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GENDER DIFFERENCES AND POLICY EFFECTIVENESS IN ADDRESSING OPEN DEFECATION IN UYO CAPITAL CITY, AKWA IBOM STATE, NIGERIA

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Abstract

Background: Sanitation policy in Nigeria increasingly recognises both gender and institutional responsibility as central to eliminating open defecation. However, the extent to which these factors operate in practice at the city level has rarely been examined empirically.

Objective: This study evaluated gender differences in perceptions and attitudes towards open defecation and assessed the effectiveness of existing policies and interventions among residents of Uyo Capital City, Akwa Ibom State, Nigeria.

Methods: A cross-sectional survey was conducted among 345 respondents (183 males, 162 females) in Uyo Capital City. Data were analysed using chi-square tests and Analysis of Variance (ANOVA). Findings were supplemented by a Focus Group Discussion (FGD) to provide qualitative insights.

Results: There was no statistically significant difference between men's and women's perceptions or attitudes towards open defecation ($\chi^2 = 0.304$, $p = 0.989$; $F = 0.09$). However, qualitative evidence indicated that women remain disproportionately exposed to safety and privacy risks due to inadequate facilities. On policy effectiveness, only 52.17% of respondents were aware of the health risks associated with open defecation, and just 4.06% identified Non-Governmental Organisations as responsible for addressing the practice. Despite existing legal instruments — including Executive Order 009 (2019), the Akwa Ibom State Water Resources Sector Oversight and Regulation Law 2022, and the Akwa Ibom State WASH Policy 2025 — which formally prohibit open defecation and prescribe penalties, implementation remains weak.

Conclusion: Gender is not, by itself, a significant driver of attitudinal differences towards open defecation in Uyo. However, weak public awareness, unclear institutional responsibility, and limited NGO visibility are undermining policy implementation. The study recommends stronger multi-stakeholder coordination, gender-responsive facility design, and targeted risk communication to address open defecation in urban areas.

Keywords: Gender; open defecation; policy effectiveness; sanitation governance; institutional responsibility; Uyo Capital City**.**

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1. INTRODUCTION

Two dimensions are frequently identified as critical, yet under-examined, in efforts to eliminate open defecation: gender and institutional/policy effectiveness. Women and girls are widely reported to be disproportionately affected by inadequate access to private, secure sanitation facilities, facing heightened risk of sexual harassment, violence and health complications where such facilities are absent (Saleem *et al*., 2019; Sahoo *et al.*, 2018). At the same time, the persistence of open defecation despite formal legal prohibition in many jurisdictions points to gaps in policy implementation, institutional coordination and public communication (Nnaji *et al*., 2021). In Akwa Ibom State, several legal and policy instruments have been enacted to end open defecation, including the Akwa Ibom State Water Resources Sector Oversight and Regulation Law 2022, the Akwa Ibom State WASH Policy 2025, and the state's Roadmap to End Open Defecation by 2030. Yet the practice remains widespread in Uyo, the state capital, suggesting either that these instruments are not being effectively enforced or communicated, or that gendered vulnerabilities are not being adequately addressed within them (WASHNORM, 2021). This study examines both dimensions together, gender differences in perception and attitude, and the effectiveness of existing policy and institutional responses to inform more targeted governance interventions. These two dimensions are not unrelated. Because policy design determines where and how sanitation facilities are sited, financed and regulated the extent to which existing Akwa Ibom State instruments explicitly address gendered vulnerability or fail to, is itself a test of policy effectiveness. Examining gender and institutional effectiveness together, rather than as separate lines of enquiry, therefore offers a more complete picture of why open defecation persists in Uyo despite a comparatively well-developed formal legal and policy architecture.

Although open defecation affects entire communities, a substantial body of evidence indicates that men and women experience and evaluate the practice differently. Due to concerns about modesty, vulnerability to harassment and inconvenience – particularly during menstruation or at night – women frequently report more negative sentiments toward open defecation than men, prioritising health, privacy and dignity out of fear of violence and sexual harassment, and applying stricter personal standards against the practice (Jenkins and Curtis,

2005; Sahoo *et al.*, 2018). Men, by contrast, more often regard open defecation as a convenient, common and comparatively unstigmatised activity, particularly in rural or semi-urban settings where it is socially normalised, and give comparatively little weight to privacy or health considerations (Abubakar, 2018). Saleem *et al.* (2019) found that women are more likely than men to suffer adverse health outcomes linked to open defecation, with long-term consequences for physical and mental wellbeing; the authors identified heightened risk of sexual exploitation, threats to privacy and dignity, and psychological stress as recurring themes in women's accounts of the practice, and argued that intersecting socio-cultural and economic disadvantages frequently leave women and girls without equal standing to negotiate safer alternatives. Fisher (2017) and Abubakar and Dangana (2020) similarly found that men's attitudes toward sanitation are more strongly shaped by cost, tradition and convenience, while women's demand for improved hygiene facilities is more consistently driven by health, dignity and security concerns – a divergence with direct implications for how sanitation interventions and facilities should be designed.

