Unmasking Reliable News: An Investigation of University Students' Search for Trustworthy Information during the Pandemic

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Received: 27 March 2023
Received in revised form: 12 May 2023
Accepted: 31 May 2023
Published: 31 July 2023

ABSTRACT

The COVID-19 pandemic has been accompanied by a deluge of misinformation and falsehoods about the virus, which have made it challenging to discern facts from fake news. This study aims to investigate the correlation between university students' background and their knowledge of fake news, as well as their perception of their ability to distinguish between facts and fake news. Data was collected through an online Google Form as the pandemic intensified, and it became imperative to contain the spread of COVID-19. This study utilised quantitative cross sectional survey design with purposive sampling to select active social media users who are studying full time programs from a private higher learning institution as the research samples. The collected data of 261 respondents was then analysed using Social Science Statistical Software (SPSS) and Excel. The study's findings reveal that most university students have a commendable level of knowledge about fake news, which empowers them to differentiate between factual information and fake news. However, the study also indicates that the level of education of college students does not significantly affect their knowledge of fake news or their ability to recognize the differences between fake news and facts. Furthermore, the research demonstrates that there is a positive correlation between knowledge of fake news and the ability to distinguish between fake news and real news. In conclusion, this study's results suggest that university students possess a good understanding of fake news and are capable of differentiating it from factual information. The findings imply that there is a need to prioritize teaching critical thinking skills to all students to equip them to effectively combat misinformation and fake news.

Keywords
Fake news, facts, social media, University Students, news sources

Introduction

The proliferation of social media has dramatically increased the number of users to over 3.6 billion in 2020, with projections expected to rise to over 4.41 billion by 2025 (Cement, 2020). Social media platforms offer an unparalleled ability to disseminate personal information to a vast audience and have disrupted traditional media channels (Wani et al., 2021). Unfortunately, this has also led to the spread of fake news, with official news media and online social networks identified as the primary sources of 72.3% of fake news (Allcott & Gentzkow, 2017; Conroy et al., 2015). The media industry has lower entry barriers due to social media, allowing the proliferation of fake news (Brunius & Lind, 2017).

Regrettably, social media users are highly susceptible to false information (Latham, 2020). The media has lost public trust (Kalogeropoulos et al., 2021), and individuals often believe in fake news by only reading the headline, disregarding the body of the article (Markowitz & Hancock, 2016). Fake news has severe consequences for public health, as observed in the COVID-19 pandemic. False information about chloroquine's efficacy in treating COVID-19 led to widespread dissemination, hindering governmental and health organizations' work (Soto, 2020). Fake news is a

symptom of a larger social problem, where public opinion is being manipulated to influence real-world events (Huynh, 2020). The COVID-19 pandemic has demonstrated how vulnerable the public is to fake news and its potentially harmful consequences (Talwar et al., 2020; Yang & Tian, 2021; Rocha et al., 2021). Lower levels of education are associated with a higher likelihood of sharing fake news on social media, while higher education levels are linked to better management of information overload (Mihai-Ionuț and ENE, 2019; Gerosa et al., 2021). Research by Duplaga (2020), Radwan et al. (2020), and Sun et al. (2020) supports the idea that individuals with lower educational levels are more susceptible to fake news on social media. Studies by Rocha et al. (2021), Guimarães et al. (2021), and Hayat et al. (2020) have confirmed these findings, indicating that different age and educational groups are vulnerable to fake news on social media. Overall, educational level is a critical factor in an individual's ability to distinguish between facts and false news on social media. This study aims to identify reliable news sources among university students by examining their knowledge and recognition of fake news. To this end, this study explores the respondents' capacity to distinguish between fake news and real news, building on the emerging research that indicates education level as a critical factor in reducing the spread of fake news (Allcott & Gentzkow, 2017; Pennycook, Cannon & Rand, 2018). By examining these relationships, this study contributes to the body of knowledge on the spread and impact of fake news, informing effective strategies for combating its dissemination.

This study posits three hypotheses to investigate the relationship between education level and knowledge and recognition of fake news among respondents. The rigorous examination of these hypotheses is expected to contribute to the growing body of knowledge on fake news and the role of education in combatting its spread.

Hypothesis 1 (H1): There is a positive correlation between respondents' education level and their knowledge of fake news.

Hypothesis 2 (H2): There is a positive relationship between respondents' education level and their ability to differentiate between fake news and real news.

Hypothesis 3 (H3): Respondents' knowledge of fake news is positively associated with their capacity to identify the difference between fake news and real news.

There are three objectives in this study:-

Objective 1 (O1): To determine the university students' knowledge of fake news.

Objective 2 (O2): To determine the university students' capacity to recognise the difference between fake news and real news.

Objective 3 (O3): To find the relationship between their education level and their knowledge of fake news, and also their capacity to recognise the difference between fake news and real news.

