



Maternal and child health outcomes of prolonged labour in public hospitals in Ibadan, Oyo State

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Abstract

This study examined the effect of prolonged labour on mother and child health outcome in selected maternity centres in Ibadan metropolis. Descriptive survey research design was adopted. A multi-stage sampling technique was adopted, firstly a stratified sampling technique was used to divide Ibadan metropolis into Ibadan north, Ibadan south-west, Ibadan north-east, Ibadan south-east and Ibadan North-West, secondly, a simple random sampling technique was used to select fifty (50) women of childbearing age from selected hospitals. Two hundred and fifty (250) participants were selected. Pearson product moment correlation (PPMC) was used to analyse the data at 0.05 level of significance. Findings showed that there was a positive significant relationship between maternal age of mother and child health among women in selected maternity centres ($r = .405^*$, $N = 250$, $p < .05$), there was a positive significant relationship between socio-economic status of mother and child health among women in selected hospitals ($r = .318^*$, $N = 250$, $p < .05$), there was a positive significant relationship healthcare infrastructure of mother and child health among women in selected hospitals ($r = .458^*$, $N = 250$, $p < .05$). The study recommended that maternity centres should enhance antenatal monitoring protocols including routine partograph use and comprehensive risk-factor screening to identify and treat prolonged labour promptly.

Key words: complications, delivery, government hospital, maternal and child health outcomes, pregnancy, prolonged labour

Introduction

Mother and child health is a foundation of public health and global growth. It shows the quality of healthcare systems and the socio-economic status of a countries. World Health Organization (WHO, 2020) documents that close to eight hundred and ten (810) women die daily on account of avoidable causes connected to pregnancy and delivery, and a larger percentage of these deaths are attributed to complications arising during delivery. One of the most common problems is prolonged labour, also referred to as dystocia. Prolonged labour is referred to as labour that is more than 20 hours for first-time mothers (primigravida) or 14 hours for mothers who had given birth before (multigravida). It speeds up the vulnerability of adverse maternal and neonatal results, which includes uterine rupture, postpartum haemorrhage, sepsis, foetal distress, and stillbirth. resolving this health condition is key to achieving enduring improvements in mother and child health results, particularly in low-economic countries.

Prolonged labour directly contributes to negative maternal and neonatal outcomes. For the mother, it may lead to serious infections, obstetric fistula, or even death. For the child, the implications include hypoxia, low Apgar scores, or neonatal death (Olatunji, Ezugwu & Adewumi, 2022). These medical conditions place extra burden on the families and hospital systems. Moreover, delayed recuperation times and additional hospital admission negatively affect socio-economic output. Despite the advances in hospital services, many research indicate that solutions to resolve prolonged labour are still unexplored in regions with shortage of healthcare human and financial resources (Okoroafor, Akinyemi & Olajide, 2023). While prolonged delivery is given serious attention, it is significant to recognise the critical independent variables affecting its occurrence and treatment. Factors such as age of the mother, parity, financial status, antenatal care attendance, healthcare facilities, cultural practices, and underlining medical conditions significantly determine the risk and outcome of prolonged delivery (Ibrahim, Ayodele & Usman, 2021).

Mother's age is a key index influencing the vulnerability of prolonged labour. Extremes of mother's age, such as teenage mothers (under 20 years) and older mothers (above 35 years), are linked with severe chances of obstetric problem, including prolonged delivery (Nnamdi, Eze & Obinna, 2020). Adolescent mothers may witness prolonged labour on account of nonmatured pelvic structures, while adult mothers are more prone to challenges on account of low uterine contractility and underling medical conditions. Equally, the number of times a woman has deliveries plays an important role. Researchers suggest that first-time mothers (primigravidae) have a higher probability of prolonged labour due to the inexperience of the uterus, compared to women who has given birth to many deliveries (Ogunleye, Oladipo & Adepoju, 2021). Financial condition of women is another factor which also determine to a very large extent the impact on the vulnerability and management of prolonged delivery. Mother's income, a sub-variable of financial standing, dictate chances to hospital services, including skilled birth attendants, diagnostic equipment, and medications. Women with small salary face hindrances to timely hospital services, add up to the chances of prolonged labour and its problems (Adeleke, Ogundipe & Adebisi, 2020). Conversely, women with fat salary have better chances of holistic antenatal and delivery care, minimising the vulnerability connected with prolonged labour.

