

*A Study on Fact-Checking and Challenges to Combating Disinformation While
AI Is Threatening the Media in Bangladesh*

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Abstract

The spread of disinformation, misinformation, and fake news has increased due to the widespread use of social media. Recently, artificial intelligence-generated disinformation and deepfake have added new threats to society. Anyone who has little technology knowledge can produce deep fake or fake content and spread it online with the help of AI tools. As a result, the risk of publishing false information in the media has increased, which has triggered the importance of fact-checking. The main objective of this study is to explore fact-checking practices and challenges in combating disinformation in Bangladesh. Using the qualitative research method and the in-depth interview, this study analyzed the data obtained from 15 senior journalists on their fact-checking practices and challenges. The result of the study suggested that media organizations are not ready yet to combat disinformation and deepfake. There is no systematic process for fact-checking within the media houses in Bangladesh. Interviewed journalists have not witnessed any serious impact of AI-generated disinformation so far due to its early-stage development. But they think, advanced technical support, standard education, training, and regulations made by government and media will be needed to combat disinformation. For example, journalists expressed that fact-checking software can help us to detect disinformation. This study identified some challenges related to fact-checking such as fund crisis, lack of skilled human resources, partisan journalism, etc. Media organizations, policymakers, and stakeholders should take action to overcome the challenges. Although the research was conducted in the context of Bangladesh, its findings would be considered as new academic knowledge in the global arena that will contribute to combat disinformation.

Keywords: AI, Disinformation, Misinformation, Deepfake, Fact-Checking, Media

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Introduction

While we are living in a digital world, misinformation, disinformation, and rumors have been flooding every corner of the globe. These are being spread out for political (Landon-Murrey and Mujkic, 2019), religious (Haque et al., 2020), and financial reasons. From the individual to the government level (Leong, 2019), false information is deliberately spread to deceive people. By using advanced generative artificial intelligence (AI) tools, anyone can generate a cloned human voice, hyper-realistic pictures, and videos in a few seconds and with minimal costs. This disinformation is a new threat to journalism (Kahn, 2023). AI can produce targeted fake emails, texts, statements, audio, and video content to manipulate public opinion, mislead voters, tarnish the candidate's image, and undermine the results of the election, which erodes the value of democracy (Robins-Early, 2023).

In the last couple of years, Bangladesh, with a population of over 170 million, has experienced several communal unrests and mob lynchings that were incited by spreading falsely claimed information through social media (Haque et al., 2020). Buddhist temples and hundreds of minority houses at Ramu in Cox's Bazar (one of the districts of Bangladesh) were set on fire; Hindus' houses at Nasirnagar upazila, Brahmanbaria district, were attacked and torched; and a series of mob attacks happened in different parts of the country after disseminating rumors of child abduction (Alam and Ahmed, 2012). Now, AI is being used as a weapon for making and spreading false content against opposite political parties and leaders in Bangladesh (Afrin, 2023). Such contents usually increase during the general election in Bangladesh. Bangladeshi fact-checking organization Dismislab pointed out that 44.4% of disinformation circulated from July 2023 to August 2023 was politics-related (Afrin, 2023). Therefore, the importance of fact-checking in media organizations has increased.

Thus, this study explores the fact-checking practices media organizations use to combat disinformation and the challenges of fact-checking. As follows, this study also presents the significance of automated and manual fact-checking practices in media. Then the research explores journalists' knowledge of AI technology and its usage in media. In conclusion, the study offers potential solutions to overcome the fact-checking limitations.

Literature Review

Artificial intelligence (AI) is considered the most revolutionary and complex human innovation yet (Sukhadeve, 2021). The representation of AI is in every sector of human life except some unexplored fields (Tai, 2020). It incorporates human knowledge or intelligence into machines through a set of algorithms that can do multiple things, such as give reason, learn, gather knowledge, communicate, manipulate, and perceive objects (Collins et al., 2021). As the influence of AI has increased around the world, its business market has expanded. This market is estimated to reach \$22.6 billion by 2025 (Forbes, 2023). But the use of AI technology in journalism has advantages and disadvantages (Dorr, 2016). For example, while AI is being used to produce media content, it can also create fake news. Westerlund, (2018) stated, AI created challenges to fair journalism. So, as a topic, AI gained popularity among media researchers (Goni and Tabassum, 2020).

Machine Learning vs Deep Learning vs Generative AI

Machine learning is a subset of AI technology (Ongsulee, 2017). It provides computers with the capability to learn without being explicitly programmed (Munoz, 2012). It produces

algorithms that learn from the provided data and make decisions based on patterns observed in this data. However human assistance is needed when it makes an incorrect or undesirable decision (Singapore Computer Society, 2020). Machine learning does a variety of computing tasks, including troublesome or impractical works; for instance, information or email filtering, detection of intruders in network systems or hostile insiders working towards a data breach (Ben, 2017), and optical character recognition (OCR) (Yang et al., 2010). On the other hand, deep learning is part of machine learning methods based on learning representations of data. It is called a subfield of machine learning (IBM Blog, 2023).

Processing data through different layers of algorithms utilizes an artificial neural network and confirms a perfect decision without human intervention (Singapore Computer Society, 2020). Different types of deep learning are applied to various fields like automatic speech recognition, computer vision, natural language processing, bioinformatics, and audio recognition (Ongsulee, 2017). Another subset of AI is generative AI, which is now more applicable to making news content (Collins et al., 2021). At present, the most popular generative AI tools are ChatGPT, Dall-E, Midjourney, Bard, DeepMind, etc., which are considered to be in an era of transformation in journalism (Pavlik, 2023). It can produce various media contents such as text, audio, video, images, code, and other data (Bell, 2023).

