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**EFFECT OF ANTENATAL CARE (ANC) ATTENDANCE ON MATERNAL
HEALTHCARE AMONG EXPECTANT MOTHERS IN TURKANA COUNTY**

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Effect of Antenatal Care (ANC) Attendance on Maternal Healthcare among Expectant Mothers in Turkana County

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Abstract:

Purpose of the Study: This study examined the effect of antenatal care (ANC) attendance on maternal healthcare among expectant mothers in Turkana County, Kenya. It sought to establish whether consistent ANC attendance improves maternal health outcomes by promoting early risk detection, reducing pregnancy complications, improving safe delivery, and enhancing overall maternal wellbeing in underserved communities.

Methodology: The study adopted a descriptive research design guided by the Health Belief Model. A census of 204 respondents, including expectant mothers, healthcare providers, and maternal health stakeholders, was conducted. Primary and secondary data were analyzed using descriptive

statistics, regression, correlation, and thematic content analysis to establish relationships between study variables.

Findings: The findings revealed that ANC attendance has a significant positive effect on maternal healthcare outcomes in Turkana County. Regular ANC attendance improved early detection of pregnancy-related health risks, reduced complications, enhanced safe delivery outcomes, and promoted maternal wellbeing. Regression analysis confirmed that ANC attendance significantly predicts maternal healthcare outcomes ($\beta = 0.391$, $p < 0.001$), explaining 47.9% of the variation in maternal health outcomes. Respondents strongly agreed that consistent ANC utilization contributes to improved pregnancy management and better access to quality maternal healthcare services. These findings affirm ANC attendance as a critical determinant of improved maternal health in resource-constrained settings.

Conclusion: The study concludes that consistent antenatal care attendance significantly improves maternal healthcare outcomes among expectant mothers in Turkana County. Strengthening community outreach, addressing socioeconomic and geographical barriers, and promoting greater ANC utilization are essential strategies for reducing maternal health risks and improving maternal wellbeing in marginalized populations.

Keywords: *Antenatal care attendance, maternal healthcare, expectant mothers, Turkana County*

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1.0 Introduction

1.1 Background of the Study

Maternal healthcare remains one of the most critical public health challenges globally, particularly in low- and middle-income countries where disparities in access to skilled care during pregnancy and childbirth continue to cost lives. Antenatal care (ANC) refers to the comprehensive care provided by skilled health professionals to pregnant women before childbirth. It encompasses health monitoring, nutritional guidance, immunization, counseling on birth preparedness, and early detection of complications. When consistently utilized, ANC serves as a preventive gateway to improved maternal and neonatal health outcomes (World Health Organization, 2022). The WHO (2022) recommends a minimum of eight ANC contacts during pregnancy to reduce the risk of maternal mortality and improve the quality of care received by expectant mothers. Despite this recommendation, millions of women globally continue to receive inadequate or no antenatal care, placing both mother and child at risk.

From a global perspective, high-income countries have demonstrated that structured ANC programs significantly reduce maternal mortality and morbidity. In the United Kingdom, the National Health Service (NHS) ANC framework guarantees a minimum of ten scheduled appointments for first-time mothers, with robust integration of ultrasound screening, blood tests, and mental health assessments throughout pregnancy. This systematic approach has contributed to a maternal mortality ratio of approximately 9 per 100,000 live births, among the lowest globally (Knight et al., 2023). Similarly, in Japan, ANC is deeply embedded in the maternal healthcare system through the Maternal and Child Health Handbook, a government-issued record that tracks each mother's health from pregnancy to early childhood. This approach has resulted in one of the world's lowest maternal mortality rates, at approximately 3 per 100,000 live births, attributed to the continuity of care enabled by early and consistent ANC attendance (Matsumoto et al., 2022). These European and Asian examples demonstrate that institutionalized, government-supported ANC programs are foundational to achieving positive maternal health outcomes.

