BARRIERS TO UTILIZING SKILLED BIRTH ATTENDANCE AMONG ADOLESCENT MOTHERS IN URBAN INFORMAL SETTLEMENTS IN NIGERIA: A LITERATURE REVIEW

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Abstract
This literature review synthesizes evidence on barriers to skilled birth attendance (SBA) among adolescent mothers in urban informal settlements in Nigeria. The paper adopts the Three Delays Model as the theoretical framework. Drawing on studies published between 2012 and 2025, the review identifies critical socioeconomic, cultural, health system, and individual-level barriers that impede access to facility-based delivery services. Key findings reveal that only 18–34% of adolescent mothers in Nigeria utilize health facilities for delivery, with rates particularly low in Northern Nigeria and urban slum communities. Major barriers include poverty and the high cost of services, low educational attainment, long distances to health facilities, negative attitudes of healthcare workers, cultural beliefs favoring traditional birth attendants, stigma against pregnant adolescents, and lack of family support. The review highlights the urgent need for multi-sectoral interventions, including girl-child education, expansion of health insurance coverage, improvement in healthcare worker attitudes, community engagement, and targeted support for vulnerable adolescent populations in urban informal settlements. These findings have significant implications for achieving Nigeria's maternal mortality reduction targets and the Sustainable Development Goals.
Keywords: Adolescent Mothers, Skilled Birth Attendance, Nigeria.

1. Introduction

Maternal mortality remains a critical public health challenge in sub-Saharan Africa, with Nigeria accounting for a disproportionate share of global maternal deaths. With a maternal mortality ratio (MMR) of 512 per 100,000 live births, Nigeria faces significant challenges in achieving the United Nations Sustainable Development Goal target of 70 per 100,000 live births by 2030 (Olubodun et al., 2024). Adolescent mothers, defined as young women aged 15-24 years, face particularly elevated risks during pregnancy and childbirth, including perinatal mortality, preterm births, low birth weight, and infections (Afape et al., 2024). These risks are compounded when adolescents reside in urban informal settlements, where access to quality maternal healthcare services is severely limited. Skilled birth attendance is defined as delivery assisted by trained healthcare professionals such as doctors, nurses, or midwives, it is recognized as a critical intervention for reducing maternal and neonatal mortality (Olakunde et al., 2019). Despite the proven benefits of facility-based delivery, utilization rates among adolescent mothers in Nigeria remain alarmingly low. Evidence suggests that between 18% and 34% of young mothers utilize health facilities for delivery, with the majority opting for home births attended by traditional birth attendants or family members (Olubodun et al., 2025; Olubodun et al., 2023). This underutilization is particularly pronounced in urban informal settlements, where poverty, inadequate health infrastructure, and social marginalization converge to create formidable barriers to care.

Urban informal settlements, commonly referred to as slums, are characterized by overcrowding, poor sanitation, limited access to basic services, and high levels of poverty (Sidze et al., 2021). In Nigeria, these settlements house millions of residents, including significant populations of adolescent mothers who face unique vulnerabilities. Understanding the specific barriers that prevent adolescent mothers in these settings from accessing skilled birth attendance is essential for designing targeted interventions and improving maternal health outcomes. This literature review aims to synthesize current evidence on the barriers to utilizing skilled birth attendance among adolescent mothers in urban informal settlements in Nigeria. By examining socioeconomic, cultural, health system, and individual-level factors, this review provides a comprehensive understanding of the multifaceted challenges facing this vulnerable population and offers evidence-based recommendations for policy and practice.

2. Literature Review

2.1 Adolescent Pregnancy in Nigeria

Adolescent pregnancy is a significant contributor to maternal mortality in Nigeria, with more than half of pregnant adolescents not attending antenatal care (ANC) services (Akinyemi et al., 2021). Early childbearing is associated with numerous adverse health outcomes for both mothers and infants, including increased risks of obstetric complications, low birth weight, and neonatal mortality. The prevalence of adolescent pregnancy is influenced by

factors such as early marriage, low educational attainment, poverty, and limited access to reproductive health information and services (Olusanya et al., 2012).

2.2 Urban Informal Settlements and Health Inequities

Urban informal settlements represent some of the most underserved communities in Nigeria, characterized by inadequate health infrastructure, limited access to clean water and sanitation, and high levels of poverty (Sidze et al., 2021). Residents of these settlements face significant health inequities, with maternal and child health indicators consistently worse than those in formal urban areas or rural communities. The concentration of poverty, unemployment, and social marginalization in these settings creates a perfect storm of vulnerabilities that disproportionately affect adolescent mothers (Kawakatsu et al., 2020).