Appiah-Effah *et al.* (2024) further found that education, wealth status, religion, occupation and place of residence substantially shape open defecation practice among Ghanaian rural women specifically, and that the practice is disproportionately concentrated among poorer rural women. Taken together, this literature suggests that gendered perception and vulnerability, family toilet adoption decisions, and participation in hygiene programming are closely linked, such that inclusive and sustainable hygiene programming requires an accurate understanding of gender differences in perception and attitude within the specific community concerned (Nnaji *et al.,* 2021).

It is worth noting that much of this international literature was generated in predominantly rural or peri-urban study settings, where the physical distance to sanitation facilities and the visibility of open defecation sites are often greater than in a dense urban capital such as Uyo. This raises a genuine empirical question, addressed directly by this study, as to whether the gendered attitudinal differences documented in these rural-focused studies generalise to an urbanising state-capital context where facility access is nominally higher (as this research series' companion analysis of sanitation access shows) but

where the specific safety and privacy considerations driving women's attitudes in rural settings may operate differently, for instance, around shared urban facilities and poorly lit public spaces rather than distant rural bushland.

Nigeria's modern policy response to open defecation dates to 2015, when the Federal Ministry of Water Resources, working with development partners, produced a National Road Map "Making Nigeria Open-Defecation-Free by 2025" approved by the National Council on Water Resources in 2016 under the PEWASH (Partnership for Expanded Water Supply, Sanitation and Hygiene) programme strategy (2016–2030); this deadline was subsequently revised to 2030 following a Federal Ministry review in November 2024. In November 2018, then-President Muhammadu Buhari declared a state of emergency in the WASH sector to strengthen elimination efforts (Okuku, 2020), and on 20 November 2019, one year after the nationwide launch of the Clean Nigeria: Use the Toilet campaign, signed Executive Order 009 on Ending Open Defecation in Nigeria, which mandated implementation of the National ODF Roadmap, established a Clean Nigeria Campaign Secretariat within the Federal Ministry of Water Resources, directed that all public places (schools, hotels, fuel stations, worship centres, markets, hospitals and offices) provide accessible toilets, and called on the National Assembly and State Houses of Assembly to enact laws prohibiting open defecation with appropriate penalties.

At the state level, the Akwa Ibom State Government responded by developing a Roadmap to Make Akwa Ibom State Open-Defecation-Free by 2030, whose preparatory process began in 2014 with UNICEF and European Union support under the Niger Delta Support Programme WASH component, resulting in 116 water facilities and 88 hygiene-facility units across four pilot local government areas (Nsit Atai, Obot Akara, Ikono and Esit Eket). The roadmap envisages a phased implementation, preparation and transition in 2025, external progress evaluation in 2027, consolidation and self-evaluation in 2029, and a final push to certified ODF status by July 2030, financed through an estimated N31.3 billion (74% of total cost) in household contributions toward 265,250 household latrines, and N8.681 billion (26%) in government and development-partner funding toward 416 institutional toilets in schools, health centres, markets and motor parks. Consistent with Executive Order 009, the Akwa Ibom State Government subsequently enacted the Water Resources Sector Oversight and

Regulation Law 2022, establishing the state Water Corporation, Rural Water Supply and Sanitation Agency, Water Council and Water Services Regulatory Commission. Section 108 of the Law directly addresses open defecation, requiring that all homes and public spaces – including schools, hotels, fuel stations, worship centres, markets, shopping centres, hospitals and offices – provide accessible restrooms with due regard for the needs of persons with disabilities, and prescribing that any person found defecating in public is liable to a minimum fine of ₦100,000, a maximum sentence of three months' imprisonment, or both.

The Water Services Regulatory Commission established under the same 2022 Law is, in principle, positioned to play an important oversight role in sanitation service delivery, including monitoring compliance with facility-provision obligations at public premises under Section 108. However, this study's findings on low public awareness of specific legal provisions (Section 8.4) suggest that the Commission's regulatory presence has not yet translated into a level of public visibility comparable to its formal statutory mandate, a pattern consistent with the broader institutional-trust findings of this study, in which state regulatory agencies were less frequently identified by residents as responsible for addressing open defecation than either community leaders or government in general terms (Section 8.3). The Akwa Ibom State Government approved its Water, Sanitation and Hygiene (WASH) Policy in June 2025, aligning the state's strategy with both its own ODF Roadmap and the Federal Government's National Policy on Water Resources. The policy is structured around a set of numbered Policy Statements, including explicit provision for persons with disabilities (Policy Statement 1), alignment with the National Roadmap for an ODF Nigeria (Policy Statement 2), environmental protection (Policy Statement 5), and a Legal and Regulatory Framework provision (Policy Statement 9) intended to guarantee enforceability of the state's sanitation commitments. The policy explicitly anticipates continued reliance on Community-Led Total Sanitation (CLTS) and related behaviour-change strategies as principal implementation mechanisms, reflecting the same demand-side, community-driven approach underpinning the national roadmap.

