

Factors of Information Literacy Preventing Fake News: A Case Study of Libraries in Developing Countries

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Abstract

This study's core purpose is to determine the prevention of fake news and the roles of librarians in spreading fake news and the effectiveness of information literacy programs. Because people all over the country mostly rely on fake news rather than authentic news. People all over the country mostly rely on fake news rather than authentic news. Fake news attracts all kind of people and society is going to the wrong path for trusting those news and sources. Librarians or information professional's role is to give right information to right people at the right time. Fake news attracts all kinds of people and society is going down the wrong path by trusting those sources. Librarians or information professionals' role is to give the right information to the right people at the right time. The study conjointly highlights the importance of determining the roles and responses of librarians in information literacy programs in preventing the era of fake news. Therefore, the aim of this study is to identify fake and authentic news, and to determine the roles and responses of librarians to prevent the spread of fake news. The target audience of this study is librarians of public and private libraries in Dhaka. The exploration of data has been completed by quantitative techniques. Librarians can spread this knowledge and make all users aware of fake news. The target audience of this study is librarians of public and private libraries in Dhaka. The exploration of data has been completed by quantitative techniques. A questionnaire survey approach has been adopted and data has been consolidated by following the google form questioning method and some questions through audio call. Data were fully analyzed by 28th version of SPSS software. This study also reviewed literature which is related to this study topic. Data analysis represents using pie charts, bar and histogram also Cronbach's alpha reliability test is shows with the help of SPSS. After findings this study concludes some valuable recommendations and challenges. This paper concluded with an investigation into how technology influences information literacy among librarians, identifying the competency level of librarians and determining the challenges in dealing with fake news.

Keywords: Information Literacy, Fake News, IL Program, Librarians, IL Skill, Technology, Developing Countries

INTRODUCTION

The dissemination of false or misleading information in the form of news, commonly referred to as "fake news," has become a significant concern in recent years (Lazer et al., 2018). While the term "fake news" has been widely used, experts advise against its use or at least limiting it as it is closely associated with politics and can limit the issue's breadth in an undesirable way (Wardle & Derakhshan, 2017). Instead, the term "disinformation" or "misinformation" is preferred as it encompasses a broad range of false information across all media and genres, including health, the environment, and economics (Wardle & Derakhshan, 2017; Lazer et al., 2018).

Fake news is not a new phenomenon, but its impact has been exacerbated by the widespread use of social media platforms and the ease of access to information on the internet (Jones - Jang & Mortensen, 2019). This has resulted in the rapid spread of fake news, especially among the younger generation (Bode & Vraga, 2018). Fake news can be defined as information that is incorrect or misleading and is presented as news (Lewandowsky

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et al., 2012). Its impact can be significant, ranging from personal harm to reputational damage, and it can even influence political outcomes (Lazer et al., 2018).

The spread of fake news is not only limited to political news items but is prevalent across all fields, affecting individuals, organizations, and communities worldwide (Wardle & Derakhshan, 2017). The spread of fake news is anonymous and can be confidential, causing harm to individuals' personal and professional lives (Lazer et al., 2018). While fake news can affect anyone, celebrities and political figures are especially vulnerable (Khosla et al., 2020).

One of the significant challenges associated with dealing with fake news is the lack of information literacy among the general public (Bode & Vraga, 2018). Many individuals do not know how to identify reliable sources of information and are susceptible to false information (Khosla et al., 2020). Additionally, some individuals intentionally spread fake news, motivated by personal or political gain (Bode & Vraga, 2018). The increasing use of technology has also contributed to the spread of fake news, and people are being turned in the wrong direction (Lazer et al., 2018).

The purpose of this study is to investigate the level of information literacy skills among librarians in Dhaka, Bangladesh, and the information literacy programs implemented to prevent the spread of fake news. This study aims to determine the influence of technology on preventing the spread of fake news in Dhaka libraries (Wickneswary et al., 2024). The research questions for this study are:

What is the level of information literacy skills among librarians in Dhaka, Bangladesh, regarding the prevention of fake news?

What information literacy programs are implemented in Dhaka libraries to prevent the spread of fake news?

How does technology influence the prevention of fake news in Dhaka libraries?

