

# The Influence of Health Innovation Awareness on the Use of Skilled Birth Delivery Services: A Case Study of Kimilili Sub County, Bungoma County, Kenya

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**Abstract:-** The uptake of skilled birth delivery services (SBDs) is crucial for improving maternal and child health, as it significantly reduces maternal and child mortality rates (MCMR). Maternal morbidity and mortality profoundly impact mothers, babies, families, communities, and society at large. The World Health Organization (WHO) estimates that maternal and child deaths result in an annual loss of USD 15.5 billion in potential productivity globally. In Bungoma County, the rate of SBDs has risen to over 50% in the past eight years, except for 2017 when it dropped to 46% due to a prolonged health workers' strike. However, there has been uncertainty regarding the sustainability of these high SBD rates after the cessation of specific health programs. This study aimed to describe and analyze how awareness of health innovations influences the use of skilled birth delivery services in Kimilili Sub County, Bungoma County. Utilizing a cross-sectional descriptive quantitative analytical design, the study employed both probability and non-probability sampling techniques to select participants. Descriptive statistics, including means and percentages, were used to summarize the data, while multiple regression analysis assessed the relationship among various innovations in increasing skilled birth delivery uptake. Findings indicated that awareness of health innovations, particularly those addressing financial aspects of delivery, significantly influences the uptake of skilled birth delivery ( $p=0.000$ ). The study concluded that health innovations providing financial support for medical bills and emotional support throughout pregnancy strongly affect skilled delivery rates in Kimilili Sub County.

**Keywords:-** Health Innovation Awareness, Use of Skilled Birth Delivery Services.

## I. INTRODUCTION

### A. Skilled Birth Delivery Services

In this study, skilled birth delivery (SBD) services encompass all services provided to pregnant women during and immediately after childbirth by trained individuals with the necessary medical knowledge and skills, whether within or outside health facilities. Conversely, unskilled birth delivery (UBD) services are those provided by untrained

individuals such as traditional birth attendants (TBAs), friends, or relatives, typically outside health facilities (Kenya DHIS 2011-2020). These providers often lack education, hygiene practices, and awareness of the associated risks. Mothers attended by skilled birth attendants receive proper monitoring, hygienic care, and protection against labor complications, reducing the risk of maternal and neonatal death. Early detection of complications, effective labor monitoring, and hygienic care are crucial for preventing maternal and neonatal mortality (Kenya DHIS 2011-2020).

From 2011 to 2020, Kenya saw a significant increase in the use of SBD services, rising from 44.3% to 77.8%, which is expected to significantly reduce maternal and child mortality rates (Kenya DHIS 2011-2020). Despite political support for maternal health improvements, such as the 2013 free maternity policy and the Beyond Zero program aimed at enhancing access to health services and strengthening referral systems, the uptake of skilled delivery services varies across different regions.

### ➤ Factors Hindering Access to Skilled Services Include:

- Lack of information about available services.
- Lack of knowledge about the importance and risks of the services.
- Economic barriers preventing payment for services.
- Local cultural and social barriers to accessing quality health services.
- Inadequate capacity building and use of local resources, including community health volunteers.

To address these challenges, various nations and organizations are actively seeking solutions. Kenya, for instance, has collaborated with partners to develop policies such as the 2007 Reproductive Health Policy and the 2014 Kenya Health Policy. Additionally, the Beyond Zero campaign, launched by Kenya's First Lady in 2014, aims to improve maternal and child health services by providing mobile clinics to reduce maternal and child mortality (Bungoma County Government Report, 2014).

**B. Health Innovation Awareness**

Kimilili Sub County had three Level 4 health facilities that served as referral centers for the sub-county and neighboring areas. These facilities provided critical obstetric and gynecological services. Family planning and antenatal services were available daily at the maternal child welfare clinics. Kimilili Hospital featured a 10-bed maternity ward with two additional delivery beds. Dreamland Mission Hospital also offered maternity services, though these were not covered under the free maternity policy at the time of the study, requiring payment either out-of-pocket or through private medical and National Hospital Insurance.

All Level 3 and Level 2 facilities provided reproductive health services, including family planning, antenatal care (ANC), and maternity care, with the exception of Sulwe, Kamasielo, Chebukwabi, and Kambini Dispensaries, which did not offer maternity services despite serving large populations. These facilities, like many others in different

sub-counties, experienced staff shortages. However, they were all within a 5 km radius, as recommended by WHO. The sub-county hospital had two ambulances to transport patients needing referral services to either the sub-county hospital or Dreamland Hospital. The free maternity service policy was applicable in all county health facilities providing maternity services, but not at Dreamland Mission Hospital.