Automated Journalism and Some Debates

Chadwick (2013) stated that automated journalism is a complicated hybrid system. 'Computational journalism' and 'computer-assisted journalism' (Parratt-Fernandez et al., 2021; Codina and Vallez, 2018), 'robotic journalism' (Clerwall, 2014), 'algorithmic journalism' (Anderson, 2012), 'machine-learning journalism' (Van-Dalen, 2012)—all are commonly known as 'automated journalism' (Graefe, 2016; Moran and Shaikh, 2022). Top media organizations, including The Washington Post, The New York Times, Reuters, and Associate Press (AP), are trying to practice this type of journalism (Fanta, 2017; Tunez-Lopez et al., 2018; Chan-Olmsted, 2019; Dorr, 2015; Linden and Tuulonen, 2019). However, this practice is mainly confined to the sports and finance sectors (Canavilhas, 2022).

Generative AI is helping to advance automated journalism. For content creation, many news portals have openly acknowledged the use of AI tools robustly and systematically (Korneeva, 2023). But AI tools are also used to identify and combat any kind of disinformation (Ruffo and Semeraro, 2022). Adami (2023) thinks AI technology can be an opportunity or a threat to journalism. Cassauwers (2019) explained that with the help of AI, fake videos, audio, and pictures can be generated, which would be the worst practice in journalism. Hosseini et al. (2023) researched the OpenAI (one of the popular generative AI platforms) chatbot's answers. He found that the majority of answers were incorrect, misleading, and inappropriate. Galactica (another AI platform) programmers warned about their biased language models (Galactica 2022; Heaven 2022). Pena-Fernandez et al. (2023) explained that more reliance on technology platforms for doing journalism will be the prime challenge in the next few decades. News Guard (a renowned fact-checking company) placed 100 facts on the ChatGPT platform in January 2023. The facts were about American politics and the health situation. It found that most responses were categorically false and misleading (Brewster, J. et al., 2023).

Misinformation, Disinformation, and Deepfake

Misinformation, disinformation, and rumor—all are made to deceive others intentionally. All of them are elements of fake news. Cummings and Kong (2019) suggested that

misinformation and rumor have a bit of a target to deceive, while disinformation and propaganda come from vested interests to deliberately influence others. Spreading misinformation, disinformation, and rumor has many purposes, including exploiting individual and communal harmony (Banaji et al., 2019; Khan et al., 2019), the economic interest (Clarke et al., 2020; Marten et al., 2020; Wooley, 2016), and politics (Wooley, 2017; Bastos and Dan Mercea, 2019).

Advanced technologies, social media, and electronic platforms have created new paths for disseminating misinformation (Bode and Vrage, 2015; World Economic Forum, 2016). Renowned journalist Bellingcat Eliot Higgins generated some pictures of former US President Donald Trump's fictional arrest by using the generative AI platform Midjourney. The artifacts went viral quickly (Kahn, 2023). Techno specialist Marilyn Gonzalo wrote that visual disinformation could have a strong emotional impact on audiences' perceptions (Kahn, 2023). Deep fake is another threat to journalism (Day, 2018; Fletcher, 2018). Deepfake is a growing concern in Bangladesh. For spreading fake information, replica websites of established news organizations were developed during the country's national poll in 2018 (Alam et al., 2018). In Bangladesh, 1,400 false news stories related to 206 issues were published by the media from January to December 2022 (Rumour Scanner, 2023).

Methodology and Framework

This study employed the in-depth interview method to answer the research questions, which are: What activities do media organisations conduct for fact-checking as generative AI-generated disinformation poses a threat to fair journalism in Bangladesh? and What limitations do Bangladeshi media organisations have for fact-checking? The purposive sampling method was used to select journalists for interviews. Lavrakas (2008) says that purposive sampling is a non-probability sampling that corresponds to the whole population size of a research topic for a specific logic or reason. Since fact-checking is a new issue, purposively I selected 15 top-listed media houses: The Daily Prothom Alo, The Daily Bangladesh Protidin, The Daily Jugantor, The Daily Samakal, and The Daily Kalerkantho, The Daily Star, Financial Express, bdnews24.com, jaggonews24.com, banglatribune.com, dhakapost.com, Independent TV News, Somoy Television, Jamuna Television, and ATN News. One senior journalist from each media was selected for a roughly 40-minute interview. Interviews were conducted online with a questionnaire.

Results

Manual Practice for Verification

Interviewees have revealed that despite having improved technology in the past couple of years, there has been no development of fact-checking methods in media houses in Bangladesh. They still use the old manual technique to verify information if they have suspicions. The fact-checking term is very new for them. Most of the interviewees stated that IT tools or software are a big arm for fact-checking, while AI-generated disinformation is being spread out everywhere. But they do not know how to use this new technology. Interviewee Udisa Islam, Special Correspondent, Bangla Tribune, said:

'When we get any suspicious information, we try to reach the root of that information. We talk to the respective sources of the news: local correspondents, government

officials, etc. Everything is being conducted manually. There is no software or AI tool for fact-checking in our office.'

Most respondents in the study think that logistic support is important for a skilled journalist to do fact-checking. In this case, media organizations must hire tech-savvy journalists who have literacy in advanced technology. Training can also bring fruitful results. Selim Khan, Executive Editor, Independent TV, stated:

'Skilled manpower and logistics support, which are needed to conduct fact-checking digitally, are not available in our media organization. Due to this limitation, we cannot conduct digital activities to verify the facts.'