2.3 The Three Delays Model

The "Three Delays Model" provides a useful framework for understanding barriers to maternal healthcare utilization. The Three Delays Model in maternal health care was developed by: Sereen Thaddeus and Deborah Maine in 1994 to explain barriers contributing to maternal mortality and poor access to maternal health services. This model identifies three critical delays that contribute to maternal mortality: (1) delay in deciding to seek care, (2) delay in reaching a healthcare facility, and (3) delay in receiving adequate care at the facility (Atuhaire et al., 2016). Each of these delays is influenced by socioeconomic, cultural, and health system factors that are particularly pronounced in urban informal settlements.

2.4 Access to Healthcare Framework

Access to maternal healthcare encompasses three key dimensions: affordability (financial accessibility), physical accessibility (geographic proximity and transportation), and acceptability (cultural appropriateness and quality of care) (Ekpenyong, 2025). Understanding barriers through this multidimensional lens is essential for developing comprehensive interventions that address the complex interplay of factors affecting adolescent mothers in urban informal settlements.

3. Methodology

This literature review is based on a comprehensive search of scholarly databases including Google Scholar, and PubMed, conducted between 2015 and 2026. The search strategy employed Boolean queries targeting adolescent mothers, skilled birth attendance, maternal health services, and urban informal settlements in Nigeria. This review focuses on the top most relevant papers, which include quantitative cross-sectional studies using national demographic and health survey data, qualitative investigations employing in-depth interviews and focus group discussions, mixed-methods studies, and systematic reviews. The papers examined various aspects of maternal health service utilization, with particular emphasis on barriers to skilled birth attendance among adolescent and young mothers in Nigerian contexts, including urban informal settlements.

4. Prevalence of Skilled Birth Attendance Among Adolescent Mothers

The utilization of skilled birth attendance among adolescent mothers in Nigeria remains critically low, with substantial variation across regions and settings. National data from the Nigeria Demographic and Health Survey (NDHS) reveals that only 33.72% of young mothers aged 15-24 years utilized health facilities for delivery (Olubodun et al., 2023). This figure is even more alarming in Northern Nigeria, where only 18.26% of married adolescent girls aged 15-19 years delivered in health facilities (Olubodun et al., 2025). The prevalence of home delivery among young mothers is correspondingly high. Adewuyi et al. (2019) found that 69.5% of young mothers aged 15-24 years delivered at home, with rates reaching 78.9% in rural areas and 43.9% in urban areas. Among women residing in low-income communities in Lagos State, 30.2% delivered at traditional birth attendant centers, religious centers, or at home (Olubodun et al., 2025). These statistics underscore the magnitude of the challenge facing Nigeria's maternal health system. Among married adolescent women, utilization of the full continuum of maternal health services is particularly poor. Rai et al. (2012) reported that only 35% of married adolescent women had at least four ANC visits, 25% had safe delivery care, and 32% received postnatal care. These findings highlight the interconnected nature of maternal health service utilization, with poor ANC attendance often predicting low rates of facility-based delivery. The situation is especially dire in urban informal settlements. Akinyemi et al. (2021) found that among adolescent mothers in urban slums in Kaduna, Lagos, and Oyo states, only 55% had four or more ANC visits in a health facility with a skilled attendant, compared to 41% in the general DHS sample. This suggests that while urban slum residents may have geographic proximity to health facilities, other barriers prevent them from accessing quality maternal healthcare services.

5. Barriers to Skilled Birth Attendance

5.1 Socioeconomic Barriers

5.1.1 Poverty and Financial Constraints

Poverty emerges as one of the most significant barriers to skilled birth attendance among adolescent mothers in urban informal settlements. The cost of healthcare services, including registration fees, consultation charges,

medication, and delivery expenses, represents a prohibitive burden for many families living in poverty (Olubodun et al., 2025). Even when services are nominally free, indirect costs such as transportation fees create substantial financial barriers (Mekwunyei et al., 2020). In a study of low-income communities in Lagos State, affordability was identified as a primary reason for choosing traditional birth attendants or home delivery over facility-based care (Olubodun et al., 2025). Similarly, Ijaiya et al. (2023) found that 85.9% of mothers cited high cost of hospital delivery as a barrier to facility-based delivery. The financial burden is particularly acute for adolescent mothers, who are more likely to be unemployed, unmarried, and lacking financial autonomy (Olusanya et al., 2012).

Household wealth index consistently predicts facility-based delivery across multiple studies. Olubodun et al. (2023) found that young mothers from wealthier households had significantly higher odds of delivering in health facilities, with the effect increasing progressively across wealth quintiles. In Northern Nigeria, having a "rich" wealth index increased the odds of facility delivery by 64% among married adolescent girls (Olubodun et al., 2025). These findings underscore the fundamental role of economic resources in enabling access to skilled birth attendance. The absence of health insurance coverage exacerbates financial barriers. Despite the existence of the National Health Insurance Scheme (NHIS) in Nigeria, coverage remains limited, particularly among poor and marginalized populations in urban informal settlements (Ijaiya et al., 2023). The lack of financial risk protection means that families must pay out-of-pocket for maternal healthcare services, often leading to catastrophic health expenditures or avoidance of facility-based care altogether.