In the primary health care sector, there were 25 fully established Community Health Units (CHUs) delivering health promotion messages and referral services, including birth companion (BC) activities. These CHUs were distributed across the four wards, each supported by 25 Community Health Volunteers (CHVs), ten of whom received a monthly stipend of Ksh 2000/=. The county health sector operated an approved referral strategy policy. The table below compares the uptake of birth delivery services before and after devolution.

Table 1: Skilled Deliveries National, Bungoma County and Sub Counties in Bungoma County (MOH, DHIS 2011-2020)

	YEAR PERFORMANCE % COVERAGE	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	National	44.3	45.5	51	53.7	57.1	59.6	53	64.9	67	77.8
2	Bungoma County	29.6	31.1	41.5	50.7	59.2	61.6	53	72	71.9	84.6
3	Kimilili	33.4	32.5	43	57	66.6	71.3	46	66.2	75.1	88.5
4	Mt. Elgon	27.9	27.6	41.7	54.7	60.2	60.2	39	58	55.4	65.7
5	Kabuchai	30.9	27.4	41.6	47.2	48.9	51.6	54.5	61.9	58.4	65.6
6	Tongaren	15.2	27.4	35.2	43.4	47.7	58.9	53.7	64.3	57.3	67.7
7	Webuye West	0	0	0	77	96	91	85	112.5	106.3	137.8
9	Webuye East	2	4.5	5.3	5	14	26	35.9	47	47.6	49.1
10	Kanduyi	45.9	44.8	52.3	69	75	71	68	98.7	105.8	127.7
11	Sirisia	23.6	22.7	36.1	43	42	51	58	73.7	67.3	75.7
12	Cheptais	15.7	26.6	36.1	31	61	55	38	47.2	56.3	62.4

**II. STATEMENT OF THE PROBLEM**

The uptake of skilled delivery services in Kimilili Sub County showed a positive trend, contributing to improved maternal and child health, and subsequently reducing maternal and child mortalities. This increase occurred alongside numerous health innovations, including the Beyond Zero campaign, Birth Companion, and the Linda Mama program. These initiatives were believed to be the driving force behind the rise in skilled delivery service uptake from 33.4% to 85.5% in Kimilili Sub County. The critical issue was whether this positive trend could be sustained. The study aimed to determine if there were significant effects and associations between awareness of these health innovations and the increasing number of mothers seeking skilled birth services. If such a relationship existed, the study would recommend that county policymakers adopt strategies to channel more investments into these initiatives, ensuring continued or even greater improvement in maternal and child health outcomes beyond the program period.

➤ *Objective of the Study*

To determine the influence of Health innovation awareness on use of Skilled birth delivery services a case of Kimilili Sub County -Bungoma County.

➤ *Research Question*

This study was directed by the following research question:

- How influential is the awareness of Health innovations by mothers of child bearing age towards the uptake of skilled birth delivery service uptake?

➤ *Conceptual Framework*

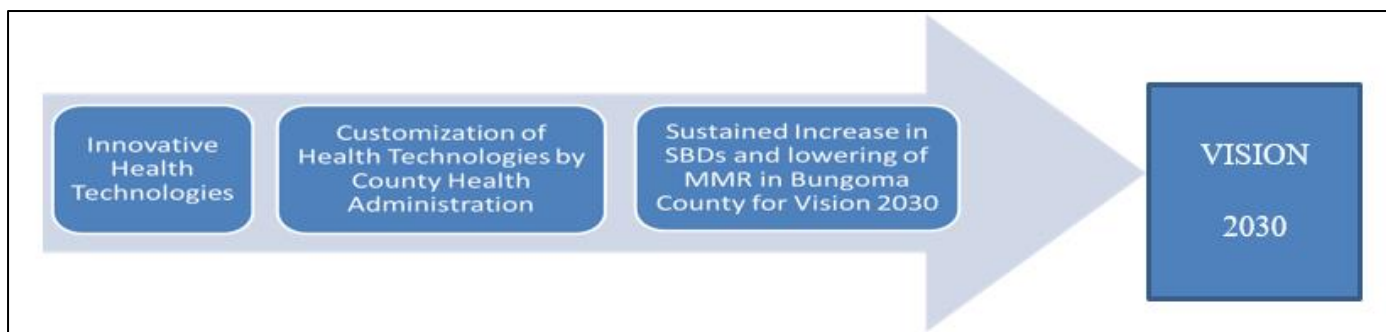


Fig 1: Andersen’s Behavioral Model of use of Health Services (Andersen RM, 1995)

