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**The Effectiveness of a Health Provider Led Education Intervention on Improving Patient Rights Awareness among Pregnant Women attending Antenatal Care Clinics in Kenya**

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**Abstract**

**Purpose:** According to WHO, a third of women experience mistreatment during childbirth and this affect their health outcomes. Patient rights are essential for promoting quality healthcare. However, awareness of these rights, particularly vulnerable groups such as pregnant women, remains low in many healthcare settings especially the rural and peri-urban settings, where 98% of maternal morbidity and mortality could be prevented by timely and appropriate healthcare. This study aimed to determine the effectiveness of a health provider led education intervention on improving knowledge on patient rights awareness among pregnant women attending antenatal clinics in Kenya.

**Methodology:** A quasi-experimental design where convergent parallel design was adopted. A Pre and post intervention studies were conducted in selected antenatal clinics in Kenya. A total of 168 pregnant women participated, with 96 in the intervention group and 72 in the control group. The intervention was delivered by healthcare providers through educational forums held within the health facility. Data were collected using an interviewer administered questionnaire, and statistical analysis was performed using SPSS v25 to evaluate the changes in awareness levels.

**Findings:** The results showed a significant improvement in awareness of patient rights among the intervention group, with knowledge of the patients' rights charter increasing from 19.8% pre-intervention to 67.8% post-intervention ( $p < 0.001$ ). The proportion of pregnant women who acknowledged receiving information regarding patient rights increased from 3.1% to 71.1% ( $p < 0.001$ ). Majority of the respondents cited healthcare providers (68.4%), health facilities (31.6%), media (47.4%), and others (15.8%) as the sources of information. Additionally, the quality of services rated by mothers improved significantly from 35.5% to 53% at end line, with a decline of those who reported being dissatisfied with the services received from 17% to 13.3%.

**Unique Contribution to Theory, Practice and Policy:** Raising awareness and ensuring respect for patients' rights are essential for improving the quality of maternal care. These findings highlight the significance of educating women about their healthcare rights, as increased awareness is directly linked to utilization of maternal health services and better health outcomes. Educational sessions delivered by healthcare providers offer significant benefits, emphasizing the importance of continuing these valuable sessions and other services provided at healthcare facilities. These findings also highlight the need for policy makers to incorporate continuous training and the development of educational content for healthcare providers to ensure long-term sustainability.

**Keywords:** Educational Intervention, Patient's Rights, Pregnant Women, Health Policy, Healthcare Utilization

**JEL Codes of Classification:** I12, I14, I18, D83, K32

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## INTRODUCTION

Access to good health and well-being is universally recognized as a basic human right (1). It should not be treated as a privilege but rather as a fundamental necessity for a fulfilling life, underscoring the importance of Sustainable Development Goal 3. According to the World Health Organization, Patients' Rights are integral to human rights, serving as a quality assurance mechanism that protects patients from abuse and discrimination while promoting ethical practices. However, having Patients' Charters without implementing awareness mechanisms among healthcare recipients does little to enhance the quality of healthcare services (1,2).

The Universal Declaration of Human Rights, established by the United Nations in 1948, has been implemented globally (3). In Kenya, the National Patients' Rights Charter was introduced in 2013, and the Constitution of Kenya enshrines the right of patients to access healthcare of the highest attainable quality in terms of products and services (4,5). Antenatal care, a cornerstone of maternal and child health programs, aims to prevent and reduce maternal and child morbidity and mortality. Given that patients are among the most vulnerable members of society, safeguarding their rights is a critical component of healthcare practice. According to WHO study in four countries, a third of women experienced mistreatment during childbirth. Consequently, the poorest and most marginalized populations consistently face the greatest risks during pregnancy and childbirth due to discrimination, inadequate access to health services, and underinvestment in guaranteeing universal access to care (1).