5.1.2 Educational Attainment

Low educational attainment among adolescent mothers and their partners represents a critical barrier to skilled birth attendance. Education influences health-seeking behavior through multiple pathways, including increased health literacy, greater awareness of the benefits of skilled care, enhanced decision-making autonomy, and improved economic opportunities (Rai et al., 2012). Multiple studies demonstrate a strong dose-response relationship between education and facility-based delivery. Olubodun et al. (2023) found that young mothers educated beyond the secondary school level had 4.4 times higher odds of delivering at a health facility compared to those with no education. Similarly, in Northern Nigeria, secondary or higher education increased the odds of facility delivery by 82% among married adolescent girls (Olubodun et al., 2025). The protective effect of education extends to partners' education as well, with women whose partners had higher than secondary education showing increased odds of facility delivery (Olubodun et al., 2023).

The mechanism through which education influences skilled birth attendance is multifaceted. Educated women are more likely to recognize the risks associated with home delivery, understand the importance of skilled care, and possess the confidence to advocate for their healthcare needs (Mekwunyei et al., 2020). Education also enhances women's economic opportunities and social status, which in turn increases their autonomy in healthcare decision-making (Xu et al., 2022). Community-level education also matters. Women living in communities with higher levels of female education were more likely to deliver in health facilities, suggesting that education creates positive social norms and peer effects that promote facility-based delivery (Olubodun et al., 2023). This finding highlights the importance of addressing educational disparities not only at the individual level but also at the community level.

5.1.3 Employment and Economic Empowerment

Unemployment and lack of economic empowerment among adolescent mothers constitute significant barriers to skilled birth attendance. Olusanya et al. (2012) found that adolescent mothers were more likely to be unemployed compared to older mothers, limiting their financial resources and decision-making power. Economic dependence on partners or family members reduces women's autonomy in healthcare decisions and their ability to access services when needed (Xu et al., 2022). Women with higher levels of autonomy and decision-making power are more likely to utilize maternal healthcare services. Xu et al. (2022) found that women with significant levels of autonomy were less likely to deliver outside health institutions. This suggests that economic empowerment interventions that enhance women's income-generating capacity and financial independence could play an important role in improving access to skilled birth attendance.

5.2 Cultural and Social Barriers

5.2.1 Stigma and Social Marginalization

Stigma against pregnant adolescents represents a pervasive cultural barrier to maternal healthcare utilization. Alex-Ojei et al. (2023) found that stigma was common across urban and rural communities in Nigeria, affecting adolescent mothers' willingness to seek care and their experiences when accessing services. Pregnant adolescents, particularly those who are unmarried, face social disapproval, judgment, and discrimination from family members, community members, and even healthcare providers (Mekwunyei et al., 2020). The stigmatization of pregnant teenagers creates a climate of shame and secrecy that delays care-seeking and reduces utilization of maternal health services. Adolescent mothers may avoid attending ANC or delivering in health facilities to escape

judgmental attitudes and maintain privacy (Mekonnen et al., 2019). This is particularly problematic in urban informal settlements, where close-knit communities and limited privacy amplify the social consequences of adolescent pregnancy. Stigma also intersects with other forms of social marginalization. Adolescent mothers who are unmarried, from ethnic minorities, or living in poverty face compounded discrimination that further limits their access to care (Olusanya et al., 2012). Addressing stigma requires not only changing attitudes among healthcare providers but also engaging communities in dialogue about adolescent pregnancy and maternal health.

5.2.2 Cultural Beliefs and Traditional Practices

Cultural beliefs and traditional practices significantly influence decisions about place of delivery. Many communities in Nigeria hold beliefs that childbirth is a natural process that does not require medical intervention, with the saying "childbirth is not a sickness; a woman should struggle to give birth" reflecting this perspective (Naanyu et al., 2018). Such beliefs normalize home delivery and discourage facility-based care. Traditional birth attendants (TBAs) play a prominent role in many communities, particularly in urban informal settlements. Olubodun et al. (2025) found that 19.4% of women in low-income communities in Lagos were attended by TBAs during ANC, and 30.2% delivered at TBA centers, religious centers, or at home. TBAs are often preferred because they are familiar, accessible, affordable, and culturally aligned with community practices (Kawakatsu et al., 2020). Belief in herbs and spiritual interventions also influences healthcare-seeking behavior. Some families prefer traditional or spiritual remedies for pregnancy-related concerns, viewing them as more effective or culturally appropriate than biomedical care (Olubodun et al., 2025). Religious beliefs and practices, including reliance on prayer and religious leaders for guidance during pregnancy, can either facilitate or hinder access to skilled birth attendance depending on the messages conveyed by religious authorities (Alex-Ojei et al., 2023). Cultural norms around early pregnancy disclosure also affect ANC attendance and facility-based delivery. In some communities, cultural practices discourage early disclosure of pregnancy, leading to delayed initiation of ANC and reduced likelihood of facility-based delivery (Olubodun et al., 2025). These cultural barriers require culturally sensitive interventions that respect community values while promoting evidence-based maternal healthcare practices.