LITERATURE REVIEW

Information Literacy Skill and IL Program

Information literacy (IL) has been recognized as an essential skill in preventing the spread of fake news. Kiernan (2017) suggested that IL skills could influence how individuals evaluate information on social media and apply reference and online evaluation abilities to identify fake news. Moreover, Haigh et al. (2019) emphasized the importance of developing IL skills and library infrastructure in combating fake news (Hartley & Khuong, 2021). However, the lack of familiarity with the terms "information literacy" or "information skills" among half of the population suggests the need for long-term efforts to improve IL programs (Kiernan, 2017; Khattak. et al., 2022).

Zimmer et al. (2019) investigated the effects of misleading news on audience information behavior and highlighted the importance of critical information literacy to combat fake news. Brisola and Doyle (2019) also emphasized the need for critical information literacy to understand the ranking and presentation algorithms of social media platforms.

Paor & Heravi (2020) discussed initiatives aimed at educating communities and combating the spread of fake news. They also identified the importance of information professionals' standards of behavior and technology use in identifying fake news and assessing current and upcoming information literacy frameworks (Wai et al., 2024).

Technology

Social media has become a significant source of fake news, and its influence on the spread of false information has been investigated by several scholars (Umesh et al., 2023). Chiou & Tucker (2018) investigated the influence of social media and social media advertising on the spread of false information. They found that social media platforms' algorithms and the viral nature of social media content can facilitate the spread of false information (Haque et al., 2022).

Fernández-Torres et al. (2021) also identified social media and instant messaging as the sources of the most erroneous information. Buchanan (2020) suggested that preventing fake news through technology is an efficient method of addressing social media deception. However, Allcott & Gentzkow (2017) noted that it is essential to pay close attention to fake news stories having political ramifications.

In conclusion, the literature highlights the importance of information literacy skills and IL programs in preventing the spread of fake news. Furthermore, the role of technology, particularly social media, in the spread of false information has been investigated, and the need for critical information literacy and initiatives aimed at educating communities has been emphasized.

Theoretical Framework

After careful consideration, by referring to the model, a few adoptions from the previous theory and model have been taken for the guideline of the study derived from the underpinning theories and models that I have discussed before. Thus, this paper proposes the following framework to conduct the study.