➤ *Theoretical Review*

This study was grounded in Andersen's Behavioral Model of Health Services, a widely utilized framework for understanding the determinants of health care service usage. The model categorizes these determinants into predisposing factors, enabling factors, and need factors. In this study's

context, health innovation incorporating predisposing characteristics allowed the resource-limited health sector to meet the established goal of ensuring women deliver under the care of Skilled Birth Attendants. This innovation functioned within the inherent proximal factors, including demographic, socio-economic, and cultural influences.

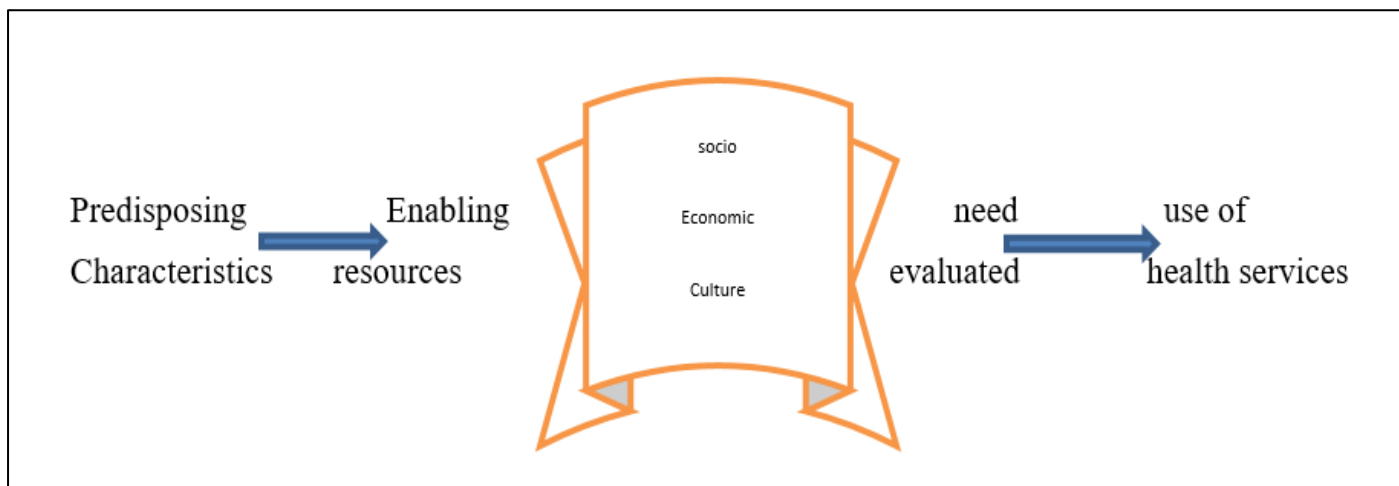


Fig 2: Theoretical Framework

➤ *Innovations Proximate Factors*

- Andersen’s behavioral model of use of health services (Adopted from Andersen RM, 1995).
- Empirical Review
- Skilled Delivery

To reduce maternal morbidity and mortality, it is crucial that every baby is delivered with the assistance of a skilled birth attendant, which typically includes a medical doctor, nurse, clinical officer, or midwife. Experts agree that the risk of stillbirth or maternal death due to intrapartum-related complications can be reduced by about 20% with the presence of a skilled birth attendant during delivery (UNICEF, 2017). Reflecting its significance in reducing maternal morbidity and mortality, skilled birth attendance is included as indicator 3.1.2 under Goal 3, Target 3.1 of the Sustainable Development Goals (UNICEF, 2019).

Several studies have examined factors that promote or hinder the use of maternal health services. However, these studies often focus on specific health innovations and socio-economic factors within certain age groups and regions. There is limited knowledge about the change in demand for skilled birth attendance and the factors influencing the choice and place of delivery for mothers who had given birth in the five years preceding these studies. The World Health Organization (WHO) estimates that 300,000 women die from pregnancy-related causes each year, with about 830 mothers dying daily (WHO, 2015; cited by UNICEF, 2019).

