

# Newspaper Reportage of Water, Sanitation, And Hygiene Issues in Nigeria: A Systematic Literature Review

<sup>1</sup> Shitta, Bweseh Habila; <sup>1</sup> Umar, Columbus Garba; <sup>2</sup> Bulus, Kwebu Ishaya

<sup>1</sup> Department of Mass Communication, Taraba State University, Jalingo

<sup>2</sup> Department of Public Health, Taraba State University, Jalingo

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## ABSTRACT

This systematic review synthesises 88 empirical and conceptual studies on newspaper reporting of Water, Sanitation, and Hygiene (WASH) issues in Nigeria, analysing themes, frames, tones, regional differences, theoretical frameworks, research methodologies, and overall literature synthesis. The findings indicate that sanitation (43. 26%) and water (33. 33%) receive the most coverage, whereas hygiene and open defecation are accorded less attention. Regional disparities are evident, with a higher prevalence of studies from Northern Nigeria (19. 32%) compared to the southern regions (7. 95%). Theories such as Agenda Setting and Framing Theory (19% and 16%, respectively) are frequently utilised, underscoring the media's influence in shaping public perception. The review identifies nine predominant frames, with 'Problem and Risk' (33. 33%) and 'Crisis' (27. 84%) being most prominent, reflecting the media's focus on urgent WASH issues and crises. The 'Health and Safety' frame (13. 64%) also plays a significant role, while the 'Economic Impact' (3. 41%) and 'Solution- Oriented' (4. 55%) frames are less prevalent, indicating a reactive, event- driven approach. Regarding tone, advocacy (49%) and negative tones (24%) predominate, emphasising awareness and highlighting deficiencies within WASH systems. Conversely, positive (16%) and neutral (11%) tones are less frequently employed, limiting solution- focused discourse. The most common research methodologies include content analysis (48%) and mixed methods (24%), which elucidate WASH framing. The findings identify several opportunities for further research, including the impact of underreporting WASH issues in marginalised communities on public health in Nigeria. The need to investigate the media representation of women and children in WASH reporting and the role of the media in advocating for sustainable water and sanitation policy reforms. These proposed research directions aim to fill existing gaps in understanding the influence of media on public health and policy development within the WASH sector.

**Keywords:** WASH, SDG-6, Nigeria, newspaper, media, Reportage, public health communication

## INTRODUCTION

Water, Sanitation, and Hygiene (WASH) issues are crucial for public health, human dignity, and sustainable development worldwide. In 2010, the United Nations General Assembly officially recognised access to safe drinking water and sanitation as a human right (UN, 2010; Brown, Neves-Silva, & Heller, 2016; Nehaluddin, 2021; Baer, 2022). This dedication is embodied in Sustainable Development Goal 6 (SDG 6), which aims to achieve universal access to sanitation and hygiene while promoting sustainable water management by 2030 (Arora & Mishra, 2022; Okesanya et al., 2024).

However, despite notable progress, WASH challenges are still widespread globally. The World Health Organisation (WHO) and UNICEF report that more than 2 billion people still lack access to safely managed drinking water, while 771 million do not have basic water services. Additionally, about 3.6 billion people use sanitation facilities that release untreated human waste, posing serious health and environmental risks (WHO/UNICEF, 2021; WHO, 2023). It is estimated that approximately 3 billion people lack basic handwashing facilities, and 1.9 billion do not have access to essential sanitation services (Nischal, 2019; WHO, 2023; Angelakis et al., 2023; Mouadden et al., 2025).

In Nigeria, issues related to Water, Sanitation, and Hygiene (WASH) persist as a significant public health concern. The nation faces deficiencies in water supply and sanitation infrastructure, characterised by inadequate drainage systems, widespread open defecation practices, poor hygiene facilities and limited access to safe drinking water (Sanusi et al., 2022; Melea, 2023; Cherono, 2024; Ukpabi, 2024). Waterborne diseases, including cholera, malaria, diarrheal diseases, typhoid, and Guinea worm infestations, continue to pose substantial public health risks (Arku & Fiasorgbor, 2013; Ajibade & Ojedokun, 2019; Melea, 2023; Suleiman, 2023; Gulumbe et al., 2023; Ihua et al., 2024; Cherono, 2024; Beker et al., 2024; Ekhorgbon, 2024). These challenges are exacerbated by rapid urbanisation, environmental degradation, climate change, and lapses in governmental oversight (Akpabio & Rowan, 2021; Budge et al., 2022; Ayelazuno & Tetteh, 2025). The economic burden of poor sanitation is estimated to be approximately \$3 billion annually, accounting for about 1.3% of Nigeria's Gross Domestic Product (GDP) (Ekoh, Anih, & Eneh, 2023).

The media, especially newspapers, can play a crucial role in raising public awareness, shaping policy discussions, and influencing government actions on the WASH sector (Appiah et al., 2020; Bassey, 2022; Ajisafe & Babaleye, 2024; Olayiwola & Taye, 2024). Through agenda-setting and framing of issues, newspapers hold a central position in promoting sanitation and hygiene practices, thereby enhancing public understanding of WASH practices (Asemah, 2015; Bello, 2015; Okorie, 2024).

In spite of the central role the media plays in advancing the WASH cause, empirical evidence indicates that newspaper reporting on WASH issues in Nigeria remains fragmented, infrequent, mostly reactive and episodic (Obuah, 2017; Adinlewa & Olubodede, 2022; Sanusi et al., 2022; Melea, 2023; Lamai et al., 2024; Olayiwola & Taye, 2024; Ogadimma et al., 2025; Bassey, 2025; Lucas et al., 2025). WASH topics are often relegated to the back pages, overshadowed by stories on politics, crime, or economy (Popoola, 2014; Bello, 2015; Asemah, 2015; Obuah & Okon, 2017; He et al., 2018; Ogu, 2020; Obasi & Msughter, 2023; Okorie, 2024). Furthermore, coverage mainly highlights crisis events, such as cholera outbreaks or environmental disasters, rather than offering regular, detailed reporting on systemic WASH challenges or ongoing policies (Oforibika, Alalibo, & Solomon, 2018; Obasi & Msughter, 2023; John & Ajibade, 2024).

Similarly, despite the significant role of media in promoting the WASH agenda, existing research on this subject within Nigeria remains limited and fragmented. Most studies concentrate on localized case analyses (Arku & Fiasorgbor, 2013; Ajibade & Ojedokun, 2019; Melea, 2023; Suleiman, 2023; Cherono, 2024; Ajayi & Qudus, 2022; Sanusi et al., 2022; Adinlewa & Olubodede, 2022; Gulumbe et al., 2023; Mustapha et al., 2022; Maren, 2024; Bassey, 2025; Nnabuike & Okonkwo, 2022), analyses of specific media outlets (Popoola, 2014; Asemah, 2015; Obuah & Okon, 2017; Zannah, 2017; Oforibika, Alalibo, & Solomon, 2018; Mbangati, 2020; Mugo, 2020; Obasi & Msughter, 2023; Okorie, 2024; Melea, 2023; Nwosu & Okoroafor, 2025), or thematic reviews of isolated WASH-related issues, such as open defecation or drainage sanitation (Melea, 2023; Haruna, 2023; Lamai et al., 2024c; Lucas, Laguma, & Akodu, 2025a). This deficiency in a cohesive analytical framework underscores the necessity for a systematic review that consolidates these studies, identifies recurring trends and framing techniques, assesses empirical findings, and highlights research gaps. Such an approach will facilitate a more comprehensive understanding of the media's role in shaping public discourse on WASH issues. It will further establish a foundation for advancing the WASH agenda in alignment with the 2030 target of UN Goal 6.