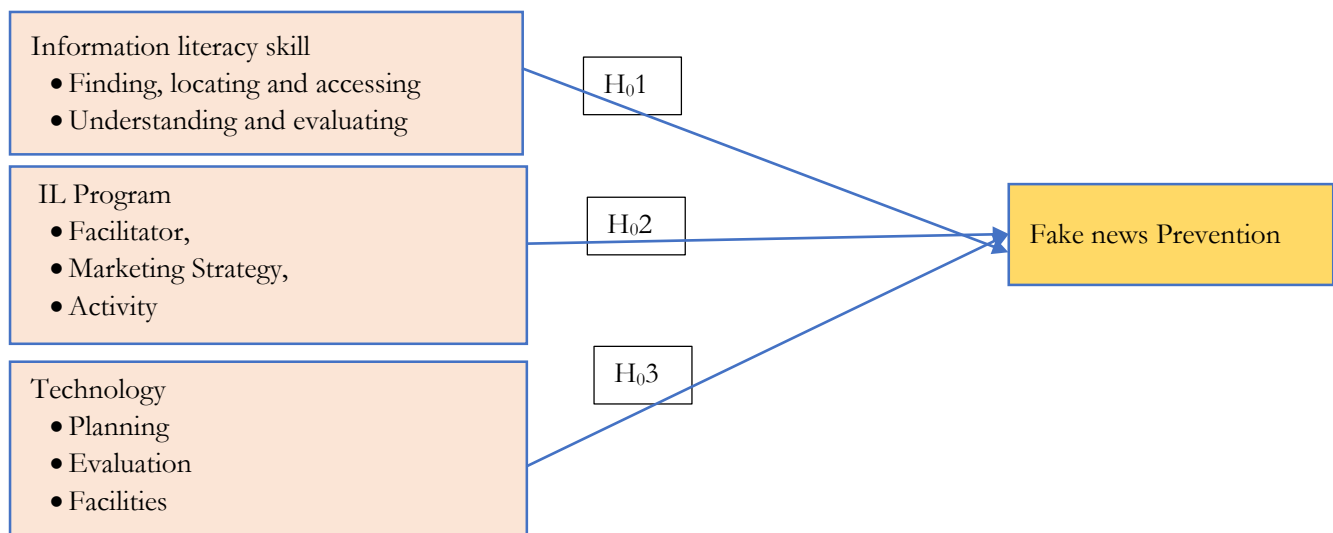


Figure 1: Research Framework

In this study, the two variables being measured are on information literacy program in preventing the era of fake news. Based on the theoretical framework above, information literacy skill and program have the ability to support several major requirements for fake news prevention (Khattak et al. 2022).

The independent variable in this study is information literacy skill, IL program and technology and there are sub independent variables also included under this. The discussion about information literacy program and fake news prevention has been discussed in a study from (Ikram et al., 2009; Sun et al., 2013; Murray & Perez, 2014). All variables in this study will be tested by using elements for the data instruments.

Hypothesis

The hypothesis of this study is that information literacy program plays a strong role facilitating the fake news prevention among public libraries in terms of information literacy skill, IL program and technology for fake news prevention by librarian.

The theoretical underpinning for this hypothesis comes from Kiernan (2017) who highlighted the importance of information literacy skills in evaluating information on social media and preventing the spread of fake news. Previous research has also shown that individuals with higher information literacy skills are better equipped to identify and evaluate sources of information (Berry et al., 2017; Manca & Ranieri, 2016; Ahmed et al. 2022a).

H1: There is significant difference between IL skills and fake news prevention.

This hypothesis is supported by Haigh (2019) who emphasizes the role of long-term efforts to develop information literacy programs and library infrastructure. Such programs can equip individuals with the necessary skills and knowledge to identify and combat fake news. Previous studies have shown that effective IL programs can improve critical thinking and evaluation skills (Limberg et al., 2012; Ahmed et al., 2024).

H2: There is significant difference between IL program and fake news prevention.

The use of technology, particularly social media, has been associated with the spread of fake news (Chiou & Tucker, 2018). However, some scholars suggest that technology can also be leveraged to detect and prevent the spread of fake news, such as through the use of fact-checking tools and algorithms (Zimmer et al., 2019). Therefore, the relationship between technology and fake news prevention is complex and warrants further investigation (Azhari et al., 2022).

H3: There is significant difference between of technology and fake news prevention.

METHODOLOGY

This study employed the commonly use methods practiced in previous studies utilizing a quantitative approach (Wider,2023; Jiang et al., 2023). According to Creswell & Zhang (2009), quantitative research is a way of analyzing objective concepts by examining the relationship between variables, which may then be measured, frequently using equipment, and analyzed using statistical procedures. This study is a quantitative type of data, and the data collection method is a survey approach using Google Form. The structured predefined questions in this paper survey questionnaire are the analysis technique of this study is the probability simple random sampling technique.

This study analyzed their data through 28th SPSS analysis tools. The unit of analysis are two types of libraries: public and private, and to calculate the exact sample size of the population, this study used a piece of software called Raosoft (Sample Size Calculator), whereby the population size was 170 and the sample size was 119, but the total data collection was 125. This paper also analyzes two types of tests, which are pre-test and pilot test. This thing proves that the data instrument in this paper can be trusted and reliable.

Pre-Test

A pre-test with four librarians was undertaken to identify any ambiguities or flaws in the survey. These librarians completed the pretest using the plus-and-minus rule. The participants were asked what difficulties they were thinking about and what potential solutions they could come up with. We also talked about the good features to have a better idea of what we thought was suitable. Based on the four pre-test tests, the questionnaire was changed (where needed) (Senathirajah et al., 2023).

Pilot Test

The pilot case study is conducted on a representative sample in a public and private library in order to eliminate discrepancies and flaws in the chosen process. The primary goal of this pilot study is to improve the questionnaire's material, organization, and size (Chowdhury et al., 2023). The goal of the pilot test is to ensure that the questions are not only answered but also interpreted in the same way by everyone in the survey. The results of the pilot test are listed below.