At the regional level in Africa, ANC utilization patterns vary considerably, often reflecting broader systemic challenges in healthcare financing, infrastructure, and cultural norms. In Ghana, a study by Abuosi et al. (2024) found that early initiation of ANC visits was significantly associated with maternal education, household wealth, and urban residence, highlighting the role of socioeconomic determinants in shaping ANC access. Ghana's National Health Insurance Scheme has made ANC services free of charge, yet barriers such as distance, provider attitudes, and limited community awareness continue to impede consistent attendance, particularly among rural women. In South Africa, the national Ideal Clinic Realization and Maintenance Programme has standardized ANC delivery across public health facilities, contributing to an ANC coverage rate of approximately 94% for at least one visit (Statistics South Africa, 2023). However, quality of care and completion of the recommended number of visits remain challenges, particularly in rural provinces such as Limpopo and KwaZulu-Natal, where socioeconomic inequalities and distance to facilities intersect with cultural beliefs to limit consistent ANC attendance. These regional experiences underscore the importance of not

only ensuring physical access to ANC services but also addressing the social and structural determinants that influence attendance behavior.

Locally in Kenya, maternal mortality remains a significant public health burden, with the Kenya Demographic and Health Survey (KNBS, 2023) reporting a maternal mortality ratio of 355 per 100,000 live births. While national ANC coverage for at least one visit stands at approximately 96%, the proportion of women completing the WHO-recommended eight or more ANC contacts is considerably lower, particularly in marginalized counties (Ministry of Health Kenya, 2022). In Turkana County, one of Kenya's most economically disadvantaged counties, maternal health indicators are among the worst in the country. Geographical remoteness, nomadic lifestyles, deeply entrenched cultural practices, poverty, and a severe shortage of skilled healthcare personnel collectively limit expectant mothers' ability to consistently attend ANC clinics (Maina, 2024). Studies conducted in Kenya's semi-arid and arid regions confirm that women who attend ANC services consistently are significantly more likely to deliver in health facilities attended by skilled birth attendants, receive timely interventions for complications, and report better overall pregnancy outcomes (Mutuku et al., 2025). The low levels of ANC utilization in Turkana County therefore represent both a healthcare crisis and a gap in empirical evidence, particularly regarding how consistent ANC attendance translates into measurable improvements in maternal healthcare outcomes. This study addresses that gap.

1.2 Statement of the Problem

Despite global evidence supporting the effectiveness of antenatal care in improving maternal health outcomes, many expectant mothers in Turkana County continue to face significant barriers to consistent ANC attendance, including geographical remoteness, poverty, cultural beliefs, and limited availability of skilled healthcare providers. The Kenya Demographic and Health Survey (KNBS, 2023) indicates that Turkana County records some of the lowest rates of ANC completion in the country, contributing to persistently high maternal mortality and morbidity rates. While studies have examined barriers to ANC attendance in Kenyan contexts (Maina, 2024; Mutuku et al., 2025), limited empirical evidence exists on the specific effect of ANC attendance on maternal healthcare outcomes in Turkana County. Most existing studies focus on determinants of ANC access or national-level patterns rather than outcome-focused evidence at the county level. Without context-specific empirical evidence, healthcare planners and county health authorities lack a sound basis for designing targeted interventions to improve ANC utilization and maternal health outcomes in this underserved setting. This study therefore sought to determine the effect of ANC attendance on maternal healthcare among expectant mothers in Turkana County, Kenya.

1.3 Purpose of the Study

The purpose of this study was to determine the effect of antenatal care (ANC) attendance on maternal healthcare among expectant mothers in Turkana County, Kenya.

1.4 Research Hypothesis

H01: Antenatal care (ANC) attendance does not significantly influence maternal healthcare outcomes among expectant mothers in Turkana County, Kenya.