Antenatal care visits and hospital facilities are also very important factors determining mother's and child health conditions. Constant antenatal care attendance give opportunity for quick detection of risk factors, such as foetal malpresentation, cephalopelvic disproportion, or gestational hypertension, which are antecedent to prolonged delivery. However, chances to

antenatal care are determined majorly by the availability of well-equipped hospital equipment and qualified staff. Shortage of hospital equipment, including shortage of manpower at the nursing homes, affect prompt management of prolonged labour, especially in low economic nations like Nigeria (Ezeocha, Ibeh and Chijioke, 2022). Another important factor is Socio-cultural practices that influences prolonged labour. Cultural beliefs and traditions sometimes disallow women from going to modern hospital for delivery, instead they prefer traditional birth attendants who may lack knowledge in the management of serious cases like prolonged labour. For instance, some cultural laws in Nigeria forbid modern hospital deliveries on account of financial implication or not believing in modern healthcare system (Adeyemi, Bello & Odunayo, 2019). Such cultural way of life slow down access to emergency obstetric care, aggravating the vulnerabilities for both mother and child.

Underlining medical conditions, such as hypertension, diabetes, or anaemia, are contributing factors that speed up prolonged labour. These conditions worsen maternal health during pregnancy and labour, increasing the vulnerability to emergencies. For example, women with gestational diabetes are more prone to produce macrosomic babies, which can lead to dystocia (Afolabi, Okonkwo & Ekong, 2021). Resolving these problems via planned medical solutions could largely minimise the rate of prolonged labour and its related problems. Mother's age and numbers of deliveries influence prolonged labour via physiological procedures. Young mothers may have non-matured pelvic structures, while older mothers may encounter diminished uterine efficiency, resulting into prolonged labour. Equally, parous mothers are prone to serious risk on account of absence of previous uterine experience, compared to women who had given birth severally. These variables connect to determine maternal and neonatal health outcomes, identifying the need for solutions (Oladimeji, Olatunde & Adetayo, 2021).

The financial condition of the mothers directly influences their capacity to access quickly and good hospital care. For instance, women from poor economic backgrounds may slow down hospital care on account of monetary problems, increasing the chances of prolonged labour. On the other hand, mothers with fat salary are more likely to receive early detection and care, reducing the vulnerability of health conditions (Ajayi, Owoeye & Adekunle, 2022). This connection emphasises the importance of resolving financial imbalance in maternal hospital care services. Antenatal care visits and hospital facilities also play a concrete role in reducing prolonged labour. Women who often goes for antenatal have better opportunity for delivery and more likely to achieve quick interventions for emergencies. However, the non-availability of modern equipment subverts these opportunities, particularly in poor economic area. The relationship between antenatal care and hospital facilities identifies the need for systemic enhancements to improve maternal and child health outcomes (Ezeocha, Ibeh & Chijioke, 2022).

The impact of local cultural practices and underlining health conditions on prolonged labour cannot be jettisoned. Cultural norms that slow down access to professional care speed up the risk of serious health conditions, while untreated medical problems aggravate these risks. Resolving these variables needs a multi-dimension way out that merge cultural sensitivity with medical knowledge (Olawale, Ajibola & Ogunyemi, 2021). Collaboratively, mother's age, parity, financial capacity, antenatal care visits, hospital facilities, local cultural practices, and underlining health problems interplay to determine the results of prolonged labour. Knowing this connection is significant for bringing planned solutions to enhance mother's and child health outcomes.

The theoretical orientation for this study was anchored on African Indigenous Health Theory. African Indigenous Health Theory views health holistically as the harmony of physical, spiritual, mental, and social aspects of an individual, family, and community, not just the absence of disease. Sickness arises from an imbalance in these aspects or from supernatural forces, and treatment involves restoring equilibrium through spiritual healing, herbal remedies, rituals, and addressing social and moral components alongside physical needs. There is no single "propounder" of African Indigenous Health Theory, as it is a broad concept encompassing diverse indigenous knowledge systems, beliefs, and practices across the continent. Rather than a single codified theory, it refers to the integrated view of health that considers physical, mental, emotional, spiritual, and environmental well-being within family and community contexts. Various African scholars and researchers, such as Kwabena Asamoah-Gyadu and Peter Omonzejele, have contributed to defining and documenting these concepts.