Health-care institutions across around the globe have adopted legislation and implemented strategies that improve patient awareness and satisfaction, thereby improving health outcomes (4,6). These guidelines require healthcare providers to inform healthcare recipients about their rights, enabling them to understand and act on these rights when necessary (7). In Kenya, the Patients' Bill of Rights emphasizes that every patient, irrespective of age, gender, race, or other differences, has the right to knowledge, respect, confidentiality, privacy, high-quality care and treatment, protection, and the ability to raise objections. Understanding and respecting patients' opinions allows healthcare providers to better adhere to their treatment and service needs. Furthermore, patient rights are critical to maintaining dignity and respect, and when they are observed, a positive relationship can be built between healthcare providers and beneficiaries, and the quality of patient care will improve (8). Previously, it was assumed that only health care providers were aware of their patients' health and well-being and so had the authority to make decisions about their welfare. However, in the current world, it is important to observe and respect basic rights of patients as human beings.

While the Kenya Patients' Charter (4,19,24) empowers patients to demand quality care, challenges remain regarding equitable access and the implementation of strategies to realize these rights. According to studies done by Kagoya et. al. pregnant women, in particular, often face abuse, detention, and significant violations of their fundamental rights in health facilities where they seek antenatal and postnatal care services (9,25). Hajavi et al. highlights that educating patients about their rights equips them with the knowledge to understand what to expect from their healthcare providers (10). Providing educational interventions for patients, as well as training for healthcare providers, can significantly enhance the observation of patients' rights and their associated responsibilities. Without adequate awareness and training, healthcare providers may be limited in their ability to deliver high-quality care aligned with the principles outlined in the Patients' Charter (25).

## **Problem Statement**

World Health Organization studies estimates about 800 women dying every day from preventable causes related to pregnancy and childbirth, and countless others experience discrimination, ill-treatment and abuse in maternal health care settings (1). With 95% of these mortalities occurring in low- and middle-income countries, 98% of these maternal morbidity and mortality could be prevented by timely and appropriate healthcare. A study conducted in Tanzania revealed that only 34.4% of women were aware of their right to access maternal health services (26). Notably, those who were aware were almost five times more likely to utilize skilled birth attendants compared to those unaware. These findings underscore the importance of educating women about their healthcare rights, as such awareness is associated with higher utilization of skilled maternal health services and improved health outcomes (20). Whilst many studies have been conducted about patient rights, there is limited studies done on the effectiveness of health provider led interventions among the pregnant women, and their adherence to these rights particularly in Kenya and in extension Kirinyaga County. This study will highlight the effectiveness of the educational intervention bridging the patient rights awareness gap with beneficiaries being the Ministry of Health, policy makers and healthcare recipients.

## **METHODOLOGY**

### **Methods**

The study employed a quasi-experimental design with pre-test and post-test assessments to evaluate the effectiveness of the educational intervention on patient rights awareness. One group pre-intervention and post-intervention design was adopted. The study implemented an intervention in one group, and none in the other group as control. Both in the control and intervention group, questionnaires and matching of respondents was done to control for confounding factors. Both quantitative data and qualitative data was collected in pre-intervention and post intervention, and its findings analyzed.

### **Study Site**

This study was conducted in two health centers within Kirinyaga County. While the specific names of the clinics may vary, they typically included both urban and rural healthcare facilities to ensure diverse representation of the population. The clinics had health care providers who provided antenatal care services to pregnant women on a monthly basis, making them suitable sites for implementing the educational intervention aimed at enhancing patient rights awareness.

### **Data Collection**

Health facilities conveniently selected due to their numbers of pregnant women attending antenatal care clinics. Random sampling method was used to sample pregnant women at the health facility for baseline study. This infers that pregnant woman who turned up in each facility for an antenatal care and consented was recruited. Participant names were not recorded to preserve confidentiality. The recruitment continued until the sample size was attained.