Some interviewees emphasized the improvement of journalists' efficiency for fact-checking rather than setting up fact-checking teams in media houses. They commented that if journalists can suck up the fact-checking technique properly with the help of technology, it will be easy to combat disinformation, misinformation, and fake news. Golam Mortuja, senior reporter on crime and human rights at bdnews24.com, said:

'I think, before installing fact-checking team, journalists should be made skilled at fact-checking. If we get training and facilities, we will be able to manage any kind of disinformation or rumors.'

Md. Mafuzur Rahman (Mishu), Special Correspondent on Politics, Gas, and Energy, Jamuna Television, commented on the news verification process:

'To verify the information, we analysed first-hand information from the beat reporter. Later, we check the respective person's Facebook, Twitter (now X), or other social media accounts to confirm that information. This is our general practice for fact-checking.'

However, some of the journalists in the study asserted that they try to reach local sources and correspondents and sometimes go to the spots to verify the local news while doing verification of the international news. They search for the same news in famous international media organizations like AFP, Reuters, BBC, CNN, Al-Jazeera, etc. If these media contain that news, then they think it is not fake news. Manwar Hossain, Senior News Editor, Somoy TV, said:

'For local news, we contact beat reporters. We ask them to provide supporting documents related to the statement or information. If the documents sent by the reporter are fake, then it is very tough for us to verify the information's genuineness. On the other hand, we rely on international media organizations to verify international news.'

Although some interviewees emphasized the credibility of the international media in choosing their news for publication in their media, Goutam Mondal, News Editor (online), The Daily Samakal, explained:

'When we intend to publish any reports concerning the international media, we first try to weigh the credibility of that media. After examining this, the news is published'

in our media. This practice not only ensures the credibility of the news but also promotes the responsibility of objective and fake-free journalism.

Image Verification

Most of the interviewees opined that it is equally important to verify text news along with pictures. However, they are not so aware of AI-generated news, pictures, and fake content. Using technology tools or software to verify news has not started in the media house in Bangladesh. However, very few journalists stated that they use technology, especially Google, to verify images. Zohaer Ibna Kalim (Zoha), shift in-charge, Central Desk, The Daily Jugantor, presented his experience:

A few days ago, one of our local correspondents sent some pictures with news to our newsroom. The picture caption said a group of wild elephants attacked innocent villagers. Human bodies were scattered there. From the doubt, I called our correspondent. He replied that the images were collected from one of the villagers. When we contacted the villager over the phone, he said that he did not snap the pictures with my hand; he collected them from the Internet. After that, I took help from Google to check the image date. Finally, I identified that this happened in an Indian village where these pictures were published in online media two years ago.

Individual Efforts

Interviewees noted that verification of information is a common practice in journalism. But fact-checking practices with the help of technology tools are not common. But few reporters and copyeditors fact-check with their knowledge and efforts. Few national and international NGOs and independent fact-checking organizations arranged fact-checking training and workshops where they participated with their interests. Media houses do not arrange any in-house training for their employees. Razib Hasan, News Editor, The Daily Prothom Alo, said:

As fact-checking has not been institutionalized, we cannot start it officially. We did not arrange any training regarding the issue in our house. But some of our colleagues do fact-checking on their initiative. They verify news and images by using Google, and sometimes they get help from our social media team.

Udisa Islam, Special Correspondent, Bangla Tribune, echoed:

I attended fact-checking training. Some fact-checking organizations provide training to journalists in Bangladesh. However, two years ago, there was no idea about fact-checking among journalists. I had not heard anyone talking about it. Now they are familiar with this matter. Policymakers in media organizations need to come forward with this issue more effectively.

Goutam Mondal, News Editor, The Daily Samakal, explained:

Fact-checking has not officially started yet in our country. But in my media house, a few journalists have some knowledge of fact-checking using technology. Approximately 5–10% do this practice.

Media and Fact-Checking Platforms' Relationship

Journalists are aware of the independent fact-checking organizations and their activities. Except for very few, they follow fact-checking platforms online. However, there is no collaboration between any media organizations and fact-checking platforms for combating disinformation. Interviewees think that this collaboration will improve fact-checking practices and develop a sense of objective journalism. Udisa Islam, Special Correspondent, Bangla Tribune, noted here:

I am observing some fact-checking organizations' activities, which regularly publish reports based on their research. They presented several fake news stories that were published in different media organizations during a certain period. Now and then they contact the media houses to inform them what types of fake news they have published. They offer training to journalists as well.

The Digital or IT Team Is Doing Fact-Checking

Journalists used their digital or IT team for fact-checking as an alternative to the fact-checking team. IT or social media teams of media organizations are becoming more relevant to fact-checking. Razib Hasan, News Editor, the Daily Prothom Alo, noted:

In the age of technology, the importance of fact-checking has increased. Therefore, we are to verify many news stories. Sometimes we get help from IT and social media teams to ensure whether the news is fake or not, as there is no fact-checking team. Since AI-generated content has emerged as a threat to objective journalism, we discussed this issue with the IT and social media teams. Apart from this, we are planning to adopt a policy on using AI-generated tools for making news and pictures.

Joysree Bhadury, senior reporter for the Daily Bangladesh Protidin, said:

If we cannot ascertain the truth of any information or pictures, I approach the IT or social media team of our media house. If there was a fact-checking unit, I would go to them.

