







ISSN: 2455-5282

DOI: https://dx.doi.org/10.17352/gjmcc

Research Article

Teenage Pregnancy in Nigeria from 1970 to 2023: Burden, Issues, and Prospects

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Keywords: Teenagers; Pregnancy; Review; Nigeria; Public health; Prevalence; Burden

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Abstract

Background: Teenage pregnancy represents a multifaceted challenge that affects not only the health of adolescent girls but also the socio-economic development of communities and the nation as a whole.

Objective: We narratively reviewed how socio-cultural, economic, and health system factors have influenced teenage pregnancy rates in Nigeria over time and identified opportunities for improvement

Methods: The study was a narrative review of published studies. A total number of 85 articles were obtained: 30 from PubMed, 37 from Google Scholar, and 18 from African Journals Online (AJOL). The articles were then screened for duplication and eligibility. Data was summarized with descriptive statistics. Data was summarized with descriptive statistics of frequency and percentage.

Results: The studies carried out nationally were 14 (46.7%) followed by that of the southwest geopolitical zone of Nigeria 9 (30.0%). Cross-sectional studies were the most utilized study type 15 (50.0%). The majority of the studies were carried out between 2011 and 2020, 19 (63.33%).

Conclusion: While the incidence and prevalence have shown some regional improvements, particularly in urban areas, the burden remains high in rural regions where socio-cultural practices such as early marriage persist. The associated health risks, including maternal and infant mortality, and the socio-economic challenges of disrupted education and poverty, highlight the urgent need for comprehensive interventions.

Introduction

Teenage pregnancy, defined as pregnancy occurring in women aged 10 to 19 years, is a global public health concern, particularly prevalent in developing countries. In Nigeria, it represents a multifaceted challenge that affects not only the health of adolescent girls but also the socio-economic development of communities and the nation as a whole. Teenage pregnancy is associated with adverse outcomes, including higher risks of maternal and child mortality, obstetric complications, and a cycle of poverty due to disrupted education and limited economic opportunities for young mothers [1].

Globally, the adolescent birth rate has declined over the past few decades, but progress has been uneven. In Nigeria, teenage pregnancy rates remain alarmingly high, particularly in rural and impoverished areas where traditional and cultural practices such as early marriage persist. Early marriage and limited access to Sexual and Reproductive Health (SRH) services are major contributors to the high incidence of teenage pregnancy in Nigeria, with far-reaching consequences for individuals, families, and society [2].

The problem of teenage pregnancy in Nigeria is exacerbated by insufficient healthcare infrastructure, cultural resistance to contraceptive use, and inadequate SRH education. The World Health Organization (WHO) reports that complications during pregnancy and childbirth are the leading causes of death for girls aged 15-19 years globally, with the situation in sub-Saharan Africa, including Nigeria, being particularly severe [3]. The impact of teenage pregnancy extends beyond health, as it often results in school drop-out, unemployment, and a cycle of intergenerational poverty [4].

This review aims to provide a comprehensive narrative analysis of the incidence, prevalence, burden, underlying issues, and future prospects of teenage pregnancy in Nigeria from 1970 to 2023. By reviewing relevant studies, demographic health surveys, and policy documents, this review seeks to examine the trends in teenage pregnancy over five decades, highlight the contributing factors, assess the socio-economic and health-related consequences, and evaluate potential interventions that could mitigate the issue. We narratively reviewed how socio-cultural, economic, and health system factors have influenced teenage pregnancy rates in Nigeria over time and identified opportunities for improvement.

Methods

Study area

The study covered the incidence, prevalence, burden, issues, and prospects of teenage pregnancy in Nigeria.

Review question

What are the trends in incidence, prevalence, burden, issues, and prospects of teenage pregnancy in Nigeria?

Study population and type of studies included

The search was carried out on PubMed, Google Scholar,

and African Journals Online (AJOL) and studies that passed the eligibility criteria were used for the study.

Inclusion criteria

- Studies published between 1970 and 2023.
- Studies or reports focused on Nigeria or sub-regions within Nigeria.
- Studies that examined teenage pregnancy (defined as pregnancy among females aged 13-19).
- Only studies published in English were included.
- Studies that provided data or analysis on the prevalence, incidence, burden, issues, or future prospects of teenage pregnancy.
- Studies in which participants were allowed to participate voluntarily with uttermost confidentiality and anonymity were considered for inclusion. Studies that acknowledged diversity and respect for individual differences were also considered.