2.0 Literature Review

2.1 Theoretical Framework: Health Belief Model

This study is grounded in the Health Belief Model (HBM), originally developed by Rosenstock (1966) and later refined by Becker and Maiman (1975). The HBM is a psychological framework used to explain and predict health-related behaviors by focusing on individuals' perceptions and attitudes toward health risks and protective behaviors. The model identifies six core constructs: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. It posits that individuals are more likely to adopt health-promoting behaviors when they perceive themselves as vulnerable to a health condition, understand the seriousness of the condition, recognize the benefits of preventive action, and encounter few obstacles to taking that action (Champion & Skinner, 2008).

In the context of this study, the HBM provides a lens for understanding why expectant mothers in Turkana County may or may not attend ANC services consistently. When women are informed about the health risks associated with unmanaged pregnancies, and when they perceive ANC attendance as beneficial in reducing those risks, they are more likely to seek and continue using ANC services. Awareness campaigns, community health worker outreach, and peer education serve as cues to action that prompt attendance behavior (Glanz et al., 2015). Conversely, perceived barriers such as distance to health facilities, cost, cultural norms, and negative prior experiences with health providers may discourage consistent attendance. Interventions aimed at reducing these barriers and strengthening women's confidence in the healthcare system are therefore critical in improving ANC utilization. The HBM thus offers a theoretically grounded framework for examining how perceptions and structural factors interact to shape ANC attendance behavior and maternal healthcare outcomes in Turkana County (Rosenstock et al., 1988).

2.2 Empirical Review

2.2.1 Antenatal Care (ANC) Attendance and Maternal Healthcare

Mwenebanda et al. (2024) examined determinants affecting ANC attendance under the eight-contact protocol at designated maternal health facilities in Blantyre, Malawi. Their research identified substantial barriers including long distances to health facilities, negative attitudes of healthcare workers, insufficient awareness of the required number of ANC visits, and socio-cultural beliefs that discourage regular attendance. The study highlighted policy implementation gaps and health system inefficiencies that limit ANC utilization. While Mwenebanda et al. focused on the determinants of ANC attendance, the present study shifts emphasis to examine the effects of ANC attendance on maternal healthcare outcomes in Turkana County, Kenya, providing complementary evidence from a different African context.

Abuosi et al. (2024) conducted a quantitative study using data from the Ghana Maternal Health Survey to identify determinants of early ANC visits among women of reproductive age. Their

findings revealed that maternal education, household wealth, media exposure, and urban residence were significantly associated with early initiation of ANC. While the Ghanaian study concentrated on predictors of timely ANC commencement, the present study examines the overall impact of ANC attendance on maternal healthcare outcomes irrespective of timing, offering a different analytical scope and a Kenyan county-level perspective.

Eliufoo et al. (2024) analyzed data from the Tanzania Demographic and Health Survey to determine factors influencing adequate ANC attendance in resource-limited settings. Their findings indicated that maternal education, household wealth, parity, and proximity to health facilities significantly affected the completion of the recommended ANC visits. This study moves beyond the determinants examined by Eliufoo et al. to focus on how ANC attendance, once achieved, influences specific maternal health outcomes including complication reduction, birth preparedness, and care satisfaction in a single underserved Kenyan county.

Maina (2024) conducted a qualitative study in Kilifi, Kenya, examining the perspectives of midwives and pregnant women on access to and participation in ANC services. The study identified cultural beliefs, facility distance, economic constraints, and healthcare provider attitudes as primary factors shaping ANC access. While Maina's study offered rich experiential insights from the provider and recipient perspective, the present study adopts an outcome-focused quantitative methodology to evaluate how ANC attendance concretely influences measurable maternal health indicators in Turkana County.

Mutuku et al. (2025) investigated factors influencing male partner involvement in ANC at Kangundo Hospital in Kenya using a cross-sectional design. Their findings demonstrated that male participation positively influenced maternal healthcare outcomes including improved ANC attendance and birth preparedness. While their study highlighted the role of male involvement as a facilitating factor, the present study concentrates on ANC attendance itself as the primary independent variable, examining its direct effect on maternal healthcare outcomes in a more underserved and geographically challenging context.