Table 1: Pilot Test reliability

Construct	Cronbach's Alpha	Number of Item
Information Literacy Skills	0.745	5
Information Literacy Program	0.717	8
Technology	0.798	4
Fake News Prevention	0.823	7

Table 1: Cronbach's Alpha value for variables during pilot test

Based on the table above, the value of Cronbach’s Alpha for information literacy skills is 0.745, information literacy program is 0.717, technology is 0.798. Meanwhile the value of Cronbach’s Alpha for fake news prevention is 0.823. According to all values listed above, it clearly shows that all of the values are more than 0.6, therefore, it proves that data instrument of this study can be trusted and reliable for used. Thus, researchers proceed to distribute the questionnaires for all respondents.

Mapping of Research Objectives and Research Method

Table 2 provides the mapping between the research objectives and the corresponding research method.

Table 2: Indicators' Source

Research Objectives	Variables Involved	Research Method	
		Data Collection	Data Analysis
To investigate either the technology influences the information literacy among the librarians.	Information literacy skill <ul style="list-style-type: none"> • Finding, locating and accessing • Understanding and evaluating Fake news prevention	Questionnaire Finding, locating and accessing s:(3 items – Likert Scale) Understanding and evaluating: (5 items – Likert Scale) Fake news prevention: (4 items – Likert Scale)	<ul style="list-style-type: none"> • Common Method Bias (SPSS ver 20)
To determine the challenges in dealing with the fake news.	Technology <ul style="list-style-type: none"> • Planning • Evaluation • facilities Fake news prevention	Questionnaire Planning: (4 items-Likert Scale) Evaluation: (4 items-Likert Scale) Fake news prevention: (4 items – Likert Scale)	<ul style="list-style-type: none"> • Common Method Bias (SPSS ver 20) • Confirmatory Factor Analysis (AMOS Ver 20)
To identify the competency level of librarians.	IL Program <ul style="list-style-type: none"> • Facilitator • Marketing strategy • Activity Fake news prevention	Questionnaire Facilitator: (4 items-Likert Scale) Marketing strategy: (4 items-Likert Scale) Activity: (4 items-Likert Scale) Fake news prevention: (4 items – Likert Scale)	<ul style="list-style-type: none"> • Common Method Bias (SPSS ver 20) • Confirmatory Factor Analysis (AMOS Ver 20)

Table 2: Matrix between research objective and research method

FINDINGS

This section discusses the findings from this study by explaining the demographic profile, descriptive analysis, and correlation analysis. All data is represented by the 28th version of SPSS software using pie charts, bars, histograms, and the Cronbach’s Alpha reliability test, including the descriptive and correlation analysis.

Reliability Test

Based on George & Mailery (2003) as cited by Cervone et al. (2016), they stated, the reading of Cronbach’s Alpha for the purpose of reliability rules are above table (Khalil et al. 2022). “>0.9- Excellent, >0.8- Good,>0.7 Acceptable, 0.6 Questionable, <0.5 Poor and <0.5 Unacceptable” (as cited in Gliem & Gliem, 2003).

Table 3: Reliability Statistics

Construct	Cronbach's Alpha	Number of Item
Information Literacy Skills	0.745	5
Information Literacy Program	0.717	8
Technology	0.798	4
Fake News Prevention	0.823	7

Table 4: Cronbach’s Alpha value for variables during pilot test

Cronbach's Alpha for information literacy skills is 0.745, for information literacy programs is 0.717, and for technology is 0.798, according to the table above. Cronbach's Alpha for false news prevention is at 0.823. According to all of the numbers stated above, it is evident that all of the values are more than 0.6, proving that

the data instrument utilized in this research may be trusted and dependable. As a result, the researchers proceed to distribute questionnaires to all responders.

Demographic Information of Respondents

In this section, it provides the demographic research sample results. There are five area will be discussed in the respondent demographic profiles which are respondent’s gender, respondent’s library type, academic qualification, department and working experience being studied.

