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Sources used and the challenges encountered by newspaper journalists when covering environmental conservation information in Tanzanian newspapers

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Abstract

Background: Environmental conservation is a crucial global issue, and in Tanzania, newspaper journalists play a vital role in raising awareness and educating the public.
Purpose: This study explores the sources Tanzanian newspaper journalists use to gather environmental conservation information and examines the challenges they face in reporting on these issues.
Research Design, Study Sample, Data Collection and/or Analysis: Using a qualitative research design, the study involved journalists from four major newspapers: Daily News, The Guardian, Mwananchi, and Habari Leo. A purposive sampling technique was used to select 20 journalists for in-depth interviews and content analysis of published articles.
Results: The findings indicate that journalists rely on sources such as government agencies, environmental conservation organizations, academic experts, community voices, social media, corporate sources, international reports, and their own observations to cover information they publish in the newspapers. However, they encounter barriers such as a lack of prioritization for environmental news, resource constraints, insufficient

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skills and knowledge, time limitations, low public literacy on environmental issues, restricted access to credible information, and political and commercial pressures.
Conclusion: This study highlights the need for improved journalism education and policy support to enhance environmental reporting. It recommends comprehensive training for journalists, increased awareness of the importance of environmental news, better access to diverse sources, and a supportive media environment to strengthen conservation coverage in Tanzania.

Keywords
environmental conservation, challenges, journalists, newspapers, information sources, Tanzania

Introduction

Newspaper journalists are information providers who engage in complex activities of interacting with information for ensuring that the needs of their customers or users of information are met through news production. They struggle to ensure that information consumers find value in the information they provide (Davies and Williams, 2012). They add value to the information they provide by building partnerships and close collaborations with their users as well as engaging in value-adding information behavior through "evaluating, analyzing, organizing, packaging and presenting information in a way that maximizes its usefulness" (Wittwer, 2001).

By the nature of their profession, journalists are recognized as information gatherers who adhere to established professional practices and norms (Agyei-Mensah et al., 2022). They collect information from diverse sources before producing news, a process that involves five key stages: acquiring information, validating it, processing it, presenting and disseminating it, and finally curating the information (Spyridou and Veglis, 2016, see Figure 1).

The information acquisition stage involves the discovery of information in a raw form based on quality, accessibility, and other selection criteria (Reich, 2006). At this stage the journalist interacts with various sources of information as well as people that are involved or can express opinions about the news subject. Source interaction requires journalists to build rapport with sources before they are comfortable to share information which may

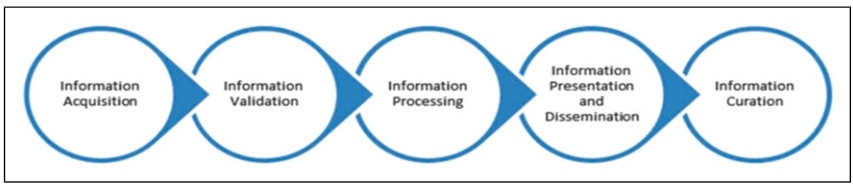


Figure 1. Stages in the journalistic work process. Source: Adapted from Spyridou and Veglis (2016).

provide ideas for new stories in addition to information for current stories. This stage is followed by information validation whereby the journalist cross-checks the original data and obtains further data from sources in order to enrich the available information. Information validation is preceded by information processing stage whereby news begins to take its final form ready for presentation and dissemination stages. Finally, information is curated where journalists are now expected to further disseminate social networks and engage in conversation with users. This is the stage at which journalists manage the boundary between themselves and their sources. Journalists also cultivate long-term relationships with selected sources to have access to background information and trusted comments.

Statement of the problem

In Tanzania, environmental conservation remains a critical issue, with the country facing various challenges such as deforestation, climate change, loss of biodiversity, and pollution among others. The media plays an essential role in raising awareness, shaping public opinion, and influencing policy regarding environmental conservation (Abdujabbarovna, 2023; Lusagalika, 2020). However, despite the importance of environmental journalism, there is limited research on the sources used by newspaper journalists to cover environmental issues and the challenges they encounter in reporting on these topics (Kamboh et al., 2023; Nino et al., 2022). This study aims to explore the sources used by Tanzanian newspaper journalists when covering environmental conservation topics and to identify the challenges they face in gathering, verifying, and reporting such information. Additionally, the study seeks to highlight the barriers usually faced by newspaper journalists while collecting information on environmental conservation. The study will improve the quality and impact of environmental reporting in Tanzanian newspapers, enabling journalists to overcome challenges and deliver more comprehensive, accurate, and timely information to the public.