5.2.3 Gender Dynamics and Decision-Making Power

Gender dynamics and power imbalances within households significantly affect adolescent mothers' ability to access skilled birth attendance. In many Nigerian communities, husbands or male partners hold primary decision-making authority regarding healthcare utilization (Olubodun et al., 2025). Women's limited autonomy in healthcare decisions means that even when they recognize the need for facility-based delivery, they may be unable to act on this knowledge without male approval. The influence of spouses on place of delivery is well-documented. Olubodun et al. (2025) identified "choice of spouse" as a key factor determining whether women delivered in health facilities or at home. When husbands are absent at the onset of labor or do not prioritize facility-based delivery, women are more likely to deliver at home or with traditional birth attendants (Udenigwe et al., 2022).

Coercion and violence from partners also constitute barriers to maternal healthcare utilization. Mekwunyei et al. (2020) found that coercion or violence from partners was significantly associated with lower utilization of maternal health services among pregnant teenagers. This finding highlights the intersection of gender-based violence and maternal health, underscoring the need for interventions that address intimate partner violence as part of comprehensive maternal health programs. Marital status influences maternal healthcare utilization, with married adolescents generally showing higher utilization rates than unmarried adolescents. Mekwunyei et al. (2020) found that 86% of married pregnant teenagers utilized maternal health services compared to 67.1% of single teenagers. However, marriage does not necessarily guarantee access to skilled care, as married adolescents may still face barriers related to poverty, lack of education, and limited decision-making power within their marriages.

5.3 Health System Barriers

5.3.1 Geographic Accessibility and Distance

Geographic accessibility represents a fundamental health system barrier to skilled birth attendance in urban informal settlements. Despite the urban location of these settlements, distance to health facilities remains a significant obstacle due to poor road infrastructure, lack of transportation, and the concentration of health facilities in more affluent areas (Olubodun et al., 2025). Distance to health facilities was identified as a major barrier across multiple studies. Ijaiya et al. (2023) found that 18.8% of mothers cited distance as a barrier to facility-based delivery. In Northern Nigeria, perceiving distance to a health facility as a "big problem" significantly reduced the odds of facility delivery among married adolescent girls (Olubodun et al., 2025). Community-level distance to health facilities also matters, with women living in communities farther from facilities less likely to deliver in health facilities (Olubodun et al., 2024).

Transportation costs compound the barrier of distance. Even when health facilities are relatively close, the cost of transportation can be prohibitive for poor families in urban informal settlements (Udenigwe et al., 2022). In Gombe State, expensive transportation fees were identified as a key factor limiting women's use of facility

delivery services (Udenigwe et al., 2022). The challenge is particularly acute during labor, when the need for immediate transportation creates urgency and may require more expensive options such as taxis or emergency vehicles. The timing of labor onset also interacts with distance and transportation barriers. When labor begins suddenly or progresses rapidly, the time required to reach a health facility may be perceived as too long, leading families to opt for home delivery or delivery with a traditional birth attendant (Ijaiya et al., 2023). This is reflected in the finding that 58.8% of mothers cited "sudden birth" as a reason for not delivering in a hospital (Ijaiya et al., 2023).

5.3.2 Quality of Care and Health Worker Attitudes

The quality of care at health facilities, particularly the attitudes and behaviors of healthcare workers, represents a critical barrier to skilled birth attendance. Negative attitudes from healthcare providers, including harsh treatment, judgmental behavior, lack of respect, and negligence, were consistently identified as deterrents to facility-based delivery across multiple studies (Olubodun et al., 2025; Mekonnen et al., 2019; Ekpenyong, 2025). Adolescent mothers are particularly vulnerable to negative treatment from healthcare providers. Mekonnen et al. (2019) found that harsh and judgmental attitudes from health providers toward pregnant adolescents were common, reflecting broader societal stigma against adolescent pregnancy. Healthcare workers may express disapproval of adolescent pregnancy through their words, tone, or behavior, creating an unwelcoming environment that discourages young mothers from seeking care.