Traditional healers diagnose through divination and ritual incantations to understand the root cause of illness, whether natural or supernatural, to provide a comprehensive treatment approach. Health is viewed from a Holistic perspective such that Health is integrated, encompassing physical, spiritual, mental, emotional, and social well-being for both the individual and their community. Health is also seen from Interconnectedness; The individual's health is inseparable from their family, community, and the environment. Spiritual and Supernatural Causation: Illness can stem from spiritual imbalances, supernatural forces, or disruptions in one's social environment, rather than solely from natural causes. Traditional healers use divination, ritual incantations, and symbolic interpretations to diagnose the underlying cause of illness, which could be a spiritual issue. Treatment aims to restore balance and can involve physical remedies (herbal medicine), spiritual healing, ritual practices, and psychotherapy. Healers are believed to be gifted with the ability to understand the causes of disease and misfortune. They provide guidance not just on physical ailments but also on moral, spiritual, social, and psychological issues. Their role is to diagnose the root cause of imbalance and apply appropriate treatments to restore harmony within the individual and their community. The ritualized use of plant and animal-derived preparations is a common treatment method. Practices like faith healing and therapeutic occultism are employed to address spiritual imbalances. Incantations and other rituals are used to make a diagnosis and to connect with mystical or cosmic forces during healing.

This African Traditional belief system does not allow women from seeking orthodox cares, fostering hope on traditional cares or spiritual healers. The implications of such wrong information are serious, as they not only reduce pregnant mother access to scientific orthodox maternal care but also enhance the wrong information of problems at pregnancy such as prolonged labour, leading to poor health outcomes. One common cultural behaviour in parts of Ghana and Nigeria is the administration of local medicine by Traditional Birth Attendants (TBAs) to induce, augment, or control labour and bleeding (Otoo, Habib, and Ankomah, (2015). While these local medications are largely endorsed in the African communities, their health safety stands scientifically proven, and their likelihood contribution to poor health outcomes, including stillbirths, is largely unexamined. The continuous existence of these traditional practices, alongside deep-rooted myths, can lead to prolonged labour, enhancing the risk of foetal distress and other (Drife, Lewis, Neilson, Knight, Cooper, and Cantwell, (2023). The emotional effect of prolonged labour is very significant, as women witnessing this traumatic life experiences often express feelings of exhaustion, anguish, and frustration (Elmir, Schmied, Wilkes, and Jackson, (2010). These negative emotions can be worsened by cultural beliefs that misrepresent prolonged labour as a failure on the part of the pregnant mother rather than a complex physiological process. Women who undergo prolonged labour

also document lower perceived safety and personal ability during child delivery (Gaudernack, Michelsen, Egeland, Voldner, and Lukasse, (2020), further compounding their sense of risky and pain. Moreover, unnecessary worries surrounding prolonged labour can create unwanted anxiety, potentially determining a woman's future birth choices and continuous dependency on cesarean section (CS) (Gaudernack, Michelsen, Egeland, Voldner, and Lukasse, (2020). Fauza, (2023) opined that despite the commonest of these cultural myths, it is worth noting that prolonged labour does not inherently forecast poor outcomes. Instead, other linkages variables such as delayed medical care and operative delivery options perform more important roles in shaping maternal and neonatal health results. Thus, resolving this local cultural wrong information through education and enhanced access to professional obstetric and gynecologist care can help reduce their impact, ensuring safer delivery experiences for women in Nigeria and similar environments.

Otite and Ogionwo (2016) illustrate how societal constraints, such as limited access to quality prenatal and intrapartum care, negatively affect maternal health outcomes. In the African context (Atuyambe, Mirembe, Annika, Kirumira, and Faxelid (2008) opined that problems at pregnancy are commonly linked to external forces (Spiritual), such as witchcraft or from God on account of perceived transgressions, including infidelity.

Previous research has examined the predictors of maternal health outcomes, wide gaps remain. Several research have paid attention to maternal death without going into a particular role of prolonged labour in determine mother's and neonatal outcomes. Furthermore, finance infrastructure, and cultural aspects of prolonged labour have been neglected, reducing the scope of scientific interventions (Ogunleye, Oladipo & Adepoju, 2021). This study therefore examined this gap by examining the infrastructural decadence and cultural aspect of maternal and child health outcomes of prolonged labour in government hospital in Ibadan.