Research objectives (RO)

RO_1: To examine sources used by Tanzanian newspaper journalists to collect environmental conservation information for reportage in the respective newspapers.
RO_2: To determine barriers usually faced by newspaper journalists while collecting information on environmental conservation in Tanzania for reportage in the respective newspapers.

Literature review

Sources used by newspaper journalists to cover environmental conservation information in newspapers

The sources used by journalists depend on several factors, including the journalist's training, personal preference, the organizational culture where the journalist lives and works. They also differ among various reporting areas, sometimes referred to as "beats,"

such as sports, crime, education, foreign affairs, and entertainment (Chinn, 2001). Source and channel of information are quite often used interchangeably, though sources might use different channels for information dissemination (Dagiliute, 2023). For the newspaper journalist to be able to cover environmental news, they need to access such information from various sources or channels. Pan et al. (2022) reported that an increase in environmental information dissemination increases environmental knowledge. This means that the more people are exposed to environmental information, the more they are inclined to behave in a pro-environmental way (Otto and Kaiser, 2014).

The study conducted by Ahmad et al. (2020) indicates that the formal information sources mainly used by journalists were the internet, Television, radio, newspapers agencies, and social media, including Facebook, Twitter, and WhatsApp, among others. Tasmim and Atikuzzaman (2023) conducted a study to investigate the information needs and seeking behavior of campus journalists from different universities in Bangladesh. The study found that campus journalists primarily sought information to write news, covering university prosperity, hall or residence-related issues, the university's political issues, and cultural activities. The results also showed that the campus journalists mainly collected news by visiting the place physically and listening to witnesses' stories. Singh and Sharma (2013) conducted a study on the information-seeking behavior of newspaper journalists working in Delhi, India, whose results indicated that most frequently journalists used periodicals, news magazines, current issues of newspapers, clipping files, and reference books. Umeozor (2018) conducted a study on the information needs and seeking behaviors of journalists and artisans. In that study, it was reported that journalists are a heterogeneous group of professionals and their information needs are enormous, quite insatiable, and much diversified because they not only inform the masses but also play an important role in the interpretation of news and events to develop understanding, opinion formation and persuasion. To obtain information, journalists consult a variety of formal and informal sources, but they mostly use informal (interpersonal) sources.

Singh and Sharma (2013) assessed the information-seeking behavior of newspaper journalists in India. In that study it was observed that for the purpose of seeking specific information, journalists consulted sources such as dictionaries/biographical dictionaries, Government publications, encyclopedias, books and newspaper clipping files. The most sources consulted by journalists for keeping up-to-date were current issues of newspapers, newsmagazines, periodicals, book reviews and Government publications and for the purpose of background information, sources mostly consulted were newspaper clipping files, back issues of newspapers, books, archival sources and periodicals. With regards to the frequencies of use of these sources, periodicals, news magazines, current issues of newspapers, newspaper clipping files, and dictionaries/biographical dictionaries were most frequently consulted.

Mahadevagouda and Pavithrabai (2022) conducted a study on the information-seeking behaviour of newspaper journalists of Karnataka State. The study found that journalists search, access, and make use of a variety of information sources, both in print and electronic media. Anwar and Asghar (2009) conducted a study on the information-seeking behavior of Pakistani journalists. The results indicate that the journalists in Pakistan use various information sources, which include both formal and informal sources. Journalists used an in-house electronic library enhanced by Internet-of-Things (IoT) resources to get

the idea which was used for preparing a storyline and for background information. Gupta (2016) conducted research on the information-seeking behavior of print-media journalists in Riwa Division, India. Findings indicate that journalists were using various types of information resources to meet their information needs. The information sources included the latest periodicals, newspaper' clippings and reference materials. The review of the above literature shows that the media professionals/journalists working in different departments need and seek information in order to provide the public with up-to-date news and information. To assist media professionals in searching and accessing the required information, it is essential to investigate their information-seeking behaviors.