Breaches of confidentiality and lack of privacy further undermine trust in health facilities. Ekpenyong (2025) found that breaches of confidentiality were a significant barrier to maternal healthcare utilization in South-South Nigeria. For adolescent mothers, who may already be dealing with stigma and social judgment, the fear that their personal information will not be kept confidential can be a powerful deterrent to seeking care. Long waiting times at health facilities represent another quality-of-care barrier. Olubodun et al. (2025) identified long waiting times as a reason for choosing traditional birth attendants over health facilities. When women must wait for hours to be seen, particularly when they are in labor, the perceived benefit of facility-based care diminishes, and alternative options become more attractive.

Healthcare worker absenteeism and shortages of skilled personnel further compromise the quality of care. Udenigwe et al. (2022) found that healthcare worker absenteeism limited women's use of facility delivery services in Gombe State. When women arrive at health facilities only to find that skilled providers are not available, their confidence in the health system erodes, and they may be less likely to seek facility-based care in future pregnancies. Lack of equipment, drugs, and life-saving interventions also affects perceptions of quality. Olubodun et al. (2025) found that lack of equipment and drugs was a barrier to facility-based delivery in low-income communities in Lagos. When health facilities lack basic supplies and equipment, they are unable to provide the quality of care that women expect and need, undermining the rationale for facility-based delivery.

5.3.3 Availability and Accessibility of Services

The availability of maternal health services, including the number and distribution of health facilities and skilled providers, affects access to skilled birth attendance. Mekwunyei et al. (2020) found that availability and accessibility of maternal health service facilities were significantly associated with utilization among pregnant teenagers. In areas where health facilities are scarce or understaffed, women have limited options for facility-based delivery. The shortage of skilled healthcare workers is a systemic challenge in Nigeria's health system. Atuhaire et al. (2016) identified low numbers of skilled health workers as a factor contributing to maternal mortality. This shortage is particularly acute in urban informal settlements and rural areas, where health facilities may be staffed by less qualified personnel or may operate with insufficient numbers of providers to meet demand.

The lack of 24-hour service availability at some health facilities creates additional barriers. When health facilities are not open around the clock, women who go into labor at night or on weekends may have no option but to deliver at home or seek care from traditional birth attendants. This is particularly problematic in urban informal settlements, where the nearest facility offering 24-hour services may be far away or difficult to reach.

5.4 Individual and Family-Level Barriers

5.4.1 Family Support and Parental Influence

Family context and support play a crucial role in adolescent mothers' utilization of maternal health services. Akinyemi et al. (2021) found that parental survival and maternal education were key determinants of ANC utilization among adolescent mothers in urban slums. Adolescents who had both parents alive and whose mothers had post-primary education had significantly higher odds of attending four or more ANC visits with a skilled attendant. The loss of parents has a particularly devastating effect on adolescent mothers' access to care. Akinyemi et al. (2021) found that the odds of attending adequate ANC for adolescents who had lost both parents was almost 60% less than those whose parents were alive, and about 40% less than those whose mothers were alive. This finding highlights the critical protective role that parents, particularly mothers, play in supporting adolescent daughters through pregnancy and childbearing.

Maternal support and influence shape adolescent mothers' healthcare preferences and behaviors. Alex-Ojei et al. (2023) found that maternal support was a major driver of maternal healthcare use and provider choice among adolescent mothers. Mothers who have positive experiences with facility-based care are more likely to encourage their daughters to seek similar care, while those who prefer traditional care may steer their daughters away from health facilities. Social and financial support from family members enables adolescent mothers to access skilled birth attendance. Alex-Ojei et al. (2023) found that social and financial support from family were major drivers of maternal healthcare use among adolescent mothers. Families that provide financial resources for healthcare expenses and emotional support for navigating the healthcare system facilitate access to skilled care. The need for permission from significant others, including parents, in-laws, or partners, can delay or prevent access to care. Mekwunyei et al. (2020) found that permission from significant others was a determinant of maternal health service utilization among pregnant teenagers. When adolescent mothers must obtain permission before seeking care, delays in decision-making can result in missed opportunities for timely intervention.

5.4.2 Parity and Previous Birth Experiences

Parity, or the number of previous births, influences maternal healthcare utilization patterns. Olubodun et al. (2023) found that having fewer children increased the odds of health facility delivery among young mothers. This may reflect the fact that first-time mothers are more anxious about childbirth and more likely to seek skilled care, while multiparous women may feel more confident in their ability to deliver without medical assistance. Previous birth experiences shape expectations and preferences for subsequent deliveries. Women who have had positive experiences with facility-based delivery are more likely to return to health facilities for future births, while those who have had negative experiences may opt for home delivery or traditional birth attendants (Olubodun et al., 2025). This underscores the importance of ensuring positive experiences for all women, particularly adolescent first-time mothers, to establish patterns of facility-based care. The perception that experienced women do not need skilled care is reflected in the finding that women with more children felt more experienced and were less likely to deliver in health facilities (Olubodun et al., 2025). This perception is problematic, as complications can occur in any pregnancy regardless of previous birth experiences, and skilled care remains important for all deliveries.