In light of the above, this study aims to undertake a systematic review of existing scholarly articles and studies, focusing on how Nigerian newspapers cover and report water, sanitation, and hygiene (WASH) issues. Specifically, the review seeks to analyse the thematic focus of WASH reporting found in the studies. It also examines the regional representation within the studies, as well as the methodological approaches and theoretical underpinnings. Furthermore, the review identifies gaps in media framing, policy connections, and audience engagement, contributing to a comprehensive understanding of the media's role in addressing WASH issues in Nigeria and developing societies.

## OBJECTIVES OF THE STUDY

The following objectives will guide the study:

- i. To identify the thematic focus in WASH reportage in existing studies

- ii. To identify major frames and tones employed in WASH reportage from the studies
- iii. To examine the regional disparities from the studies on WASH reportage in Nigeria
- iv. To bring out the dominant theories and methodologies in the extant literature.
- v. To synthesise the findings from the studies and identify gaps for future research.

## METHODS

This study employed a qualitative research design to conduct a systematic review of existing scholarly articles on newspaper coverage and reportage of Water, Sanitation, and Hygiene (WASH) issues in Nigeria. The primary data sources included academic databases such as Google Scholar, JSTOR, Academia, and ResearchGate, as well as reports from reputable organisations like the WHO and UNICEF. The search terms used were “WASH and media in Nigeria,” “newspaper coverage of sanitation,” “open defecation in Nigerian newspapers,” “communication strategies and WASH,” “framing of hygiene behaviour,” “SDG 6 and journalism,” and “environmental journalism in Nigeria,” among others.

The study used discourse analysis to explore the themes, tone, and framing of WASH issues in the literature. The main techniques involved identifying common themes, frames, biases, and regional views in WASH coverage, as well as assessing the application of media and health communication theories.

Data analysis was carried out using both qualitative and quantitative methods. Qualitative analysis involved thematic coding to identify recurring patterns, key themes, and gaps in the literature. This process enabled the systematic categorisation of WASH issues across the studies, supporting a detailed exploration of how these issues were presented, framed, and communicated.

In addition to the qualitative analysis, quantitative techniques were used to measure the frequency and prominence of specific WASH issues across the studies. This involved categorising the issues and presenting them in frequency distribution tables and charts. The goal was to synthesise the findings, analyse the distribution of focus among various WASH topics, and assess the emphasis on specific issues in the existing literature. This mixed-methods approach offered a deeper understanding of thematic patterns and provided a solid statistical overview of the prevalence of WASH topics.

The data extraction process was guided by the standards set by PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) and narrative review frameworks (Moher et al., 2009), by taking cognisance of rigorous inclusion and exclusion criteria as follows:

- i. Focus explicitly on newspaper or media coverage of WASH or environmental health issues.
- ii. Present empirical data, either through content analysis, surveys, interviews, or mixed methods.
- iii. Be published in English between 2010 and August 2025.
- iv. Include WASH-related themes, such as water, open defecation, hygiene practices, sanitation, or related public health messaging/communication strategies.
- v. Engage with communication theories or concepts such as agenda-setting, framing, risk communication, or behavioural change.

Studies that focused solely on the technical, engineering, or economic aspects of WASH without analysing media and communication were excluded, unless they explicitly examined public communication or advocacy dynamics.

The review’s initial search found 3,245 publications across databases: Google Scholar (1,531), JSTOR (364), Academia (646), and Researchgate (704). After applying the criteria, 88 studies met the required standard. The PRISMA diagram is given below.

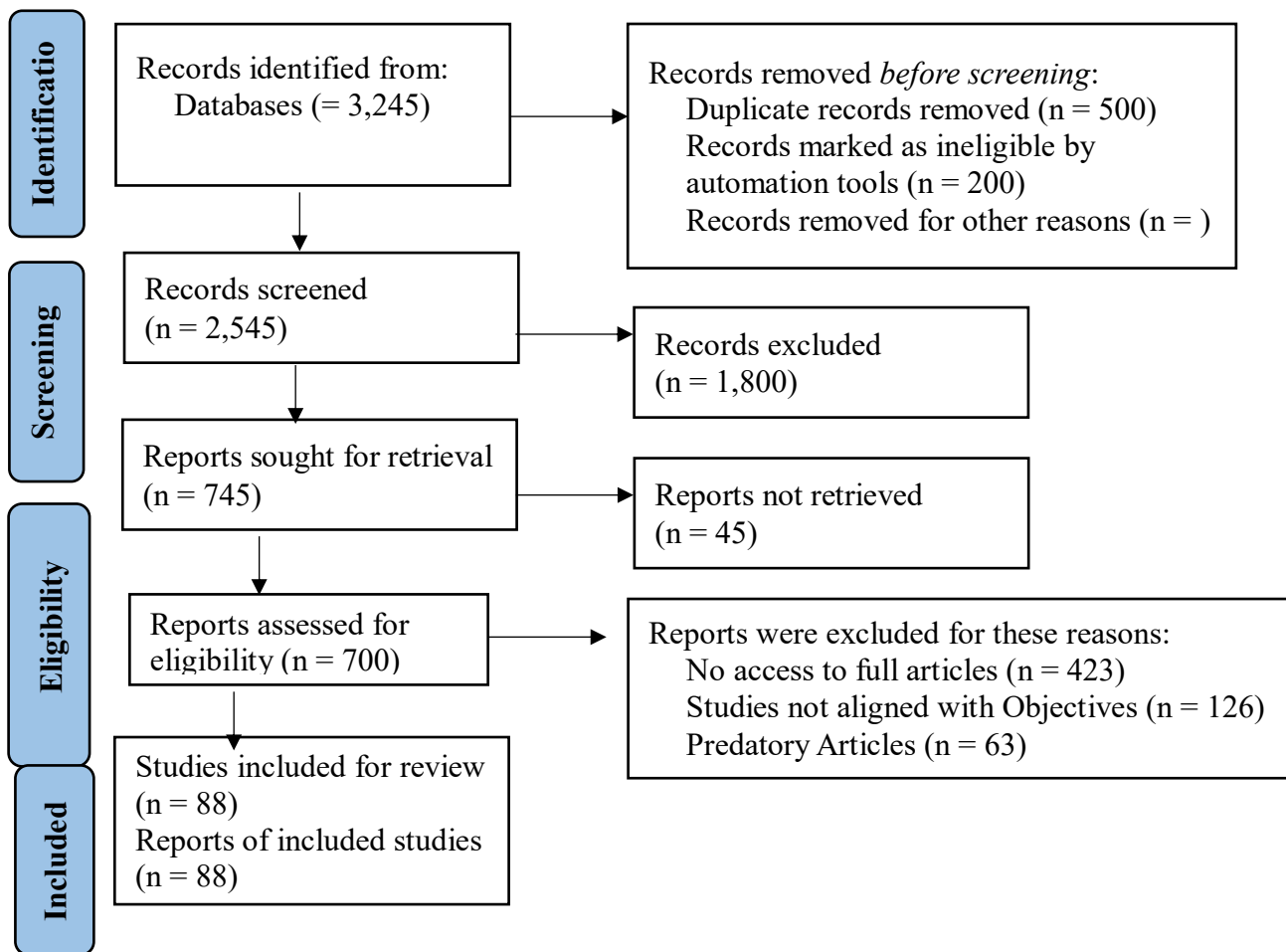


Figure 1: PRISMA Table

## FINDINGS/DISCUSSION

### Thematic Focus in the Reportage of Water, Sanitation, and Hygiene

**Table 1:** Most Studied Themes on WASH Newspaper Reportage in Nigeria

Thematic Category	Study Count (Frequency)	Percentage (%)
Water	47	33.33%
Sanitation	61	43.26%
Hygiene	14	9.93%
Open Defecation	19	13.48%
<b>Total</b>	<b>141</b>	<b>100%</b>

An analysis of Nigerian newspaper coverage on WASH (Water, Sanitation, and Hygiene) issues shows a strong focus on sanitation and water topics. Sanitation was the most covered theme, appearing in 61 studies (43.26%), highlighting ongoing challenges such as waste management and open defecation. Water issues also garnered significant attention, with 47 studies (33.33%), primarily focusing on water scarcity and contamination. Hygiene, essential for preventing diseases such as cholera, typhoid, diarrheal diseases, and malaria, was less frequently covered, featuring in only 14 studies (9.93%). Open defecation was discussed in 19 studies (13.48%),

underscoring its widespread occurrence, especially in rural areas. To this end, the media's reporting on WASH issues plays an important role in enhancing public health in Nigeria.