Table 4: Demographics profiling of the respondents

Demographics of the Respondents		Frequency	Percentage
Gender of Respondents	Male	66	52.8%
	Female	59	47.2%
Library Types	Private Library	73	58.4%
	Public Library	52	41.6%
Academic Qualification of Respondents	Honors	34	27.2%
	Master’s	82	65.6%
	M. Phill	6	4.8%
	Ph.D.	3	2.4%
Different Department of The Library	Librarian	25	20.0%
	Assistant Librarian	42	33.6%
	Deputy Librarian	14	11.2%
	Assistant Register	11	8.8%
	Circulation Officer	26	20.8%
Years of Working Experiences	Maintenance Supervisor	7	5.6%
	5 Years and Below	39	31.2%
	6-10 Years of Experience	44	35.2%
	11-15 Years	22	17.6%
	More Than 15 Years	20	20

The table displays the demographics of survey respondents. There were 125 replies in all. There were 66 (52.8%) men and 59 (47.2%) women among them. In terms of library types, 73 (58.4 percent) of respondents worked in private libraries, whereas 52 (41.6 percent) worked in public libraries. In terms of academic credentials, 34 (27.2 percent) of respondents had Honors degrees, 82 (65.6 percent) held Master's degrees, 6 (4.8 percent) held M. Phill degrees, and 3 (2.4 percent) held Ph.Ds. The numerous departments of the library where respondents worked were classified as Librarian, Assistant Librarian, Deputy Librarian, Assistant Register, Circulation Officer, and Maintenance Supervisor. The majority of responders (42, or 33.6 percent) worked as Assistant Librarians, while 25 (20.0 percent) were Librarians. Respondents' employment experience was classified as 5 years or less, 6-10 years, 11-15 years, or more than 15 years. The majority of respondents (44, or 35.2 percent) had 6-10 years of experience, while 39 (31.2 percent) had 5 years or less, 22 (17.6 percent) had 11-15 years, and 20 (20 percent) had more than 15 years.

So cross tabulating the demographics we can identify, 42 of the 66 male respondents worked in private libraries, while 24 worked in public libraries. 31 of the 59 female respondents worked in private libraries, while 28 worked in public libraries. Of the 66 male respondents, 42 worked in private libraries and 24 in public libraries, whereas 31 of the 59 female respondents worked in private libraries and 28 in public libraries. 14 of the 39 respondents with 5 years or less of experience worked as Assistant Librarians, whereas 10 of the 44 respondents with 6-10 years of experience worked as Circulation Officers.

Information Literacy Skill

The researcher in this section provides the information literacy skill sample results. There are five area will be discussed in to understand, finding, accessing, evaluating the information literacy skill of respondents in library. The aim of the study was to evaluate and understand the level of information literacy skill in the library of Dhaka through librarians.

Table 5: Frequency of Information Literacy Skill

	Response	Frequency	Percentage
Importance of Information Literacy (IL) Skill for Librarians	Strongly Agree	88	70.4%
	Agree	31	24.8%
	Neutral	6	4.8%
	Disagree	0	0%
	Strongly Disagree	0	0%
	Total	125	100%
Understanding the Level to Support IL Skills to the Library's Users	Strongly Agree	70	56.0%
	Agree	45	36.0%
	Neutral	9	7.2%
	Disagree	1	0.8%
	Strongly Disagree	0	0%
	Total	125	100%
Librarian's Guide User Accessing Relevant Information	Strongly Agree	63	50.4%
	Agree	48	38.4%
	Neutral	13	10.4%
	Disagree	1	0.8%
	Strongly Disagree	0	0%
	Total	125	100%
Librarian Teach User on Evaluation of Information	Strongly Agree	72	57.6%
	Agree	39	31.2%
	Neutral	13	10.4%
	Disagree	1	0.8%
	Strongly Disagree	0	0%
	Total	125	100%

These tables summarize the answers of the 125 respondents. The majority of responders in each figure expressed agreement with the claims, either strongly agreeing or agreeing. In Table 1, for example, 88 (70.4 percent) respondents strongly agreed that IL skills are necessary for librarians, while 70 (56.0 percent) respondents strongly agreed that they grasp the level to provide IL skills to library users. For all four numbers, the proportion of responders who were indifferent or disagreed was low.