Obstacles encountered by newspaper journalists when reporting on environmental conservation issues

Journalists face a number of challenges or obstacles that keep them from meeting their information needs. These obstacles consequently hinder journalists from effectively covering environmental conservation information for reportage in the Tanzanian newspapers. The study conducted by Freeman, 2021 indicates that the lack of priority in reporting environmental conservation information caused by journalists and media owners who do not consider environmental coverage as a priority is one of the hindrances for journalists to cover environmental conservation information. This is associated with the fact that some journalists and media owners do not consider environmental coverage a priority, especially at the national level. This author further opined that if the environmental information was a priority, journalists would try to cover it better and make environmental issues the beat in their newspapers.

Some other studies (e.g., Abou-Doun, 2019; Rija and Kidegesho, 2020) have reported that the lack of public demand for more environmental issues coverage is one of the potential obstacles in the coverage of environmental conservation information by the newspaper journalists. This is because there is no widespread demand among the public for more environmental coverage. Freeman, 2021 is of view that some people are less interested in the forest issues and things outside their visible world because overall conservation awareness is not adequate. Ejaz et al. (2021) further added that the lack of interest in the coverage of complex scientific issues prompts media organizations to pay less attention to environmental news.

Newspaper journalists need skills, knowledge and techniques on how to cover topics on environmental issues. However, lack of substantive knowledge about the environment contributes to the factors that hinder newspaper journalists from covering environmental conservation information in their newspapers (Karakire, n.d). Journalists use their own experiences to cover environmental issues without undergoing environmental journalism courses that would have made them professional environmental journalists (Luedecke and Boykoff, 2017). Journalists' lack of knowledge may lead to shallow, sparse, misleading, sporadic, and inaccurate coverage of environmental conservation topics in the newspapers (Freeman, 2021; Saifudin, 2016). Other studies (e.g. Karakire, n.d; Siyao and Sife 2021) indicate that newspaper journalists are constrained by inadequate financial resources and time which impact coverage and reportage of developmental news. In those studies, journalists are reported to have operated on meagre budgets which implies that the budgets

allocated to newspaper journalists are not enough to cover transportation, food, accommodation, and the acquisition of proper information and communication technology equipment, such as cameras, recorders, and laptops which are required for covering available information. All these make it hard to cover environmental issues in the newspapers.

Another obstacle encountered by newspaper journalists in the coverage of environmental news is closely related to the public's low level of literacy in environmental science issues. Most people lack a deeper understanding and application of knowledge in environmental and scientific issues, especially those related to complex environmental issues. Thus, without adequate public understanding of environmental topics, it is hard for the media such as newspapers to cover and disseminate environmental messages for public consumption (Saifudin, 2016). Boykoff &Roberts (2007) cite difficulties such as time constraints and scientific specialization to check the data and learn new information resources, tight deadlines, which keep newspapers away from conducting in-depth research and comprehending information (Attfield and Dowell, 2003), as hindrances to obtaining information by newspaper journalists for reportage in the newspapers.

Theoretical framework

The Hierarchy of Influences (HoI) Model a theoretical framework developed by Shoemaker and Reese (2013). This model is used to understand the various factors that influence media content production. The model provides a level that shows different forces from individual to broader social systems. The model consists of five levels of influence from micro to macro. These levels including individual level (focuses on personal characteristics of journalists and editors), routines level (concerns professional practices and newsroom norms), organizational level (looks at the media organization's structure, ownership, and internal policies), social institution level (examines how other institutions influence media) social system level (the broadest level; includes cultural, political, economic, and ideological systems).

The HoI model is especially useful for media content analysis, journalism studies, and communication research. It helps scholars and practitioners understand: why certain issues get more coverage than others, how societal values shape news content and where interventions can be made to improve coverage of underrepresented issues (like environmental conservation). This model is found more relevant to this study because it identifies who and what influences the way environmental issues are reported, it links media content to public awareness and potential action and develop targeted strategies to improve conservation communication.