The media's coverage of Water, Sanitation, and Hygiene (WASH) issues in Nigeria primarily focuses on sanitation and water-related topics, with sanitation being the most covered theme (43.26%) and water issues receiving considerable attention (33.33%). Despite this significant focus, hygiene and open defecation remain relatively underreported (9.93% & 13.48%), which is concerning given their public health implications. Nigeria, as the world's open defecation capital since 2019 (Melea, 2023) is a wakeup call to prioritise media reportage and address the persistent problem. The widespread prevalence of open defecation and inadequate sanitation facilities continues to pose major barriers to public health in the country; however, media coverage often falls short of providing comprehensive, ongoing reporting on these issues (Ajayi & Qudus, 2022; Wami, 2023). The predominance of episodic and crisis-driven coverage, typically emerging during outbreaks or government interventions, limits the media's capacity to sustain attention on systemic challenges such as open defecation and hygiene (Shang et al., 2015; Sanusi et al., 2022). This consistent failure to emphasise the issues results in a lack of sustained public pressure and policy focus on addressing these deeply rooted problems (Bello, 2015; Oforibika, Alalibo, & Solomon, 2018).

Although the media occasionally highlights the urgency of sanitation and water issues, it largely neglects ongoing challenges related to hygiene and open defecation (Wami, 2023). This gap in media coverage worsens Nigeria's sanitation crisis, as issues like inadequate toilets and poor waste management facilities continue to impact millions of Nigerians (Shang et al., 2015; Okpara, 2025). Despite the introduction of various policy documents and strategies aimed at tackling WASH challenges, the absence of sustained media engagement has hampered the effective implementation of these policies (Melea, 2023; Obasi & Msughter, 2023). Furthermore, limited coverage of key interventions by organisations such as UNICEF and IOM, which are crucial in addressing these issues, hampers public awareness of ongoing efforts and reduces the chances of mobilising the necessary support (Bell, 2022; Usman et al., 2023).

The findings reveal significant gaps in Nigerian media coverage of WASH issues, especially concerning hygiene and open defecation. These gaps have vital implications for WASH advocacy, journalism training, and government communication. The media should move from sporadic to consistent, in-depth reporting on systemic WASH challenges. Journalism training ought to emphasise proactive advocacy and accountability in WASH coverage. Government communication strategies must provide ongoing media updates on WASH progress, fostering public awareness and support.

## Major frames in the reportage of WASH

**Table 2: Major Frames Used in the Study on WASH Reporting by Newspapers in Nigeria**

Frame	Number of Studies	Percentage (%)
Problem and Risk	29	33.33
Crisis	25	27.84
Health and Safety	12	13.64
Political and Policy Influence	7	8.02
Community and Behavioural Change	6	6.82
Economic Impact	3	3.41
Social Justice	2	2.27

Solution-Oriented	4	4.55
<b>Total</b>	<b>88</b>	<b>100%</b>

The frequency distribution indicated the utilisation of nine dominant frames within the study. The findings reveal a predominant emphasis on specific aspects of WASH coverage. Notably, the ‘Problem and Risk’ frame emerged as the most dominant, accounting for 33.33% of responses, which reflects the media’s tendency to prioritise WASH-related challenges as urgent and hazardous. Crisis frame followed with 27.84%, indicating a focus on immediate, high-impact events such as outbreaks or environmental disasters. The ‘Health and Safety’ frame, comprising 13.64%, underscores the media’s role in correlating WASH issues with public health concerns. Further, frames, including ‘Political and Policy Influence’ (8.02%) and ‘Community and Behavioural Change’ (6.82%), illustrate the intersection of WASH issues with broader societal and political contexts. Conversely, frames such as ‘Economic Impact’ (3.41%), ‘Social Justice’ (2.27%) and ‘Solution-Oriented’ received less attention, suggesting that while media predominantly concentrates on crisis and health dimensions, there is a limited examination of economic, social and solution aspects of WASH issues.

Accordingly, the findings from the data above suggest a reactive and event-driven reporting style, with less focus on long-term solutions or systemic reforms. This also indicates that media coverage of WASH is mainly reactive, often triggered by crises such as cholera outbreaks, flooding, or official interventions. There is a lack of consistent, investigative, and development-oriented journalism to address water access, sanitation equity, and hygiene practices that can set the agenda or frame WASH issues beyond episodic and event-driven reporting to influence policy efforts (Melea, 2023; Obasi & Msughter, 2023; Oforibika, Alalibo, & Solomon, 2018). Chagutah (2010) described this as a pattern of “crisis journalism,” where focus peaks during environmental emergencies but quickly diminishes. These patterns are observed in Nigeria and other regions, where WASH stories mainly relate to emergencies rather than ongoing structural issues (Rahmatullah, 2024; Okorie, 2024; Sanusi et al., 2022; Bello, Shittu, & Suleiman, 2024). This event-driven approach to reporting restricts public awareness and hampers policy development on critical WASH challenges.

The findings emphasise the importance of shifting WASH advocacy from immediate crisis response to sustainable solutions and preventive measures. This further entails that journalism training and reportage must focus on investigative reporting related to systemic WASH challenges to foster greater public involvement. Additionally, government communication strategies need to prioritise transparent and consistent dissemination of WASH policies to support continuous public engagement.