Methodology

The descriptive survey research design was used. The population for the study comprised of all women of childbearing age in maternity centres in Ibadan metropolis. The study adopted a multi-stage sampling technique, firstly, Ibadan metropolis was stratified into five local government area: Ibadan North, Ibadan Southwest, Ibadan Northeast, Ibadan Southeast and Ibadan Northwest. Secondly, a simple random sampling technique was used to select fifty (50) women of childbearing age from two maternity centres from each of the selected local government area making a total of two hundred and fifty (250) participants. The major instrument used for the study was a self-constructed questionnaire. The questionnaire tagged "Prolong Labour on Child and Mother Health Questionnaire (PLCMHQ)". The instruments were facilitated by the face content and construct procedures. The instruments were administered personally by the researcher after a thorough vetting by the project supervisor through the test-retest method by administering the same instrument to the respondent in another area outside the study area. This enabled the researcher to determine the reliability of the instrument. Questionnaires were administered to collect data from the child bearing mothers. The questionnaires were administered during the clinic session at the maternity centres in each of the locations. The data collected was analysed through the use of descriptive statistics with simple numbers and percentages. PPMC statistics were used to analysed the hypotheses with 0.05 level of significance. Ethical approval was sought from the University of Ibadan Social Science and Humanities Ethics Committee (SSHEC) with Reference No – UISSHEC2024/0005 with emphasis on informed consent, confidentiality, beneficence, and no harm to the participants.

RESULTS

Table 1: The Socio-demographic characteristics of respondents

Socio-demographic		Frequency (N=250)	Percentage
Age	20-25	14	5.6
	26-30	197	98.6
	31-45	30	12.2
	46 and above	09	3.8
Sex	Male	-	-
	Female	250	100
Occupational	Trader	95	38.0
	Civil Servant	21	8.4
	Self-Employed	54	21.6
	Professional	80	32.0
Religion affiliation	Christian	132	44.8
	Islam	112	52.8
	Traditional	6	2.4
Ethnic group	Yoruba	184	73.6
	Hausa	08	3.2
	Igbo	58	23.2

Table 1 revealed that 14(5.6%) respondents were within the age of 20-25 years, 197(78.6%) were within 26-30 years while, 30(12.2%) were within 31-45 years and 9(3.8%) were within 46 years and above. This showed that respondents with age range of 26 -30 years had the highest percentage. Table 1 revealed that 250(100%) of the respondents are female. This implies that all the respondents are female. Table 1 revealed that 95(38%) of the respondents were traders, 21(8.4%) were civil servant while, 54(21.6%) were self-employed and 80(32%) were professional. The above result implies that majority of the respondents were traders. The table revealed that 112(44.8%) of the respondents were Christians and 132(52.8%) practices Islam, while Traditional religious were 6 (2.4%) of the total respondent. The above result implies that majority of the respondents were the Islam. The table revealed that 184(73.6%) of the respondents were Yoruba, and 8(3.2%) were Hausa/Fulani, while Igbo were 58(23.2%) of the total respondent. The above result implies that majority of the respondent were from Yoruba Ethnic group.

Hypotheses

H0₁: There is no significant relationship between maternal age of mother and child health among women in selected maternity centres in Ibadan metropolis.

Table 2: Result of PPMC showing the significant relationship between maternal age of mother and child health

Variable	Mean	Std. Dev.	N	r	P	Remark
Mother's Age	14.33	3.29	250	.405**	.000	Sig.
Mother and Child Health	13.58	3.60				

*Sig. at .05 level

Table 2 shows that there was a positive significant relationship between maternal age of mother and child health among women in selected maternity centers in Ibadan metropolis ($r = .405^{**}$, $N = 250$, $p < .05$). The result rejected the null hypothesis and accepted the alternate hypothesis which states there is a significant relationship between maternal age of mother and child health among women in selected maternity centers in Ibadan metropolis.

H0₂: There is no significant relationship between socioeconomic status of mother and child health among women in selected maternity centers in Ibadan metropolis.

Table 3: Result of PPMC showing the significant relationship between financial capacity of mother and child health

Variable	Mean	Std. Dev.	N	R	P	Remark
Financial Capacity	14.33	3.29	250	.318**	.000	Sig.
Mother and Child Health	14.95	3.01				

*Sig. at .05 level

Table 3 shows that there was a positive significant relationship between socioeconomic status of mother and child health among women in selected maternity centers in Ibadan metropolis ($r = .318^{**}$, $N = 250$, $p < .05$). The result rejected the null hypothesis and accepted the alternate hypothesis which states there is a significant relationship between socioeconomic status and mother and child health among women in selected maternity centers in Ibadan metropolis.

