# Maternal Health Service Delivery and the Impact of Anti-Abortion Law in Nigeria: Case Study Akure Metropolitan City

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Abstract— Background: This case study investigates Nigeria's anti-abortion legislation and attempts to marry them to maternal delivery of healthcare in the municipality of Akure. The study determines the level of awareness of the criminal code antiabortion law among women and health service workers, the general perception of women and health workers in Akure metropolis about the criminal code anti-abortion law, whether or not the criminal code anti-abortion law has contributed to a reduction in abortions (safe or unsafe) among women, and finally determine whether the penal code's anti-abortion law has influenced maternal health service delivery in Akure. Methodology: The study employs mixed-method research. Nonetheless, the researcher utilized a convergent research strategy, guaranteeing that data processed for both methodologies is collected, processed, and interpreted separately to achieve study objectives. The study employs a convenience sample of 380 respondents, including women in their reproductive years who attend various maternity health facilities and healthcare staff from Akure's four public hospitals. Results: The level of awareness of women and health service workers about the criminal code antiabortion law (R2 = 0.006, F1,326= 1.81,  $\beta$  = 0.142, p > 0.05) is low. Women and health care workers perceive (R2 = 0.052, F1,326 = 18.032,  $\beta$  perception = 0.101, p < 0.05) the criminal code antiabortion law as ineffective and forgotten. The criminal code antiabortion law has significantly helped in achieving reduced abortion amongst women in Akure (r = 0.577, p < 0.05). Finally, the criminal code anti-abortion law has significantly affected maternal health service delivery in the Akure metropolis (R2 = 0.175, F1,326= 69.301,  $\beta$ CCAA = 0.21, p < 0.05). Conclusion: Addressing this complicated issue requires a holistic approach considering the community's socio-cultural fabric whilst promoting the fundamental right to safe and comprehensive maternity care. Policymakers may prepare the path for a future in which maternal well-being is protected and women's rights are fully honoured by creating an ideal atmosphere for reproductive

Index Terms— Maternal Health, Abortion Laws, Reproductive Rights, Community Health Interventions, Digital Health Awareness, Nigeria.

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### 1. Introduction

Addressing the complicated connection between maternal health service delivery and abortion in Nigeria necessitates a careful analysis of the current socio-legal milieu. Nigeria, a country with a diverse cultural heritage, faces considerable issues in the maternal health sector, especially concerning the provision of abortion services. The broader context of Nigeria's strict anti-abortion legislation complicates maternal health service delivery. Abortion is severely restricted by the legal framework, which is affected by both religious as well as cultural considerations, culminating in a clandestine and dangerous procedure. In the absence of controlled and easily obtainable abortion providers, women might turn to risky methods, exacerbating maternal health concerns [1]. This case study investigates Nigeria's anti-abortion legislation and attempts to marry them to maternal delivery of healthcare in the municipality of Akure.

## A. Study Background

The discussion of whether or not women of sexual maturity ought to have the liberty of deciding whether or not they want a child or abort a pregnancy remains a prevalent topic in public health research and conversations around the world [2]. This controversy has been handled with views in favour of and against abortion. Whilst scholars believe that women in their reproductive stage should be allowed to decide on abortion if it is best for them and their family at any time - and shouldn't be deprived of accessibility to high-quality healthcare irrespective of their decisions [3], other parties contend that if these liberties are granted to women, they may be abused (conscientious objection) [4]. The second category argued that as opposed to becoming pregnant and then considering an abortion, women within their reproductive ages could explore the use of contraception or family planning to avoid pregnancy and all of

its consequences [5]. Whilst this viewpoint appears to be correct, it does not tackle the demographic of vulnerable women with little or barely anything about contraception, and also those that reside in countries devastated by war and volatile locations wherein women may face rape or sexual assault [6].

Irrespective of which side of the debate one takes, studies consistently demonstrated that strict anti-abortion laws could contribute to a rise in maternal mortality [7], a catastrophe that could potentially threaten women's reproductive safety and health for many years to come. In the study by [8], maternal mortality can have a bearing on women's health outcomes, dignity, economic security, societal involvement, overall wellbeing, and life quality. As a result, [9] asserted that antiabortion policy is frequently viewed as deteriorating maternal death rates, particularly in low and lower-middle-income nations.