### Tone of WASH Reporting

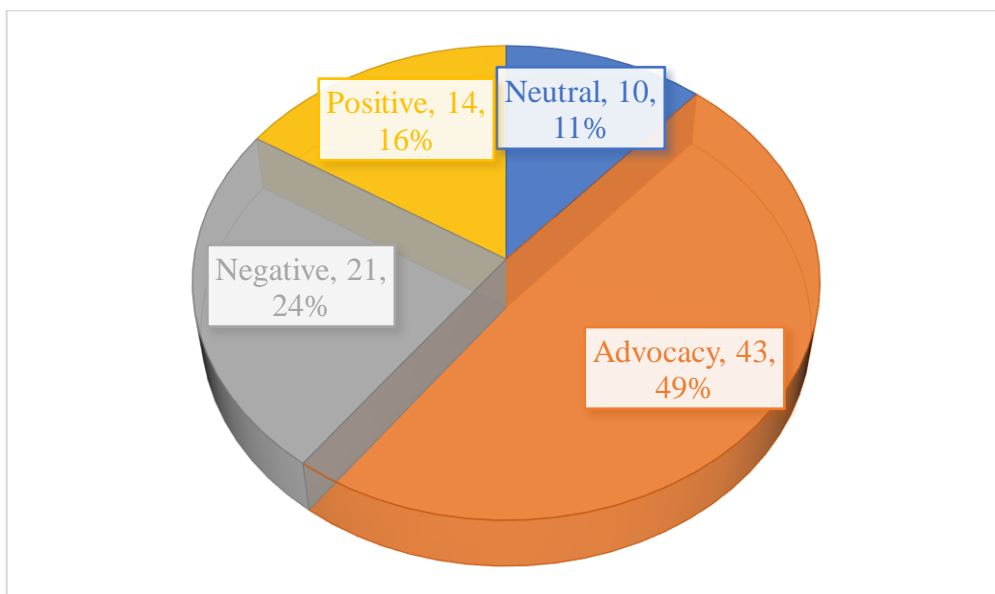


Figure 1: Tone of WASH Reporting in Nigeria

The tone in Nigerian newspaper reporting on Water, Sanitation, and Hygiene (WASH) issues shows that advocacy and negative tones are the most prevalent, with these two categories making up the largest share of responses. Advocacy-focused reporting, which promotes action and change, accounts for 49% of media content, stressing the media's role in promoting solutions and raising awareness on key issues like open defecation and sanitation challenges. Negative tones, which emphasise problems such as poor infrastructure and health risks, constitute 24%. This indicates that, although the media recognise the urgency of WASH issues, much of the coverage concentrates on exposing failures and deficiencies in sanitation and water management. Positive and neutral tones, although present, are less represented, suggesting that while solutions are suggested, there remains a focus on reporting ongoing struggles within the sector.

The above findings show that the tone of WASH reportage frequently fluctuates between advocacy, negativity, neutrality, and positivity. Research indicates that although some Nigerian newspapers endeavour to practice advocacy journalism on issues such as water, open defecation, poor hygiene and sanitation practices, however, they remain either neutral or adopt a distant, bureaucratic tone that fails to evoke an emotional response from readers (Sanusi et al., 2022; Lamai et al., 2024; Olayiwola & Taye, 2024; Ogadimma et al., 2025; Bassey, 2025). For instance, Bello (2015) and Asemah (2015) observed that health-related stories, including those related to sanitation and poor hygiene, are often characterised by technical language, excessive jargon, and inadequate coverage on lead pages or editorial columns, thus diminishing their resonance and impact.

In light of the Health Belief Model (HBM), the advocacy tone, which constitutes 49% of the coverage, can be construed as an endeavour to incite behavioural change by accentuating the benefits of enhanced sanitation practices. Nonetheless, as Sriram & Maheswari (2013) and Bello (2015) underscore, these media reports frequently underutilise the emotional and psychological appeals imperative for fostering long-term behavioural change, primarily due to inconsistent engagement and the absence of clear, actionable solutions. The scant representation of positive (16%) and neutral (11%) tones further exacerbates this disparity, as these tones are vital for delivering a balanced narrative that highlights the personal and communal benefits of adopting WASH practices. Consequently, whilst Nigerian media demonstrates an awareness of WASH challenges and advocates for action through journalism, the tone often remains predominantly reactive and episodic, emphasising failures and crises over sustainable solutions. This reactive stance curtails the efficacy of media in mobilising public participation and effectuating enduring behavioural change, as indicated by Framing Theory and the HBM. It therefore becomes imperative for media stakeholders to develop more consistent, inclusive, and emotionally resonant media narratives that address crises while also offering comprehensive solutions and ongoing advocacy for WASH improvements.

## Regional Disparities in WASH Reportage in Nigeria

**Table 3:** Regional Disparities in WASH Reportage

Region	Number of Studies	Percentage
Northern Nigeria	17	19.32%
Southern Nigeria	7	7.95%
National	47	53.41%
Other Countries	17	19.32%
<b>Total</b>	<b>88</b>	<b>100%</b>

An analysis of regional disparities in studies on newspaper reportage of WASH in Nigeria reveals significant media focus at the national level, with 47 studies (53.41%) dedicated to national issues. This reflects widespread WASH challenges across the country. Northern Nigeria had 17 studies (19.32%), highlighting the region's particular difficulties, especially in rural and conflict-affected zones. Southern Nigeria was represented by 7 studies (7.95%), indicating less attention, possibly due to the region's better infrastructure. International studies

comprised 17 studies (19.32%) and offered a comparative outlook on WASH issues. The foregoing findings suggest the need for unified national strategies and highlight urgent WASH challenges in Northern Nigeria, along with opportunities for increased media coverage across Nigeria.

Furthermore, the findings on regional disparities in media coverage of Water, Sanitation, and Hygiene (WASH) issues are relevant both within Nigeria and across other comparable African countries. In Nigeria, WASH coverage tends to be episodic, with the media mainly reporting on crises such as cholera outbreaks, flooding, and official responses, while systemic issues like water access and sanitation equity often remain underreported (Melea, 2023; Bello, 2015). This pattern is similar to that in several other African nations, including Ghana, Zambia, and Cameroon, where urban WASH challenges attract more media attention than rural ones (Chagutah, 2010; Arku & Fiasorgbor, 2013; Nkemnyi et al., 2016; Kanyanga, 2017). In Ghana, for instance, urban sanitation issues are given greater prominence in the media, whereas rural sanitation problems tend to be overlooked (Anderson, 2019; Kanyanga, 2017). Likewise, in Nigeria, rural areas and peri-urban regions frequently experience underreporting of their sanitation issues, with much of the media's focus remaining on urban centres and political narratives (Asemah, 2015; Melea, 2023; Ekhorgabon, 2024).

While some African countries, such as Kenya, have experienced greater engagement with local communities in WASH reporting, this remains the exception rather than the norm. In Kenya, the media has made progress in highlighting grassroots solutions and empowering marginalised communities (Nkemnyi et al., 2016). However, even in Kenya, media coverage is mainly reactive, usually triggered by disease outbreaks or disasters, rather than promoting ongoing discussions on the structural issues in water, sanitation, and hygiene (Siyao et al., 2025). This reflects a broader pattern of event-driven reporting seen across the continent, where the media tend to focus on immediate crises rather than long-term developmental challenges.

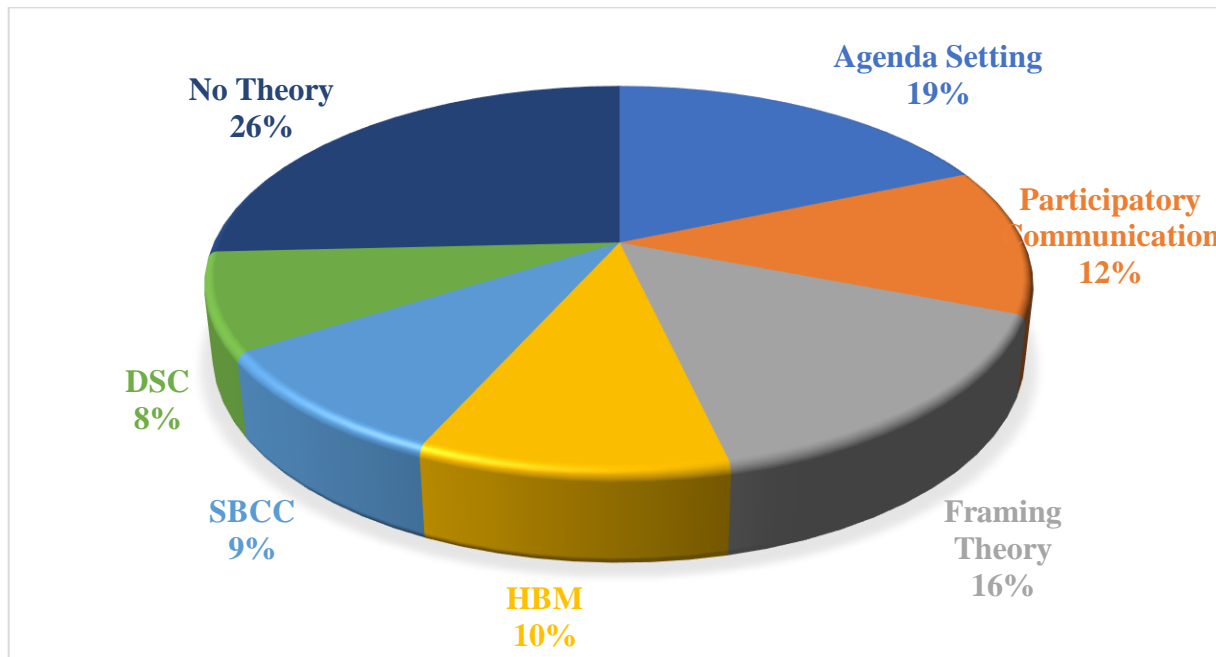
An analysis comparing Nigeria with neighbouring countries indicates that the difficulties Nigerian media face in reporting on WASH issues reflect a broader continental trend. Countries such as Ghana, Zimbabwe and Zambia also tend to underreport and focus heavily on government-led narratives in their WASH coverage (Chagutah, 2010; Arku & Fiasorgbor, 2013; Kanyanga, 2017). Media in these countries often highlight official statements or responses to sanitation problems, rarely questioning the effectiveness or sustainability of these solutions (Lam et al., 2017; Anderson, 2019). Coverage generally emphasises institutional views, often overlooking the actual experiences of those most affected by WASH challenges (Melea, 2023).