Notably for this study's focus, the policy's population projections – estimating continued growth of approximately 3.2% annually across the state – explicitly acknowledge the

pressure that urbanisation places on sanitation infrastructure delivery, a pressure this study's companion analysis of sanitation access has found to be particularly acute in Uyo Capital City's urban and semi-urban zones. The policy statement architecture, however, does not appear to include a numbered statement specifically dedicated to gender-differentiated facility design or safety planning, beyond the general disability-inclusion provision in Policy Statement 1 – a gap consistent with this study's finding that gendered safety risk, while qualitatively significant, has not been as explicitly addressed in formal policy design as other dimensions such as disability inclusion and legal enforceability. Despite this comparatively well-developed formal architecture, empirical assessment of on-the-ground policy effectiveness in Akwa Ibom State remains limited. The 2021 WASHNORM report documented a concerning regression in the state's WASH indicators between 2019 and 2021 – including a rise in the open-defecating population from 4% to 11%, and a decline in access to basic hygiene services – despite the roadmap and legal framework already being in place, attributing this partly to inadequate WASH-sector budgetary allocation and weak release of approved funds (FMWR, 2021). This regression is instructive: it suggests that the existence of formal policy instruments does not, by itself, guarantee effective implementation, and that public awareness, institutional coordination and resource flow are independent determinants of policy effectiveness that require separate empirical assessment – the specific focus of this study's second objective.

Comparison with other Nigerian states offers useful context for interpreting Akwa Ibom State's implementation trajectory. Jigawa State was declared Nigeria's first fully open-defecation-free state in 2022, having pursued a sustained, community-led implementation strategy under the national roadmap, while Kano, Kaduna, Anambra and Cross River States have achieved partial local-government-level ODF certification through comparable Community-Led Total Sanitation approaches. These cases indicate that the national policy architecture is capable of producing measurable results where implementation is sustained and well-resourced. Akwa Ibom State's own comparatively favourable aggregate open defecation rate (11%, against a national average of 23%) situates it ahead of many peer states in relative terms, even as this study's findings, together with the state's own documented 2019–2021

regression, indicate that the state has not yet achieved the level of sustained implementation intensity associated with fully certified ODF states such as Jigawa. This comparative positioning, meaningfully ahead of the national average, yet short of full ODF achievement and subject to documented regression, is consistent with this study's core finding that Akwa Ibom State's challenge lies less in policy design than in the consistency of implementation, communication and enforcement over time.

This study draws on the Theory of Planned Behaviour (Ajzen, 1991) to interpret its institutional-effectiveness findings, since the theory's construct of subjective norms – perceived social and institutional expectations – is directly shaped by how visibly and consistently formal rules are communicated and enforced. Where residents are unaware that open defecation is legally prohibited and financially penalised under Section 108 of the Water Resources Sector Oversight and Regulation Law 2022, or perceive enforcement as inconsistent, the subjective-norm pressure that formal law is designed to exert is correspondingly weakened, regardless of how comprehensive the underlying legal text may be. The research also draws on feminist and gender-and-development perspectives on WASH programming, which emphasise that gender-neutral policy design risks perpetuating gendered vulnerability where it fails to explicitly account for the differentiated safety, privacy and health considerations documented in Section 5.1 (Fisher, 2017). The reviewed literature suggests two things relevant to this paper. First, gendered differences in vulnerability to the consequences of open defecation are well documented internationally, even where attitudinal differences between men and women may not always reach statistical significance in a given local sample, a distinction this study tests directly for Uyo Capital City. Second, Akwa Ibom State possesses a comparatively comprehensive formal legal and policy architecture , Executive Order 009, the 2022 Water Resources Law, the 2025 WASH Policy and the ODF Roadmap, yet documented regression in state WASH indicators between 2019 and 2021 indicates that formal policy comprehensiveness has not translated into consistent implementation effectiveness, underscoring the need for empirical assessment of public awareness and institutional trust of the kind undertaken in this study.

Globally, gender and governance have increasingly been recognised as intertwined priorities in sanitation programming: the Sustainable

Development Goals frame safe sanitation access explicitly with reference to the needs of women and girls (SDG target 6.2 specifically references "paying special attention to the needs of women and girls"), while national ODF roadmaps across sub-Saharan Africa, including Nigeria's own, have similarly incorporated gender-responsive language into their design. Yet the gap between gender-aware policy language and gender-responsive implementation in practice, whether facilities are actually sited, lit and secured with women's safety in mind, and whether enforcement institutions are actually trusted and accessible is precisely the kind of gap that aggregate national and state monitoring statistics are poorly positioned to detect, and that this study's city-level, mixed-methods approach is designed to surface.