Whilst nations with lower incomes are impacted worse when anti-abortion laws are in place [10], the impact of these regulations on women in wealthier nations has resulted in massive protests in nations like the US, within which new antiabortion legislation in Texas prohibits abortion after 42 days [11]. Senate Bill 8 (SB8), dubbed the "fetal heartbeat bill," stipulates that after an ultrasound detects the fetal heartbeat, a mother is no longer permitted to choose to terminate the pregnancy [12]. Even though this bill probably had an impact, medical experts assert it is deceptive because fetal development in the mother's womb is continually and what lawmakers presently mix up as a heart rate is an electrically generated reflected and wavering part of the tissue that soon turns into the infant's heart [13].

## B. Research Aims and Objectives

The study aims to examine the impact of one of Nigeria's anti-abortion laws (the criminal code) on the delivery of maternal health services in the Akure metropolis. Specific objectives will be to:

- 1. To understand the level of awareness of the criminal code anti-abortion law amongst women and health service workers in Akure metropolis.
- 2. To understand the general perception of women and health workers in the Akure metropolis about the criminal code anti-abortion law.
- To ascertain whether or not the criminal code antiabortion law has helped in achieving reduced abortions (safe or unsafe) amongst women in the Akure metropolis.
- 4. Determine whether the criminal code anti-abortion law has in any way affected maternal health service delivery in Akure metropolis

## C. Research Questions

Developed in line with the forgoing research aim and objectives, this study will look to answer the following research questions:

- What is the level of awareness of women and health a) workers about the criminal code anti-abortion law?
- How do women and Health Workers perceive the

- criminal code anti-abortion law?
- To what extent has the criminal code anti-abortion law helped in achieving reduced abortion amongst women in Akure?
- How has the criminal code anti-abortion law affected maternal health service delivery in the Akure metropolis?

# D. Research Hypotheses

The following null hypotheses will be tested at a 0.05 level of significance

H01: The level of awareness of women and Health Workers about the criminal code anti-abortion law is low.

H02: Women and Health Workers perceive the criminal code anti-abortion law as unforgotten

H03: Criminal code anti-abortion law has not significantly helped in achieving reduced abortion amongst women in Akure H04: The criminal code anti-abortion law has not significantly affected maternal health service delivery in the Akure metropolis requirement.

#### 2. Material and Method

# A. Study Setting

The research was carried out at Akure, the capital city of Ondo state in Nigeria's southwestern region. The city was selected upon the researcher's knowledge of its maternal health status, being employed for more than 15 years with the state's health department/ministry.

## B. Study Design

The qualitative approach has been employed as the primary method in the current study, and it is supplemented by quantitative methods. Nonetheless, the researcher utilized a convergent research strategy, guaranteeing that data processed for both methodologies is collected, processed, and interpreted separately to achieve study objectives [14].

## C. Ethics

Ethical approval was acquired from the Institutional Ethical Committee, Ondo State Ministry of Health Akure, and group admins of all WhatsApp groups for all maternal health clinics visited. A welcome letter written by the researcher provided potential respondents with a detailed explanation of the study's goal. This was sent across various WhatsApp groups before the delivery of surveys to obtain informed consent [15]. To protect each respondent's anonymity, no room was available for personal information on the instrument [16], and it was forbidden to copy the individual telephone number of any member of the WhatsApp groups as part of the authorization granted to the researcher [16]. Before conducting the interviews, all participants provided written, informed consent. When respondents deliberately or mistakenly divulged private information, their answer was deemed void. In addition, all replies were provided voluntarily, with responses kept anonymously on the cloud and removed once the data analysis was completed. Finally, because this study involves humans, the researcher guaranteed that they were not harmed in any way

(psychological, physical, emotional, or otherwise). This was accomplished by adhering to the Helsinki Declaration guidelines published by the World Medical Association [17], [18].

## D. Sample size

All women and health service personnel working for public hospitals in Ondo state who provide prenatal and postnatal care, as well as other reproductive and sexual health services, were included in this study. According to 2016 population census estimates, there are around 35,000 women between the ages of 15 and 45 in Akure, with 96 healthcare staff spread among four public maternity health institutions. This led to a sample size of 35,096 participants. Utilizing [19], a web-based sample size calculator, with a confidence interval of 5 and a confidence level of 95%, the sample size for an estimated population of 35,096 is 380. As a result, this study employs a convenience sample of 380 respondents, including women in their reproductive years who attend various maternity health facilities and healthcare staff from Akure's four public hospitals.