The regional disparities in WASH reporting across Nigeria and similar trends in other African countries highlight the need for more balanced, consistent, and inclusive media coverage. The intense focus on urban centres and episodic crises reveals an urgent gap in addressing rural sanitation issues, which are often neglected. This indicates that WASH advocacy must target both urban and rural areas, ensuring that marginalised communities have a voice in the media. Journalism training should stress the importance of covering systemic issues alongside crises, fostering a more comprehensive and investigative approach to WASH reporting. Government communication strategies need to ensure that media narratives are not dominated by political or crisis-driven content but instead emphasise long-term solutions, empowering local communities and offering actionable, sustainable approaches to WASH challenges.

The analysis of dominant theories in WASH reportage studies in Nigeria shows that Agenda Setting (19%) and Framing theory (16%) are the most commonly used. This highlights a strong focus on the media's role in shaping public discourse and framing societal understanding of water, sanitation, and hygiene (WASH) issues. The Participatory Communication theory (12%) emphasises the important role of community involvement and engagement in addressing WASH challenges, indicating that grassroots participation is key for sustainable behaviour change. The Health Belief Model (HBM) (10%) and Social and Behaviour Change Communication (SBCC) (9%) theories focus on the psychological aspects of individual health perceptions and their impact on adopting healthier sanitation and hygiene practices. The theory underpins the need for targeted interventions that address behaviour at the individual level. Furthermore, Development Support Communication (DSC) (8%) is utilised to promote communication strategies that integrate WASH initiatives into broader development frameworks. A notable 26% of the studies did not explicitly specify a theoretical framework, suggesting they adopt a more flexible and integrated approach to WASH communication, combining elements from multiple theories to address the complex nature of WASH challenges in Nigeria. This variety in theoretical application

reflects the complexity of WASH communication, which requires a comprehensive understanding of media, community dynamics, individual health behaviours, and development policies.

### Dominant Theories and Methodological Approaches in the Studies on WASH Reportage in Nigeria



**Figure 2: Dominant Theories in Studies of WASH Reportage in Nigeria**

The findings buttress the significance of Agenda-Setting Theory, which emphasises the media’s role in prioritising WASH issues by consistently reporting topics such as sanitation and water access, the media can ensure these matters stay prominent within public and policy agendas, thereby encouraging sustained action. Similarly, Framing Theory clarifies that the media’s focus on crises can limit engagement with long-term solutions. Transitioning to preventive and systemic reforms in media narratives could foster a more proactive approach. The Health Belief Model (HBM) also suggests that media should emphasise the personal and community benefits of improved sanitation practices, using emotional appeals to motivate behavioural change. Also, Development Communication Theory points out the importance of integrating WASH communication within broader development initiatives, thereby promoting community participation and policy coherence. Combining these theories into journalism training and government strategies can improve WASH coverage, support policy reforms, and promote ongoing public engagement.

**Table 4: Dominant Methods in Studies of WASH Reportage in Nigeria**

Methodology	Frequency of Use	Percentage (%)
Content Analysis	51	48%
Mixed-Methods	26	24%
Survey Research	16	15%
Focus Group Discussions (FGDs)	6	6%
In-depth Interviews	7	7%
<b>Total</b>	<b>106</b>	<b>100%</b>

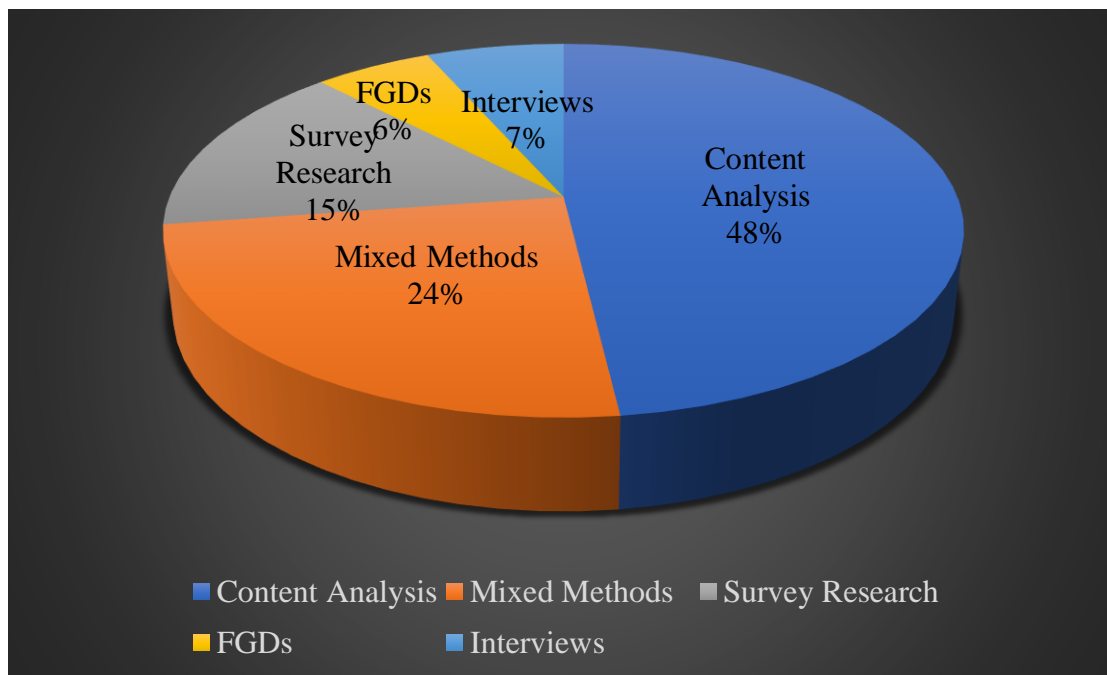


Figure 3: Dominant Methods in Studies of WASH Reportage in Nigeria

The analysis of methodologies in WASH reportage studies shows that Content Analysis is the most common approach, used in 51 studies (48%), highlighting its effectiveness in systematically examining media coverage of water, sanitation, and hygiene issues. This method enables researchers to quantify and analyse patterns, themes, and framing in media content, which is vital for understanding the media's influence in shaping public discourse. Mixed methods are utilised in 26 studies (24%), combining qualitative and quantitative approaches to offer a comprehensive perspective. Survey Research is employed in 16 studies (15%), allowing researchers to gather broad data on public awareness and behaviours. Other methods, such as Focus Group Discussions (6%) and In-depth Interviews (7%), although less frequent, are valuable for gaining qualitative insights. The prominence of content analysis is based on its practical utility in providing objective and detailed insights into the media's portrayal of issues. Mixed methods enrich the analysis by integrating multiple viewpoints.

