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Assessing environmental knowledge among journalists: A study in Bangalore city

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Abstract

This study explores the level of environmental knowledge among journalists in Bangalore, focusing on their understanding of global environmental issues, local environmental concerns, and ecological knowledge. With Bangalore experiencing rapid urbanization and environmental challenges, the role of media in shaping public awareness and discourse on sustainability is critical. The research employs a quantitative approach using structured questionnaires to survey 32 journalists from print and electronic media, with equal representation across gender, language (Kannada and English), and media type. The study examines the influence of demographic and professional variables, such as gender, media type, and language, on journalists' environmental knowledge.

Findings highlight notable variations in environmental knowledge based on these factors, emphasizing the importance of language and media type in enhancing awareness. The research highlights the need for capacity-building initiatives to equip journalists with the necessary knowledge for effective environmental reporting.

Keywords: Environmental knowledge, ecological knowledge, global environmental issues, local environmental issues, environmental journalism

Introduction

Bangalore, often referred to as the Silicon Valley of India, is one of the fastest-growing global cities. However, rapid urbanization and industrialization have brought significant environmental challenges. Among these are air pollution, diminishing green spaces, traffic noise, water scarcity, and improper waste management. The city's lakes, once celebrated for their ecological richness, are now victims of pollution and encroachment. Furthermore, the rising temperatures and erratic weather patterns due to climate change exacerbate these challenges. As Bangalore continues to expand, addressing these environmental issues becomes increasingly urgent to sustain the quality of life and ensure ecological balance.

In a cosmopolitan and tech-savvy city like Bangalore, media holds immense influence over public opinion and policy-making. With a diverse population that actively consumes news through digital platforms, newspapers, television, and social media, the media acts as a bridge between the government, experts, and the public. It has the potential to shape narratives, raise awareness, and mobilize collective action. The role of media in addressing urban issues, including environmental concerns, is critical in cities experiencing rapid development like Bangalore.

Environmental communication is a specialized field that requires fine reporting. The media serves as a crucial platform for disseminating information about environmental challenges, potential solutions, and the implications of inaction. By bringing environmental issues to the forefront, the media can drive public discourse and encourage sustainable practices. In Bangalore, where environmental degradation directly impacts millions, the media's role in informing and engaging the public is more important than ever.

Over the years, Bangalore's environmental issues have been extensively covered in various media outlets. Stories about the foaming and burning of Bellandur Lake, the alarming drop in the city's groundwater levels, and air quality concerns have sparked public outrage and policy interventions. Media campaigns have also highlighted citizen-led initiatives, such as lake rejuvenation projects and waste segregation drives, showcasing the power of collective action.

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These examples underscore the media's capacity to not only report but also influence environmental conservation efforts. Journalists play a pivotal role in bridging the gap between scientific knowledge and public understanding. In the context of Bangalore's environmental challenges, journalists must possess adequate knowledge about global and local environmental issues as well as knowledge of ecology to report accurately and effectively. Their ability to simplify complex environmental data and present it in an engaging manner can drive awareness and action. Moreover, journalists act as watchdogs, holding authorities accountable for environmental mismanagement. Their work can inspire behavioral change and advocate for policies that prioritize sustainability.

Given the complexity and urgency of environmental issues, journalists need a robust understanding of environmental science, policies, and local context. This knowledge equips them to ask the right questions, identify credible sources, and report responsibly. In Bangalore, where environmental challenges are intertwined with urban development, journalists must be adept at highlighting the interconnectedness of these issues. By doing so, they can foster a more informed and engaged citizenry, ultimately contributing to the city's sustainable future.

Literature review

Environmental journalism plays a crucial role in shaping public understanding of climate change, often serving as the bridge between scientific communities, stakeholders, and the general public. As Fahy and Nisbet (2011)^[3] and Post (2017)^[8] highlight, journalists act as vital intermediaries, translating complex scientific information into accessible narratives. Their decisions on what to prioritize and how to present information significantly influence audience perceptions and understanding of climate change, a sentiment echoed by Boykoff and Boykoff (2007)^[1], Hart (2011)^[4], and Myers *et al.* (2012)^[7]. These choices empower journalists and news managers to shape the narratives that reach audiences, as they determine how issues like climate change are framed in public discourse (Schmid-Petri *et al.*, 2016)^[10].