H0₃: There is no significant relationship between healthcare infrastructure of mother and child health among women in selected maternity centers in Ibadan metropolis.

Table 4: Result of PPMC showing the significant relationship between healthcare infrastructure of mother and child health

Variable	Mean	Std. Dev.	N	r	P	Remark
Hospital Facilities	14.33	3.29	250	.458**	.000	Sig.
Mother and Child Health	14.22	3.23				

*Sig. at .05 level

Table 4 shows that there was a positive significant relationship healthcare infrastructure of mother and child health among women in selected maternity centres in Ibadan metropolis ($r = .458^{**}$, $N = 250$, $p < .05$). The result rejected the null hypothesis and accepted the alternate hypothesis which states there is a significant relationship between healthcare infrastructure and mother of child health among women in selected maternity centres in Ibadan metropolis.

Discussion

The study revealed that there was a positive significant relationship between the mother's age and child health among women in private and government hospitals in Ibadan metropolis. This finding aligns with the study of Nnamdi, Eze, and Chijioke (2020) who found that women over 35 years and porous mothers witnessed a large case of prolonged labour. Equally, Oladimeji, Olatunde, and Adetayo (2021) showed that both very young and older mothers, when combined with either low or high parity, were prone to prolonged labour. Also, Ibrahim, Ayodele, and Usman (2021) posited that extremes in parity both null first timer and grand multiparty alongside age differences add up to complications during labour. In the same vein, Otite and Ogionwo (2016) showed that women above 35 years of age commonly sustained prolonged labours. Furthermore, Okechukwu, and Adebayo (2021) agreed that both mother's age and parity are significant determinants in labour emergencies.

The study also revealed that there was a positive significant relationship between financial capacity of mother and child health among women in primary healthcare in Ibadan metropolis. This finding is in tandem with Adeleke, Ogundipe, and Adebisi (2020), they found that low mother's financial capacity is strongly linked to extra postpartum hospital admissions on account of prolonged recuperation. Equally, Ajayi, Owioye, and Adekunle (2022) indicated that financial variations lead to extended hospital admissions, as low salary of mothers sometimes encounters difficulties to rapid care. Moreover, Ogunleye, Oladipo, and Adepoju (2021) examined maternal health problems among four hundred (400) women, and they found that financial constraints significantly slow down postpartum recovery. Also, Black and colleagues (2020) showed that low financial capacity seriously affects postpartum recuperation and discharge timing. Adeyemi, Bello, and Odunayo (2019) documented that low salary, compounded by cultural problems, leads to prolonged admission stays. In the same vein, Otite and Ogionwo (2020) opined that shortage of financial resources aggravates the problems of postpartum recuperation.

The result further revealed that there was a positive significant relationship between hospital facilities accessibility of mother and child health among women in private and government hospitals in Ibadan metropolis. This finding is in support of the study of (Bedwell, Smith, and Jones, 2017) which involved two hundred (200) pregnant women on follow up using antenatal devices. Their findings revealed that quick and effective antenatal follow up largely minimises the cases of prolonged labour. Also, Garcia, Hernandez, and Thompson (2021) conducted a randomised controlled trial of a randomised controlled trial of enhanced antenatal education for improving labour outcomes, the study found that enhanced antenatal education leads to low periods of prolonged labour. Mathews (2021) findings also showed that quick recognition of risk factors during antenatal attendance enhances labour outcomes. Equally, Otite and Ogionwo (2020) examined the problems in Hospital facilities and prolonged labour and opined that inadequate facilities often lead to poor management of prolonged labour. In the same vein, Okoroafor, Akinyemi, and Olajide (2023) documented that routing antenatal visits in advanced hospital facilities largely enhances labour outcomes.

The continuous existence of these traditional practices, alongside deep-rooted myths, can lead to prolonged labour, enhancing the risk of foetal distress and other (Drife, Lewis, Neilson, Knight, Cooper, and Cantwell, (2023)). These negative emotions can be worsen by cultural beliefs that misrepresent prolonged labour as a failure on the part of the pregnant mother rather than a complex physiological process. Women who undergo prolonged labour also document lower perceived safety and personal ability during child delivery (Gaudernack, Michelsen, Egeland, Voldner, and Lukasse, (2020)), further compounding their sense of risky and pain.