Information Literacy Program

The researcher in this section provides the information literacy program sample results. There are eight area will be discussed into frequency level, spreading knowledge, time management, event planning, marketing strategy and other activities of respondents in library.

Table 6: Frequency of Information Literacy Program

	Frequency	Number of Respondents	Percentage
Frequency of Doing IL Program in the Library	Occasionally	29	23.2%
	Weekly	44	35.2%
	Monthly	25	20.0%
	Yearly	22	17.6%
	Other ways	5	4.0%
	Total	125	100%
IL Program Spreading Knowledge of the Community	Strongly Agree	75	60.0%
	Agree	35	28.0%
	Neutral	8	6.4%
	Disagree	1	0.8%
	Strongly Disagree	6	4.8%
	Total	125	100%
IL Program Marketing Strategy to Attract More Users to the Library	Strongly Agree	61	48.8%
	Agree	47	37.6%
	Neutral	13	10.4%
	Disagree	3	2.4%
	Strongly Disagree	1	0.8%
	Total	125	100%
IL Program Time Management	Strongly Agree	69	55.2%
	Agree	43	34.4%
	Neutral	12	9.6%
	Disagree	1	0.8%

Strongly Disagree	0	0%
Total	125	100%

The tables summarize the replies of the 125 respondents, the majority of respondents (35.2 percent) reported participating in IL programs on a weekly basis, whereas, 75 (60.0 percent) strongly agreed that IL programs share community knowledge. 61 (48.8 percent) of respondents strongly agreed that IL program marketing methods may attract more users to the library. Finally, the majority of respondents (55.2 percent) strongly agreed that time management is critical for IL programs at the library.

Technology

This section allows the researcher to gain the knowledge of the technology and set the planning, evaluation level and facilities in a library through librarians.

Table 7: Frequency statistics of technology

Technology Aspect	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Support library IL program	71 (56.8%)	44 (35.2%)	8 (6.4%)	1 (0.8%)	1 (0.8%)
Speed up the process of IL program	51 (40.8%)	61 (48.8%)	9 (7.2%)	2 (1.6%)	2 (1.6%)
Related applications attract users	65 (52.0%)	46 (36.8%)	10 (8.0%)	3 (2.4%)	1 (0.8%)

Based on the table, we can see the different opinions of respondents regarding three different aspects of technology in the library. For the technology support library IL program, the majority of respondents strongly agreed or agreed with it (56.8% and 35.2% respectively) (Senathirajah et al., 2024), while a small percentage were neutral, disagreed, or strongly disagreed. For the technology speed up the process of IL program, a slightly lower percentage of respondents strongly agreed or agreed with it (40.8% and 48.8% respectively), while a small percentage were neutral, disagreed, or strongly disagreed. For the technology related applications that attract users in the library, the majority of respondents strongly agreed or agreed with it (52.0% and 36.8% respectively), while a small percentage were neutral, disagreed, or strongly disagreed (Ifedi et al., 2024).

Overall, it appears that respondents generally have positive opinions regarding the use of technology in libraries, with the majority agreeing that it can support IL programs and attract users through related applications. However, there is some variation in the level of agreement among respondents, particularly for the speed at which technology can improve IL program processes.

Fake News Prevention

The section allows the researcher to identify the fake news prevention and how it can be dependent to others variable like technology, IL skill and program in a library. Also determine the responsibility of librarian and other staffs of libraries of Dhaka.

Table 8: Frequency statistics of ‘fake news presentation’

Aspect	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Fake news prevention is one of the roles of librarians	59 (47.2%)	50 (40.0%)	12 (9.6%)	3 (2.4%)	1 (0.8%)
Fake news prevention involves evaluating news from authentic sources	52 (41.6%)	60 (48.0%)	10 (8.0%)	2 (1.6%)	1 (0.8%)
Information literacy skills can prevent fake news	53 (42.4%)	51 (40.8%)	16 (12.8%)	3 (2.4%)	2 (1.6%)
IL program and experience can prevent fake news	52 (41.6%)	46 (36.8%)	22 (17.6%)	3 (2.4%)	2 (1.6%)
Technology can be used to prevent fake news through IL	44 (35.2%)	61 (48.8%)	15 (12.0%)	3 (2.4%)	2 (1.6%)