Approximately 62% of maternal deaths worldwide occur in Africa, with Sierra Leone having the highest maternal mortality rate (MMR) of 1,360 per 100,000 live births, followed by the Central African Republic with an MMR of 882 per 100,000 live births (WHO, 2015). In contrast, countries like Finland and Greece have an MMR of 3 per 100,000 live births (WHO, 2015). This variation can be attributed to the level of state development and other factors.

According to the Commission on Information and Accountability for Women and Children's Health 2013 Update Report, in 2012 alone, more than 100,000 children died before their fifth birthday, largely due to preventable causes. Recent estimates indicate that over 500,000 women between the ages of 15 and 49 die each year from causes related to pregnancy and childbirth that could be prevented (WHO, 2019). In 2000, WHO estimated that the lifetime risk of maternal death was 1 in 16 in sub-Saharan Africa, compared to 1 in 2,800 in developed countries (WHO, 2000). The United Nations General Assembly (2000) reported that providing quality antenatal care during pregnancy and ensuring that mothers are assisted by skilled birth attendants during delivery significantly reduces maternal and child mortality rates, which are indicators used to monitor progress towards achieving the Millennium Development Goals for Vision 2030.

Ann Gitimu, Christine Herr, Happness Oruko, Evalin Karijo, Richard Gichuki, Peter Ofware, Alice Lakati and Joseph Nyangelo (2017) in their study: Skilled Birth attendants at Delivery in Makueni, stated that Skilled birth attendants refers exclusively to doctors, nurses and clinical officers who have the skills necessary to manage labor. However, they also concluded that there is need to promote behavior change to enhance demand for Skilled Birth delivery services. While considering the objectives of this study the issue of differential effects of socio economic and cultural factors featured. Cognizant of the changes in timing and approaches to improve the quality of maternal Health, a test of this was entertained in the study.

A report in the Kenya Demographic Health indicator survey of KDHS reported that Maternal mortality ratio for Kenya gradually reduced from 741/100,000 in 1998 to 342/100,000 live birth in 2017 ( KDHS, 2017). This was attributed to the Improvement in health care, literacy, nutrition, hygiene and promotion of skilled delivery services. Based on that literature, WHO publication of 2017 states that skilled care before during and after child birth saves the lives of the mother and the new born (WHO.2017). Whereas the rate of skilled deliveries was too low in the undeveloped countries, first world countries had few or Zero unskilled delivery recorded. This high variation in the rate of maternal deaths can be matched with the possible variations in the above factor also.

Considering Kenya as a country, utilization of skilled delivery services also varies from one region to the other. North Eastern province of Kenya had skilled delivery rate of 32.3% and Loitokitok 30.3% in 2008. (KDHS,2008).This was consistent with the reported MMR of 3795/100000 for Mandera County and 1683/100000 for Wajir County both of which are in the North Easten province and both of which reported low skilled delivery rate. (KDHS, 2008). The high rate of maternal death was also most common in poor rural communities with myriads of challenges that the ministry of health is always trying to address with scientifically proved ideologies and policies that included Health innovations. A consistent rise in the rate of skilled delivery (DHIS, 2020)

observed in the country may consequently bring down the maternal and child mortality.

### III. HEALTH INNOVATIONS AND AWARENESS

Before 2011, Kenya's national stillbirth rate (SBDS) was as low as 43.3%, while the maternal mortality rate (MMR) was as high as 488 per 100,000 live births. By 2013, the SBDS began to rise, and the MMR decreased to 332 per 100,000 live births (DHIS, 2011-2013). These changes coincided with the implementation of innovative health interventions. According to a 2017 report from Aga Khan University on the Mama na Mtoto project, the Aga Khan University and the Community Health Department of the Aga Khan Health Service Kenya collaborated with poor rural communities in three districts of Kenya's Coast Province to improve maternal and child healthcare.

The Mama na Mtoto project, meaning "mother and child" in Kiswahili, conducted operational research to provide community-based training for midwives, nurses, and other health workers at 10 local health facilities in Kwale, Kinango, and Msambweni. The project aimed to address the high rates of maternal, neonatal, and child mortality in rural Kenya, where fewer than half of all deliveries were attended by a nurse or midwife. One objective was to prepare health workers to eventually take over functions initially performed by Aga Khan University staff (Aga Khan University, 2017). If the current innovations are linked to the increase in skilled deliveries, policies could be developed to ensure sustainability and quality service delivery in county health systems.