Despite the existence of state-level sanitation laws, policies and a formal roadmap to achieve open-defecation-free status by 2030, open defecation persists in Uyo Capital City, and there is limited empirical clarity on two related questions: first, whether men and women experience and evaluate the practice differently, given that women are widely presumed, but rarely locally verified, to face greater risk from inadequate sanitation access; and second, which institutions the public itself regards as responsible for addressing the problem, and how effectively existing policies are perceived to be enforced. Without this evidence, interventions risk being poorly targeted, whether by overlooking genuine gender-differentiated needs or by relying on institutional actors the public does not trust or recognize as responsible. Hence, the need to evaluate gender differences in perception and attitude towards open defecation, and to assess the effectiveness of existing policies and institutional interventions in addressing the practice, in Uyo Capital City, Akwa Ibom State, Nigeria.

2. Materials and Methods

Study Area

Uyo Capital City, the capital of Akwa Ibom State, Nigeria, lies between latitudes 4° 58′ N and 5° 04′ N and longitudes 7° 51′ E and 8° 01′ E, covering approximately 214.31 km² (Ekpenyong *et al.*, 2020). See Figure 1. As the seat of state government, Uyo is the administrative centre from which the sanitation policies and institutions discussed in Section 5.2 are coordinated, even though, as this study's companion analysis of sanitation access shows, implementation on the ground within the capital itself has not been uniformly effective.

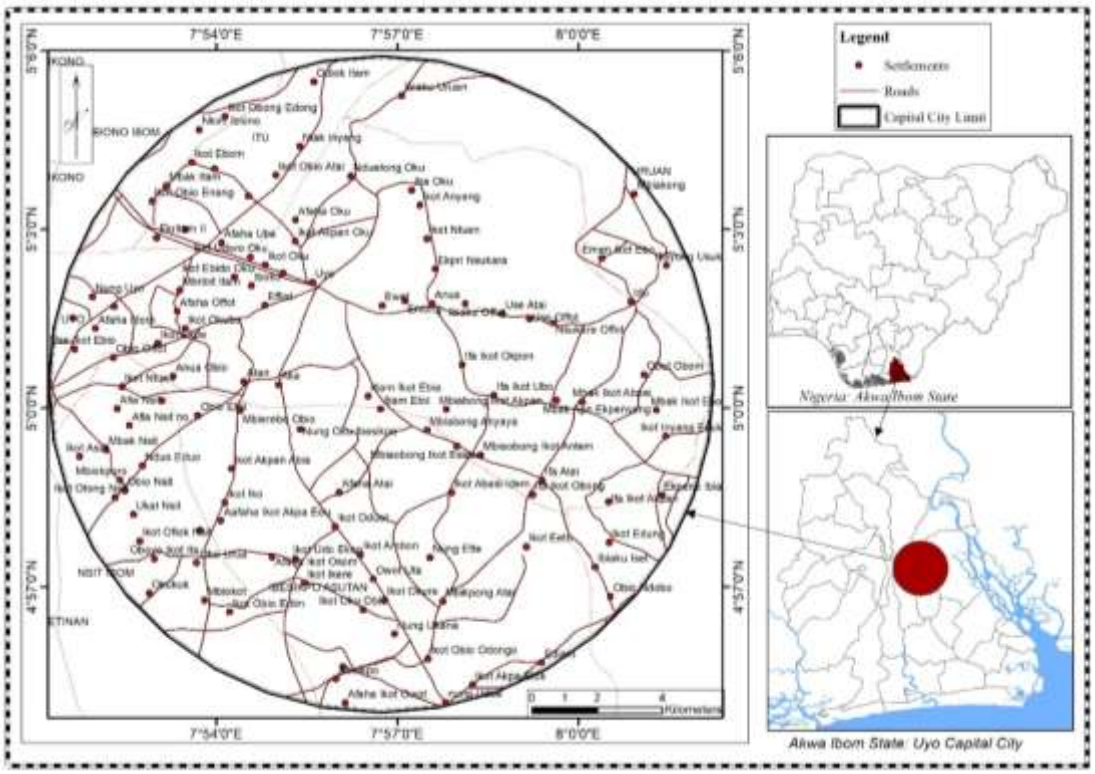

Figure 1: Uyo Cpital City the study Area with Akwa Ibom and Nigeria as Insert
Source: GIS/Cartographic Studio, Dept. of Geography UNIUYO (2026)

The city falls under the jurisdiction of several state institutions relevant to sanitation governance, including the Akwa Ibom State Ministry of Water Resources and Sanitation, the Akwa Ibom State Environmental Protection and Waste Management Agency, the Akwa Ibom State Water Corporation, and the Akwa Ibom State Rural Water Supply and Sanitation Agency, alongside community-level structures such as traditional rulers and community leaders who retain considerable social influence over local norms and enforcement. A State Sanitation Court has also been established as part of the state's enforcement architecture under the Water Resources Sector Oversight and Regulation Law 2022, intended to process cases of public defecation and related infractions under Section 108 of the Law.