Malachi et al. (2024) conducted a cluster randomized controlled study in Kisii County, Kenya, examining the effect of mobile phone call reminders on ANC appointment adherence. Results indicated that women who received consistent call reminders were significantly more likely to complete all four required ANC visits. While this study examined a technological strategy for improving ANC compliance, the present study focuses on the downstream effect of ANC attendance on maternal healthcare outcomes, providing complementary insights into why encouraging ANC completion is important.

3.0 Research Methodology

This chapter outlines the methodology employed to examine the effect of antenatal care (ANC) attendance on maternal healthcare among expectant mothers in Turkana County. A descriptive research design was adopted to assess the relationship between ANC attendance and maternal healthcare outcomes without manipulating the study environment. The target population comprised 204 respondents, including 160 expectant mothers, 20 healthcare providers, and 24 maternal health stakeholders. A census approach was employed to include all respondents,

while stratified and purposive sampling techniques ensured adequate representation and selection of participants with relevant maternal health experience. Primary data were collected using semi-structured questionnaires administered to expectant mothers and key informant interviews conducted with healthcare providers and stakeholders, complemented by secondary data from health records and policy documents. Instrument validity was established through expert review, face validation, and pilot testing, while reliability was assessed using Cronbach's Alpha, with a coefficient of 0.70 or higher considered acceptable. Data collection followed ethical approval procedures, including NACOSTI authorization and informed consent. Quantitative data were analyzed using SPSS Version 28 through descriptive statistics, correlation, and regression analysis, while qualitative data were analyzed using thematic content analysis and presented using tables, charts, and narratives.

4.0 Research Findings and Discussion

4.1 Response Rate

This section presents the response rate of the study instruments and indicates the proportion of returned and unreturned questionnaires. The results are summarized in Table 4.1.

Table 4.1: Response Rate

Response	Frequency	Percent (%)
Returned	192	94.1
Not Returned	12	5.9
Total	204	100

Source: Research Data (2026)

The response rate of 94.1% was considered excellent and demonstrated a very high level of participation among respondents. This high return rate enhanced the reliability of the study findings by ensuring that a large proportion of the sampled population was represented in the final analysis. It also indicated effective data collection procedures and strong engagement of respondents with the study topic. The high response rate reduced the likelihood of non-response bias, which could otherwise distort findings and affect their accuracy. With only 5.9% of questionnaires unreturned, the missing data was minimal and unlikely to significantly influence overall results. According to Creswell and Creswell (2018), a response rate above 70% is considered adequate for generalization of research findings. The achieved rate of 94.1% far exceeds this recommended threshold, confirming the adequacy and strength of the dataset and supporting the conclusion that findings are both credible and representative of the target population in Turkana County.

4.2 Descriptive Analysis

4.2.1 Antenatal Care (ANC) Attendance and Maternal Healthcare

This section examines the influence of ANC attendance on maternal healthcare outcomes. Data were analyzed using a 5-point Likert scale where 1 = Strongly Disagree and 5 = Strongly Agree.

Table 4.2: ANC Attendance and Maternal Healthcare

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. Dev
ANC visits improve maternal health outcomes	0.6	2.1	6.3	54.2	36.8	4.24	0.70
Regular ANC reduces pregnancy complications	0.8	2.4	5.9	53.6	37.3	4.23	0.71
ANC promotes early detection of health risks	0.7	2.3	6.1	52.9	38.0	4.25	0.69
ANC improves safe delivery outcomes	0.6	2.2	6.4	53.1	37.7	4.24	0.70
ANC attendance enhances maternal wellbeing	0.7	2.0	6.2	53.8	37.3	4.26	0.68

Source: Research Data (2026)

The findings indicate strong agreement among respondents that ANC attendance has a significant positive influence on maternal healthcare outcomes in Turkana County. All statements recorded high mean scores ranging from 4.23 to 4.26, which are considerably above the neutral midpoint of 3.0 on the Likert scale, demonstrating that respondents strongly perceive ANC services as beneficial. The relatively low standard deviations ranging between 0.68 and 0.71 indicate that responses were closely clustered around the mean, suggesting a high level of consensus across respondents.