Moreover, unnecessary worries surrounding prolonged labour can create unwanted anxiety, potentially determining a woman's future birth choices and continuous dependency on cesarean section (CS) (Gaudernack, Michelsen, Egeland, Voldner, and Lukasse, (2020). Fauza, (2023) opined that despite the commonest of these cultural myths, it is worth noting that prolonged labour does not inherently forecast poor outcomes. Instead, other linkages variables such as delayed medical care and operative delivery options perform more important roles in shaping maternal and neonatal health results. Thus, resolving this local cultural wrong information through education and enhanced access to professional obstetric and gynecologist care can help reduce their impact, ensuring safer delivery experiences for women in Nigeria and similar environments.

The results of this study have significant implications for improving maternal and child health in developing nations, where maternal and neonatal death stand unacceptably high. Information gotten from the study reveal that prolonged labour, increased complications, and higher death prevalence are closely connected to factors such as old age of the mother, low financial capacity, cultural practices and dearth of hospital facilities. These findings indicate that maternal health outcomes are directly influenced by both individual characteristics and systemic challenges. The study provides a clear guideline for healthcare practitioners, social work professionals, and policymakers. It recommends the development of tailored intervention programmes, enhanced antenatal care protocols, and specialised support for parous mothers. Furthermore, it emphasises the importance of continuous training for medical social workers, healthcare workers, upgrading facilities in low-resource settings, and expanding community outreach initiatives to educate women and families about early risk detection and timely care. These insights offer practical direction for designing holistic, culturally sensitive, and patient-centred care models that address medical, social, and economic factors. By implementing these strategies, you can work towards reducing prolonged labour and its associated risks, ultimately contributing to better health outcomes for mothers and new-borns.

Recommendations

Based on the findings of the study, the following recommendations were made:

- Healthcare Professional such as doctors, nurses, and medical social workers should develop age and parity specific intervention programmes that address individual maternal profiles to facilitate early risk detection and management.
- Maternity centres should enhance antenatal monitoring protocols including routine partograph use and comprehensive risk-factor screening to identify and treat prolonged labour promptly, thereby improving maternal and child health.
- Maternal care programmes should incorporate specialised psychosocial support for first-time mothers, embedding confidence-building counselling and peer mentoring within antenatal education.
- Hospital boards should strengthen training initiatives for social workers, and healthcare workers in culturally sensitive, patient-centred care and advanced case management.
- Governments should upgrade healthcare infrastructure in low-resource settings by ensuring essential equipment (for example, functioning foetal monitors) and adequate staffing for effective management of labour complications.
- Social workers, in partnership with community leaders, should expand outreach initiatives through women's groups, radio programmes and home visits to educate families on the risks associated with prolonged labour and the importance of timely facility-based care.

- Governments should implement subsidised maternal healthcare services and streamlined health insurance schemes to reduce financial barriers and shorten postpartum recovery periods.
- Health practitioners should integrate socio-economic and cultural assessments into maternal-care models during antenatal visits to address traditional beliefs and barriers to health-seeking behaviour.
- Health authorities should prioritise deployment of skilled birth attendants, including midwives and obstetricians, in rural and underserved areas to ensure safe delivery practices.
- Professional bodies and policymakers should advocate for policy reforms and increased funding aligned with Sustainable Development Goals to support continuous improvements in maternal and child health services.

Conclusion

Early identification through antenatal screening is vital in the reduction of prolonged labour among expectant mothers above the age of 35 and routine risk screening during antenatal care is crucial for the mother and child health. The study found that prolonged labour, child and maternal morbidities and mortality is common among low socio-economic status therefore, it was concluded that socioeconomic factors play a pivotal role in maternal health outcomes and bridging the economic gap and improving economic support mechanisms is essential also community-based support is vital to improve child and maternal health care. It was also concluded that investment in modern infrastructure is key to maternal health centres also, antenatal education is an effective intervention to reduce prolonged labour. Furthermore, the study concluded that the effect of facility readiness on maternal outcomes on both care attendance and infrastructure are interlinked and infrastructure investment is non-negotiable. Exploring alternative practices is beneficial and infrastructure improvement and strengthened referral systems are necessary and community awareness on early registration is crucial.

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