Exclusion criteria

- Studies conducted within Nigeria or in settings specific to teenage pregnancy which lacked original data or sufficient detail on the key variables of interest.
- Studies on teenage pregnancy within the time frame in written in English language and acknowledged diversity and respect for individual differences but with methodological flaws were excluded.

Study design

This narrative review was designed to synthesize available literature on the incidence, prevalence, burden, issues, and prospects of teenage pregnancy in Nigeria. This review covers studies published between 1970 and 2023.

Information source

Search was carried out on PubMed, Google Scholar, and African Journals Online (AJOL).

Article search process

PubMed, Google Scholar, and African Journals Online (AJOL) were searched for studies and articles on the incidence, prevalence, burden, issues, and prospects of teenage pregnancy in Nigeria published between 1970 and 2023. Relevant studies included keywords like "teenage pregnancy," "adolescent pregnancy," "Nigeria," "incidence," "prevalence," "burden," and "socio-economic factors" were additionally searched. References from government and international reports, including those from the World Health Organization (WHO), United Nations International Children's Emergency Fund (UNICEF), and Nigeria's National Population Commission, were also included [5]. A total number of 85 articles were obtained: 30 from PubMed, 37 from Google Scholar, and 18

from African Journals Online (AJOL). The articles were then screened for duplication and eligibility. On the whole, 65 studies were eliminated, 46 were duplicates while 19 had insufficient information and incomplete data resulting in 20 studies used for the study.

Study articles selection process

A total number of 85 articles were obtained: 30 from PubMed, 37 from Google Scholar, and 18 from African Journals Online (AJOL). The articles were then screened for duplication which led to the elimination of 46 articles which gave rise to 39 articles. Also, 19 articles with insufficient information and incomplete data were removed from the remaining 39 articles. This gave rise to a total of 20 articles used for the review.

Data analysis

Data was summarized with descriptive statistics using frequency and percentages.

Results

Overview of included studies

This review identified 20 relevant studies published between

1970 and 2023 that examined the impact of pharmacist-led medication reconciliation programs on clinical outcomes in Nigerian hospitals.

Discussion

Incidence and prevalence of teenage pregnancy

The incidence and prevalence of teenage pregnancy in Nigeria have demonstrated significant regional and temporal variations from 1970 to 2023 as shown in Table 1. During the

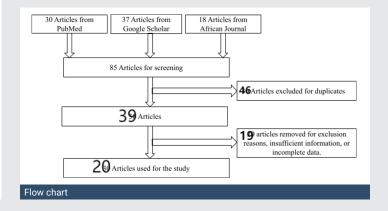


Table 1: Evidence-based table on Pharmacist-Led Medication Reconciliation Programs in Nigeria (1970-2023).

References	Author	Study Title	Year of Publication	Geopolitical Zone	Study Design	Sampl e Size
6	Adedini SA	Regional variations in infant and child mortality in Nigeria: a multilevel analysis	2015	North-West	Multilevel analysis	1000
7	Fatusi AO	Adolescent health in an international context: the challenge of sexual & reproductive health in SSA		South-West	Cross-sectional	1200
8	Bankole A	Removing barriers to adolescents' access to contraceptive information and services	2010	National	Policy Review	N/A
9	Okonofua FE	Providing safe abortion services in Nigeria: findings from a national facility- based survey	2018	South-South	Facility-based survey	300
10	Ezeh AC	Global population trends and policy options	2012	National	Demographic Analysis	N/A
11	Otoide VO	Why Nigerian adolescents seek abortion rather than contraception: Evidence from focus-group studies	2001	South-West	Qualitative	N/A
12	ljadunola KT	Male involvement in family planning decision making in Ile-Ife, Nigeria	2010	South-West	Cross-sectional	400
13	Sedgh G	Adolescent pregnancy, birth, and abortion rates across countries: Levels and recent trends	2015	National	Cross-country y Analysis	N/A
14	Olukoya AA	Adolescent sexual and reproductive health and rights in Nigeria	2002	National	Review	N/A
15	Blum RW	Adolescent health in the 21st century	2012	National	Longitudinal	1500
16	Ajayi Al	Contraceptive use among young women in Nigeria	2016	National	Survey	1200
4	Ganchimeg T	WHO Multicountry Survey on Maternal Newborn Health Research Network. Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study	2014	National	Multi-country study	1000
17	Adekanle DA	Late antenatal care booking and its predictors among pregnant women in Nigeria	2008	South-West	Cross-sectional	600
18	Adeyinka AA	Outcome of adolescent pregnancies in southwestern Nigeria: a case-control study	2010	South-West	Case-control study	45
19	Cortez R	Adolescent sexual and reproductive health in Nigeria: analysis and implications	2015	National	Policy Analysis	N/A
20	Okoli CI	Socioeconomic inequalities in teenage pregnancy in Nigeria: evidence from demographic health survey.	2022	National	Cross-sectional	8423
21	Onwubuariri MI	Teenage pregnancy: prevalence, pattern and predisposing factors in a tertiary hospital, Southern Nigeria	2019	South-South	Cross-sectional	198
22	Ezeh AC	Adolescent reproductive health and pregnancy prevention programs in Nigeria	2016	National	Demographic study	N/A
23	Ogelle OM	Teenage pregnancies a lingering obstetric problem in Nigeria	2011	South-East	Case-control study	161
24	Fagbamigbe A	Trend analysis of teenage pregnancy in Nigeria (1961-2013): how effective is the contraceptive use campaign	2019	National	Cross-section nal study	70,811