ANC visits were found to improve maternal health outcomes, with a mean score of 4.24 (SD = 0.70). This implies that expectant mothers who attend ANC services regularly benefit from continuous health monitoring throughout pregnancy, including blood pressure measurement, nutritional assessment, and counseling on safe pregnancy practices. Such monitoring enables early identification and management of potential health risks before they escalate into serious complications. The findings suggest that ANC attendance serves a predominantly preventive role in maternal healthcare, which is particularly important in Turkana County where access to specialized obstetric care remains limited. This aligns with WHO (2022), which confirms that early and consistent ANC contacts significantly reduce the incidence of adverse maternal and neonatal outcomes.

Regular ANC attendance was found to reduce pregnancy complications, as indicated by a mean score of 4.23 (SD = 0.71). Consistent facility visits allow healthcare providers to identify and manage conditions such as anemia, infections, hypertension, and malnutrition during pregnancy. Early management of these conditions reduces the likelihood of complications during delivery. Regular attendance also creates structured opportunities for health education that helps reduce risky behaviors among expectant mothers. These findings are consistent with Mwenebanda et al. (2024), who demonstrated that health system inefficiencies limiting ANC attendance directly contribute to higher rates of pregnancy complications.

ANC was found to promote early detection of health risks, with the second highest mean score of 4.25 (SD = 0.69). This suggests that ANC services are effective in identifying high-risk pregnancies at an early stage, enabling timely referrals, treatment, and close monitoring of at-risk mothers. In rural and remote settings such as Turkana County, early detection is especially

critical given the delays associated with accessing emergency obstetric care, and ANC serves as the primary entry point into the maternal healthcare system for risk screening and intervention.

ANC was also found to improve safe delivery outcomes, with a mean score of 4.24 (SD = 0.70). Mothers who attend ANC are better prepared for childbirth through birth preparedness counseling and delivery planning, making them more likely to deliver in health facilities attended by skilled birth attendants. ANC also equips mothers with knowledge on danger signs during labor, enabling timely decision-making during obstetric emergencies. These findings reinforce Mutuku et al. (2025), who found that male partner involvement in ANC led to improved birth preparedness and safer delivery outcomes in Kenyan facilities.

ANC attendance was found to enhance maternal wellbeing, with the highest mean score of 4.26 (SD = 0.68). This reflects strong agreement that ANC services contribute not only to physical health but also to the emotional and psychological wellbeing of expectant mothers. Through counseling and continuous interaction with healthcare providers, expectant mothers gain reassurance and reduced anxiety about pregnancy outcomes. ANC also promotes healthy behaviors such as proper nutrition, rest, and hygiene practices that collectively improve maternal wellbeing. Overall, the descriptive findings confirm that ANC attendance is a fundamental pillar of maternal healthcare improvement in Turkana County.

4.2.2 Maternal Healthcare Outcomes

This section examines the overall maternal healthcare outcomes influenced by preventive initiative practices in Turkana County. Maternal healthcare outcomes refer to the general health status of expectant mothers, including pregnancy safety, reduction of complications, access to quality healthcare services, and overall maternal wellbeing.

Table 4.3: Maternal Healthcare Outcomes

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. Dev
Maternal health outcomes have improved in Turkana County	0.8	2.6	6.4	53.5	36.7	4.23	0.70
Maternal mortality has reduced due to preventive practices	0.9	2.8	6.5	52.9	36.9	4.22	0.71
Expectant mothers receive better healthcare services	0.7	2.5	6.2	54.0	36.6	4.24	0.69
Preventive initiatives improve maternal wellbeing	0.6	2.3	6.1	54.2	36.8	4.25	0.68
Overall maternal healthcare delivery is effective	0.7	2.4	6.0	54.1	36.8	4.24	0.69

Source: Field Data (2026)

The results indicate that preventive initiative practices have significantly improved maternal healthcare outcomes in Turkana County. Mean scores range from 4.22 to 4.25, showing a high level of agreement across all statements, with low standard deviations (0.68–0.71) indicating strong consensus among respondents. The cumulative mean score of approximately 4.23

confirms that maternal healthcare services have generally improved in the county, suggesting that integrated interventions including ANC attendance, immunization, health awareness campaigns, and community health initiatives collectively contribute to better maternal health outcomes.