# E. Sample Technique

An open-ended interview schedule (qualitative) and a close-ended (structured) questionnaire (quantitative) were employed to elicit respondents' views on the consequences of anti-abortion legislation on maternal health service delivery in Akure. The open-ended interview schedule included 10 inquiries designed to elicit information regarding women's awareness of anti-abortion legislation, as well as their experiences seeking healthcare associated with abortion or complications stemming from it. The questions were designed to be completed in 20 minutes and were based on the research's principal issue. The questionnaire form also includes 10 Likert

scale questions with alternatives graded 1-3 (3-agree, 2 disagree, and 1 undecided) and is meant to be completed in 10 minutes.

## F. Data Collection

This study's data was collected over a span of two weeks (August 15-29, 2021). The instrument was managed digitally through the WhatsApp instant messaging service. After creating the instruments in Google Forms, the researcher distributed the links to the questions to various female-only WhatsApp groups in Akure. These groups comprise women's fellowship groups from different Christian and Islamic denominations, social and fashion-related clubs, etc. For this study, content analysis was used to examine interview data. The researcher used descriptive statistical techniques for the quantitative treatment of data, such as measurements of central tendency (e.g., mean score) and measures of spread (e.g., ranking of score).

#### 3. Result

### A. Quantitative Findings

The respondents returned all 328 copies of the issued questionnaire, resulting in a 100% return rate. Furthermore, all of the returned surveys were deemed to be valid and were subsequently evaluated. Tables, charts, frequency, simple percentages, and thematic analysis were used to demonstrate the collected data. The hypotheses were examined using regression analysis, which employed the Statistical Package for Social Sciences and Microsoft Excel software applications. The tables and figures below show how the correspondent responded.

Description of the respondents

		Frequency	Percent	Valid Percent	<b>Cumulative Percent</b>
Valid	A woman in her reproductive years	112	34.1	34.1	34.1
	Attained menopause	47	14.3	14.3	48.5
	A woman in her reproductive years who is also a healthcare worker	100	30.5	30.5	79.0
	A male healthcare worker	56	17.1	17.1	96.0
	A woman who has attained menopause but who is a healthcare worker	13	4.0	4.0	100.0
	Total	328	100.0	100.0	

Source: Field Survey Data (2021)

Table 2

		Frequency	Percent	Valid Percent	<b>Cumulative Percent</b>
Valid	15-25 years	51	15.5	15.5	15.5
	26-35 years	212	64.6	64.6	80.2
	36-45 years	49	14.9	14.9	95.1
	46 years and above	16	4.9	4.9	100.0
	Total	328	100.0	100.0	

Source: Field Survey Data (2021)

Table 3

	Respondents' level of awareness concerning the illegality of abortion in Nigeria					
		Frequency	Percent	Valid Percent	<b>Cumulative Percent</b>	
Valid	Well-informed	60	18.3	18.3	18.3	
	Aware	151	46.0	46.0	64.3	
	Unaware	115	35.1	35.1	99.4	
	Never heard of it	2	.6	.6	100.0	
	Total	328	100.0	100.0		

Source: Field Survey Data (2021)

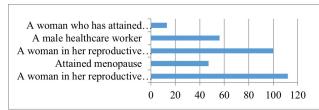


Fig. 1. Description of the respondents

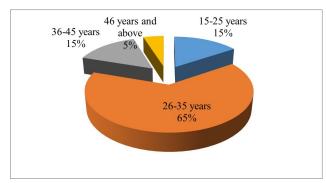


Fig. 2. Respondents' age group

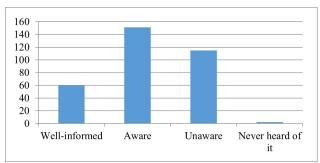


Fig. 3. Respondents' level of awareness with regard to the illegality of abortion in Nigeria