The main methodologies in WASH reporting, particularly Content Analysis (48%) and Mixed Methods (24%), reveal important opportunities to enhance policy and advocacy in Water, Sanitation, and Hygiene (WASH). Content Analysis provides a systematic approach to understanding how media influences public discourse and frames WASH issues, supporting policy development and advocacy efforts. When media coverage is measured by frequency, framing, tone, regional disparities, and placement in print newspapers, it reveals gaps in representation and project areas needing more attention, especially beyond crisis reporting. This emphasises the crucial role of advocacy groups. Similarly, Mixed Methods improves understanding of public perceptions and media effects, enabling more effective engagement strategies. Qualitative techniques such as Focus Group Discussions and In-depth Interviews offer deeper insights into the emotional impact of WASH issues, assisting in the creation of more nuanced advocacy. The findings underscore the need for improved journalism training using frameworks like Framing and Agenda-Setting. These frameworks promote sustained, strategic WASH coverage and development communication theories to address developmental deficits related to WASH reportage barriers. These insights suggest that government engagement with the media should be more proactive and comprehensive, integrating long-term solutions to enhance public participation and policy change.

### Synthesis of findings and research gaps

The following table is based on the final selections of the empirical articles used in the systematic review. It details the author(s) of the articles, key themes, main findings and methodologies. The synthesis of literature is based on the results contained in the table and the conceptual literature which account for thirty studies as discussed in the succeeding paragraphs.

**Table 5:** Data Visualisation Table

S/N	Author(s)	Key Themes	Main Findings	Methodologies
1	Haruna, S. (2023)	Communication media, drainage, sanitation, and behaviour change	The majority of respondents receive information via radio; radio use is ineffective for behaviour change	Survey
2	Arku, F. S., & Fiasorgbor, D. (2013)	MDG sanitation, rural-urban differentials, media coverage	Media coverage favours rural areas, but the sanitation target of MDG 7C remains unmet.	Content Analysis
3	Nwaerema, P., et al. (2023)	Environmental sanitation, communication practice, Port Harcourt	Radio is the most utilised medium, but communication does not significantly affect sanitation practices.	Mixed Methods – Survey & Interviews
4	Anderson, M. T. (2019)	Sanitation, communication strategies, and institutional cooperation	Effective communication strategies improved awareness, but challenges remained with coordination.	Mixed-Methods: Survey & Interviews
5	Kanyanga, N. R. (2017)	Water supply, sanitation, communication, Lusaka project	Low community participation, but most are aware of the project's existence.	Mixed-Methods: Survey & Interviews
6	Nwankwo, I. U. (2017)	Media, environmental health education, Onitsha Urban	The media plays a minimal role in environmental health education, with low awareness of sanitation issues.	Mixed-Methods: Survey & Interviews
7	Obuah, P.F., Okon, G.B. (2017)	Waste management, communication strategies, and compliance	High awareness of campaigns, but low compliance with waste disposal procedures.	Survey
8	Obasi, M. C., & Msughter, A. E. (2023)	Environmental hazards, mining communities, and media coverage	The media's neglect of environmental issues in mining communities, with no dedicated coverage.	Mixed-Methods: Survey, Content Analysis, Interviews
9	Omondi, P., Onyango, M., & Museve, E. (2020)	Communication mode, strategy implementation,	Communication mode had no significant effect on water service provision.	Mixed-Methods: Survey & Interviews

		water service provision		
10	Nkemnyi, M. F., et al. (2016)	Media communication, environmental behaviour, Buea, Cameroon	Media communication was insufficient in promoting positive environmental behaviours.	Mixed-Methods: Survey, In-Depth Interviews, & Field Observations
11	Ibenyenwa, N. C., & Kenechukwu, S. A. (2024)	Media campaign, waste disposal, Oye-Ekiti, behavioural health attitudes	Media campaigns had minimal impact on waste disposal behaviours.	Survey
12	Ngobeka, L., & Nyirenda, M. (2024)	Communication strategies, water safety, public perception, Zambia	Social media is underutilised, and there is limited public engagement with messages on water safety.	Mixed-Methods: Survey, Interviews
13	Hurlimann, A., & Dolnicar, S. (2012)	Water conservation, media influence, public policy	Media coverage lacked scientific backing and impartiality, affecting public opinion.	Content Analysis
14	Aliyu, M. F. (2020)	SDGs, health & environmental issues, media coverage in Nigerian newspapers	Low media coverage of SDGs, especially health and environmental issues.	Content Analysis
15	Lamai, O. M., et al. (2024)	Open defecation, media influence, Nasarawa State, Nigeria	Media messages on open defecation were inadequate.	Survey
16	Murugu, F., Too, V., & Mwenda, C. N. M. (2024)	Hygiene practices, mass media influence, Garba Tula Sub-county	A moderate relationship was found between media exposure and hygiene practices.	Mixed-Methods: Survey, Interviews
17	Nazir, F., et al. (2025)	Water issues, agenda setting, framing, Pakistan	Jang newspaper is more influential in agenda setting, and coverage is biased.	Mixed Methods: Content Analysis, Survey
18	Nwosu, N. C., & Okoroafor, E. K. (2025)	Environmental awareness, radio programming, Ogoni, Eleme communities	Limited awareness of the “Ogoni Clean-up Show” among Eleme residents.	Mixed-Methods: Survey, Focus Group Discussion

19	Simooya, S. M. (2011)	Public environmental awareness, Zambian media, and environmental journalism	Environmental issues are poorly covered; more space is dedicated to political news.	Mixed-Methods, Content Analysis, Interviews, Survey
20	Okorie, K. (2024)	Environmental pollution, media coverage, Nigerian newspapers	Uneven coverage of environmental pollution; low focus on air pollution.	Content Analysis
21	Oforibika, A. G., Alalibo, I. K., & Solomon, L. (2018)	Environmental pollution, reportage, Nigerian newspapers	Limited coverage on environmental pollution; focus on oil spillage.	Content Analysis
22	Rauf, A; Ali, S; Irfan, (2021)	Media coverage, environmental issues, Urdu vs English press	Limited agenda-setting for environmental issues in Pakistani media.	Content Analysis
23	Asemah, E. S. (2015)	Newspaper coverage, health issues, Nigeria	Low coverage of health issues like hygiene practices, especially rural health.	Content Analysis
24	Melea, J. M. (2023)	Open defecation, media coverage, Nigerian newspapers	Undercoverage of open defecation issues; the government major news source.	Content Analysis
25	Lamai, O. M., Igyuve, A., & Akase, T. M. (2024)	UNICEF, anti-open defecation campaign, communication strategies	Communication strategies are not yielding the desired impact.	Survey
26	Lucas, B. D., Laguma, J., & Akodu, P. K. (2025)	Open defecation, Plateau State, PEPSA strategies	Communication strategies have not been effective due to poor attitude and a lack of sustainability.	Mixed-Methods, In-Depth Interviews, Survey
27	Lamai, O. M., Tsgyu, S., & Bernard, D. L. (2024)	Waste management, communication strategies, Lafia Metropolis	Communication strategies are not yielding the desired impact.	Survey