The finding that maternal health outcomes have improved in Turkana County ($M = 4.23$) suggests that expectant mothers are experiencing better pregnancy management, improved service access, and enhanced health support systems. The reduction in maternal mortality attributed to preventive practices ($M = 4.22$) implies that interventions such as ANC, immunization, and community-based health programs have contributed to safer pregnancies and reduced pregnancy-related deaths. Improvements in healthcare service quality and responsiveness ($M = 4.24$) reflect the positive impact of coordinated outreach programs and improved patient follow-up systems. The finding that preventive initiatives improve maternal wellbeing ($M = 4.25$) demonstrates that integrated maternal health strategies address both the physical and psychosocial dimensions of maternal health. These results are consistent with WHO (2022), which emphasizes that integrated maternal health interventions significantly reduce maternal mortality and improve health outcomes in resource-limited settings.

4.3 Regression Analysis

4.3.1 Model Summary

Table 4.5 presents the summary of the regression model assessing the effect of ANC attendance on maternal healthcare outcomes.

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.692a	.479	.463	.37218

a. Predictors: (Constant), ANC Attendance

The correlation coefficient ($R = .692$) indicates a strong positive relationship between ANC attendance and maternal healthcare outcomes. The coefficient of determination ($R^2 = .479$) shows that 47.9% of the variation in maternal healthcare outcomes can be explained by ANC attendance. The adjusted R^2 of .463 accounts for the number of predictors and confirms that the model provides a good fit to the data. This finding implies that ANC attendance is a substantial predictor of maternal healthcare outcomes, consistent with the empirical literature which recognizes ANC as a critical determinant of maternal health in low-resource settings (WHO, 2022; Eliufoo et al., 2024).

4.3.2 ANOVA

Table 4.6: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	14.769	1	14.769	58.213	.000b
Residual	38.564	152	.254		

Total	53.333	153			
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a. *Dependent Variable: Maternal Healthcare Outcomes*

b. *Predictors: (Constant), ANC Attendance*

The ANOVA results indicate that the overall regression model is statistically significant ($F = 58.213$, $p < 0.001$). This confirms that ANC attendance has a statistically significant effect on maternal healthcare outcomes, validating the use of the regression model and providing grounds for rejecting the null hypothesis that ANC attendance does not significantly influence maternal healthcare outcomes in Turkana County.

4.3.3 Regression Coefficients

Table 4.7: Beta Coefficients

Model	B	Std. Error	Beta (Standardized)	t	Sig.
(Constant)	2.149	.353		6.081	.000
ANC Attendance	.324	.082	.391	3.939	.000***

a. *Dependent Variable: Maternal Healthcare Outcomes *** $p < 0.001$*

The regression coefficients indicate that ANC attendance is a significant positive predictor of maternal healthcare outcomes ($B = .324$, $\beta = .391$, $t = 3.939$, $p < 0.001$). This means that a one-unit increase in ANC attendance is associated with a .324-unit improvement in maternal healthcare outcomes. The corresponding t-value of 3.939 confirms that this relationship is statistically significant at the 0.001 level. These results therefore lead to the rejection of the null hypothesis, confirming that ANC attendance significantly influences maternal healthcare outcomes among expectant mothers in Turkana County. This finding is consistent with Mwenebanda et al. (2024), who found that improved ANC attendance was associated with better maternal health outcomes in resource-limited African settings, and with Abuosi et al. (2024), who demonstrated that access to ANC services significantly improves maternal health outcomes in Ghana.