The population of Uyo Capital City was projected at about 1.3 million as of 2023, growing at roughly 3.2% annually (Akwa Ibom State WASH Policy, 2025). The population is predominantly Christian, and both traditional community leadership structures and Christian religious institutions retain considerable moral authority in shaping local norms around cleanliness and public conduct, positioning both as potentially important – but, as this study's findings suggest, currently under-utilised – partners in sanitation behaviour-change programming alongside formal state institutions.

Uyo Capital City's sanitation governance landscape is characterised by multiple

overlapping institutional mandates rather than a single lead implementing agency: the Ministry of Water Resources and Sanitation holds broad policy responsibility, the Water Corporation and Rural Water Supply and Sanitation Agency handle infrastructure delivery in urban and rural contexts respectively, the Environmental Protection and Waste Management Agency oversees waste management more broadly, and the State Sanitation Court handles enforcement. While this institutional structure mirrors the multi-agency approach typical of Nigerian state WASH governance generally, the absence of a single, publicly visible lead agency for open defecation specifically may itself contribute to the diffuse public attribution of responsibility documented in this study's results, where over a third of respondents attributed responsibility to multiple actors jointly rather than to any single institution.

This multi-agency structure is not unique to Akwa Ibom State – it reflects the Federal Government's own multi-agency approach embodied in Executive Order 009, which explicitly tasks a dedicated Clean Nigeria Campaign Secretariat with coordinating across government ministries, departments and agencies precisely because sanitation delivery inherently spans water supply, public health, education, environmental protection and law enforcement mandates. What this study's findings suggest, however, is replicating this multi-agency coordination structure at state and city level without a correspondingly clear, publicly communicated point of contact risks reproducing the same diffusion of perceived responsibility at the local level that the national Secretariat was designed to resolve at the federal level.

Research Design and Sampling

The study used a cross-sectional survey design supplemented by a focus group discussion. The target sample size of 384 was determined using the standard formula for large populations at a 95% confidence level and 5% margin of error, appropriate given Uyo Capital City's population size of approximately 1.3 million, with the sample subsequently allocated proportionately across the urban, semi-urban and rural zones. of 384 questionnaires administered across these zones, 345 (89.84%) were retrieved and analysed, comprising 183 male (53.04%) and 162 female (46.96%) respondents – a gender distribution that, while not perfectly balanced, was sufficiently close to parity to support meaningful statistical comparison between male and female subgroups without requiring weighting adjustment. A focus group discussion involving nine participants, held in March 2025 in Ikot Edido, Uyo, provided qualitative depth on community perspectives regarding gendered experience and institutional responsibility, with both male and female participants included to ensure both perspectives were

represented in the qualitative component.

Method of Data Analysis

Gender differences in perception and attitude were tested using the Pearson chi-square test of independence and one-way analysis of variance (ANOVA), which compares the variance between the male and female group means against the variance within each group ($F = MS_{eeoeee} / MS_{xithin}$). Institutional and policy effectiveness was assessed using descriptive statistics on respondents' attributions of responsibility and awareness of open-defecation-related risks, complemented by thematic analysis of the focus group discussion. Statistical significance was set at $p < 0.05$.

3. Results and Discussion of Findings

Gender Differences in Perception and Attitude

The sample comprised 183 male (53.04%) and 162 female (46.96%) respondents. On the statement "open defecation is more hygienic than defecating in a toilet," male and female mean response scores were nearly identical (male mean = 1.98, female mean = 2.02), with comparable standard deviations (male = 1.56, female = 1.57). The chi-square test produced $X^2 = 0.304$ (df = 4, p = 0.989), and ANOVA produced F = 0.09, indicating no statistically significant difference between male and female attitudes; the null hypothesis of no gender difference could not be rejected. A similar pattern held for perceptions of the acceptability of open defecation across urban, semi-urban and rural zones: mean scores for males and females were closely aligned in each zone (urban: male 1.36, female 1.34; semi-urban: male 1.36, female 1.33; rural: male 1.35, female 1.34), and overall (male 2.66, female 2.64), with similarly small variances (male 0.43, female 0.41).