Based on the table, we can see the opinions of respondents regarding the different aspects of preventing fake news in libraries and the factors that influence it. For the role of librarians in preventing fake news, the majority of respondents either strongly agreed or agreed with this idea (47.2% and 40.0% respectively). For the importance of evaluating news from authentic sources to prevent fake news, a similar percentage of respondents strongly agreed or agreed with this idea (41.6% and 48.0% respectively). For the impact of information literacy skills in preventing fake news, the majority of respondents strongly agreed or agreed with this idea (42.4% and 40.8% respectively). For the impact of IL program and experience in preventing fake news, a significant number of respondents were neutral (17.6%), but a majority either strongly agreed or agreed with this idea (41.6% and

36.8% respectively). For the use of technology to prevent fake news through IL, the majority of respondents either agreed or strongly agreed with this idea (48.8% and 35.2% respectively).

Overall, the findings suggest that respondents believe that preventing fake news in libraries is important, and that various factors such as the role of librarians, evaluating news from authentic sources, information literacy skills, IL programs and experience, and the use of technology can all play a role in preventing fake news.

Correlation Analysis

Table 9: Correlation Analysis

Variables	Information Literacy Skills	Information Literacy Program	Technology	Fake news Prevention	Decision
Information Literacy Skills	.423**	.527**	.565**	.678*	Supported
Information Literacy Program	.486**	.450**	.502**	.578*	Supported
Technology	.438**	.525**	.466**	.378	Supported

Pearson correlation is the most commonly used correlation, and this study's correlation analysis also uses Pearson correlation. Correlation analysis is the study of how variables are connected. The preceding tables show some values for variables, and those values differ from one another (Fei et al., 2024). Some numbers range from 0.30 to 0.49, indicating a medium correlation, and others range from 0.50 to 1.0, indicating a strong connection. And the table shows that all values are supported.

DISCUSSION

Following the discovery and analysis, this study provides their statements in the discussion section. In total, 125 competent library professionals contributed their important insights to this study. The IL skills level of the library's librarians or other employees is quite high (Kiernan, 2017). However, libraries and users must raise their knowledge in order to combat fake news and enhance their IL skills and programs. Other librarians additionally perform some activities in their libraries, which are referred to as IL skills (Allcott & Gentzkow 2017). Librarians want to provide the correct knowledge to the right people at the right time; thus, they must also keep these things in order to prevent fake news utilizing IL (Ahmed et al., 2022b; Barman et al., 2023). This survey includes both public and private libraries (Zimmer et al., 2019). However, librarians and their staff are quite compatible in their work, particularly when it comes to information literacy skills and information literacy programs (Allcott & Gentzkow 2017; Narayanan et al. 2023). The two most common obstacles are a lack of sufficient technology and skilled or qualified personnel, and it is in public libraries that these technical and trained personnel are most needed (Fernández-Torres et al. 2021). Librarians also mentioned in the open-ended questions about lack of knowledge of technology especially public library (Al-Zaman et al., 2020).

RECOMMENDATIONS

Every study has recommendations, but in this study, the respondents share their own suggestions in the questionnaire, so we can consider those recommendations from this study (Jacob & Furgerson, 2012). Because librarians experience so many ups and downs when they deal with an information center or library, the right information, the right source they faced so many challenges when organizing or running the whole system that they had to make some determinations to improve it (Ramalingam et al., 2024). Based on the results, there is one question in the last section: is there any suggestion to improve it? This question is for librarians and other staff of libraries. Development of existing library policy, arranging training and seminar on IL may improve the current scenario.

A continuous database of sources fake news should be developed and circulated to the information seekers.

Take proper initiative, applying updating technology and software for preventing fake news.

Arrange meeting with stakeholders once a week and managed the authority for providing adequate budget in library sector.

Listing major news sources and tries to verify the news various reliable sources.

Needs more seminars, training, foreign experiences regarding fake news.

Increase the technical tools, enhance community engagement in library.

Monitoring, provide training to improve skill and creating awareness.

Spread the knowledge of information literacy to improve it.

Find the proper solution of technologies to improve it.

Developing manpower, databases, and ICT facilities.