Challenges

Fact-Checking Is an Insignificant Issue

Most of the interviewees stated that senior officials in the media failed to understand the importance of fact-checking. While fake news, rumors, and disinformation are flooding social spheres, this practice can help combat them. They concluded that if continuously false and half-true news is published by media organizations without verification or fact-checking, then it will damage the credibility of the media. Golam Mortoza, Editor, The Daily Star (Bengali Section), noted:

Government repression, the crackdown by applying the Digital Security Acts 2018, unethical journalism, paid journalism, etc. are common phenomena in the media industry. If AI-generated disinformation is added, then the journalism of Bangladesh will face a grave threat. To deal with this adversity, the policymakers of journalism should be alert in advance. But, indeed, media organizations, policymakers, and

organizations (government and non-government) that are engaged in developing the quality of standard journalism could not perceive the importance of this crisis. At first, we have to understand the gravity of this problem, and then find the solution.

Md. Mafuzur Rahman (Mishu), Special Correspondent on Politics, Gas, and Energy, Jamuna Television, presented his comment in the interview:

The biggest challenge is that the media staff do not understand the crisis of fake news. They cannot still realize it. Owners and managers of media do not want to welcome new thinking and knowledge. This is the reason they are afraid of any change.

Interviewees noted that there is little discussion in the media about the importance of fact-checking. As the issue has become less important, media organizations are being pushed into a big hole of trouble. Joyshree Bhadury, senior reporter for the Daily Bangladesh Protidin, observed:

Recently, I watched an AI-generated video on social media in which the presenter said that if you take two white cardamoms in the morning, you will be cured of high blood pressure. After a few days, I discussed this matter with a specialist doctor. He said, 'It is not scientific proof.' Such disinformation is merged into social media. As journalists, we have some social responsibilities to people so that they get accurate information. For this, a fact-checking unit is needed in our media house. But there is no discussion about it in our media at all.

Financial Insolvency

It emerged from interviewees that a lack of funds hinders conducting fact-checking activities. For fact-checking, skilled technical manpower and equipment are essential. While media houses struggle to pay their employees' salaries regularly, this extra expense is a burden for them. Layoffs in the media are a common phenomenon in the country. Since media organizations are not financially independent and solvent, editors cannot implement many good plans for developing news management. Zohaer Ibna Kalim (Zoha), shift in-charge, Central Desk, The Daily Jugantor, explained:

Our media organization is struggling as the price of newspaper elements has gone up recently. The media has adopted a cost-reduction policy to survive. In this circumstance, it is a question of how the media will install a fact-checking unit. They are to consider the expense of adapting a new team. Along with the new team, various instruments like computers and advanced software are needed that are more expensive.

Competition

Some of the interviewees said that competition for publishing news first creates a way to publish fake news in the media. This practice is prevalent among online news portals. This culture obstructs news verification practices. To catch readers online, news managers want to publish news without any verification of information or sources, even though some news is published without any editing or proofreading. Ariful Islam Arman, Future Editor, dhakapost.com, commented:

A fact-checking team is essential for any media house. However, a competitive culture indeed triggers the need for this team. Disinformation spreads more through online media. To achieve the target of news publishing, journalists rush to publish news and make mistakes. They do not want to allow more time for fact-checking and verifying sources.

Golam Mortoza, Editor, Daily Star (Bengali Section), noted:

Media organizations, especially online news portals, are in a race to publish news quickly. This practice becomes more evident when an important issue appears. If we are not aware of it, the risk of spreading fake news and disinformation will increase. Moreover, using AI tools, anyone can subtly create fake videos, audio, and images that have triggered the risk of publishing fake news in the media. So, if we emphasize fact-checking practices, it will reduce the spreading of disinformation.

Lack of Skilled Human Resources

Most of the interviewees agreed that journalists can fill up the gap left by fact-checkers if they get proper training on fact-checking and using advanced technology. They have a lack of efficiency in technology. Sheikh Salam, News Editor, ATN News, said:

AI tools can generate videos, audio, and images that look genuine. It cannot be identified if there are no IT-skilled and experienced people in media houses. There are no such skilled people in our TV station. We should seriously look into this matter, which will help combat AI-generated disinformation.

Political Pressure and Partisan Journalism

Some of the interviewees said that most of the journalists have their political ideologies. Sometimes they serve their political purposes by publishing reports. Therefore, when they see any news that is favorable to their political parties and ideology, they try to publish or broadcast it in any way. Whether the news is fake or true does not matter to them. They do not want to properly verify the news. Moreover, some media intentionally publish false and biased news for political gain. Publishing corrections while acknowledging the mistake is part of journalism ethics that is not seen in this case. Golam Mortoza, Editor, Daily Star (Bengali Section), stated:

The worst aspect of journalism in Bangladesh is that journalists have become workers of a political party, and journalist leaders have become leaders of a party. Therefore, journalists, except for some top media houses, have derailed the principles of objective journalism, propaganda-free journalism, or disinformation-free journalism.

No House Policy

It became obvious from the interviews that no media has adopted a house policy regarding fact-checking in Bangladesh. House policy is a guide for media organizations or journalists to ensure professional and objective journalism. This policy is also important to combat disinformation. As there is no policy, journalists do not place importance on fact-checking. Golam Mortoza, Editor, Daily Star (Bengali), noted:

There are two reasons for the crisis of credibility in our journalism. One is malpractice journalism; another is falsehood journalism. Due to both reasons, journalism is suffering from this crisis. A few days ago, the Bangladeshi fact-checking platform Rumour Scanner presented a scenario of fake and falsely claimed news published in different media in the last six months. It was found that a TV channel published 38 fake news stories. I think that the media has no longer credibility after publishing a large number of fake stories. We should enact a policy where it is mentioned that we will not publish false news.