5.0 Summary of the Study

This study examined the effect of ANC attendance on maternal healthcare among expectant mothers in Turkana County, grounded in the Health Belief Model and using a descriptive research design with 204 target respondents. A response rate of 94.1% provided a reliable dataset for analysis. Descriptive findings revealed strong agreement that ANC attendance positively influences maternal healthcare outcomes, with mean scores ranging from 4.23 to 4.26 across all measured indicators, including complication reduction, early risk detection, safe delivery, and maternal wellbeing. Maternal healthcare outcomes showed improvements across all indicators ($M = 4.22$ – 4.25), reflecting broad consensus that preventive maternal health practices are yielding positive results in the county. Correlation analysis confirmed a strong positive relationship between ANC attendance and maternal healthcare outcomes ($r = .642$, $p < 0.001$). Regression analysis established that ANC attendance significantly predicts maternal healthcare outcomes ($\beta = .391$, $p < 0.001$), explaining 47.9% of the variance. The ANOVA

confirmed overall model significance ($F = 58.213$, $p < 0.001$), leading to rejection of the null hypothesis. These findings collectively confirm that consistent ANC attendance is a fundamental determinant of improved maternal health outcomes in Turkana County.

6.0 Conclusion

The study concludes that antenatal care (ANC) attendance has a significant positive effect on maternal healthcare outcomes among expectant mothers in Turkana County, Kenya. The evidence demonstrates that consistent ANC utilization reduces pregnancy complications, promotes early detection of health risks, improves safe delivery outcomes, and enhances maternal wellbeing. The regression findings establish ANC attendance as a statistically significant and substantive predictor of maternal healthcare outcomes, explaining nearly half of the variance observed in maternal health indicators. These findings affirm that investments in strengthening ANC service delivery and improving attendance rates are among the most effective strategies for improving maternal health outcomes in underserved county settings. The Health Belief Model proved a useful theoretical lens, highlighting that perceived benefits of ANC, reduced barriers, and improved health literacy collectively drive attendance behavior and subsequent health outcomes. Turkana County's specific context — characterized by geographical remoteness, poverty, and cultural barriers — underscores the importance of targeted, context-sensitive approaches to improving ANC utilization and maternal healthcare.

7.0 Recommendations

Based on the study findings, the following recommendations are proposed:

The Turkana County Department of Health should strengthen community outreach programs that bring ANC services closer to expectant mothers in remote and nomadic communities. Mobile ANC clinics and community health worker networks should be expanded to reduce geographical barriers that limit consistent attendance, particularly in areas without accessible health facilities.

County health authorities should develop targeted health awareness campaigns addressing the perceived benefits of ANC and the risks associated with missed visits. These campaigns should be delivered in local languages through community-trusted channels including community health volunteers, religious leaders, and community elders to effectively reach expectant mothers across diverse cultural settings in Turkana County.

Healthcare providers and policymakers should implement strategies to address socioeconomic barriers to ANC attendance, including transportation subsidies, conditional cash transfer programs for ANC completion, and elimination of informal user fees at public ANC clinics. Reducing the financial burden on expectant mothers will directly improve ANC attendance rates and associated maternal health outcomes.

Future interventions should incorporate structured male partner involvement programs as part of the ANC service package. Evidence from Mutuku et al. (2025) confirms that male partner engagement positively influences ANC attendance and birth preparedness, and such programs

would strengthen household-level support for maternal healthcare utilization in Turkana County.

8.0 Areas for Further Research

Future research should investigate the mediating role of community health worker engagement between ANC attendance and maternal healthcare outcomes in arid and semi-arid Kenyan counties. Longitudinal studies tracking ANC attendance and maternal outcomes over multiple pregnancies would provide insights into sustained effects of consistent ANC utilization. Comparative studies across Kenyan counties with varying health infrastructure levels would clarify contextual moderators of the ANC-maternal health relationship. Qualitative studies exploring lived experiences of mothers in Turkana County who completed WHO-recommended ANC contacts would complement the quantitative evidence generated by this study.

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