Table 1: Gender Differences among Male and Female

Setting	Male mean	Female mean
Urban	1.36	1.34
Semi-urban	1.36	1.33
Rural	1.35	1.34
Overall	2.66	2.64

These findings indicate that, contrary to a common assumption in the sanitation literature that women hold systematically more negative attitudes towards open defecation than men (Jenkins and Curtis, 2005), attitudes and perceptions in Uyo Capital City were essentially gender-neutral at the statistical level. However, the focus group discussion suggested this statistical parity masks differentiated lived experience:

participants noted that women remain more exposed to safety and privacy risks associated with inadequate or distant sanitation facilities, particularly at night, consistent with wider evidence that inadequate sanitation access disproportionately burdens women and girls through heightened vulnerability to harassment and violence (Saleem *et al.,* 2019; Sahoo *et al.*, 2018). This apparent tension – statistical parity in attitude alongside qualitatively documented gendered risk, is itself an important finding rather than a contradiction to be resolved away. It suggests that men and women in Uyo Capital City may share a broadly similar normative view that open defecation is undesirable (hence the absence of attitudinal difference), while nonetheless facing materially different consequences and risks when circumstances compel them to practise it. This distinction matters for policy design: an intervention informed only by the quantitative finding of gender parity might reasonably conclude that gender-specific programming is unnecessary, whereas the qualitative evidence indicates that gender-blind facility design and safety planning would leave a real, if statistically invisible in attitude data, safety gap for women unaddressed. This reconciliation is consistent with Fisher's (2017) observation that women's sanitation priorities are shaped less by attitude toward the practice itself than by concrete safety, privacy and health considerations that attitude-scale items may not fully capture. This distinction between attitude and lived risk also has implications for how gender is incorporated into sanitation survey instruments more broadly. Standard attitude-scale items, of the kind used to generate the means and chi-square results reported, are well suited to detecting differences in normative belief (whether open defecation is regarded as acceptable), but are not designed to, and did not in this study, capture differences in exposure to risk, coping behaviour, or the practical constraints that shape when and how open defecation is practised by different groups. Future survey instruments seeking to assess gender dimensions of sanitation behaviour would benefit from incorporating risk-exposure and coping-behaviour items alongside standard attitude-scale measures, rather than relying on attitude parity alone as evidence that gender-responsive programming is unnecessary.

Public Attribution of Responsibility

When asked who should be responsible for addressing open defecation in their community, 34.20% of respondents (n = 118) identified a combination of government, community leaders, individuals and NGOs collectively; 25.22% (n = 87) identified community leaders alone; 21.74% (n = 75) identified government alone; 14.78% (n = 51) identified individual households; and only 4.06% (n = 14)

identified NGOs.

Table 2: Table showing Attributed Responsibility

Attributed responsibility	Frequency	%
Multiple stakeholders (combined)	118	34.20
Community leaders	87	25.22
Government	75	21.74
Individuals/households	51	14.78
Non-governmental organisations	14	4.06

The low attribution of responsibility to NGOs (4.06%) suggests that these organisations are either not visible in Uyo's sanitation landscape or are not trusted as significant actors by residents, representing a missed opportunity, since NGOs frequently bring both funding and technical expertise to sanitation programming. The relatively high proportion identifying multiple stakeholders jointly (34.20%) indicates that the public views open defecation as a shared, multi-sectoral problem rather than one with a single obvious lead agency, which itself points to a coordination gap that formal policy has not yet resolved. Notably, 25.22% who identified community leaders alone, and the 21.74% who identified government alone, together suggest that residents place more direct trust in visible, locally proximate authority structures than in either the state's formal WASH agencies specifically or in external NGO actors.

Awareness and Perceived Policy Effectiveness

Only 52.17% of respondents (n = 180) reported having received any education or awareness campaign on the risks associated with open defecation, leaving 47.83% (n = 165) without such exposure. Given that formal instruments such as Executive Order 009, Section 108 of the Water Resources Sector Oversight and Regulation Law 2022, and the Akwa Ibom State WASH Policy 2025 already prohibit the practice and prescribe penalties for it, this near-even split indicates that enforcement and public communication of these instruments are either weak or unevenly reaching the population, a gap that campaigns focused solely on infrastructure provision are unlikely to close on their own.

This finding is particularly striking given the specificity of the legal penalty structure in place: Section 108 of the 2022 Law prescribes a minimum fine of ₦100,000 or up to three months' imprisonment for public defecation; enforceable in principle through the state's dedicated Sanitation Court. Yet the focus group discussion suggested that awareness of this specific

penalty regime was low even among participants who were otherwise aware that open defecation was generally discouraged, indicating a gap not merely in general risk-awareness messaging but specifically in public communication of the legal consequences of the practice – a distinct communication failure from the health-risk-awareness gap and one that may require different messaging channels (e.g. community-leader and religious-institution communication of legal consequences, rather than health-focused campaigns alone) to address.