5.4.3 Antenatal Care Attendance

Antenatal care attendance is strongly associated with facility-based delivery. Olubodun et al. (2023) found that attending more antenatal visits increased the odds of health facility delivery among young mothers. Similarly, Olubodun et al. (2024) found that women who had more than four antenatal visits had 4.03 times higher odds of facility-based delivery compared to those with fewer visits. ANC attendance serves as a gateway to facility-based delivery through multiple mechanisms. During ANC visits, women receive health education about the importance of skilled birth attendance, develop relationships with healthcare providers, become familiar with health facilities, and receive birth preparedness counseling (Rai et al., 2012). These factors collectively increase the likelihood that women will choose facility-based delivery when labor begins.

The quality of ANC matters as much as the quantity. Receiving ANC from skilled attendants, as opposed to traditional birth attendants, increases the likelihood of facility-based delivery (Olakunde et al., 2019). This suggests that interventions to improve ANC quality and ensure that adolescent mothers receive care from skilled providers could have downstream effects on facility-based delivery rates. However, ANC attendance alone is not sufficient to guarantee facility-based delivery. Olubodun et al. (2025) found that 97.7% of women in low-income communities in Lagos had ANC during their last pregnancy, yet only 69.8% delivered in health facilities. This gap between ANC attendance and facility-based delivery highlights the need to address barriers that specifically affect delivery location, including cost, distance, and quality of delivery services.

5.4.4 Knowledge and Awareness

Lack of knowledge about the benefits of skilled birth attendance and the risks of home delivery represents an individual-level barrier to facility-based care. Mekonnen et al. (2019) identified lack of knowledge as a barrier to maternal health service utilization among adolescent women in sub-Saharan Africa. Adolescent mothers may not fully understand the potential complications of childbirth or the ways in which skilled attendants can prevent or manage these complications. Fear of hospitals and medical procedures, often rooted in lack of knowledge or misinformation, also deters facility-based delivery. Naanyu et al. (2018) found that fear of hospitals and procedures was a barrier to facility-based delivery in Western Kenya. Similar fears likely exist among adolescent mothers in Nigerian urban informal settlements, particularly those who have had limited exposure to formal healthcare systems. Exposure to mass media is associated with increased facility-based delivery. Olubodun et al. (2024) found that exposure to mass media increased the odds of health facility delivery by 34%. Mass media can serve as an important source of health information, helping to increase awareness of the benefits of skilled birth attendance and normalize facility-based delivery.

6. Geographic and Regional Variations

Significant geographic and regional variations exist in skilled birth attendance rates across Nigeria. Northern Nigeria consistently shows lower rates of facility-based delivery compared to Southern regions. Olubodun et al. (2025) found that only 18.26% of married adolescent girls in Northern Nigeria delivered in health facilities, compared to higher rates in Southern regions. These regional disparities reflect differences in socioeconomic development, educational attainment, cultural practices, and health system capacity. Rural-urban disparities are also pronounced. Adewuyi et al. (2019) found that the prevalence of home delivery was 78.9% in rural areas compared to 43.9% in urban areas among young mothers. However, these aggregate urban statistics mask significant heterogeneity within urban areas, with urban informal settlements showing rates more similar to rural areas than to formal urban neighborhoods (Sidze et al., 2021).

Living in rural areas significantly reduces the odds of facility-based delivery. Olubodun et al. (2025) found that rural residence was associated with lower odds of facility delivery among married adolescent girls in Northern Nigeria. This reflects the compounded challenges of distance, transportation, and limited health infrastructure in rural areas. State-level variations in facility-based delivery rates highlight the importance of subnational analysis. Olubodun et al. (2024) conducted spatial analysis showing the distribution of health facility delivery by state, revealing substantial heterogeneity across Nigeria. These variations suggest that state-specific factors, including governance, health system investment, and cultural contexts, play important roles in shaping maternal healthcare utilization. Community-level factors also matter. Women living in communities with higher levels of poverty, lower levels of female education, and greater distance to health facilities were less likely to deliver in health facilities (Olubodun et al., 2023; Olubodun et al., 2024). These findings underscore the importance of addressing community-level determinants of health, not just individual-level factors.

7. Facilitators of Skilled Birth Attendance

While this review has focused primarily on barriers, it is important to also identify facilitators that promote skilled birth attendance among adolescent mothers. Understanding these facilitators can inform the design of effective interventions.