Data collection was conducted using interviewer-administered questionnaires at both the baseline and post-intervention phases. To assess reliability, Cronbach's alpha was calculated, yielding a mean value of 0.88. Validity was ensured by refining the questionnaire items and seeking expert feedback on their content. During the intervention, pregnant women were



provided with pamphlets containing the Patients' Rights Charter and healthcare providers organized educational sessions and discussions on patients' rights using standardized messages in the general waiting areas of the facility during antenatal clinic visits. To maintain the quality and consistency of information, healthcare providers underwent training, and standardized messages were developed to guide the discussions. The interactive sessions included a question-and-answer format, and discussions were documented for further analysis. Post-intervention data collection was conducted after the intervention period using a follow-up questionnaire to assess respondents' knowledge of both patients' rights and responsibilities.

### **Data Analysis**

Data was analyzed using SPSS version 25. Descriptive analysis was used to compute the percentages, mean and standard deviation of the sample and correlation coefficients. Multivariate regression analysis was employed to adjust for potential confounders and to estimate the relationship between the intervention and the outcome of the study. Also, during analysis, data was stratified by variables such as age and gender.

### **RESULTS**

#### **Table 1: Respondents' Demographic and Socioeconomic Characteristics**

The study categorized ANC clients into different age cluster. Majority, 66 (68.8%) and 49 (68.1%) of the ANC clients in intervention group and Control group respectively were between the age of 18-30years of age. In terms of socioeconomic status, the study majority, 45 (46.9%) and 34 (47.2%) in Intervention group and Control group respectively were not employed, while the income levels of most of the clients were above Kes 3,000, 56 (58%) in the intervention group and 40 (45%) in the control group. Most of the respondents were married at 74 (77%) in the intervention and 56 (77.1%) in the control groups. Even though there are those that are employed as stated above, income level is low in both the facilities were quite low. Most of the respondents had attained secondary education with 54 (56.3%) and 46 (64%) in the control groups.

**Table 1: Respondents' Demographic and Socioeconomic Characteristics**

Variable	Intervention n=96	Control n=72	OR (95% CI)	P value
<b>Age in years</b>				
18-30	66 (68.8)	49 (68.1)	1.1 (0.3-4.2)	0.915
31-40	25 (26.0)	19 (26.4)	1.1 (0.2-4.5)	0.944
41-49	5 (5.2)	4 (5.6)	1.0	
<b>Employment status</b>				
Employed	17 (17.7)	10 (13.9)	1.3 (0.5-3.2)	0.585
Self-employed	34 (35.4)	28 (38.9)	0.9 (0.5-1.8)	0.801
Not Employed	45 (46.9)	34 (47.2)	1.0	
<b>Income level per month</b>				
0-3000	40 (41.7)	32 (44.4)	0.8 (0.4-1.8)	0.665
3000-5000	28 (29.2)	21 (29.2)	0.9 (0.4-2.0)	0.809
Above 5000	28 (29.2)	19 (26.4)	1.0	
<b>Level of education</b>				
Primary	7 (7.3)	5 (6.9)	0.6 (0.1-3.5)	0.572
Secondary	54 (56.3)	46 (63.9)	0.5 (0.1-2.1)	0.339
Certificate	16 (16.7)	9 (12.5)	0.8 (0.2-3.7)	0.736
Diploma	12 (12.5)	9 (12.5)	0.6 (0.1-2.8)	0.494
Degree	7 (7.3)	3 (4.2)	1.0	
<b>Marital status</b>				
Single	19 (19.8)	12 (16.7)	2.4 (0.3-16.4)	0.380
Married	74 (77.1)	56 (77.8)	2.0 (0.3-12.3)	0.462
Separated	1 (1.0)	1 (1.4)	1.5 (0.1-40.6)	0.810
Other	2 (2.1)	3 (4.2)	1.0	

### Logistic Regression

Multiple logistic regression model was used to determine the effect of educational intervention of awareness of patients' rights. The first model was constructed using all the variables which included demographic characteristics of the participants. The significant variables which included education level, knowledge of patients' rights charter and patients' rights awareness were included in the final model. Patients' responsibility awareness was excluded in the model because it was positively correlated to patients' rights awareness ( $r=0.7$ ,  $p<0.001$ ).