Government and Professional Organizations' Inactiveness

The result found that government and professional organizations could play a vital role in developing a fact-checking culture in media organizations by arranging training, seminars, and workshops. But only two interviewees out of 15 said they got fact-checking training from the Press Institute of Bangladesh (PIB), a government organization. The activity of professional organizations was more frustrating. No journalists in the study got any training or participated in workshops from professional organizations for journalists. Golam Mortuza, Editor, Daily Star (Bengali), pointed out:

The leaders of our professional organizations were busy with politics. They did not think about how to develop the journalism profession. As they are partisan journalists, it is foolish to expect good things from them that are effective for journalists. I never participated in their programs and never heard that our colleagues got invitations to participate in their fact-checking training or such kinds of programs.

Discussion

Automation Journalism

Approximately 70% of journalism students in Bangladeshi universities believe that AI technologies are effective in detecting fake news, and 64% think AI is good for automated media content (Goni and Tabassum, 2020). The research data suggested that no media organizations work with automation systems for verifying information or making content. Journalists use manual techniques. On the other hand, most journalists have no proper knowledge about the automated techniques that are being used for fact-checking, news writing, and editing in many countries. A few of the journalists use Google Lens to verify images.

Fact-Checkers or Journalists: Who Are the Frontliners?

While almost all the mainstream media in neighboring India have a separate fact-checking team (Hossain and Muzykant, 2023), there is no separate fact-checking team or specialists in any media organizations in Bangladesh, which is a big loophole for fact-checking practices. So, media organizations are unprotected. If there is a weakness in fact-checking, fake news spreads everywhere in society (Lowrey, 2017). It is difficult for journalists to identify AI-generated disinformation, which can create genuine content.

There is no official collaboration between media organizations and independent fact-checking platforms. It is true that if they worked together, the spreading of fake news would be greatly

reduced. FactCheck.org and PolitiFact have collaborated with local and national news organizations in the USA to assist journalists with fact-checking and sharing their works, which is effective in combating fake news (Amazeen, 2013).

Journalists are aware of fact-checking platforms' activities. They follow the activities. This finding contrasts with the previous study that concluded that most of the journalists in Bangladesh are not aware of fact-checking organizations' work. (Haque et al., 2022). Although fact-checkers think their involvement and position in society are unique and different from journalists' work (Graves et al., 2016; Shin and Thorson, 2017).

Improving literacy

To build awareness about fake information among the general public, the media, civil society, NGOs, government, and professional organisations can play a vital role. Additionally, for journalists, training, workshops, or seminars on AI and disinformation and their impact on society should be organised regularly. Some respondents said that few NGOs conducted these types of programs for journalists on a small scale. Hossain and Muzykant (2023) found, Bangladeshi journalists need to acquire fact-checking techniques to combat disinformation. The USA, Germany, and Australia introduced media literacy programs to combat disinformation (Tulodziecki and Grafe, 2029; Ciampaglia et al., 2015). The New York Times, Washington Post, and many more media organizations offer general people curricular resources around information credibility, use of evidence, and news production (Bulger and Davison, 2018). This builds trust in the media. Spreading fake news or disinformation will create a big threat not only to journalism but also to democracy (Kaplan, 2020; Borges et al., 2018; Qayyum et al., 2019).

Ethical and Legal Binding

Some interviewees suggested that political pressure and partisan journalism pushed the fact-checking initiative backward. Due to political pressure, journalists lost interest in uncovering the innocent truth. Therefore, understanding and pursuing journalism ethics and morality is important, which may reduce the publication of fake news in the media. Most journalists maintain personal relationships with political leaders and top government officials, which is tantamount to self-interest. Haque et al. (2020) found that the collaboration between journalists and political leaders may harm journalism. Legal binding is also crucial for ensuring fair journalism. For this purpose, the Press Council Act, the Official Secret Act, the Defamation Act, the Digital Security Act (now the Cyber Security Act), and many more have been enacted. However, these laws are being used more on journalists so that they cannot uncover any government corruption or human rights violations instead of ensuring fair journalism. From January to April 2023, there were 1,295 cases under the Digital Security Act; 27% of the cases were against journalists (Hasan, 2023).

Conclusion

The study finds that there is no separate fact-checking activity in media organizations. Journalists usually do it manually when they have doubts about any information. Automation systems for making content and fact-checking are fully absent, while misinformation and disinformation are flooding the social sphere. As a result, false and fake information is continuously becoming news for readers. Fact-checking platforms (very few) examine the authenticity of information when it goes viral. If they had a collaboration with the media,

fact-checking practices would improve. The result shows that journalists are unable to fact-check due to a lack of skills and tools, like software.

However, the study is limited to a small number of participants and a short period of time. Therefore, the findings may not be generalized. Despite this limitation, the study made an important contribution to bringing out the real scenario of fact-checking and its challenges in Bangladesh. The results of the research and suggestions will help conduct future research with larger participants and a broader scope. Moreover, this research brought attention to media investors, scholars, and journalists about the mighty power of AI and its usages.