Table 3 summaries the chi-square results for all major socio-demographic and behavioural variables tested against open defecation practice across this research series, confirming that gender ($X^2 = 0.304$, $p > 0.99$) and religion ($X^2 = 4.24$, $p = 0.64$) were the only variables examined that showed no statistically significant relationship with the practice, in contrast to perception, knowledge, toilet facility type, occupation and poverty, all of which were significantly associated.

Table 3: Summarises of chi-square results for all major socio-demographic and behavioural variables

Variable	X^2	p-value	Relationship
Toilet facility type	49.37	< 0.001	Very significant
Occupation	51.00	< 0.001	Very significant
Poverty	20.15	< 0.001	Very significant
Perception	2.445	< 0.001	Very significant
Age	23.45	0.024	Significant
Household income	15.67	< 0.01	Significant
Culture	12.50	< 0.01	Significant
Knowledge	10.56	< 0.01	Significant
Gender	0.304	> 0.99	Not significant
Religion	4.24	0.64	Not significant

This pattern is informative for policy sequencing: because gender and religion are not themselves significant drivers of open defecation practice, interventions built primarily around gender-segmented or religion-segmented messaging campaigns are unlikely, on their own, to substantially shift practice; the variables shown here to matter most, facility type, occupation, poverty, perception and knowledge, are the more promising primary levers, with gender-responsive design, serving a complementary, risk-mitigation rather than primary-driver role. It is worth emphasising

that this conclusion should not be read as suggesting gender is unimportant to sanitation policy in Uyo Capital City, rather, it clarifies gender's specific role within a wider set of determinants. Gender does not explain variation in whether residents practice open defecation (that variation is better explained by facility type, occupation and poverty), but it does explain, at least qualitatively, variation in the severity and nature of the consequences residents face when they do. Effective sanitation policy in Uyo Capital City therefore needs gender-responsive elements addressing consequence severity, layered onto interventions targeting the primary behavioural drivers identified elsewhere in this research series, rather than treating gender as either the central variable or an irrelevant one.

Focus group participants offered a broadly consistent account of why formal policy has not translated into consistent behaviour change: several noted that they were unaware which specific agency to contact regarding sanitation infrastructure problems in their neighbourhood, and that where problems had previously been reported, response had been slow or absent. Others noted that community leaders, rather than state agencies, were typically the first and most trusted point of contact for local sanitation concerns, consistent with the survey finding that community leaders alone were more frequently identified as responsible than government alone (Section 8.3). Participants generally expressed support for the principle of legal penalties for public defecation but were sceptical that these were consistently enforced, a perception consistent with this study's finding of low awareness of the specific penalty provisions under Section 108 of the 2022 Law. On gender specifically, both male and female focus group participants converged on the view that women faced distinct and heightened risks when circumstances forced them to defecate in the open – particularly around personal safety after dark and menstrual hygiene management – even though, as the quantitative findings in Sections 8.1 and 8.2 show, this did not translate into a measurably different overall attitude score between male and female survey respondents. Female participants specifically described adapting their daily routines (timing of movement, choice of route, use of companions) to manage these risks where facility access was inadequate, a level of behavioural adaptation not captured by the standard attitude-scale items used in the quantitative survey component. This divergence between quantitative attitude parity and qualitatively rich, gender-differentiated coping behaviour is itself a methodological finding: it suggests that survey-based attitude measurement, on its own, may understate the practical significance of gender in shaping the lived

experience of inadequate sanitation, even where it accurately captures the absence of attitudinal difference.

Comparison with State and National Policy Benchmarks

Set against the comparative state experience discussed in Section 5.4.1, this study's findings help explain why Akwa Ibom State, despite outperforming the national average on aggregate open defecation prevalence, has not yet achieved the sustained implementation intensity associated with fully certified ODF states such as Jigawa. Jigawa's successful trajectory has been attributed substantially to sustained, well-resourced Community-Led Total Sanitation implementation with clear local ownership; the diffuse public attribution of responsibility and limited awareness of specific legal consequences documented in this study, suggest that Uyo Capital City has not yet achieved a comparable level of clear local ownership and consistent public communication, even though the underlying legal and policy instruments , Executive Order 009, the 2022 Water Resources Law and the 2025 WASH Policy are formally in place. This comparison reframes the policy challenge facing Uyo Capital City: it is not primarily a challenge of designing new legal instruments, the state already possesses a specific, enforceable penalty regime under Section 108 of the 2022 Law, but of translating existing instruments into the kind of sustained, locally owned implementation that has driven success in states such as Jigawa. This reframing directly informs the recommendations that follow, which prioritise strengthening awareness, institutional visibility and community-leader partnership over further legal or policy elaboration.