**Table 2: Multiple Logistic Regression Model**

<b>Model 1</b>		
<b>Variable</b>	<b>Adjusted OR (95% CI)</b>	<b>P value</b>
<b>Age in years</b>		
18-30	1.8 (0.1-24.1)	0.664
31-40	4.5 (0.2-91.1)	0.326
41-49	1.0	
<b>Employment status</b>		
Employed	1.1 (0.1-8.9)	0.964
Self-employed	0.5 (0.1-1.8)	0.263
Not Employed	1.0	
<b>Income level per month</b>		
0-3000	1.0 (0.2-5.7)	0.990
3000-5000	0.6 (0.1-4.7)	0.657
Above 5000	1.0	
<b>Level of education</b>		
Primary	1.0	
Secondary	85.1 (2.7-2715.7)	<b>0.012</b>
Tertiary	19.9 (0.6-658.4)	0.094
<b>Marital status</b>		
Single	1.0	
Married	0.6 (0.1-3.3)	0.516
Separated	1.5 (0.0-369.4)	0.893
Other	2.4 (0.1-110.9)	0.654
<b>Know about patients' rights charter.</b>		
Yes	6.8 (2.0-23.5)	<b>0.002</b>
No	1.0	
<b>Patients' rights awareness</b>		
Poor to moderate (<75)	1.0	
Good (>=75)	131.2 (27.7-620.4)	<b>&lt;0.001</b>

From the model, the participants in the intervention group were more likely to have knowledge about patient's rights charter, aOR 5.2 (95% CI 1.9 – 13.9), p=0.001, than those in the control group after the intervention was administered. Similarly, the intervention group were more likely to have good awareness (>=75 score) of patients' rights, aOR 37.0 (13.4-102.4), p<0.001, compared to the control group.

**Table 3: Final Model on the Significant Variables**

Final model		
Variable	Adjusted OR (95% CI)	P value
<b>Level of education</b>		
Primary	1.0	
Secondary	5.0 (0.9-26.9)	0.058
Tertiary	3.0 (0.5-16.7)	0.207
<b>Know about patients' rights charter.</b>		
Yes	5.2 (1.9-13.9)	<b>0.001</b>
No	1.0	
<b>Patients' rights awareness</b>		
Poor to moderate (<75)	1.0	
Good (>=75)	37.0 (13.4-102.4)	<b>&lt;0.001</b>

**Table 4: Quality of Services in the Control and Intervention Groups**

Variable	Intervention group			Control group		
	Pre (n=96) n (%)	Post (n=90) n (%)	P value	Pre (n=72) n (%)	Post (n=67) n (%)	P value
<b>Quality of services rating</b>						
Dissatisfied	17 (38.5)	22 (24.4)	0.077	15 (20.8)	14 (20.8)	0.998
Neutral	6 (6)	2 (2.2)		4 (5.6)	3 (4.5)	
Satisfied	53 (55.2)	66 (73.3)		53 (73.6)	60 (74.6)	

The percentage of neutral responses dropped from 6.3% to 2.2% in the intervention group, suggesting that respondents may have shifted their opinions to express either satisfaction or dissatisfaction more clearly, after the intervention. The proportions of respondents who rated their satisfaction as "Satisfied" significantly increased from 55% to 73%. This could be due to the increased knowledge and awareness of their patient rights. There was also a significant reduction of the dissatisfied clients from 38.8% to 24.4%.

The results of this recent study indicate a significant improvement in satisfaction levels among antenatal care (ANC) mothers after an educational intervention focused on their patient rights. In the intervention group, post-intervention data showed that a notable improvement in percentage of ANC mothers rating their satisfaction higher than in the pre-intervention phase. This improvement can be attributed to the increased awareness of their rights, which likely encouraged mothers to engage more actively with healthcare providers.