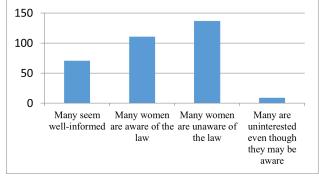


Fig. 4. Level of women's awareness of the illegality of abortion in Nigeria

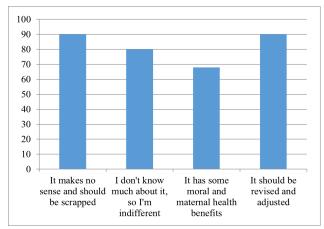


Fig. 5. Respondent's perception of Nigeria's anti-abortion laws

Table 4 Level of women's awareness of the illegality of abortion in Nigeria

		Frequency	Percent	Valid Percent	<b>Cumulative Percent</b>
Valid	Many seem well-informed	71	21.6	21.6	21.6
	Many women are aware of the law	111	33.8	33.8	55.5
	Many women are unaware of the law	137	41.8	41.8	97.3
	Many are uninterested even though they may be aware	9	2.7	2.7	100.0
	Total	328	100.0	100.0	

Table 5 Respondent's perception of Nigeria's anti-abortion laws

		Frequency	Percent	Valid Percent	<b>Cumulative Percent</b>
Valid	It makes no sense and should be scrapped	90	27.4	27.4	27.4
	I don't know much about it, so I'm indifferent	80	24.4	24.4	51.8
	It has some moral and maternal health benefits	68	20.7	20.7	72.6
	It should be revised and adjusted	90	27.4	27.4	100.0
	Total	328	100.0	100.0	

Source: Field Survey Data (2021)

Table 6 Women and maternal health workers' general perception of the anti-abortion laws

		Frequency	Percent	Valid Percent	<b>Cumulative Percent</b>
Valid	Many women don't care since the government isn't enforcing it	162	49.4	49.8	49.8
	Many women are careful not to be used as scapegoats	123	37.5	37.8	87.7
	The government does not even remember there's any such law	40	12.2	12.3	100.0
	Total	325	99.1	100.0	
Missing	System	3	.9		
Total	•	328	100.0		

Source: Field Survey Data (2021)

Table 7 Would you say the anti-abortion law has reduced the rate of abortion?

		Frequency	Percent	Valid Percent	<b>Cumulative Percent</b>
Valid	Yes	87	26.5	26.7	26.7
	No	170	51.8	52.1	78.8
	Maybe	55	16.8	16.9	95.7
	I don't know	14	4.3	4.3	100.0
	Total	326	99.4	100.0	
Missin	g System	2	.6		
Total		328	100.0		

Source: Field Survey Data (2021)

Table 8 Advice to the government with regards to regulating abortions or retaining the ban

		Frequency	Percent	Valid Percent	<b>Cumulative Percent</b>
Valid	The government should regulate abortions	114	34.8	34.8	34.8
	Abortion should remain banned	97	29.6	29.6	64.3
	Women should be given autonomy to do as they wish	113	34.5	34.5	98.8
	None of the above	4	1.2	1.2	100.0
	Total	328	100.0	100.0	

Source: Field Survey Data (2021)

Table 9 Methods through which healthcare workers handle abortion-related, sexual, and reproductive health issues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Health workers are in support of the laws and would report such a case	90	27.4	27.6	27.6
	Many don't take the law seriously so they act like it does not exist	111	33.8	34.0	61.7
	Health workers mostly avoid getting involved with such cases	120	36.6	36.8	98.5
	None of the above	5	1.5	1.5	100.0
	Total	326	99.4	100.0	
Missin	g System	2	.6		
Total		328	100.0		

Source: Field Survey Data (2021)

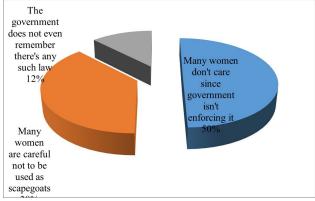


Fig. 6. Women and maternal health workers' general perception of the anti-abortion laws

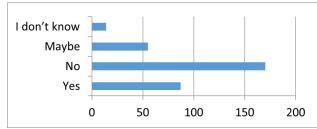


Fig. 7. Anti-abortion law and reduction in the abortion rate

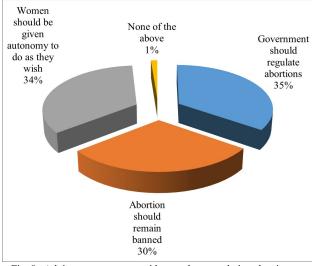


Fig. 8. Advise to government with regards to regulating abortions or retaining the ban