The representation of climate change in media, particularly in the Indian context, reveals diverse interpretations and approaches. Billett (2010)^[11], in the study "*Dividing Climate Change: Global Warming in the Indian Mass Media*," analyzed Indian newspaper coverage and found that climate change was portrayed as a real and ongoing phenomenon, with its impacts localized to the Indian context. Through interviews with 15 Indian journalists, Billett discovered unanimous agreement that climate change is a tangible reality, with its effects already visible in the country, causing significant suffering. Furthermore, 10 of these journalists specifically linked climate change to disruptions in the Indian monsoon, emphasizing its immediate and observable consequences.

In contrast, Arul Aram (2011)^[2] found differing perceptions in a study involving 25 Indian journalists. Here, climate change was viewed as an abstract concept, detached from the tangible realities of daily life in India. This contrast underscores the variability in how climate change is perceived and communicated within the Indian media landscape, reflecting broader challenges in environmental journalism.

Beyond India, environmental journalism has been

conceptualized as journalism with a purpose. Rademakers (2004)^[9] argues that it serves to advocate for environmental awareness while also functioning as a platform for reporting on environmental issues. Journalists' ability to influence perceptions of climate change solutions is particularly significant. As Maibach *et al.* (2020)^[6] note, journalists working across various media formats—print, broadcast, and radio—have the potential to shape public discourse by connecting climate science with actionable solutions.

The challenge of trust in climate science communication further complicates the journalist's role. Holmes, Solano, and Hill (2017)^[5] identify that people tend to trust only a select group of sources, including scientists, farmers, firefighters, and weather presenters of these, weather presenters hold a unique position, as they have both access to large audiences and the communication skills necessary to effectively convey information.

These findings illustrate the complexities of environmental journalism and its multidimensional nature. Journalists not only report on climate change but also shape its framing, contributing to public understanding and engagement. As such, their role in addressing the climate crisis extends beyond information dissemination to fostering meaningful dialogue and action.

Scope of the study

This study focuses on assessing the environmental knowledge of journalists working in Bangalore city. The study examines journalists' understanding of global environmental issues, local environmental concerns, and ecological concepts, all of which are critical for responsible and impactful environmental reporting. By focusing on journalists from both print and electronic media, the research provides insights into the role of media professionals in shaping public awareness and discourse on environmental sustainability.

This study aims to contribute to the fields of environmental communication and journalism by identifying gaps in knowledge, highlighting the influence of factors such as gender, media type, professional role, and language, and emphasizing the need for capacity-building initiatives to equip journalists with the necessary knowledge. The findings are expected to be valuable for media organizations, policymakers, and educators in designing training programs and policies to enhance environmental literacy among journalists, ultimately fostering more informed and impactful media coverage of environmental issues in Bangalore and beyond.

Objective of the study

The primary objective of this study is to analyze the level of environmental knowledge among journalists working in Bangalore city. The study examines the influence of various demographic and professional factors, such as gender, the type of media they work in (print or electronic), their position or role within the organization, and the language in which they communicate, on their environmental knowledge. These variables are crucial as they may shape journalists' exposure to environmental issues, access to resources, and perspectives on reporting such topics. By exploring these dimensions, the research endeavors to uncover patterns and disparities in environmental knowledge among journalists and identify the factors that enhance or hinder their understanding.

Methodology

This study employs a quantitative research design utilizing the survey method. Due to the absence of a comprehensive sampling frame, the accidental sampling technique was adopted. The respondents for the study were drawn from regional media houses, comprising 32 journalists working in both print and electronic media across various professional capacities. Data collection was facilitated through the use of structured questionnaires.

Sample

In our sample equal representation is given to gender (male; and female) both represent 16N each. A total sample of 32, representation from television and newspaper carries 16N each. Subeditors, newspaper reporters, copy editors, and television reporters represented 25% each. Equal representation is given to the language of media (Kannada 16N, English 16N).

Variables: Demographic variable: Respondents were asked to answer the independent variables in the

questionnaire of their gender (male; female), type of media they work (television; newspaper), and language of media (Kannada; English).