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1970s and 1980s, early studies indicated high teenage pregnancy rates, especially in rural areas, driven by sociocultural norms such as early marriage and traditional family structures [6]. Reports from the Nigerian Demographic and Health Surveys (NDHS) show that in the 1990s, there was some decline in teenage pregnancy rates, particularly in urban regions where educational reforms and public health campaigns had more influence [7].

Recent data from the 2018 NDHS indicate that approximately 22.2% of Nigerian women aged 15-19 had either begun childbearing or were pregnant with their first child. This rate remains particularly high in Northern Nigeria, with states in the North-West and North-East regions reporting significantly higher teenage pregnancy rates than their Southern counterparts. These regional disparities are attributed to differences in educational attainment, poverty levels, and cultural practices, including early marriages and polygamy, which are more prevalent in the North. In contrast, urbanized regions such as Lagos and Abuja have seen relatively lower rates due to better access to education and reproductive health services [8]. The majority of the studies were carried out in south-south and south-western Nigeria as shown in Table 2.

Burden of teenage pregnancy

The burden of teenage pregnancy is both a public health and socio-economic issue in Nigeria. Health risks associated with teenage pregnancy include higher incidences of maternal and infant mortality, pre-term births, and low birth weight babies. Adolescent girls are more likely to experience complications such as pre-eclampsia, obstructed labour, and fistula, as their bodies are not fully developed for childbirth. These complications are exacerbated by limited access to quality antenatal and postnatal care in many parts of Nigeria, particularly in rural areas [1]. Cross-sectional studies were predominantly used followed by policy reviews as indicated in Table 3.

The socio-economic burden of teenage pregnancy is profound. Teenage mothers often face stigma and social exclusion, leading to reduced educational and employment opportunities [16]. This perpetuates a cycle of poverty, as many teenage mothers are forced to drop out of school and are unable to acquire the skills necessary for gainful employment [25]. Children born to teenage mothers are also at higher risk of malnutrition, poor academic performance, and poor health outcomes, further perpetuating intergenerational poverty [17]. Malnutrition was a common occurrence among teenage pregnant mothers and their offspring due to late antenatal care visits and poor socioeconomic status [17].

The persistently high rates of teenage pregnancy in Nigeria, particularly in rural areas, suggest that existing interventions have been insufficient in addressing the root causes of the issue. While some progress has been made, especially in urban regions with better access to education and healthcare, the socio-cultural and economic factors driving teenage pregnancy remain pervasive in many parts of the country [12].

Table 2: Study distribution by Geopolitical Zones.

Geopolitical Zone	Number of Studies (%)
North-West	1 (5.00)
North-Central	0 (0.00)
North-East	0 (0.00)
South-East	1 (5.00)
South-West	5 (25.00)
South-South	2 (10.00)
Nationwide	10 (50.00)

Table 3: Stusy distribution by Study Types.

2 (10.00)
2 (10.00)
6 (30.00)
2 (10.00)
4 (20.00)
1 (5.00)
1 (5.00)
1 (5.00)
2 (10.00)

Table 4: Periodic Distribution of Studies (Decade-Wise).

S/N	Time Period	Number of Studies (%)
1.	1970-1980	0 (0)
2.	1981-1990	0 (0)
3.	1991-2000	0 (0)
4.	2001-2010	7 (35.00)
5.	2011-2020	12 (60.00)
6.	2021-2023	1 (5.00)

Cultural practices such as early marriage are deeply ingrained in many Nigerian communities, particularly in the northern regions. Despite laws prohibiting child marriage, enforcement is weak, and many families continue to marry off their daughters at a young age, often due to economic pressures [15]. Efforts to delay marriage and keep girls in school longer are critical to reducing teenage pregnancy rates, but these require strong policy enforcement and cultural shifts [26]. All the studies took place between the years 2000 and 2023 as shown in Table 4 when teenage pregnancy became an issue of public health discussion.