Conceptual framework

From the model, the study formulates the conceptual framework based on the HoI Model. This framework clearly defines independent variables (IVs) and dependent variables (DVs) and shows their interrelationships in the context of environmental conservation coverage in Tanzanian newspapers. The conceptual framework (Figure 2) explains how different levels of influence affect the dissemination of environmental conservation

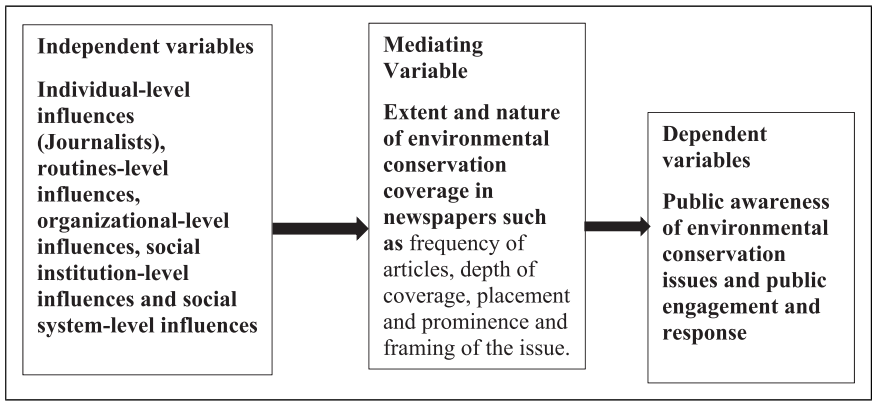


Figure 2. The study's conceptual framework.

information in Tanzanian newspapers, and how this in turn impacts public awareness and action. Therefore, the Independent Variables are individual-level influences (Journalists), routine-level influences, organizational-level influences, social institution-level influences, and social system-level influences. Dependent variables are public awareness of environmental conservation issues and public engagement and response. Mediating Variables are the extent and nature of environmental conservation coverage in newspapers, such as frequency of articles, depth of coverage, placement/prominence, and framing of the issue.

The conceptual framework elaborates, the various levels of influence in the media production process (IVs) affect the way newspapers cover environmental conservation topics (mediator), which in turn affects public awareness and engagement (DVs).

Methodology

This study uses a qualitative research design to explore the types of sources used by Tanzanian newspaper journalists when covering environmental conservation issues and the challenges they encounter in this process. A qualitative approach allows for a detailed exploration of the experiences, perspectives, and professional practices of journalists in Tanzania. The study involved journalists from four major newspapers in Tanzania, which are Daily News, The Guardian, Mwananchi, and Habari Leo. The newspapers were selected based on criteria such as nationwide coverage of mixed news, including environmental conservation, reach and countrywide circulation, existence for more than 5 years, and consistency in publishing their editions with mixed news coverage. Other selection criteria include ownership type (private and government-owned) and language used (Kiswahili and English).

A purposeful sampling technique was employed to select journalists from four newspapers out of 39 registered newspapers for qualitative data collection (URT, 2015). This sample represents 10.3% of all registered and operational newspapers in Tanzania. A sample of 24 interviewee journalists provided an in-depth understanding of their source

selection and the challenges they face. This sample size is sufficient for data saturation, where no new themes or patterns emerge from additional data collection (Mason, 2010). A smaller sample size (21) of journalists has also been used in other studies (Ejaz et al., 2022).

Data were collected through semi-structured interviews with journalists, along with a content analysis of recent environmental conservation articles published in the selected newspapers. In-depth interviews were conducted with the selected journalists, focusing on the types of sources they rely on for obtaining information on environmental conservation issues, the criteria they use to determine source reliability, specific challenges they face in gathering accurate information, and perceived barriers to obtaining information from government or conservation bodies. Newspapers published within the selected years (1st January 2019–31st December 2023) were analyzed to identify all articles related to environmental conservation issues, focusing on the types of sources cited in articles, the frequency and distribution of different source types, and any patterns or trends in source reliability or depth of coverage.

Data collected from the interviews were analyzed using thematic analysis. This method enabled the identification and interpretation of key themes that emerged from journalists' responses. The thematic analysis involved coding the interview transcripts, grouping codes into themes, and interpreting these themes in the context of the research questions (Braun and Clarke, 2006). The content analysis of newspaper articles involved categorizing sources by type and noting their prominence within each article. This analysis helped to triangulate interview findings and provide a broader understanding of sourcing patterns in Tanzanian environmental reporting. To enhance the credibility of the findings, the study employed a triangulation by comparing interview insights with content analysis findings. Member checking was also applied by sharing the interpreted data with selected participants to confirm the accuracy of interpretations.

Results and discussions

Results from interviews revealed various sources utilized by Tanzanian newspaper journalists to gather environmental conservation related information including government agencies and officials, environmental conservation associations, non-governmental organizations (NGOs), academic experts and researchers, community voices, social media and online platforms, corporate and private sector sources, international environmental reports and publications, fellow journalists, photographers and environmental sanitation and cleaners.