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Appendix-A

Interview Questions for Journalists

1. What is your duty with your news organization? What issues do you cover?
2. How long are you working in journalism?
3. To what extent do you take help from the tools (ChatGPT) of Artificial Intelligence (AI) for writing and editing report in your work?
4. What do you think about the role of AI technology in journalism in the age of technology?
5. Are you aware of AI generated disinformation?
If yes, what do you think the threat of AI generated disinformation pose to objective journalism?
6. How do you verify the sources of information when you are in doubt about the accuracy of the information? Please give examples.
7. Do you apply any technological tools to prove sources of information and data? If yes, please give an example.
8. Did you participate any fact-checking training and workshop in any stage of your career?
9. Do your organization arrange any factchecking training for their employees?
10. Are you aware of any fact-checking organizations in Bangladesh? Do you follow their fact checks?
11. Do your organization take help from independent factcheckers if need help?
12. Does your news organization have a separate fact-checking unit?
If yes, then describe how they work to combat disinformation?
if no, do you think your media organization should have to combat the flood of disinformation? Does your organization have any plan to install factchecking unit?
13. What challenges do you think have in media organizations in Bangladesh for doing factchecking while disinformation especially AI-generated disinformation is spreading in every social sphere?

Appendix-B

Name of Interviewees

Name	Post	Org.	Email
Golam Mortoza	The Editor	The Daily Star (Bengali)	mortoza@thedailystar.net
Selim Khan	Executive Editor	Independent TV	selimkhan70@gmail.com
Ariful Islam Arman	Future Editor	DhakaPost.com	arif.arman@gmail.com
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Manwar Hossain	News Editor	Somoy TV	in2manwar@yahoo.com
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Bibliography

- Adami, M. (2023) *Is ChatGPT a threat or an opportunity for journalism? Five AI experts weigh in.* Oxford: Reuters Institute for the Study of Journalism.
<https://reutersinstitute.politics.ox.ac.uk/news/chatgpt-threat-or-opportunity-journalism-five-ai-experts-weigh>
- Afrin, S. (2023). Mirza Fakhrul, Nipun Ray and who else victimise of propaganda.
<https://www.prothomalo.com/bangladesh/ms941ikij4>
- Alam, J. and Ahmed, T. (2012). Bangladesh vows to protect Buddhists after Facebook photo attacks. <https://www.csmonitor.com/World/Latest-News-Wires/2012/1001/Bangladesh-vows-to-protect-Buddhists-after-Facebook-photo-attacks>
- Alam, N., Al-Hasnat, M., Rabbi, A. R. and Sarur, S. H. (2018). Fake news hits Bangladeshi news sites before polls. <https://www.dhakatribune.com/bangladesh/election/2018/11/17/fake-news-hits-bangladeshi-news-sites-before-polls>
- Amazeen, M. A. (2013). Making a difference: A critical assessment of fact-checking in 2012. *New America Foundation Media Policy Initiative Research Paper.*
- Anderson, C. W. (2012). Towards a sociology of computational and algorithmic journalism. *New media & society*, 15(7), 1005-1021. <https://doi.org/10.1177/1461444812465137>
- Banaji, S., Bhat, R., Garwal, A., Passanha, A. N. and Pravin, M. S. (2019). WhatsApp Vigilantes: An Exploration of Citizen Reception and Circulation of WhatsApp Misinformation Linked to Mob Violence in India. <http://eprints.lse.ac.uk/104316/>
- Bastos, D. M., (2019). The Brexit Botnet and User-generated Hyperpartisan News. *Social Science Computer Review* 37(1), 38–54.
- Bell, E. (2023). Generative AI: How It Works, History, and Pros and Cons. Investopedia, New York. <https://www.investopedia.com/generative-ai-7497939#:~:text=Generative%20AI%2C%20or%20generative%20artificial,user%20given%20prompts%20or%20dialogue>
- Ben, W. (2017). *Big Data in Education: The Digital Future of Learning, Policy and Practice.* London: SAGE. 256. ISBN 9781473948006 (Paperback).
- Borges, L., Martins, B., and Calado, P (2019). Combining Similarity Features and Deep Representation Learning for Stance Detection in the Context of Checking Fake News. *Journal of Data and Information Quality*, 11(3). <https://doi.org/10.1145/3287763>
- Brewster, J., Arvanitis, L. and Sadeghi, M. (2023). The Next Great Misinformation Superspreader: How ChatGPT Could Spread Toxic Misinformation at Unprecedented Scale. <https://www.newsguardtech.com/misinformation-monitor/jan-2023/>
- Bulger, M. and Davison, P. (2018). *The promises, challenges, and futures of media literacy.*