It also suggests a useful diagnostic question for policymakers going forward: rather than asking whether Akwa Ibom State's sanitation laws and policies are sufficiently comprehensive – a question this study's review of Executive Order 009, the 2022 Water Resources Law and the 2025 WASH Policy suggests can already be answered affirmatively, the more productive question is whether each specific instrument's intended beneficiaries, from ordinary Uyo residents to the community leaders this study found they trust most, are actually aware of, and able to act on, what those instruments provide. Reframing policy evaluation around this awareness-and-actionability question, rather than around instrument comprehensiveness alone, is the central practical contribution this study offers to Akwa Ibom State's ongoing sanitation governance effort.

4. Conclusion & Recommendations

This study found no statistically significant difference between men's and women's stated perception of, or attitude towards, open defecation in Uyo Capital

City, suggesting that gender alone is not a primary driver of attitudinal variation in this context, even though women remain more exposed to the practical safety risks of inadequate facilities. On policy effectiveness, the study found that although formal legal instruments prohibiting open defecation exist – including a specific financial and custodial penalty regime under Section 108 of the Water Resources Sector Oversight and Regulation Law 2022 – nearly half of residents remain unaware of open defecation's associated risks, awareness of the specific legal penalties is lower still, NGOs are minimally recognised as accountable actors, and the public perceives responsibility for addressing the problem as diffusely shared across government, community leaders and individuals rather than clearly assigned. These findings point to an implementation and communication gap rather than a policy-design gap: Akwa Ibom State's formal sanitation legal architecture is comparatively comprehensive, but its translation into resident awareness, institutional trust and consistent enforcement in Uyo Capital City remains incomplete.

The study point to a common underlying diagnosis: whether the question is why men and women do not differ significantly in their stated attitudes despite differing real-world risk exposure, or why comprehensive formal policy has not produced comprehensive public awareness and trust, the answer in both cases lies less in what the law and policy documents say than in how consistently and visibly that content has reached, and been acted upon by, the residents and institutions it is meant to govern. As Uyo Capital City and Akwa Ibom State more broadly move through the phased implementation stages of the state's ODF Roadmap toward the 2030 target , from the preparation and transition phase envisaged for 2025 through external evaluation in 2027 and consolidation in 2029. The findings of this study recommended that success depend less on further refinement of the legal and policy text itself than on deliberate, sustained investment in the awareness, institutional trust and gender-responsive implementation practice that this study has found to be currently lacking. Achieving the state's 2030 target is, on the evidence presented here, substantially a communication and coordination challenge as much as an infrastructural one.

REFERENCES

Abubakar, I. R. (2018). Exploring the determinants of open defecation in Nigeria using demographic and health survey data. Science of the Total Environment, 637–638, 1455–1465.

Abubakar, I. R. and Dangana, L. (2020). Gender perspectives in hygiene and sanitation behaviour in Nigeria. Journal of Water, Sanitation and Hygiene for Development, 10(4), 771–781.

Ajzen, I. (1991). The theory of planned

behaviour. Organizational Behaviour and Human Decision Processes, 50(2), 179–211.

Akwa Ibom State Water, Hygiene and Sanitation (WASH) Policy 2025 (Akwa Ibom State, Nigeria).

Akwa Ibom State Water Resources Sector Oversight and Regulation Law 2022 (Akwa Ibom State, Nigeria).

Appiah-Effah, E., Duku, G. A., Azangbego, N. Y., Aggrey, R. K. A., Gyapong-Korsah, B. and Nyarko, K. B. (2024). Rural sanitation in Ghana: Determinants of open defecation practice among women. Journal of Water, Sanitation and Hygiene for Development.

Ekpenyong, R. E., Shaibu, M. E. and Etim, E. R. (2020). Geospatial analysis and assessment of the distribution of petrol stations in Uyo Capital City, Nigeria, to safeguard human and environmental health. International Journal of Social Science, 13, 82–102.

Federal Ministry of Water Resources. (2021). Water, Sanitation and Hygiene National Outcome Routine Mapping (WASHNORM) 2021 report. Federal Ministry of Water Resources.

Fisher, J. (2017). Gender and sanitation: What we know and what we need to know. WaterAid.

Jenkins, M. and Curtis, V. (2005). Identifying gaps in hygiene provision for women and girls. Journal of Water and Health, 3(3), 259–266.

Nnaji, C. C. et al. (2021). Urban hygiene behaviour and gendered perspectives in southern Nigeria. International Journal of Environmental Research and Public Health, 18(6), 30–54.

Okuku, M. O. (2020). Policy brief: Ending open defecation in Nigeria.

Sahoo, K. C. et al. (2018). Gender differences in attitudes towards open defecation. Journal of Water, Sanitation and Hygiene for Development, 8(2), 257–266.

Saleem, M., Burdett, T. and Heaslip, V. (2019). Health and social impacts of open defecation on women: A systematic review. BMC Public Health, 19(158), 2–12.

WASHNORM (2021). Water, Sanitation and Hygiene National Outcome Routine Mapping report. Federal Ministry of Water Resources.