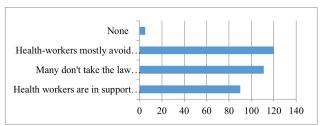


Fig. 9. Methods through which healthcare workers handle abortion-related issues of women, given the anti-abortion laws

Table 10

The likelihood that a woman will get an abortion carried out on her in a public hospital

		Frequency	Percent	Valid Percent	<b>Cumulative Percent</b>
Valid	Cannot happen	1	.3	.3	.3
	Unlikely	166	50.6	50.6	50.9
	Likely	117	35.7	35.7	86.6
	Very likely	44	13.4	13.4	100.0
	Total	328	100.0	100.0	

Source: Field Survey Data (2021)

Table 11 How often do you think women find alternatives to public hospitals to carry out abortions?

	<u>-</u>	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I can't say	42	12.8	12.8	12.8
	Occasionally	55	16.8	16.8	29.6
	Once in a while	64	19.5	19.5	49.1
	Very often	167	50.9	50.9	100.0
	Total	328	100.0	100.0	

Source: Field Survey Data (2021)

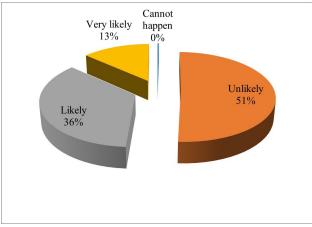


Fig. 10. Chances that a woman will get an abortion in a public hospital

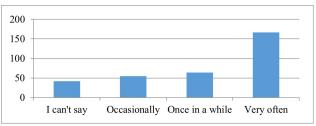


Fig. 11. How often do you think women find alternatives to public hospitals to abort?

# B. Qualitative Findings

The table 12 shows the qualitative findings.

# 4. Discussion on Findings

The study's findings revealed that women and health-care providers are unaware of the criminal code's anti-abortion law. (R2 = 0.006, F1,326 = 1.81, = 0.142, p > 0.05), indicating that

Table 12
Summary of qualitative finding

		mmary of qualitative findings
S.No.	Interview Question	Findings
Q11	Please explain all you know about abortion being	A great deal of respondents viewed abortion as an unlawful conduct punishable by up to 14
	illegal in Nigeria	years in prison unless executed to save the life of a pregnant mother.
Q12	Would you say the government's anti-abortion stance	Everyone who participated acknowledged that anti-abortion legislation is beneficial.
	is morality-driven or is it just one law that the	
	government has forgotten?	
Q13	Please describe your views concerning the	whilst all respondents believe that anti-abortion legislation is vital (see responses to question
	government criminalizing abortion in Nigeria.	12), they have distinctive and opposing opinions on criminalizing abortion in Nigeria.
Q14	Would you say the anti-abortion law has helped	Many respondents (81.4%) indicated that the anti-abortion law had aided them in reducing
	achieve a reduction in the rate of abortion within your	the rate of abortion in their communities.
	environment? Give your reasons.	
Q15	Would you say the government's anti-abortion stance	The overwhelming majority of the participants (70.3%) believe it is only one law that the
	is morality-driven or is it just one law that the	governing body has forgotten; this could be one of the explanations why many respondents
	government has forgotten?	believe abortion should not be a crime with harsh penalties in the country because a lot of
		individuals have never heard of the law before.
Q16	Provide details of the frequency of abortion around	According to 56.6% of those surveyed, 59 out of every 1,000 women aged 15-49 years
	you.	become pregnant by accident, whereas 40% of women in this age bracket terminate their
		pregnancies.
Q17	Is there a chance that a woman can easily get an	Over fifty percent of those surveyed (58.2%) acknowledged that a woman can easily get an
	abortion done in any of the government/public	abortion done in any of the government/public hospitals nearby due to the fact that penal
	hospitals around you? Please give reasons for your	and criminal codes are no longer used effectively and also because threatening abortion can
	answer	claim lives.
Q18	Please describe how much anti-abortion law is upheld	The majority of respondents (82.6%) indicated that anti-abortion legislation was not taken
	in government hospitals around you	seriously in government hospitals near them.
Q19	In comparison to government/public hospitals, how	More than half of those surveyed believed that private hospitals had a higher percentage of
	would you describe the readiness/willingness of	abortion patients than government/public facilities.
	private hospitals to offer abortion services to women?	
Q20	Kindly list a few other methods through which	A total of 799 abortion techniques were chosen by 325 of the 328 respondents. A responder
	women in your vicinity carry out an abortion	chose around two techniques on average, totalling 245.8 percent.