- Canavilhas, J. (2022). Artificial intelligence and journalism: Current situation and expectations in the Portuguese sports media. *Journalism and media*, 3(3), 510-520. <https://doi.org/10.3390/journalmedia3030035>
- Cassauwers, T. (2019). Can artificial intelligence help end fake news? *Horizon*. <https://ec.europa.eu/research-and-innovation/en/horizon-magazine/can-artificial-intelligence-help-end-fake-news>
- Chadwick, A. (2013) *Hybrid media system: politics and power*. Oxford Studies in Digital Politics.
- Chan-Olmsted, S. M (2019). A Review of Artificial Intelligence Adoptions in the Media Industry, *International Journal on Media Management*, 21(3-4). <https://doi.org/10.1080/14241277.2019.1695619>
- Ciampaglia, G. L., Shiralkar, P., Rocha, L. M., Bollen, J., Menczer, F. and Flammini, A. (2015). Computational fact checking from knowledge networks. *PloS one*, 10(6), e0128193.
- Clarke, J., Hailiang, C., Du, D., and Hu, Y., J. (2020). Fake news, Investor Attention, and Market Reaction. *Information Systems Research* (2020).
- Clerwall, C. (2014). Enter the robot journalist. *Journalism practice*, 8(5), 519-531. <http://doi.org/10.1080/17512786.2014.883116>
- Collins, C., Dennehy, D., Conboy, K., Mikalef, P. (2021). Artificial intelligence in information systems research: A systematic literature review and research agenda. *International Journal of Information Management*, 60. Elsevier. <https://doi.org/10.1016/j.ijinfomgt.2021.102383>
- Cummings, C. L. and Kong, W. Y. (2019). Breaking Down ‘Fake News’: Difference between Misinformation, Disinformation and Rumours, and Propaganda. In: I. Linkov, L. Roslycky and B. D. Trump, ed. *Resilience and Hybrid Threats: Security and Integrity for the Digital World*, 188-190.
- Day, C. (2019). The Future of Misinformation. *Computing in Science & Engineering*, 21(1), 08–108. <https://doi.org/10.1109/MCSE.2018.2874117>
- Dörr, Konstantin-Nicholas (2015). Mapping the field of algorithmic journalism. *Digital journalism*, 4(6), 700- 722. <https://doi.org/10.1080/21670811.2015.1096748>
- Fanta, A. (2017). Putting Europe’s robots on the map: Automated journalism in news agencies. Reuters Institute for the Study of Journalism. <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2017-09/Fanta%2C%20Putting%20Europe%E2%80%99s%20Robots%20on%20the%20Map.pdf>
- Fletcher, J. (2018). Deepfakes, Artificial Intelligence, and Some Kind of Dystopia: The New Faces of Online Post-Fact Performance. *Theatre Journal*, 70(4), 455–471. <https://doi.org/10.1353/tj.2018.0097>

- Forbes (2023). Application of artificial intelligence across various industries. <https://www.forbes.com/sites/qai/2023/01/06/applications-of-artificial-intelligence/>
- Galactica (2022). Limitations. <https://galactica.org/mission/>
- Goni, M. A. and Tabassum, M. (2020). Artificial Intelligence (AI) in Journalism: Is Bangladesh Ready for it? A Study on Journalism Students in Bangladesh. *Athens Journal of Mass Media and Communications*, 6(4), 209-228.
- Graefe, A. (2016). *Guide to automated journalism*. Tow Center for Digital Journalism. <https://doi.org/10.7916/D80G3XDJ>
- Graves, L., Nyhan, B. and Reifler J. (2016). Why do journalists fact-check. <https://www.dartmouth.edu/~nyhan/journalist-fact-checking.pdf> (2016).
- Haque, M. M., Yousuf, M., Arman, Z., Rony, M. M. U., Alam, A. S., Hasan, K. M., Islam, M. K. and Hassan, N. (2019). Fact-checking Initiatives in Bangladesh, India, and Nepal: A Study of User Engagement and Challenges. *In Proceedings of Computation+Journalism Symposium*, Miami, USA, 6.
- Haque, M. M., Yousuf, M., Alam, S. A., Saha, P., Ahmed, S. I. and Hassan, N. (2020). Combating Misinformation in Bangladesh: Roles and Responsibilities as Perceived by Journalists, Fact-checkers, and Users. *Proc. ACM Hum.-Comput. Interact.* 4, CSCW2, Article 130 (October 2020), 32 pages. <https://doi.org/10.1145/341520>
- Hasan, A. (2023). Digital Security Act: 27% cases against journalists. *The Daily Prothom Alo*. <https://www.prothomalo.com/bangladesh/25gmp6eun3>
- Heaven, W. D. (2022). Why Meta's Latest Large Language Model Survived Only Three Days Online. *MIT Technology Review*. <https://www.technologyreview.com/2022/11/18/1063487/meta-large-language-model-ai-only-survived-three-days-gpt-3-science/>
- Hosseini, M., Rasmussen, L. M. and Rasnik, D. B. (2023). Using AI to write scholarly publications. *Accountability in Research, Ethics, Integrity and Policy*, 30(6).
- IBM Blog (2023). AL vs. Machine Learning vs. Deep Learning vs. Neural Networks: What's the different? <https://www.ibm.com/blog/ai-vs-machine-learning-vs-deep-learning-vs-neural-networks/>
- Kahn, G. (2023). Will AI-generated images create a new crisis for fact-checkers? Experts are not so sure. Reuters Institute and University of Oxford. <https://reutersinstitute.politics.ox.ac.uk/news/will-ai-generated-images-create-new-crisis-fact-checkers-experts-are-not-so-sure>
- Kaplan, A. (2020). Artificial intelligence, social media and fake news: is this the end of democracy. In: A. A. Gul, Y. D. Erturk, P. Elme, eds. *Digital transformation in media and society*. Istanbul-Turkey: Istanbul University press, 156.