Newspaper journalists frequently rely on government agencies and officials as primary sources of environmental conservation information. These sources are perceived as authoritative which provide official data, policies, and updates related to environmental regulations, conservation efforts, and government initiatives. More importantly, Government agencies offer official data. Through an interview, one journalist reported that … *"I often collect environmental conservation information from government ministries such as the Ministry of Natural Resources and Tourism and the National Environment Management Council." (interviewee 14)*. This is similar to the study conducted by Thomas and Thomson (2023), who revealed that journalists relied on elite sources,

government, and institutional sources. This is because the government provides a convenient and regular flow of authoritative information, which reporters find efficient compared with more labor-intensive research. Reliance on government sources reduces the need for expensive specialists and extensive research (Shoemaker and Reese, 1996: 123).

Newspaper journalists indicated that they frequently rely on associations that deal with environmental conservation as primary sources of information. Interview with one journalist yielded that … *"I collect data from different associations which deal with environmental conservation, such as* Journalists Environmental Association of Tanzania *(JET)*." (Interviewee 9). JET is an accredited association that was established in 1991. It aims at raising public awareness on environmental problems through different mass media, including radio and television programmes, news and feature articles, and (traditional) communication systems such as theatre, art, dances, and plays. It also conducts seminars and workshops on issues related to environmental problems. Furthermore, JET is an important source of information because it owns a newsletter known as Kasuku which raises awareness to the public on the issues concerning wildlife conservation, forestry, water, and mining. This is in resonance with the study by Thomas and Thomson (2023) who found out that journalists usually rely on different associations where they obtain information on environmental conservation for reportage in the newspapers.

Non-governmental organizations (NGOs) are resourceful sources of information because they are often directly involved in conservation projects. Interview response from one journalist yielded that … *"I often collect data from NGOs, both local and international (e.g., WWF Tanzania). This source serves as a vital source of information as NGOs usually conduct research on environmental conservation and produce press releases, reports, and interviews*." *(interviewee 10)*. These results are similar to the study conducted by Grayson (2014), who revealed that most journalists obtain information on environmental conservation from various NGOs. However, journalists must be mindful of potential biases, as NGOs may have specific agendas, such as that of providing alternative perspectives that sometimes challenge government narratives.

Climate change experts and researchers form another important source of information. They play a crucial role contributing peer-reviewed studies and data-backed insights that enhance the accuracy and credibility of reports. One newspaper journalist indicated that … *"Academic experts and researchers are good sources of information on environmental conservation because they contribute to the expert opinions on environmental issues for decision-making." (interviewee 4)*. A climate change expert is an interpersonal source of information, which requires one to possess interpersonal skills necessary to source out information through interactions. In this regard, older and veteran journalists who may have developed interactional knowledge of sourcing information through many years of experience are needed for the ease with which they obtain information (Hiles and Hinnant, 2014). The study by Siyao and Sife (2021) indicated a high preference of newspaper journalists in obtaining scientific information from climate change experts who are based in government agencies and research institutions.

Journalists indicated that community members are an important source as they can share firsthand experiences and traditional knowledge, offering unique perspectives on how conservation efforts impact their lives. Through interviews with relevant members of

the community, journalists can collect relevant environmental information for decision-making (Thomas and Thomson, 2023). *One* interviewee responded that ... *"I sometimes meet community members, especially those affected by environmental issues and those living near national parks or forests, to gather information*." *(Interviewee 13)*.

Social media can *allow direct conversation between organizations, communities, and individuals, and t*he language used by social media is more immediate, direct and accessible to wider groups (D'Amato et al., 2019). They have emerged as a significant source of information, aligning with findings from Allison et al. (2023), which emphasized the platform's role in promoting pro-environmental behaviors when effectively managed. However, these platforms may contain unverified information or exaggerated claims that require further validation; thus, journalists should verify information obtained from these sources with other credible sources of information they use. When one newspaper journalist was asked to describe the sources she often use to obtain environmental conservation information to report in the newspapers, the response was … "*Sometimes I collect information from social media platforms such as Twitter and Facebook for story ideas, public reactions, and real-time updates. This provides an informal source of real-time information and public sentiment on conservation issues*." (Interviewee 5).