28	Lucas, B. D., Laguma, J., & Akodu, P. K. (2025)	Open defecation, Jos North, PEPSA strategies	Communication strategies have not been effective due to a poor attitude and insufficient monitoring.	Mixed-Methods, In-Depth Interviews, Survey
29	Popoola, M. (2014)	Environmental issues, newspaper reportage, Nigeria	Erosion and flood received the most coverage; feature stories predominantly used.	Content Analysis
30	Ajisafe, O. & Babaleye, T. (2024)	Open defecation, media advocacy, Southwest Nigeria	95% aware of open defecation; media advocacy is necessary to eliminate the practice	Mixed Methods: Survey Focus Group Discussions,
31	Zannah, M. (2017)	Radio stations, sanitation awareness, Makindye, Uganda	Limited role of radio stations in raising sanitation awareness.	Mixed Methods: Survey, Interview
32	Lam, S., Cunsolo, A., Sawatzky, A., et al. (2017)	Drinking water security, Indigenous communities, Canada	Limited media coverage on water challenges in Indigenous communities.	Survey
33	Mayeda, A. M., Boyd, A. D., Paveglio, T. B., et al. (2019)	Water issues, health risks, media representation, U.S. West	Health risks rarely mentioned in media coverage on water issues.	Content Analysis,
34	Shang, W., Zheng, H., Wang, Z., et al. (2015)	Water issues, media coverage, China	Increased attention on recreational water, lack of consistent coverage on policy documents.	Content Analysis
35	Siyao, P. O., Mbughuni, A. S., & Chishami, A. M. (2025)	Environmental conservation, newspaper coverage, Tanzania	Minimal attention to environmental conservation in Tanzanian newspapers.	Content Analysis
36	Chagutah, T. (2010)	Environmental reporting, Zimbabwean press, sustainability	Environmental news is primarily event-centred, lacking in-depth discussions.	Content Analysis
37	Sriram, A., & Maheswari, U. (2013)	Sanitation, hygiene behaviour change, rural India	IEC ineffective in creating awareness on sanitation; new	Focus Group Discussion, Survey

			communication strategies suggested.	
38	Liu, R., Xiao, Y., Fang, T., et al. (2025)	Environmental news, water policy, SDG6, Middle East	Media coverage positively influenced water policy reforms.	Text Analysis
39	Rahmatullah, M. (2024)	Environmental issues, media coverage, Rangpur, Bangladesh	Limited coverage on environmental issues; simple news emphasis.	Mixed-Methods, Content Analysis, Observation Method
40	Partha, S. B., & Nahar, M. (2023)	Environmental issues, media reactivity, Bangladesh	Only 25% proactive environmental coverage; there is a need for more proactive reporting.	Mixed Methods: Content Analysis, In-Depth Interviews
41	Gupta, J., & Bakshi, R. (2023)	Social media in promoting environmental awareness, Swachh Bharat Abhiyaan impact	Social media plays a critical role in spreading the Swachh Bharat Abhiyaan and influencing public behaviour towards cleanliness.	Meta-Analysis Of Existing Research Papers
42	Bello, S. M. (2015)	Health communication, media coverage of health issues, newspaper influence on health behavior	Moderate coverage of HIV/AIDS, malaria, and polio; media's role in shaping health behaviour; challenges in health reporting.	Content Analysis, Survey, In-Depth Interviews
43	Ogu, E. C. (2020)	Environmental journalism, sustainable development, the media's role in environmental protection	Media plays a vital role in promoting sustainable development; calls for more environmental journalism coverage.	Library Research, Secondary Data Analysis
44	Ezeaka, N. B., & Bartholomew, C. E. (2025)	Environmental sanitation, health communication, WASH, behavioural change	Health communication is crucial for behavioural change in sanitation; multi-sectoral and participatory approaches are needed.	Interviews, Surveys
45	Appiah, B., et al. (2019)	Public engagement, water, sanitation, hygiene, and	There is weak engagement between scientists, journalists, and the public; there is a need	Key Informant Interviews, Focus Group Discussions, Thematic Analysis

		communication barriers	for improved communication training.	
46	Zannah, M. (2017)	Radio as a tool for sanitation awareness, community participation in sanitation	Radio has a significant role in sanitation awareness but inadequate campaigns hinder its effectiveness.	Descriptive Survey, Interviews
47	Kamara, F. S. (2021)	Media's role in water governance, public participation, water shortage issues	Media reports on water shortages but lack a communication strategy for policy reforms.	Mixed Methods (Survey, Interviews, Focus Groups)
48	Mbangati, O. F. (2020)	Community radio, sanitation promotion, public awareness	Community radio enhances public awareness but challenges remain in fully addressing sanitation issues.	Qualitative And Quantitative Methods, Surveys, Statistical Analysis
49	Phiri, F. J. (2015)	Water management communication, community participation, Lusaka sewer project	Communication strategies for community participation were mixed; improvements needed for better engagement.	Mixed Methods (Quantitative, Qualitative, Surveys, Interviews)
50	Mugo, E. K. (2020)	Media's impact on water access, community mobilization, local water management	Radio is the most common media platform, but has a limited effect on improving water access and use.	Descriptive Study, Key Informant Interviews, Focus Group Discussions
51	Bassey, A. U. (2025)	Open defecation, sanitation campaigns, public health, communication strategies	AEPB's communication strategies are ineffective due to public attitudes and inadequate monitoring.	Survey Research, Structured Questionnaires, Quantitative Analysis
52	Nnabuife, S. O., & Okonkwo, C. E. (2022)	Open defecation awareness, behavior change, public health campaigns	Exposure to ODF messages did not lead to a change in behaviour as open defecation practices persist.	Survey Research, Questionnaire, Statistical Analysis (Chi-Square)
53	Nkonde, N. (2021)	Market hygiene, sanitation communication, and effectiveness	English as a communication medium in the Kalingalinga	Descriptive & Exploratory Designs

		of communication strategies	market was ineffective due to language barriers.	
54	Adinlewa, T., & Olubodede, E. O. (2022)	Anti-open defecation campaigns, attitude change, sanitation behaviours	Anti-open defecation campaigns significantly influenced attitudes and practices towards sanitation in Owo Local Government.	Survey Research,
55	Dansoho, B. T., et al. (2023)	Disaster risk reduction, media coverage of flood disaster, psychometric paradigm	Media coverage focused more on post-flood reportage rather than pre-flood disaster risk reduction.	Mixed Methods, Content Analysis, Interviews
56	Anderson, M. T. (2019)	Sanitation crisis, communication strategies, waste management, institutional cooperation	Cooperation between Zoomlion and LaDMA improved sanitation, but financial and behavioural challenges remain.	Mixed Methods (Secondary Data, Survey, Interviews)
57	Aladago, N., et al. (2024)	Sanitation, solid waste management, behaviour change communication, community mobilisation	Weak community participation in waste management; need for better communication and community involvement.	Mixed-Method Approach, Survey, Semi-Structured Interviews
58	Utami, I. H., et al. (2024)	Open defecation, health communication, behaviour change strategies	Face-to-face communication was ineffective due to unreliable sources; a multi-channel strategy is recommended.	In-Depth Interviews, Focus Group Discussions, Observations

The findings of the systematic review regarding the manner in which Nigerian newspapers report Water, Sanitation, and Hygiene (WASH) issues underscore the significant role of the media in raising public awareness and influencing policy formulation. Although the media serves a central function in highlighting WASH challenges, coverage remains inconsistent and tends to emphasise certain topics more than others. Sanitation emerges as the most prominently covered theme, representing 43.26% of studies (Arku & Fiasorgbor, 2013; Obuah & Okon, 2017; Anderson, 2019; Ezeudu, 2020; Haruna, 2023; Ngobeka & Nyirenda, 2024; Lucas et al., 2025b), followed by water at 33.33% (Hurlimann & Dolnicar, 2012; Mayeda et al., 2019; Omondi et al., 2020; Nazir et al., 2025; Liu et al., 2025). Conversely, hygiene and open defecation receive comparatively less attention, constituting only 9.93% and 13.48%, respectively (Bello, 2015; Ajayi & Qudus, 2022; Nnabuiife & Okonkwo, 2022; Shittu, 2023; Melea, 2023; Murugu et al., 2024; Lamai et al., 2024b). This distribution of focus reflects Nigeria's ongoing sanitation emergencies, particularly in urban and rural areas, where inadequate waste management and open defecation continue to pose significant threats to public health (Sanusi et al., 2022; Melea, 2023).