- Khan, S. A., Alkawaz, M. H., and Zangana], H. M. (2019). The Use and Abuse of Social Media for Spreading Fake News. In 2019 IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS). *IEEE*, 145–148.
- Korneeva, E., Salge, T., O., Teubner, T. and Antons, D. (2023). Tracing the legitimacy of Artificial Intelligence: A longitudinal analysis of media discourse. *Technological Forecasting and Social Change*, 192(2023), Germany.
<https://doi.org/10.1016/j.techfore.2023.122467>
- Landon-Murray, M., Mujkic, E. and Nussbaum, B. (2019). Disinformation in Contemporary U.S. Foreign Policy: Impacts and Ethics in an Era of Fake News, Social Media, and Artificial Intelligence. *Public Integrity*, 21(5), 512-522.
DOI:10.1080/10999922.2019.1613832
- Lavrakas, P. L. (2008). *Encyclopaedia of survey research methods*, 1, Sage Publication, California, USA.
- Leong, B. (2019). Facial recognition and the future of privacy: I always feel like ... somebody's watching me. *Bulletin of the Atomic Scientists*, 75(3), 109-115.
DOI:10.1080/00963402.2019.1604886
- Li, Y., Gao, J., Meng, C., Li, Q., Su, L., Zhao, B., Fan, W. and Han, J. (2016). A Survey on Truth Discovery. *ACM SIGKDD Explorations Newsletter*, 17(2).
- Lindén, C. and Tuulonen, H. (2019). *News automation: The rewards, risks and realities of 'machine journalism'*. WAN-IFRA report.
https://jyx.jyu.fi/bitstream/handle/123456789/67003/2/WAN-IFRA_News_Automation-FINAL.pdf
- Lowrey, W. (2017). The emergence and development of news fact-checking sites: Institutional logics and population ecology. *Journalism Studies*, 18(3), 376-394.
- Maras, M. H., & Alexandrou, A. (2019). Determining authenticity of video evidence in the age of artificial intelligence and in the wake of Deepfake videos. *International Journal of Evidence & Proof*, 23(3), 255–262.
- Martens, B., Aguiar, L., Gomez-Herrera, E., and Mueller-Langer, F. (2018). The Digital Transformation of News Media and the Rise of Disinformation and Fake News.
- Moran, R. E. and Shaikh, S. J. (2022). Robots in the News and Newsrooms: Unpacking Meta-Journalistic Discourse on the Use of Artificial Intelligence in Journalism. *Digital Journalism*, 10(10). <https://doi.org/10.1080/21670811.2022.2085129>
- Munoz, A. (2012). Machine Learning and Optimization.
https://www.cims.nyu.edu/~munoz/files/ml_optimization.pdf
- Ongsulee, P. (2017). Artificial Intelligence, Machine Learning and Deep Learning. *2017 Fifteenth International Conference on ICT and Knowledge Engineering*.
<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8259629>

- Parratt-Fernández, S., Mayoral-Sánchez, J. and Mera-Fernández, M. (2021). The application of artificial intelligence to journalism: An analysis of academic production. *Profesional de la información*, 30(3). <https://doi.org/10.3145/epi.2021.may.17>
- Pavlik (2023). Collaborating with ChatGPT: Considering the Implications of Generative Artificial Intelligence for Journalism and Media Education. *The Association for Education in Journalism and Mass Communication (AEJMC)*, 78(1). <https://doi.org/10.1177/10776958221149577>
- Peña-Fernández, S., Meso-Ayerdi, K., Larrondo-Ureta, A. and Díaz-Noci, J. (2023). Without journalists, there is no journalism: the social dimension of generative artificial intelligence in the media. *Profesional de la información*, 32(2). <https://doi.org/10.3145/epi.2023.mar.27>
- Qayyum, A., Qadir, J., Janjua, M. U. and Sher, F. (2019). Using Blockchain to Rein in the New Post-Truth World and Check the Spread of Fake News. *IT Professional*, 21(4), 16–24. <https://doi.org/10.1109/MITP.2019.2910503>
- Robins-Early, N. (2023). Very wonderful, very toxic: how AI became the culture war's new frontier. *The Guardian*. <https://www.theguardian.com/us-news/2023/aug/21/artificial-intelligence-culture-war-woke-far-right>
- Ruffo, G., Semeraro, A. (2022). Fake News Lab: Experimental study on biases and pitfalls preventing us from distinguishing true from false news. *Future internet*, v-14, 283-207. <https://doi.org/10.3390/fi14100283>
- Rumour Scanner, (2023). Rumour in Bangladeshi media: Investigation of first six months in 2022, 3 July 2022. <https://rumorsscanner.com/fact-file/bangladeshi-media-rumors/17442>
- Shin, J. and Thorso, K. (2017). Partisan selective sharing: The biased diffusion of fact-checking messages on social media. *Journal of Communication*, 67(2).
- Singapore Computer Society (2020). Simplifying the difference: Machine learning vs deep learning. <https://www.scs.org.sg/articles/machine-learning-vs-deep-learning>
- Sukhadeve, A. (2021). Artificial Intelligence For Good: How AI Is Helping Humanity. *The Forbes*. <https://www.forbes.com/sites/forbesbusinesscouncil/2021/02/09/artificial-intelligence-for-good-how-ai-is-helping-humanity/>
- Tai, M. C. (2020). The impact of artificial intelligence on human society and bioethics. *Tzu Chi Medical Journal*, 32(4), pp. 339-343. [10.4103/tcmj.tcmj_71_20](https://doi.org/10.4103/tcmj.tcmj_71_20).
- Tulodziecki, G. and Grafe, S. (2019). Media Literacy in Germany. *The International Encyclopedia of Media Literacy*, 1–6.
- Van-Dalen, A. (2012). The algorithms behind the headlines. *Journalism practice*, 6(5-6), 648-658. <https://doi.org/10.1080/17512786.2012.667268>
- Woolley, S. C. (2016). Automating power: Social Bot Interference in Global Politics.

World Economic Forum (2016). Global Risks 2016. http://reports.weforum.org/global-risks-2016/?doing_wp__cron=1533743276.8010449409484863281250

Yaqub, W. K. O., Brockman M. L., Memon N. P. S. (2020). Effects of credibility indicators on social media news sharing intent. In: Proceedings of the 2020 CHI conference on human factors in computing systems, 1–14. <https://doi.org/10.1145/3313831.3376213>

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