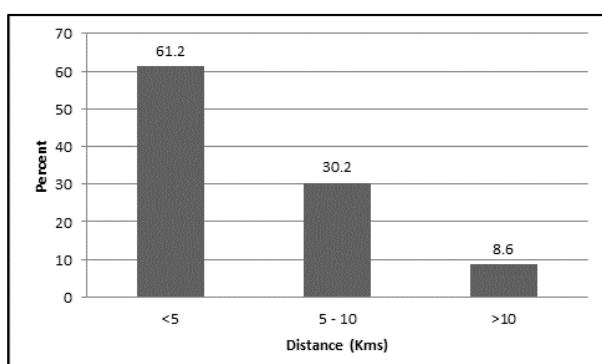
**Figure 6: Income level of respondents.**

**Influence of visit duration and location of health facility on client' satisfaction**

The study also sought to establish the distribution of respondents by the duration they have been visiting the health facilities. The response category was categorized in to five groups namely; less than 1 year, 1–2 years, 2–3 years, 3–4 years and more than 4 years. The results according to Figure 7, indicate that 51.2% to have been visiting the facility for less than 1 year, 23.6% for 1–2 years, 11% for 2–3 years, 4.7% for 3–4 years and 9.5% for more than 4 years.



**Figure 7: Duration the respondents had attended the health facility.**



**Figure 8: Distance from the health facility.**

The distribution of respondents by distance from the health facility was categorized in to three groups; <5, 5–10 and >10 kilometers. 61.2% of the respondents indicated that they live less than 5 kilometers from the health facilities, 30.2% reside within 5–10 kilometers from health facility and only 8.6% are farther than 10 kilometers from the health facility (Figure 8). The chi square test results ( $\chi^2$  (6, n=364)= 10.330, p=0.031<0.05) indicate a significant relationship between distance of residence from the health facility and the level of client satisfaction.

## DISCUSSION

The success of UHC in enhancing MHC to reduce MMR requires the full participation and support from both the husband and wife. It also requires proper income, good experience from health care providers as well as mature and well-educated mothers. In fact, studies have recorded that women who always accompanied by their husbands for at least one ANC visit were found to have a proper utilization of skilled birth attendant during delivery.<sup>17</sup> Therefore, just like in the previous studies, the present study highlighted the need for men to accompany their wives to the clinic for ANC as this would contribute to safe births and reduced maternal mortality rate. The results also showed that young mothers prefer to attend maternal health clinics as compared to older mothers. Therefore, the findings of this study were in agreement with results of a study which indicated that most mothers attending maternal health clinics had a mean age of 25 years. Furthermore, education level for the mothers has been shown to be a significant factor in the maternal health care uptake and adoption. Indeed, the education status for clients especially women positively influence their decision-making autonomy at house hold level and enable them to seek maternal health care services in most developing countries.<sup>18</sup> This was also confirmed by a study conducted in Kenya and concluded that education level positively influenced the uptake of maternal healthcare services.<sup>17</sup> This could be attributed to the capability of literate people to read and follow the instructions and thus facilitating the process of maternal healthcare service delivery, which in turn positively contributes to client satisfaction.

Apart from education and participation of husbands in MHC services, the nature and the terms of reference of employment for the health providers can also contribute to the success of MHC. Indeed, the study showed that the employment status of respondents has a positive effect on client's satisfaction. The finding was in agreement with the previous study which pointed that the patients' behaviors towards health service uptake and adoption could be influenced by their social-economic status, with strategies such as investment in health insurance cover among others being a key factor enabling them afford quality health care.<sup>19,20</sup> Further to the nature of employment, the level of income within a household also plays a role in determining the quality of health service to

be acquired by the members. The income of an individual is important as it gives them the ability to choose among the available health service opportunities. Furthermore, the distance of health facility and the patients will determine the number of patients able to visit the facility for treatment. According to the present study, it was shown that the closer the health facility, the more mothers are encouraged and able to visit for anti-natal clinic. This finding was in agreement with previous study which reported that the geographical regions and long distance to the health facilities are considered to be major determinants of the access and utilization of maternal health care services as well as the satisfaction of respondents.<sup>12</sup>

From the findings of this study, it was evident that the satisfaction of clients with the maternal health care services have highly associated with some of the patients' related factors such as, the level of education of respondents, employment status of clients which had a positive effect on clients' satisfaction, the level of income and the distance from the health facility. However, age, gender and pregnancy history didn't have a significant influence on clients' satisfaction with maternal healthcare services offered in health facilities in Rongai Sub County in Nakuru County. The findings support that client satisfaction is influenced by the level of education, employment status, income level, health facility attendance duration as well as the distance from the health facility. The findings are in agreement with, which showed that client background (age, income and educational level) may also have influence on clients' satisfaction.<sup>19</sup> The patients' demographics namely; sex, age, cultural background, employment and health condition are also associated with perceived satisfaction.<sup>6</sup> Studies have also shown disparities in the utilization of maternal health services in various economically disadvantaged counties in Kenya by education level and economic status.<sup>12</sup>

## CONCLUSION

Since the study established that a wide range of patients related factors influence clients' satisfaction on the maternal healthcare services, there is need for healthcare systems to consider empowering the members of communities. There is need for collaboration between the different players in health, healthcare providers, the government (both national and county) as well as Non-Governmental Organizations (NGOs), in organizing community involvement activities that include outreaches to sensitize the community on issues pertaining to maternal healthcare. This should enlighten them on MHC services, the quality, availability and requirements and their role in ensuring effective utilization and to shape their attitudes that will enhance their maternal health seeking behaviour.

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