The regional disparities in media coverage further highlight the need for a more nuanced and region-specific approach in addressing WASH issues. While national issues dominate the media discourse, with 53.41% of the studies reflecting widespread WASH challenges across the country, Northern Nigeria receives a disproportionate share of attention (19.32%) compared to Southern Nigeria (7.95%). This regional focus, particularly on the North, underscores the unique challenges faced by this region, where WASH issues are exacerbated by factors such as conflict and poor infrastructure. At the same time, the Southern region remains underreported, suggesting that rural areas across Nigeria are overlooked in WASH coverage, despite significant sanitation and water access gaps persisting there.

Methodologically, the studies predominantly rely on content analysis (48%), which offers a systematic means of exploring how WASH issues are framed and reported across media platforms. Content analysis has proven effective in quantifying patterns of media portrayal and identifying thematic trends, such as the prominence of crisis-driven narratives over sustained, developmental coverage (Kayode & Adeniran, 2012; Bello, 2015). The application of mixed-method approaches (24%) enriches the analysis by providing both qualitative and quantitative insights into the public's perception of media messages and their impact on behaviour change regarding sanitation practices (Obuah & Okon, 2017; Haruna, 2023). Theoretical frameworks such as Agenda Setting (18.56%) and Framing Theory (15.46%) dominate the literature, reflecting a predominant focus on the media's role in influencing public discourse and prioritising WASH issues (Aliyu, 2020; Obasi & Msughter, 2023; Melea, 2023; Rauf, Ali, & Irfan, 2021; Okorie, 2024). While these theories emphasise the media's power to shape the public agenda, they often overlook the practical implications for behavioural change, particularly in relation to the adoption of improved sanitation practices (Shittu, 2023).

Despite the valuable contributions of these theoretical frameworks, significant gaps exist in the literature, particularly regarding the underreporting of WASH issues in rural and marginalised communities. A recurring theme in the media's coverage is the prioritisation of political or economic narratives over health and sanitation concerns, particularly in rural areas where WASH issues are most acute. Moreover, vulnerable populations, particularly women and children, who bear the disproportionate burden of inadequate sanitation, remain underrepresented in media coverage. This oversight calls for a shift in focus towards these groups, ensuring that their needs and experiences are adequately captured in WASH reporting.

Furthermore, future research is needed to broaden the geographical scope of media studies to include underserved rural areas and explore how media can utilise diverse communication strategies to promote behaviour change. While some studies have addressed the potential of media to engage communities and encourage sustainable sanitation practices, there remains a lack of research on the direct effect of media coverage on actual sanitation behaviours. Understanding and documenting the influence of media coverage on behaviours such as increased toilet use or reductions in open defecation could offer valuable insights into the potential of media to foster lasting behavioural change in WASH practices.

Integrating comprehensive health communication strategies into media reporting on WASH issues could greatly improve public engagement and foster lasting behavioural change. Moving from a reactive, crisis-focused approach to ongoing, detailed, and solution-driven reporting can help the public engage more meaningfully with WASH issues and support the wider goal of enhancing sanitation standards. Strategies like regular public service announcements, community participation initiatives, and utilisation of local languages could be particularly effective. This change would necessitate a focused effort from both the media and government to develop transparent and consistent communication channels that emphasise long-term, systemic solutions to WASH challenges. Additionally, such an approach would deepen the public's understanding of the personal and community benefits of better sanitation practices, creating a more informed and proactive citizenry.

Although the media assumes a crucial role in enhancing public awareness of WASH issues, this review underscores several notable gaps in literature, especially concerning rural and vulnerable populations. It is essential to develop more comprehensive, region-specific media reports that emphasise solutions, are grounded in a robust theoretical framework, and utilise diverse methodologies. Therefore, research should prioritise addressing these gaps by investigating the capacity of media to influence behaviour change and exploring the integration of health communication strategies to ensure the enduring success of WASH initiatives.

## Implication for Theory

The theoretical implication of this systematic review is that it has enhanced understanding of the media's role in the water, sanitation, and hygiene (WASH) sector in Nigeria. The predominant use of agenda-setting and framing theory highlights the strong influence of the media in shaping public discourse and prioritising WASH-related issues. The study also contributes to the discussion on the media's power to determine what is deemed important. However, the literature indicates that these theories are inadequate to fully explain the behavioural changes driven by media coverage, particularly regarding hygiene practices. Furthermore, the limited use of theories such as participatory communication and the health belief model in addressing community engagement and behavioural change underscores the necessity for more comprehensive theoretical frameworks that combine media influence with health behaviour models.

## Implication for Practice

The findings reveal a significant gap between media coverage and its potential to drive tangible improvements in public health outcomes, particularly in areas such as hygiene and the reduction of open defecation. The disproportionate focus on urban and national-level issues, with limited coverage of rural and underserved areas, calls for a more targeted approach in media reporting. Practitioners should focus on increasing media engagement at the local level, especially in regions with significant sanitation challenges, to raise awareness and influence behaviour. Furthermore, there is a clear need to integrate comprehensive health communication strategies into WASH media campaigns, which could involve community-driven media initiatives and collaboration with local stakeholders to ensure the more effective dissemination of information.

## Research Gap and Future Directions

Arising from the findings furnished by the insights from the extant literature reviewed and the research gaps identified, further scholarly and empirical researches are suggested in the following thematic areas:

- i. An Assessment of the Impact of Underreporting of WASH Issues in Marginalised Communities on Public Health in Nigeria
- ii. Media Representation of Women and Children in Water, Sanitation, and Hygiene (WASH) Reporting in Nigeria
- iii. An Investigation of the Role of Media in Advocating for Long-Term Water and Sanitation Policy Changes in Nigeria

## CONCLUSION

The systematic review of newspaper reportage on Water, Sanitation, and Hygiene (WASH) issues in Nigeria primarily focused on sanitation (43.26%) and water-related topics (33.33%), while hygiene and open defecation received less coverage. Regional disparities in media coverage reveal that Northern Nigeria is more prominently featured (21.05%) compared to the Southern region (9.21%), highlighting the necessity for a more balanced media approach that specifically addresses the WASH challenges faced by rural and underserved communities. The dominance of theoretical frameworks such as Agenda Setting and Framing emphasises the media's influence in shaping public discourse; however, gaps persist in assessing the media's effectiveness in inducing tangible behavioural change concerning WASH.

Despite the methodological strengths of content analysis and mixed-methods research, significant gaps remain in the literature, particularly regarding vulnerable populations and rural areas. Future research should aim to broaden the geographical scope, investigate how media can influence behaviour change in sanitation practices, and incorporate health communication strategies to encourage sustainable sanitation behaviours. This approach will be crucial in improving Nigeria's WASH outcomes and aligning with global public health goals.

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