**Table 5: Level of Awareness of Patients' Rights and Responsibilities in the Control and Intervention Group**

Variable	Intervention group			Control group		
	Pre (n=96) n (%)	Post (n=90) n (%)	P value	Pre (n=72) n (%)	Post (n=67) n (%)	P value
<b>Know about patients' rights charter.</b>						
Yes	19 (19.8)	61 (67.8)	<0.001	17 (23.6)	23 (34.3)	0.163
No	77 (80.2)	29 (32.2)		55 (76.4)	44 (65.7)	
<b>Ever received an education regarding patient rights.</b>						
Yes	3 (3.1)	64 (71.1)	<0.001	2 (2.8)	12 (17.9)	0.003
No	93 (96.9)	26 (28.9)		70 (97.2)	55 (82.1)	
<b>Source of the patients' rights charter information</b>						
Healthcare provider						
Hospital (Posters, placards)	13 (68.4)	60 (98.4)	<0.001	12 (70.6)	14 (58.3)	0.519
Media (social media etc)	6 (31.6)	11 (18.0)	0.208	8 (47.1)	9 (37.5)	0.748
Others (Relatives)	9 (47.4)	15 (24.6)	0.058	8 (47.1)	11 (45.8)	0.938
	3 (15.8)	4 (6.6)	0.348	2 (11.8)	2 (8.3)	0.300
<b>Patients' rights awareness</b>						
Mean score (SD)	73.1 (13.5)	84.0 (8.0)	<0.001	66.8 (8.3)	69.4 (6.8)	0.052
<b>Category, n (%)</b>						
Poor	2 (2.1)	0	<0.001	2 (2.8)	0	0.527
Moderate	54 (56.3)	8 (8.9)		55 (76.4)	50 (74.6)	
Good	40 (41.7)	82 (91.1)		15 (20.8)	17 (25.4)	
<b>Patient responsibility awareness</b>						
Mean score (SD)	71.1 (15.9)	81.4 (9.4)	<0.001	63.8 (10.2)	65.7 (10.1)	0.270
<b>Category, n (%)</b>						
Poor	4 (4.2)	0	<0.001			0.949
Moderate	56 (58.3)	16 (17.8)		4 (5.6)	4 (6.0)	
Good	36 (37.5)	74 (82.2)		57 (79.2)	51 (76.1)	
				11 (15.3)	12 (17.9)	

In the intervention group, awareness of the patients' rights charter showed a significant increase, from 19.8% pre-intervention to 67.8% post-intervention, with a statistically significant p-value of < 0.001. This indicates that the educational program was highly effective in enhancing participants' understanding of their rights, suggesting a strong correlation between educational interventions and improved patient knowledge. The percentage of participants who reported having received education about their rights saw a remarkable increase from 3.1% pre-intervention to 71.1% post-intervention, with a highly significant p-value of < 0.001. This sharp rise illustrates how effective targeted educational programs can be in enhancing patient knowledge unlike the contrast in the control group.

The intervention group demonstrated a remarkable change in the proportion of ANC mothers receiving information from healthcare providers regarding their patient rights. This figure surged from 68.4% pre-intervention to an impressive 98.4% post-intervention, with a p-value of < 0.001 indicating a highly statistically significant change. The findings indicate a significant enhancement in overall awareness of patient rights among ANC mothers in the intervention group. The mean score improved significantly from 73.1 pre-intervention to 84.0 post-

intervention, with a highly significant p-value of  $< 0.001$ . This substantial increase reflects the effectiveness of the educational intervention in raising awareness and understanding of patient rights, reinforcing findings from various studies that demonstrate the positive impact of educational programs on patient knowledge. On patient responsibility awareness, the intervention group showed a remarked improvement from 71.1 to 81.4 with a P-value  $< 0.001$  which is statistically significant.