7.1 Education and Empowerment

Education emerges as one of the most powerful facilitators of skilled birth attendance. Both individual education and community-level education promote facility-based delivery through increased health literacy, economic opportunities, and social empowerment (Olubodun et al., 2023). Interventions that promote girl-child education and ensure that adolescent mothers can continue their education during and after pregnancy have the potential to significantly improve maternal health outcomes.

7.2 Economic Resources and Health Insurance

Household wealth and access to health insurance facilitate skilled birth attendance by reducing financial barriers. Olubodun et al. (2023) found that increasing household wealth index was associated with higher odds of facility-based delivery. Expansion of health insurance coverage, particularly through schemes that target poor and vulnerable populations, could significantly improve access to skilled birth attendance (Ijaiya et al., 2023).

7.3 Quality Antenatal Care

Quality antenatal care serves as a critical facilitator of facility-based delivery. Women who attend multiple ANC visits with skilled providers are significantly more likely to deliver in health facilities (Olubodun et al., 2024). Strengthening ANC services and ensuring that adolescent mothers receive comprehensive, respectful care during pregnancy can create a pathway to facility-based delivery.

7.4 Positive Healthcare Experiences

Positive experiences with healthcare providers and facilities facilitate continued utilization of maternal health services. Ekpenyong (2025) found that women's recognition of skilled providers and the safety offered by emergency care were facilitators of maternal healthcare utilization. When healthcare workers demonstrate competence, compassion, and respect, women are more likely to trust the health system and choose facility-based delivery.

7.5 Community Support and Social Norms

Community-level support and positive social norms around facility-based delivery facilitate skilled birth attendance. Women living in communities with higher levels of female education and skilled prenatal support were more likely to deliver in health facilities (Olubodun et al., 2023). Community engagement interventions that shift social norms and create supportive environments for facility-based delivery can amplify individual-level interventions.

7.6 Transportation Support

Availability of transportation support facilitates timely access to health facilities during labor. Olubodun et al. (2023) found that women who lived in communities with higher levels of transportation support were more likely to deliver in health facilities. Interventions that provide transportation vouchers, emergency transportation services, or community-based transportation schemes can address this critical barrier.

8. Discussion

This literature review reveals that barriers to skilled birth attendance among adolescent mothers in urban informal settlements in Nigeria are multifaceted, operating at individual, family, community, and health system levels. The persistently low rates of facility-based deliveryranging from 18% to 34% among young mothers—reflect the cumulative impact of poverty, low education, cultural beliefs, stigma, geographic barriers, and poor quality of care. These barriers are not isolated factors but rather interconnected elements of a complex system that systematically disadvantages adolescent mothers in urban informal settlements.

8.1 The Intersectionality of Vulnerabilities

Adolescent mothers in urban informal settlements face intersecting vulnerabilities that compound their risk of poor maternal health outcomes. They are young, often unmarried, poorly educated, economically dependent, and living in poverty. These individual vulnerabilities are embedded within communities characterized by inadequate infrastructure, limited health services, and social marginalization. The intersection of age, gender, poverty, and place creates a unique set of challenges that require targeted, multisectoral interventions.

8.2 The Critical Role of Education

Education emerges from this review as perhaps the most powerful determinant of skilled birth attendance. The dose-response relationship between education and facility-based delivery, observed across multiple studies, underscores the transformative potential of educational interventions. Education operates through multiple pathways—increasing health literacy, enhancing economic opportunities, empowering decision-making, and shifting social norms. Investments in girl-child education, therefore, represent not only a human rights imperative but also a strategic maternal health intervention.

8.3 Economic Barriers and the Need for Financial Protection

The prominence of economic barriers in this review highlights the fundamental role of poverty in limiting access to skilled birth attendance. Despite the existence of policies promoting free maternal healthcare in Nigeria, the reality for many families in urban informal settlements is that healthcare remains unaffordable due to direct costs, indirect costs, and opportunity costs. The limited coverage of health insurance in these communities leaves families vulnerable to catastrophic health expenditures or forces them to forgo facility-based care altogether. Expanding financial protection through health insurance and removing user fees for maternal health services are essential steps toward improving access.

8.4 Health System Strengthening

The health system barriers identified in this review—including distance, poor quality of care, negative provider attitudes, shortages of skilled personnel, and inadequate equipment—point to the urgent need for health system strengthening. Improving the quality of maternal health services requires not only infrastructure investments but also attention to the interpersonal dimensions of care. Training healthcare workers in respectful maternity care, addressing stigma and discrimination, and ensuring accountability for poor treatment are critical components of quality improvement efforts.

8.5 Cultural Sensitivity and Community Engagement

The cultural and social barriers identified in this review underscore the importance of culturally sensitive interventions that engage communities as partners in improving maternal health. Traditional birth attendants, religious leaders, and community elders play influential roles in shaping healthcare-seeking behaviors. Rather than viewing these actors as obstacles, maternal health programs should seek to engage them as allies, providing training and support that enables them to promote facility-based delivery while respecting cultural values and practices.