A Bungoma County report on the Beyond Zero campaign highlighted that the initiative was conceived by First Lady Margaret Kenyatta to improve maternal and child health (MCH) services, aiming to reduce MMR and child mortality rates (CMR). The campaign sought to increase skilled deliveries by enhancing access to services through quality antenatal clinic (ANC) services, health promotion, and early HIV/AIDS diagnosis, all provided at no cost through one-stop shops and mobile outreach clinics. This modified the traditional mobile outreach clinic model, which had declined due to various administrative challenges. The goal was to reduce financial and accessibility barriers for mothers and raise awareness about health risks to mothers and babies. Launched in Bungoma County on January 24, 2014, the campaign led to a classification and coding of the mobile community outreach lorry as a health facility serving the entire county (Bungoma County Government report, 2014). Data from the County Health Office shows that skilled deliveries increased from 44% in 2013 to 66% in 2018, and MMR reduced from 6000 per 100,000 live births in 2013 to 4000 per 100,000 live births in 2018 (DHIS, 2018).

In 2018, Beyond Zero expanded its scope with the 2nd Strategic Framework for 2018-2022, adding goals such as increasing the enrollment of pregnant women in the Kenya National Hospital Insurance Fund (NHIF), also known as the Linda Mama Program. This aimed to reduce the financial burden on mothers and promote access to skilled birth



delivery services, consequently reducing maternal mortality. The Community Strategy, a flagship project for United Nations member states, aims to enhance community access to global healthcare to improve productivity and reduce poverty, hunger, and maternal and child deaths (Community Health Strategy Implementation Guide, 2007). In Kenya, one key innovation was the introduction of level one health services—Community Health Units (CHUs)—to empower households and communities to take charge of their primary healthcare. This involves identifying health risks and providing health promotion messages.

The concept of Birth Companions (BCs) was initiated by partners in health to transition the role of traditional birth attendants (TBAs) from assisting home deliveries to escorting mothers to skilled birth attendants. According to WHO guidelines titled "Companion of Choice" (2016 version), BCs are recruited and trained in their new roles. Although TBAs typically lack medical training, BCs receive informal health lessons on advocacy and social mobilization in primary healthcare. Their role includes providing health education on disease prevention and supporting the community in identifying early danger signs in pregnancy, including delivery complications. During labor, they accompany mothers to skilled birth providers, offering an alternative to traditional birth attendants who often provide unskilled services (Save the Children, 2015).

#### IV. RESEARCH METHODOLOGY

The study employed a quantitative descriptive analytical cross-sectional survey research design. The purpose of the survey was to describe and analyze the relationship between the independent variables (innovations and factors) and the dependent variables (Creswell, 2012). This design also focused on collecting data regarding the occurrence or incidence of events (deliveries) in various situations and contexts (innovations and factors), aiming to understand the reasons, opinions, attitudes, preferences, and perceptions of the individuals of interest to the researcher (Orodho, 2003).

The study was conducted in Kimilili Sub County, Bungoma County, Kenya. The sample frame consisted of mothers aged 15 to 45 years with children residing in Kimilili Sub County. The target population included mothers who had lived in the sub-county for at least one year and had children aged 0-59 months. Both probability and non-probability sampling techniques were utilized. Initially, all 25 community health units (CHUs) were listed, along with all mothers with children aged 0-59 months in those CHUs who had resided in Kimilili Sub County for at least five years before the study.

The sample size of mothers to participate in the study was then determined using the Cochran formula as outlined below:

$$n = \frac{(Z \alpha/2)^2 p(1-p)}{e^2}$$

P = 0.885

e = 0.05

$\alpha$  = significance level=0.05

Z = 1.96

Total sample size = n + 10 % (n)=384+38=422.

The Total sample size was then divided by the total number of CHUs (25) in the sub county (422/25) which was rounded to a figure of 17 Mothers that was randomly sampled from each CHU using rotary method.

422/25 CHU =16.88 mothers/CHU. Rounded off to 17mothers /CHU.