Journalists depend on different international environmental reports and publications as primary sources of information. During the interview, one respondent noted that … "*I collect environmental conservation issues from international bodies, such as the UN Environmental Programme (UNEP) and Intergovernmental Panel on Climate Change (IPCC) report, which offer global insights on environmental conservation"* (Interviewee 8).

Information collected from international sources allows journalists to frame Tanzanian issues within a global context and underscore the universal importance of conservation efforts. This indicates that journalists consult international publications to understand complex topics, find credible data points, and access expert opinions. They often cite reports from reputable environmental organizations or academic studies to substantiate their findings and provide evidence-based context. This result is similar to a report from Fisher (2023), who found that journalists depend on press releases and other international publications to obtain environmental conservation information.

Newspaper journalists indicated that they obtained environmental conservation from their fellow journalists, especially from those who go outside the media house seeking information. In one of the interview sessions, one respondent indicated that … "*journalists who roam around as freelancers are good sources of information"* (Interviewee 11). These results are similar to the studies conducted by Blom (2022), who revealed that journalists rely on their own firsthand experiences as well as eyewitness accounts for creating compelling narratives.

The importance of having photographers as a source of information has been emphasized by Oparaugo (2021). In one of the interview sessions, one journalist indicated that … *We collect information from photographers who present key locations where environmental changes are happening, such as deforestation, polluted areas, or natural reserves degradation."* (Interviewee 16).

Furthermore, newspaper journalists indicated that environmental sanitation cleaners are also sources of information and have unique insights into local environmental conditions, such as public spaces, parks, beaches, and urban areas. In one of the interviews, one journalist noted that… *"We collect information by interviewing sanitation workers to gain a ground-level perspective on issues like urban pollution, waste management practices, and community attitudes toward cleanliness and conservation*." (Interviewee 21).

Through interviews, it was revealed that several barriers hinder newspaper journalists from collecting information about environmental conservation issues. The barriers include lack of priority in reporting environmental conservation information, resource constraints, lack of interest in covering environmental conservation information, inadequate knowledge and techniques, inadequate time, public low level of literacy in environmental science issues, limited access to credible information, technical complexity, political and commercial and pressures and lack of public demand coupled with poor reading culture.

Journalists reported a lack of priority in reporting environmental conservation information as one of the barriers they usually face while collecting information on environmental conservation. Journalist indicated that topics like political conflicts, economic instability, health crises, and those topics with more immediate, sensational, or entertainment-driven appeal typically draw more readers' attention than environmental conservation. In one of the interview sessions, one respondent noted that … "*When covering news, other economic, political, and social issues do normally receive more coverage because they are seen as having an immediate impact on the public, whereas environmental conservation issues can be sidelined based on the perceptions that they have less impact on people's everyday lives."(Interviewee 8)*. Limited funding and staffing in newsrooms make it difficult to prioritize specialized environmental journalism, with journalists often required to cover multiple beats. A lack of targeted training in environmental issues compounds this problem, leaving some journalists dependent on press releases or secondary sources, which may not always provide the accuracy or depth needed for robust reporting. Prior studies, including those by Freeman, 2021; Saifudin, 2016; Siyao and Sife, 2021, also pointed to similar challenges, identifying insufficient funding, inadequate training, and limited prioritization of environmental issues as significant obstacles. Collectively, these factors can lead to gaps in coverage, affecting the quality and reliability of environmental conservation reporting in Tanzania.

Newspaper journalists indicated that resource constraints are one of the barriers usually faced while collecting information on environmental conservation. In an interview, a respondent noted that … *"I do not have enough budget to go for field visits or to make scientific consultations; therefore, we visit areas that are easier and cheaper to cover." (Interviewee 3)*. This indicates that inadequate financial resources can minimize field visits a resulting to fewer stories being captured. Without financial resources, journalists may miss opportunities to investigate or report environmental issues that occur in a place where they need to travel, as a result, the stories may lack in-depth details. This is similar to the study conducted by Koirala and Sharma (2024), who revealed that journalists fail to collect environmental news because of financial constraints, which leads to the inability to

conduct thorough investigations into environmental issues, which affects the quality and depth of environmental news coverage.