Environmental knowledge: This was measured using a scale that presents 3 items (each item carries 6 statements) that measure knowledge of global environmental issues (Climate change; Global warming; Water pollution; Air pollution; Forest loss; Desertification), and knowledge of local environmental issues (Sewage: Lake; Waste management; Water scarcity; Noise pollution; Urban flooding). Knowledge of ecology (Habitat; Food chain; Population; Keystone species; Biodiversity; Ecosystem)

Data analysis and findings

Table 1: The table presents the percentage distribution of journalists' knowledge about global environmental issues, local environmental issues, and ecological knowledge categorized by medium (television and newspaper) and language (Kannada and English) among male and female respondents.

Table 1: Gender differences in media knowledge

| | Knowledge of Global issues | | | | Knowledge of local issues | | | | Knowledge of ecology | | | |
|--------|----------------------------|---------|-----------|---------|---------------------------|---------|-----------|---------|----------------------|---------|-----------|---------|
| | Television | | Newspaper | | Television | | Newspaper | | Television | | Newspaper | |
| | Kan (%) | Eng (%) | Kan (%) | Eng (%) | Kan (%) | Eng (%) | Kan (%) | Eng (%) | Kan (%) | Eng (%) | Kan (%) | Eng (%) |
| Male | 50 | 100 | 91.66 | 75 | 100 | 100 | 100 | 100 | 8.33 | 58.33 | 50 | 83.33 |
| Female | 91.66 | 100 | 91.66 | 100 | 75 | 100 | 100 | 100 | 25 | 91.66 | 75 | 100 |
| | 70.83 | 100 | 91.66 | 87.5 | 87.5 | 100 | 100 | 100 | 16.66 | 74.99 | 62.5 | 91.66 |

As per the table, 91.66% of knowledge about global environmental issues was recorded for male respondents in Kannada newspaper media, and 75% of knowledge about global environmental issues was recorded for male respondents in English newspaper media. Similarly, 91.66% of knowledge about global environmental issues was recorded by female respondents in Kannada newspaper media, and 100% of knowledge about global environmental issues was recorded by female respondents from English newspaper media.

As per the data, both male respondents from Kannada and English TV channels reported 100% knowledge about local environmental issues. In contrast, 75% of knowledge about local environmental issues was reported by female respondents from Kannada TV channels, whereas 100% of knowledge about local environmental issues was reported by female respondents from English TV channels. Additionally, both male and female respondents from both media types reported 100% knowledge about local environmental issues. Male as well as female Respondents from Both the Kannada and English newspapers responded with 100% knowledge about local environmental issues.

Male Kannada television respondents, showed only 8.33% of ecological knowledge whereas male English television respondents showed 58.33% of ecological knowledge. The female respondents from Kannada television reported 25% of knowledge about ecology whereas female respondents from English television reported 91.66% of ecological knowledge. Male Kannada television respondents, showed only 50% of ecological knowledge whereas male English television respondents showed 88.33% of ecological knowledge. The female respondents from Kannada television reported 75% of knowledge about ecology whereas female respondents from English television

reported 100% of ecological knowledge.

Table 2: The below table represents the summary of environmental knowledge among journalists in Bangalore, broken down by gender and media consumption through television and newspapers, across Kannada and English languages.

Table 2: Gender-differentiated environmental media knowledge levels

| | Environmental knowledge | | | | |
|--------|-------------------------|-------------|-------------|-------------|-----------|
| | Television | | Newspaper | | Total (%) |
| | Kannada (%) | English (%) | Kannada (%) | English (%) | |
| Male | 52.77 | 86.11 | 80.55 | 86.11 | 76.38 |
| Female | 63.88 | 97.22 | 91.66 | 100 | 88.19 |
| Total | 58.32 | 91.66 | 86.11 | 93.05 | 82.29 |

The above table represents the summary of environmental knowledge among journalists in Bangalore, broken down by gender and media consumption through television and newspapers, across Kannada and English languages.

The table indicates that Kannada medium television journalist has 58.32%, whereas English medium television journalist has 91.66% environmental knowledge. Kannada medium television journalist has 91.66% whereas English medium television journalist has 93.05% environmental knowledge. The table indicates that journalists in Bangalore have 82.29% environmental knowledge.

The data indicates significant differences in environmental knowledge across gender, language, and media. Overall, female journalists demonstrate higher environmental knowledge (88.19%) compared to male journalists (76.38%) in both Kannada and English newspapers. This suggests that women journalists are more engaged or retain environmental information more effectively than male

journalists, especially in print media. Journalists from English media outperform Kannada journalists in knowledge dissemination for both genders, with English newspaper journalists achieving the highest knowledge levels (93.05%) compared to journalists from Kannada newspapers (86.11%). Television journalists show lower knowledge levels overall (58.32% in Kannada and 91.66% in English), indicating that print media journalists are showing higher environmental knowledge.