Table 13

Research questions	Statistical results	Decisions
The level of awareness of women and health service workers	$R^2 = 0.006$ , $F_{1,326} = 1.81$ , $\beta =$	The level of awareness of women and health service workers
about the criminal code anti-abortion law is low.	0.142; p > 0.05	about the criminal code anti-abortion law is low.
	The null hypothesis is	
	accepted.	
Women and health service workers perceive the criminal code	$R^2 = 0.052, F_{1,326} = 18.032, \beta$	Women and health service workers perceive the criminal code
anti-abortion law as unforgotten.	= 0.101, p < 0.05	anti-abortion law as ineffective and forgotten.
	The null hypothesis is	
	rejected.	
Criminal code anti-abortion law has not significantly helped	$R^2 = 0.466, F_{1,326} = 284.713,$	The criminal code anti-abortion law has significantly helped
in achieving reduced abortion amongst women in Akure.	$\beta_{CCAA} = 0.764, p < 0.05$	in achieving reduced abortion amongst women in Akure.
	The null hypothesis is	
	rejected.	
The criminal code anti-abortion law has not significantly	$R^2 = 0.175$ , $F_{1,326} = 69.301$ ,	The criminal code anti-abortion law has significantly affected
affected maternal health service delivery in Akure metropolis.	$\beta_{CCAA} = 0.21, p < 0.05$	maternal health service delivery in the Akure metropolis.
	The null hypothesis is	
	rejected.	

the amount of awareness of the criminal code among women and healthcare personnel accounts for only 0.6% of the variance found in anti-abortion law adherence. This is corroborated by the findings of [1], who discovered that the female gender is a demographic lacking in vital knowledge and thus requires protection against their lack of education as well as the practices of abortion service providers, the majority of whom have been categorized as an immoral group of healthcare professionals.

The study's findings also revealed that women and healthcare personnel regard the criminal code's anti-abortion law as ineffective and ignored. This finding is consistent with [2] findings that there is a spike in unsafe abortions due to some anti-abortion policies are more detrimental than beneficial. As a result, the policy they presented (GGR) was reportedly removed in 2021 [3]. On the flip side, [4] proposed that reducing anti-abortion legislation will have a positive excess influence on women's educational attainment as well as labour supply.

The study findings demonstrated that the criminal code antiabortion law has greatly aided in reducing abortion among Akure women. The findings are consistent with the research conducted by [5], which similarly showed a one-third decrease in abortion rates since 1982. [4], on the contrary, suggested that decriminalizing abortion will result in a complete reversal of abortion service providers' legal responsibility from the mandatory attitude of refusing abortion services to the rather obligatory commitment to providing them. The proposal calls for doctors to be granted the legal right to exercise their rights in the form of ethical objections to abortion based on their moral integrity, the absence of impediments to individuals in need of abortion healthcare services, and the government's obligations.

The study's final finding indicated that the criminal code antiabortion law has had a significant impact on maternal health service delivery in Akure metropolis, explaining 17.5% of the variance discovered in maternal health service delivery in Akure metropolis by women and health workers' compliance to the criminal code anti-abortion law.

## 5. Conclusion

The nexus between maternal healthcare delivery and Nigeria's anti-abortion legislation, especially when considering the setting of the Akure Metropolitan City, highlights the dire need for a paradigm shift in healthcare policies. The unique problems that women confront in this urban context highlight the fundamental significance of rethinking the current legislative frameworks governing abortion. The consequences of stringent abortion regulations on maternal health outcomes in Akure are severe, with women facing obstacles that risk their well-being. As this analysis shows, the discrepancies between legal constraints and the need for accessible reproductive healthcare services cultivate a dangerous environment for maternal health in the Akure Metropolitan City. Addressing this complicated issue requires a holistic approach considering the community's socio-cultural fabric whilst promoting the fundamental right to safe and comprehensive maternity care. Reforming anti-abortion laws, as well as improving maternal health services, are critical to mitigating the negative repercussions encountered by women in Akure and, by extension, throughout Nigeria. Policymakers may prepare the path for a future in which maternal well-being is protected and women's rights are fully honoured by creating an ideal atmosphere for reproductive health.

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