Controlling news sources by creating database.

After studying the related literature and observing other respondents' recommendations, the researchers gave their own recommendations, which is to spread awareness to the users and other audience through social media. Librarians should spread the importance of information literacy all over the world using various social media platforms (Osman et al., 2024). They can also use the method of blogging using YouTube and the Facebook platform because, nowadays, people trust or see social media more than news channels and newspapers. People are mostly spending their time watching various types of videos so that librarians can make blogging on fake news and information literacy concepts interactive and spread them to the whole world through social media (Jing et al., 2023).

LIMITATIONS

It is hard to articulate this study smoothly as it has some limitations. The researcher tries to reduce the shortcomings of the study. This study has contributed to the information literacy program in preventing the era of fake news in libraries in Dhaka, yet it has a few limitations. The sample was from the three randomly selected public and private libraries in Dhaka, and the findings could differ in different perceptions and opinions. In addition, the plan was to review articles from the year 2010 until 2021. However, there has been a lack of studies related to information literacy programs in preventing the era of fake news, as they only reviewed the 2017 to 2021 literature.

The major challenge is to deal with the COVID-19 pandemic situation as the whole world is suffering from this (Kaur et al., 2022). In particular, Asian countries are still suffering the most. This study population and sample is of librarians and their staff in Dhaka, Bangladesh. Due to the pandemic, educational institutions, organizations, and companies are still closed. They run a home office and maintain the quarantine. COVID affected the majority of people in Dhaka. That's why closing most of the organizations and spreading the pandemic situation enormously makes it difficult to contact librarians and others (Osman et al., 2022). There will be a short time for collecting data and completing the research in this pandemic situation (Wan et al., 2023).

Although this study has tried to fulfill its objectives, there are still many areas for additional studies and empirical research. Further study can be developed by investigating how technology influences IL skills and programs and finding the proper way to prevent fake news through librarians or information professionals in the vast area. Last but not least, further study can also use other data collection instruments rather than questionnaires, such as interviews and observation (Cossham, 2017).

CONCLUSION

The most recent study and first attempt in Bangladesh to assess the current status of the information literacy program among librarians in the era of fake news. Also identify the challenges and overcome the fake news. This kind of notional study has never been conducted by any researcher before in our country (Sirajuddin et al., 2023). This study may help to provide proper suggestions to overcome, although this is the first study with this concept (Yi et al., 2018). This study identified that very few studies have been found to concentrate on the IL program in preventing fake news among librarians. There are lots of limitations to this study, but it can prove its objectives and give some valuable recommendations through librarians (Ying et al., 2023). Some librarians also use to do some activities in their library which is called IL program. This study covers some public and private libraries as well. In total, 125 knowledgeable people in the library field gave their valuable

opinions in this study (Haque & Joshi, 2011). They have enough competency levels in every section, but to prevent fake news, some libraries and some librarians are a little bit behind. Some staff also lacks knowledge of using technology (Lee et al., 2023). But librarians and their staff are so compatible in their work, especially information literacy skills and information literacy programs (Almonawer et al., 2023). Librarians are individuals who use information strategically in their work to help their organizations and/or clients meet key goals (Aziz et al., 2022). Librarians accomplish this through various means, including gathering, developing, deploying, and managing information resources and services (Rana et al., 2023). The importance of information literacy skills and programs cannot be described in words. It is equally essential and its usage needs to be known by everyone. These things can prevent fake news. Librarians can increase the awareness and spread positivity to the users of the IL program, which can prevent fake news. This study aims to identify the present status of libraries in Dhaka and determine the usage of the IL program and prevent fake news (Haque & Srivastava, 2014). This is the first attempt in Dhaka, Bangladesh, which may help to provide proper recommendations to overcome in further studies.

Data Available on Request Due to Privacy/Ethical Restrictions

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Ethical Approval: Formal ethical approval has been waived in state this study adhered to the principles of the strict ethical standards. Participation was anonymous, confidential, and voluntary, with informed consent obtained from all participants. There were no biomarkers or tissue samples collected for analysis. Participants had the freedom to withdraw from the study at any point.

Conflict of Interest: Authors declare no conflict of interest.

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