Based on the findings, there was a significant difference between the mean awareness scores of the control ( $t=2.56$ ,  $P<0.001$ ) and intervention groups ( $t=7.66$ ,  $P<0.001$ ) after intervention. These indications shows that the educational intervention had a statistically significant effect on the awareness of patient rights among ANC mothers in the intervention group compared to the control group.

## **DISCUSSION**

### **Impact of Educational Intervention**

According to the Kenya's patients' rights charter and the constitution of Kenya (3,4), patients have a right to receive healthcare with dignity and respect devoid of abuse and fear. Several studies have explored the impact of educational interventions on improving patient awareness of their rights in healthcare settings. According to a study by Elsayed, et.al an educational intervention had a significant difference between both before and after intervention, and this emphasizes the importance of education for healthcare providers about patient rights(17). These findings are in line with a study done in Iran involving patients, (18) that showed high scores of all aspects of the patients' rights after training. Promoting patient rights is among the priorities of healthcare providers and should be considered an indicator of delivery of health in every community.

### **Sources of Patient Rights Information**

Some studies have reported similar findings. A study conducted in Iran (11) that involved the utilization of workshops and informational pamphlets, the findings showed significant increased participants' knowledge of their rights compared to a control group. Similarly, a study done in Tehran (12) evaluated an intervention using educational sessions and written materials among patients and observed a marked improvement in patients' awareness post-intervention.

Studies done by Almoajel (14) examined the use of educational booklets and posters the finding showed that these materials effectively enhanced patient awareness of their rights. The study concluded that such interventions led to an improvement in patients' knowledge of their rights in a hospital setting. These studies collectively demonstrate that educational interventions, whether through one on one with the healthcare recipients, workshops, or printed materials, can greatly enhance patient understanding of their rights within healthcare systems. These studies demonstrate the positive impact of educational interventions on patient awareness and suggest that targeted educational efforts, including direct communication and written materials, can effectively enhance understanding of patient rights.

### **Quality of Services**

On patient satisfaction, this study implied that patients derive their satisfaction from the quality of service they receive in the healthcare facilities. These findings are consistent with other studies in the region that have explored the impact of educational interventions on patient satisfaction. Similarly, a study in three countries (15) demonstrated that antenatal care mothers

who received education about their rights expressed increased satisfaction, suggesting a direct correlation between knowledge and positive healthcare experiences. Studies done by Mwangi (16) in Tanzania reported that when healthcare providers were trained to effectively communicate patient rights, maternal satisfaction improved significantly. These studies support the idea that educational interventions not only enhance knowledge but also foster a sense of empowerment among patients, leading to better healthcare outcomes (21).

The study had some limitations. While the findings may be geographically specific, they can be generalized to facilities operating in similar contexts. Additionally, the reliance on self-reported data during data collection may introduce potential biases.

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

In conclusion, whereas these studies suggest significant impact of educational intervention delivered by healthcare providers, significant gaps still exist in the implementation of patient rights awareness (22). There should be efforts dedicated to enhancing sustainability of efforts to patient rights awareness. The emphasis on healthcare providers as a primary source of information aligns with findings from similar studies that highlight the critical role of healthcare professionals in educating patients about their rights and responsibilities.

### **Recommendation**

1. **Tailored Training and Implementation:** Healthcare providers should be consistently engaged in training on patients' rights and responsibilities to ensure long-term sustainability. These training programs should be customized, with improved communication strategies developed to effectively relay information to healthcare recipients.
2. **Policy Formulation:** Ongoing research should be encouraged to support the development and implementation of policies. Given that Kenya's health system is devolved, both county and national policymakers should play an active role in refining the implementation of the Patient Rights Charter.
3. **Health Service Integration and Monitoring:** Only 34% of facilities in Kenya have systems for measuring patient experiences and this should be a focus to increase to improve monitoring (19). To address the challenges posed by facility workloads, it is essential to integrate services and establish continuous monitoring systems to track the implementation of these rights effectively.

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