8.6 The Continuum of Care Approach

The strong association between ANC attendance and facility-based delivery highlights the importance of a continuum of care approach to maternal health. Interventions that focus solely on delivery services without addressing ANC are unlikely to achieve significant improvements in facility-based delivery rates. Conversely, strengthening ANC services and ensuring that adolescent mothers receive quality care throughout pregnancy can create a pathway to facility-based delivery and postnatal care.

8.7 Urban Informal Settlements as Priority Settings

The evidence reviewed here demonstrates that urban informal settlements represent priority settings for maternal health interventions. Despite their urban location, these communities face barriers to skilled birth attendance that are as severe as, or more severe than, those in rural areas. The concentration of poverty, inadequate infrastructure, and social marginalization in urban informal settlements creates unique challenges that require tailored interventions. Urban health policies must recognize the heterogeneity within urban areas and ensure that informal settlements receive adequate attention and resources.

9. Conclusion

Barriers to skilled birth attendance among adolescent mothers in urban informal settlements in Nigeria are complex and influenced by socioeconomic inequalities, cultural norms, health system limitations, and individual challenges. The low rate of facility-based delivery, estimated at 18–34%, highlights a major obstacle to reducing

maternal mortality. Poverty and limited education significantly reduce adolescents' ability to access skilled delivery services. Social stigma and lack of family support further discourage young mothers from seeking care. Physical barriers such as distance to health facilities and transportation challenges also limit service use. Poor quality of care and negative attitudes of health providers reduce trust in health facilities. Addressing these barriers requires coordinated interventions across individual, family, community, and health system levels. Education and economic empowerment programs, including expanded health insurance coverage, can help reduce financial and social constraints. Urban informal settlements need to be prioritized because they face severe health challenges despite being located in urban areas. Strong political commitment, adequate resources, and community participation are essential to improve access to skilled birth attendance and ensure safer childbirth for adolescent mothers.

10. Recommendations and Policy Implications

Based on the evidence synthesized in this review, the following recommendations are proposed for improving skilled birth attendance among adolescent mothers in urban informal settlements in Nigeria:

- Promote Girl-Child Education
  Invest in programs that promote girl-child education and ensure that adolescent mothers can continue their education during and after pregnancy. Education should be recognized as a core maternal health intervention, with policies that remove barriers to school attendance for pregnant and parenting adolescents
- Expand Health Insurance Coverage
  Expand health insurance coverage to include poor and vulnerable populations in urban informal settlements, with specific provisions for adolescent mothers. Remove user fees for maternal health services and provide financial support for transportation and other indirect costs
- Strengthen Health Systems in Urban Informal Settlements
  Invest in health infrastructure in urban informal settlements, including construction and upgrading of health facilities, provision of equipment and supplies, and recruitment and retention of skilled healthcare workers. Ensure that health facilities in these communities offer 24-hour services and have the capacity to manage obstetric emergencies.
- Improve Quality of Care and Provider Attitudes
  Implement training programs for healthcare workers on respectful maternity care, adolescent-friendly services, and non-discriminatory care. Establish accountability mechanisms for poor treatment and create systems for monitoring and improving quality of care. Ensure that health facilities provide privacy, confidentiality, and compassionate care to all women, particularly adolescent mothers.
- Address Stigma and Discrimination
  Implement community-based interventions to address stigma against pregnant adolescents, including education campaigns, dialogue sessions, and engagement of community leaders. Train healthcare workers to provide non-judgmental care to adolescent mothers and create adolescent-friendly service delivery models.
- Engage Communities and Traditional Actors
  Engage traditional birth attendants, religious leaders, and community elders as partners in promoting skilled birth attendance. Provide training and support that enables traditional actors to recognize complications and refer women to health facilities while respecting cultural practices. Use community dialogue and participatory approaches to shift social norms around facility-based delivery.
- Strengthen Antenatal Care Services
  Strengthen ANC services to ensure that all adolescent mothers receive quality care from skilled providers throughout pregnancy. Use ANC as an opportunity for health education, birth preparedness planning, and relationship-building between women and healthcare providers. Ensure that ANC services are accessible, affordable, and adolescent-friendly.
- Provide Transportation Support
  Implement transportation support schemes, including emergency transportation services, transportation vouchers, and community-based transportation arrangements. Ensure that women in urban informal settlements have access to affordable, timely transportation to health facilities during labor
- Empower Women and Address Gender Inequities
  Implement interventions that empower women economically and socially, including income-generating programs, savings groups, and women's empowerment initiatives. Address gender-based violence and promote male involvement in maternal health through education and engagement programs.

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