Lack of interest in the coverage of environmental conservation was reported as a barrier that hinders journalists from collecting information on environmental conservation. This is closely associated with the press's lack of attention in disseminating information about the environment conservation. One respondent noted: … *"We often struggle in engaging the audience on environmental topics because they seem complex or distant from immediate public interests" (Interviewee 7)*. These findings are similar to those of Amu and Agwu (2012), who highlighted that journalists lack of interest in environmental issues leads to inadequate coverage and insufficient support by journalists.

Newspaper journalists reported on the inadequate skills, knowledge and techniques as the barriers hindering them while collecting information on environmental conservation. Newspaper journalists pointed out that because of the inadequate knowledge and skills necessary to cover environmental conservation. journalists often encounter complex terminologies that make reporting challenging. Additionally, because of the inadequate training on how to report on environmental conservation information effectively and engagingly, both the quality and frequency of their coverage is usually affected. This is similar to the study by Elia (2019) who identified challenges such as insufficient analytical skills, limited awareness of information sources, inadequate training, and insufficient information search skills among Tanzanian journalists who report on developmental information. A journalist who is well vested in environmental issues beat would always select relevant news items, interpret and write them appropriately for easy understanding by the audiences (Ogadimma et al., 2023).

Time constraints is another barrier facing journalists while collecting information on environmental conservation. Through an in-depth interview, one respondent noted that… *"I usually operate under tight deadlines, limiting my ability to research, verify, and contextualize environmental stories" (Interviewee 13)*. Some other studies such as that of Koirala and Sharma (2024) found the same results which indicated that inadequate environmental news coverage is attributed to time constraints. Journalists often operate under tight deadlines and demanding schedules, which leave little room for thorough research or detailed reporting. This time constraints can make it challenging to provide accurate, comprehensive, and well-contextualized coverage of environmental issues in Tanzanian newspapers.

Low public level of literacy in environmental science issues has been reported as one of the barriers usually faced by journalists when collecting information on environmental conservation. One journalist responded that… "*Because of the limited understanding of the terms used in environmental science issues, public engagement and demand for in-depth reporting on such issues may be reduced" (Interviewee 17)*. This is an indication that without a strong foundational knowledge among the audience, journalists may face difficulty in conveying the relevant environmental topics to the public. The results are similar to the study conducted by Tagbo (2010), who reported that a lack of understanding of the environmental issues makes it difficult for most African journalists to perform a good job of reporting it in their newspapers.

Newspaper journalists reported on limited access to credible information and technical complexity issues as the barriers they usually face while collecting information on

environmental conservation. One respondent noted that… *"When it comes to the coverage of information, we are often hindered by limited access to reliable sources and a complex understanding of scientific data". (Interviewee19)*. This indicates that without knowing the reliable sources and data on environmental issues, journalists may struggle to effectively get credible information related to environmental topics. This gap in understanding makes it harder to engage the audience, emphasize the real-world impacts, and inspire meaningful action or awareness. The results are similar to the study conducted by Pinto and Matias (2023), who found that journalists often struggle to obtain accurate and reliable data on environmental issues for coverage in the newspapers.

Furthermore, poor reading culture among newspaper journalists (Bazira et al., 2019) often hinders their ability to produce in-depth stories, resulting in superficial coverage. Other authors like Wema (2018) commented that reading culture among newspaper journalists should be cultivated in their daily activities for promoting individuals' lifelong learning skills when they apply critical thinking and problem-solving skills.

Conclusions and recommendations

Conclusion

The present study sheds light on the sources of information used by newspaper journalists to obtain environmental conservation information and the challenges they encounter when covering such information for reportage in Tanzanian newspapers. This study is crucial for educators and policymakers to improve journalism education and promote responsible environmental news reporting practices in the country. Overall, this study has the potential to influence the development of a more vibrant and democratic media landscape in Tanzania, where newspaper journalists can play a vital role in informing and empowering their communities to change their behavior towards to their environment.

Recommendations:

Based on the findings of the study, the authors suggest the following recommendations for newspaper journalists to improve their information-seeking behavior with regard to environmental conservation information.

- Journalists should receive more comprehensive and long-term training in environmental journalism to enhance their skills and knowledge in effective information-seeking.
- For the government to create more awareness through coverage of environmental conservation news, it must collaborate with relevant institutions and the media
- As the primary reason for seeking information was related to environmental conservation for creating awareness, journalists should prioritize coverage of environmental conservation news.
- To improve, research suggests for greater access to diverse sources, and fostering a media environment where environmental reporting is prioritized and protected from undue political or commercial pressures

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