For data collection, a pre-tested structured questionnaire and a checklist were used, administered by the research assistant. Questionnaires were chosen for this study because, as noted by Kombo and Tromp (2006), they can gather data from a large sample efficiently and save time. Additionally, they help minimize bias from both the researcher and the respondents. The collected data was organized and displayed in tables, charts, and graphs, ready for analysis. The unit of analysis for this study was women aged 15-49 years with children aged 0-59 months. The data gathered through the questionnaires was validated, edited, and coded. The validation process allowed the researcher to determine the return rate of the questionnaires.

Data cleaning and analysis were conducted using STATA version 14 after the data was presented in tables, charts, and graphs. Descriptive statistics such as mean and percentages were used to summarize and examine the relationship between the identified innovations and factors related to skilled birth deliveries. Multiple regression analysis was employed to explore the relationships among the three innovations in enhancing the uptake of skilled birth deliveries. Odds ratios (OR) and 95% confidence intervals (CI) were calculated.

#### V. FINDINGS

##### A. Demographic Characteristics

Before actual analysis, respondent's demographic characteristics were explored. These included the respondents' gender, level of education and work experience. The findings are presented as shown in Table 1.

Table 2: Demographic Characteristics

Age of Mother	Place of Delivery								Pr
	Attendant's Home		Health Facility		On the Way		Total		
	n	%	N	%	n	%	N	%	
Teenage Mother (13 -19)	0	0.00	83	100.00	0	0.00	83	100.00	<b>0.006</b>
Young Mother (20 -35)	4	1.79	216	96.43	4	1.79	224	100.00	
Adult Mother (36 -44)	8	8.89	79	87.78	3	3.33	90	100.00	
Elderly Mother (45-49)	0	0.00	6	100.00	0	0.00	6	100.00	
<b>Religion</b>									0.378
Christian	1	3.12	337	95.47	5	1.42	353	100.00	
Muslim	0	0.00	27	93.10	2	6.90	29	100.00	
Native	0	0.00	3	100.00	0	0.00	3	100.00	
Protestant	1	5.56	17	94.44	0	0.00	18	100.00	
<b>Employment Status</b>									0.309
Employed (Salaried)	3	7.69	36	92.31	0	0.00	39	100.00	
Self employed	4	2.48	155	96.27	2	1.24	161	100.00	
Unemployed (Unsalariated)	5	2.46	193	95.07	5	2.46	203	100.00	
<b>Level of Education</b>									0.201
Up to Primary 8	8	5.10	147	93.63	2	1.27	157	100.00	
Form Four	2	1.07	182	97.33	3	1.60	187	100.00	
Tertiary/College	2	3.39	55	93.22	2	3.39	59	100.00	
<b>Parity</b>									<b>0</b>
1	2	1.77	111	98.23	0	0.00	113	100.00	
2	0	0.00	97	100.00	0	0.00	97	100.00	
3	1	1.16	81	94.19	4	4.65	86	100.00	
4	2	3.70	52	96.30	0	0.00	54	100.00	
5	3	6.98	40	93.02	0	0.00	43	100.00	
6	1	20.00	3	60.00	1	20.00	5	100.00	
more than 6	3	60.00	0	0.00	2	40.00	5	100.00	

Table 1 above shows that age (p=0.006) significantly influences the mothers’ place of delivery. The frequencies and percentages indicate that the teenage and elderly mothers (13-19 and 45-49 respectively) mostly sort skilled birth delivery services (SBDS). Young and adult mothers indicate 3.5% and 12.1% of non-skilled birth attendance. Similarly, Parity (p=0.000) significantly influences SBDS uptake. Table 1 above also shows that mothers with 6 or more births had low rates of skilled birth delivery services at 60% and 0% respectively.

Religion on the other hand does not significantly (p=0.378) influence SBDS. The rates of non-skilled births range between 4 and 6 births per a hundred across the religions. Additionally, the culture that limits men from supporting their wives during pregnancy and escorting them to the health facility had been addressed by introduction of Birth Companions. Employment status also indicates non-significant (p=0.309) association to Skilled birth delivery service uptake. The rate on non-skilled delivery ranges from 3 to 7 births per 100 across different employment levels. Lastly, education level doesn’t influence SBDS (p=0.201) . 2 to 6 births across the education levels did not take place under the service of a skilled birth attendant.