Access to reproductive health services is another significant challenge. Many adolescents lack access to contraception and SRH education, leading to unplanned pregnancies. Efforts to improve access to SRH services, particularly in rural and underserved areas, are necessary to reduce teenage pregnancy rates [13]. parents especially those in rural areas consider it unhealthy to discuss reproductive issues with their adolescents and most of the government interventions are focused on the adults. Programs that offer youth-friendly health services, comprehensive sexuality education, and contraceptive options have been shown to be effective in other countries and should be scaled up in Nigeria [11]. Teenage-friendly initiatives and advocacy programs targeted toward teenage pregnancy prevention should be scaled up to cover rural areas. Parents in rural areas and religious organizations may be explored in driving the advocacy and change for wider coverage and effectiveness.



Conclusion

Teenage pregnancy remains a major public health and socio-economic challenge in Nigeria. While the incidence and prevalence have shown some regional improvements, particularly in urban areas, the burden remains high in rural regions where socio-cultural practices such as early marriage persist. The associated health risks, including maternal and infant mortality, and the socio-economic challenges of disrupted education and poverty, highlight the urgent need for comprehensive interventions. Policy measures that address the root causes, such as poverty, early marriage, and lack of SRH education, are crucial for reducing teenage pregnancy in Nigeria. Community-based interventions that engage traditional and religious leaders, combined with efforts to improve access to education and reproductive health services, are essential. There is hope that with sustained efforts and investment, the incidence of teenage pregnancy in Nigeria can be significantly reduced, improving the health and socioeconomic outcomes for adolescent girls and their families.

References

- 1. World Health Organization. Adolescent pregnancy. [Internet]. 2014 [cited 2023 May 10]. Available from: https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy. Accessed on 20th October, 2024.
- Nigeria Demographic and Health Survey 2018. National Population Commission and ICF International. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF; 2019. Available from: https://www.rhsupplies.org/uploads/tx_rhscpublications/Nigeria_-_2019. pdf
- Olausson PO, Haglund B, Weitoft GR, Cnattingius S. Teenage childbearing and long-term socioeconomic consequences: a case study in Sweden. Fam Plann Perspect. 2001;33(2):70-4. Available from: https://pubmed.ncbi.nlm.nih.gov/11330853/
- Ganchimeg T, Ota E, Morisaki N, Laopaiboon M, Lumbiganon P, Zhang J, et al. WHO Multicountry Survey on Maternal Newborn Health Research Network. Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study. BJOG. 2014 Mar;121 Suppl 1:40-8. Available from: https://doi.org/10.1111/1471-0528.12630
- 5. National Population Commission (NPC) [Nigeria] and ICF. Nigeria Demographic and Health Survey 2013. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International; 2014. Available from: https:// www.unicef.org/nigeria/sites/unicef.org.nigeria/files/2018-09/Nigeriademographic-and-health-survey-2013.pdf
- 6. Adedini SA, Odimegwu C, Imasiku ENS, Ononokpono DN. Regional variations in infant and child mortality in Nigeria: a multilevel analysis. J Biosoc Sci. 2015;47(2):165-87. Available from: https://doi.org/10.1017/ s0021932013000734
- 7. Fatusi AO, Blum RW. Adolescent health in an international context: the challenge of sexual & reproductive health in sub-Saharan Africa. Adolescent Med State Art Rev. 2009;20(3):874-86. Available from: https://pubmed.ncbi.nlm.nih.gov/20653206/
- Bankole A, Malarcher S. Removing barriers to adolescents' access to contraceptive information and services. Stud Fam Plann. 2010;41(2):117-24. Available from: https://doi.org/10.1111/j.1728-4465.2010.00232.x
- Okonofua FE, Hammed A, Nzeribe E, Saidu B, Abass T, Adeboye G, et al. Perceptions of policymakers in Nigeria toward unsafe abortion and maternal mortality. Int Perspect Sex Reprod Health. 2009 Dec;35(4):194-202. Available from: https://doi.org/10.1363/ifpp.35.194.09
- 10. Ezeh AC, Bongaarts J, Mberu B. Global population trends and policy options. Lancet. 2012 Jul 14;380(9837):142-8. Available from: https://doi. org/10.1016/s0140-6736(12)60696-5