A notable observation is a perfect score (100%) for female journalists from English newspapers, further emphasizing their dominance in this category. On the other hand, men from English media exhibit higher knowledge levels

(86.11%) compared to male journalists from Kannada media (52.77% for TV and 80.55% for newspapers). The disparity between Kannada and English knowledge highlights the potential need for improved environmental knowledge for journalists from the Kannada language.

These findings suggest that English media journalists, particularly newspapers, are more aware of environmental knowledge, while Kannada media journalist has room for improve their environmental knowledge.

Table 3: The table represents correlations and p-values for three categories of environmental knowledge (global issues, local issues, and ecological knowledge) against variables such as gender, types of media, and language of media.

Table 3: Media language predicts ecological knowledge

| | Knowledge about global environmental issues | | Knowledge about local environmental issues | | Knowledge about ecological knowledge | |
|-------------------|---|--------------|--|--------------|--------------------------------------|--------------|
| | Correlation | p_value | Correlation | p_value | Correlation | p_value |
| Gender | -0.3694459 | 0.03743205 | 0.2581989 | 0.15363535 | -0.3452707 | 0.05293776 |
| Types of media | 0.1583339 | 0.386756014 | 0.2581989 | 0.153635346 | 0.4708236 | 0.006534375 |
| Language of media | 0.3694459 | 3.743205e-02 | 0.2581989 | 1.536353e-01 | 0.6591531 | 4.085344e-05 |

A significant negative correlation (-0.3694, p = 0.0374) was observed between gender and knowledge about global environmental issues, suggesting a moderate inverse relationship. The correlation between media types and knowledge was positive but not statistically significant (0.1583, p = 0.3868), indicating a weak relationship. Language of media showed a significant positive correlation (0.3694, p = 0.0374) with knowledge about global environmental issues, highlighting its potential impact on enhancing awareness.

Gender exhibited a positive correlation (0.2582) with knowledge about local environmental issues; however, this relationship was not statistically significant (p = 0.1536). Similarly, the media types showed a positive correlation (0.2582) with knowledge, but the result was also not statistically significant (p = 0.1536). The language of media demonstrated the same positive correlation (0.2582), but it did not reach statistical significance (p = 0.1536).

Gender showed a negative correlation (-0.3453) with ecological knowledge, approaching statistical significance (p = 0.0529), suggesting a moderate inverse relationship. Types of media exhibited a significant positive correlation (0.4708, p = 0.0065), indicating that the type of media consumed plays an important role in enhancing ecological knowledge. Language of media demonstrated a strong and statistically significant positive correlation (0.6592, p = 0.00004), highlighting its critical role in influencing ecological knowledge.

Major findings

The analysis reveals significant gender and media-type differences in environmental knowledge among journalists in Bangalore. Female journalists exhibit higher knowledge levels (88.19%) compared to males (76.38%), especially in print media, with a strong correlation between language and knowledge, as English media consistently outperforms Kannada. Journalists consuming English media (both TV and newspapers) demonstrate superior knowledge across global, local, and ecological issues, with female journalists in English newspapers achieving perfect scores. Media type also plays a crucial role, particularly in enhancing ecological knowledge, with television showing lower knowledge

levels, especially in Kannada. These findings highlight the importance of language and media type in shaping environmental awareness and suggest the need for improved environmental content in Kannada media to bridge knowledge gaps.

Conclusion

This research highlights the significant differences in environmental knowledge among journalists in Bangalore, with female journalists generally showing higher levels of knowledge than their male counterparts, particularly in print media. A notable negative correlation between gender and knowledge of global and ecological knowledge suggests that male journalists have lower knowledge levels, pointing to a need for targeted interventions. English media journalists showcased comparatively better knowledge of global and local environmental issues and exhibited superior knowledge, especially in knowledge of ecology. The language of media also plays a crucial role, with English media being more effective in enhancing environmental awareness. The findings suggest the need to improve the environmental knowledge of Kannada journalists to bridge knowledge gaps and ensure more comprehensive and balanced environmental reporting across all media platforms.

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