*B. To Determine Influence of Awareness for Health Innovation on use of Skilled Birth Delivery Services.*

The research further evaluated how health innovations impact the usage of skilled delivery services. The results indicated that being informed about Linda Mama significantly affects the utilization of skilled delivery services (p=0.000). A majority of mothers unaware of Linda Mama (66.67%) opted for unskilled delivery services, while 97.23% of those aware of Linda Mama chose skilled birth delivery services. Conversely, awareness of Birth Companion and Beyond Zero did not notably influence the uptake of skilled delivery, with p-values of 0.585 and 0.693 respectively. Despite lacking awareness of Birth Companion and Beyond Zero health innovations, all mothers (100%) and 96.83% of mothers still utilized skilled delivery services, as indicated in table 3.

Table 3: Association between Influence and Awareness of Health Innovation on Skilled Birth Delivery Uptake

	Innovations	Linda Mama		Birth Companion		Beyond Zero	
	Delivery	Skilled	Unskilled	Skilled	Unskilled	Skilled	Unskilled
Awareness of Health Innovations	Yes	97.23%	2.77%	96.24%	3.76%	95.79%	4.21%
	No	33.33%	66.67%	100.00%	0.00%	96.83%	3.17%
	P-value	0.000		0.585		0.693	
Influenced by Health Innovations	Yes	98.42%	1.58%	97.43%	2.57%	94.74%	5.26%
	No	62.5%	37.50%	64.29%	35.71%	97.21%	2.79%
	P-value	0.000		0.000		0.203	

Health innovations influence the mothers’ skilled delivery attendance by either paying for the delivery services (Linda Mama, p=0.000) or by providing emotional support to the mothers before during and after delivery (Birth

Companion, p=0.000). Beyond Zero had no significant influence on the mothers’ utilization of skilled delivery services.

Table 4: Binary Logistic Regression Knowledge of Health Innovations against Skilled Birth Uptake in Kimilili Sub County

Health Innovations effect on Skilled Birth Uptake	Odds Ratio	P>z
Heard of Linda Mama	181.00	0.000
Heard of Beyond Zero	0.252	0.080
Prob > chi2 = 0.000	Pseudo R2 = 0.1857	

Both parity and the entity responsible for covering the delivery expenses were found to significantly impact the uptake of skilled birth delivery, with p-values of 0.005 and 0.000 respectively, according to a binary logistic regression analysis. A one-unit increase in parity resulted in a 0.34 decrease in skilled delivery uptake, holding all other factors constant. Conversely, the payer of the delivery expenses influenced skilled birth uptake by 0.033. The regression model proved significant in elucidating changes in skilled birth uptake (p=0.000), accounting for 69.78% of the variance in skilled birth uptake (Pseudo R2=0.6978). Refer to table 5 for details.

**VI. SUMMARY**

The influence of health innovations on maternal decisions regarding skilled delivery attendance is notable. Awareness of programs like Linda Mama and Birth Companion significantly impacts the uptake of skilled delivery services. Research indicates that maternal health interventions, particularly those providing financial support such as free maternity services, play a crucial role in encouraging mothers to opt for skilled delivery, particularly in public health facilities in Kenya (MOH, 2015). Specifically, information about Linda Mama, which covers delivery costs, emerges as a pivotal factor in enhancing the utilization of skilled delivery services.

Moreover, interventions involving community-based attendants who offer support throughout pregnancy, accompany mothers to health facilities, provide assistance during delivery, and ensure safe return home post-delivery have shown to enhance skilled birth attendance rates (Magoma et al, 2013). Birth Companion programs further equip mothers with birth planning skills and encourage them to save for delivery expenses. Magoma et al.'s study underscores the importance of birth plans in promoting health facility-based deliveries, highlighting the instrumental role of Birth Companions in this regard.

**VII. CONCLUSIONS AND RECOMMENDATIONS**

In contrast, healthcare advancements that offer financial assistance by covering medical expenses, alongside those offering emotional support throughout pregnancy such as Linda Mama and Birth Companion, significantly impact the rates of skilled deliveries in Kimilili Sub County.

➤ *Based on these Findings and Conclusions, the Following Recommendations have been Put Forth:*

- Health administrators should devise strategies to ensure consistent funding for delivery services, as this is crucial for maintaining a sustained increase in skilled birth deliveries.
- The county government should explore methods to enhance the effectiveness of both Linda Mama and Birth Companion initiatives within the county, thereby ensuring continued uptake of skilled birth services.
- Further studies should be undertaken to explore the feasibility of integrating either or both of these innovations, Linda Mama and Birth Companion, into the Community Health Strategy.

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