- 11. Otoide V, Oronsaye F, Okonofua F. Why Nigerian Adolescents Seek Abortion Rather than Contraception: Evidence from Focus-Group Discussions. Int Fam Plan Perspect. 2001;27:77-81. Available from: https://www.jstor.org/ stable/2673818
- 12. Ijadunola KT, Ijadunola MY, Abiona TC, Afolabi OT, Esimai OA, OlaOlorun FM. Male involvement in family planning decision making in Ile-Ife, Nigeria. Afr J Reprod Health. 2010;14(4):43-50. Available from: https://pubmed.ncbi.nlm.nih.gov/21812197/
- 13. Sedgh G, Finer LB, Bankole A, Eilers MA, Singh S. Adolescent pregnancy, birth, and abortion rates across countries: Levels and recent trends. J Adolesc Health. 2015;56(2):223-30. Available from: https://doi.org/10.1016/j.jadohealth.2014.09.007
- 14. Olukoya A, Ferguson J. Adolescent sexual and reproductive health and development. Arch Ibadan Med. 2005;3:10-5. Available from: https://www.ajol.info/index.php/aim/article/view/34574
- 15. Blum RW, Mmari K, Moreau C. Adolescent health in the 21st century. Lancet. 2012 Apr 28;379(9826):1567-8. Available from: https://doi.org/10.1016/j.jadohealth.2017.07.009
- 16. Ajayi Al, Adeniyi OV, Akpan W. Use of traditional and modern contraceptives among childbearing women: findings from a mixed methods study in two southwestern Nigerian states. BMC Public Health. 2018 May 9;18(1):604. Available from: https://doi.org/10.1186/s12889-018-5522-6
- 17. Adekanle DA, Isawumi AI. Late antenatal care booking and its predictors among pregnant women in South Western Nigeria. Online J Health Allied Scs. 2008;7(1):4. Available from: https://web-archive.southampton.ac.uk/cogprints.org/6084/1/2008-1-4.pdf
- 18. Adeyinka DA, Oladimeji O, Adekanbi TI, Adeyinka FE, Falope Y, Aimakhu C. Outcome of adolescent pregnancies in southwestern Nigeria. J Matern Fetal Neonatal Med. 2010;23(8):785-9. Available from: https://doi.org/10.3109/14767050903572166
- 19. Cortez R, Saadat S, Marinda, Odutolu E, Oluwole A. Adolescent sexual and reproductive health in Nigeria: analysis and implications. Health, Nutrition and Population Global Practice Knowledge Brief. Washington, DC: World Bank, Available from: https://documents.worldbank.org/en/publication/ documents-reports/documentdetail/199031468290139105/adolescentsexual-and-reproductive-health-in-nigeria
- 20. Okoli CI, Hajizadeh M, Rahman MM, Velayutham E, Khanam R. Socioeconomic inequalities in teenage pregnancy in Nigeria: evidence from Demographic Health Survey. BMC Public Health. 2022 Sep 12;22(1):1729. Available from: https://doi.org/10.1186/s12889-022-14146-0
- 21. Onwubuariri MI, Kasso T. Teenage pregnancy: prevalence, pattern, and predisposing factors in a tertiary hospital, Southern Nigeria. Asian J Med Health. 2019;17(3):1-5. Available from: https://www.scirp.org/reference/referencespapers?referenceid=3820756
- 22. Ezeh AC, Bankole A, Singh S. Adolescent reproductive health and pregnancy prevention programs in Nigeria. Int J Reprod Med. 2016;24(1):13-20.
- 23. Ogelle OM, Eke AC, Okafor CI, Mbamara SU, Obiechina NJ. Teenage pregnancies: a lingering obstetric problem in Nigeria. Niger J Med. 2011;20(4). ISSN 1115-2613. Available from: https://pubmed.ncbi.nlm.nih. gov/22288314/
- 24. Fagbamigbe A, Afolabi R, Yusuf O. Trend analysis of teenage pregnancy in Nigeria (1961-2013): how effective is the contraceptive use campaign. Int J Public Health Sci. 2019;8:163-73. Available from: https://ijphs.iaescore.com/index.php/IJPHS/article/view/16429
- 25. United Nations Population Fund (UNFPA). Girlhood, not motherhood: Preventing adolescent pregnancy. [Internet]. 2015 [cited 2023 May 10]. Available from: https://www.unfpa.org/sites/default/files/pub-pdf/Girlhood_ $not_motherhood_final_web.pdf$
- 26. OlaOlorun F, Hindin MJ. Having a say matters: Influence of decision-making power on contraceptive use among Nigerian women ages 35-49 years. PLoS One. 2014;9(6). Available from: https://doi.org/10.1371/journal. pone.0098702