Literature Review

The Credibility of News Sources

The credibility of news sources is a critical issue (Pressbooks, 2022) in today's digital societies, where the growth of publicly shared, decentralized information generation has led to the rapid spread of low-quality and inaccurate information (Lazer et al., 2009; Ojo & Mellouli, 2018, Sagheer, 2022). The current COVID-19 pandemic presents a unique opportunity to study society's responses to a catastrophic threat that has already significantly impacted global economic activity and social behaviour. However, the spread of erroneous information from various sources, both human and non-human, can delay or prevent the implementation of public health recommendations or interventions (Waszak et al., 2018). The infodemic threat spreads when trustworthy information sources fail to win over the trust and attention of some members of the public, leading them to turn to inferior sources that align more closely with their beliefs or prejudices (Vicario et al., 2019) or sound more convincing due to their straightforward messages (Britt et al., 2019). In this context, television has been repeatedly found to be a more dependable news source than others, particularly print media (Leung & Leung, 2020). Objectivity has been a guiding principle in the practice of professional journalism, and the mainstream news media has enjoyed a high level of public confidence for a long time (McQuail, 1982; Finberg, Stone, & Lynch, 2002). As consumers regularly encounter a message from various sources, the validation of its credibility and importance indirectly enables them to propagate it and become a vector of dangerously erroneous information (De Domenico et al., 2016). In the face of the potential spread of a pandemic without effective cures and legitimate defences, researchers must focus on objective and credible news sources to provide accurate information to the public (Chinazzi et al., 2020, Sagheer, 2022).

Knowledge of Fake News Perspectives

The relationship between education, socioeconomic status, and knowledge levels on certain topics has been studied extensively, and the concept of the knowledge gap theory suggests that this inequality grows as information in a social system expands. Tichenor et al. (1970) found that individuals who are more affluent are more likely to benefit from increased media coverage of a topic, as they learn about new topics more quickly and easily than their less well-off peers. Gui and Büchi (2021) suggested that individuals with greater levels of education may be better able to handle information overload and Internet usage, which were prevalent during the COVID-19 lockdown phase.

In terms of traditional news sources, McQuail (2010) argued that newspapers are more representative of a country's population in terms of its geographic, political, and socioeconomic diversity than big television networks, which tend to demonstrate "audience concentration," in which the same chapter is spread to a diverse and large audience. Research has shown that the early months of the COVID-19 epidemic were emotionally stressful for many Americans (Mitchell, Oliphant, & Shearer, 2020). There is also a strong correlation between general health awareness among cancer patients and Internet use for health information, although this can be mitigated by better education of patients. Knowledge disparities based on educational level are evident in a variety of areas, including health and medical concerns, science-related issues other than health, and social and political issues. When it comes to media exposure, Yang and Grabe (2011) found that gaps in knowledge tend to grow as consumers use news media and gain more education. Additionally, various media genres have distinct impacts on the establishment or maintenance of knowledge gaps (Bonfadelli, 2005), as not all forms of media have the same effect. Overall, during times of high stress and information overload, it can be difficult to find the most pertinent and trustworthy information.

Capacity to Recognise Fake News

The proliferation of digital communication and the emergence of "fake news" have raised serious concerns about a breakdown in confidence in reliable information sources, which is damaging to political and social discourse (Tandoc, Jenkins, & Craft, 2019). The COVID-19 crisis has further highlighted the spread of false information and the influence of conspiracy theories on behaviour, such as vaccination uptake and adherence to public health recommendations (Freeman et al., 2020; Campbell et al., 2021). For example, a study conducted in the United Kingdom (UK) found that over 10% of a representative population had extremely high levels of conspiracy theory thinking on COVID-19, while 50% endorsed conspiracy thinking to some extent (Freeman et al., 2020).

Notably, not everyone is equally susceptible to misjudging information and failing to recognize fake news. (Meyer, Alfano, & De Bruin, 2021) Demographic factors such as political affiliation, educational attainment, age, gender, ethnicity, religion, wealth, and marital status collectively account for just about one-third of the variation in susceptibility to COVID-19 fallacies (Meyer, Alfano, & De Bruin, 2021). In a United States of America (USA) study, one third of the adult sample believed in one or more COVID-19 conspiracies, further emphasizing the need to improve the capacity to recognize fake news (Earnshaw et al., 2020, Jurkowitz & Mitchell, 2020a, Jurkowitz & Mitchell, 2020b). Fardiah et al. (2020) highlighted the importance of media literacy as a strategy for combating fake news. This aligns with the findings of Apuke and Omar (2020), Torres et al. (2018) and Al Zou'bi (2022) who also noted that media literacy can reduce the impact of false information. Mele et al. (2017) further emphasized that individuals need to be equipped with the necessary skills to evaluate and assess the validity of information they encounter on social media platforms to effectively tackle the spread of fake news. The association between cognitive reflection and susceptibility to fake news has been attributed to "lazy" thinking, as opposed to a propensity to weigh information more carefully and override intuitive responses (Pennycook and Rand 2019). This association may signify impulsivity in making information judgments (Baron et al., 2015; Ioannidis, 2020). As a result, there is an urgent need to improve the capacity to recognize fake news, particularly during times of high stress and information overload, such as during a pandemic.

Theory Discussion

i) The Four Factor Theory

In this study, two theories have been discussed to shed light on the phenomenon of lying: the four-factor theory and the information manipulation theory. The four-factor theory posits that when people lie, four systems are at work: arousal, behaviour control, emotion, and thinking (Vrij, Mann & Fisher, 2006; Changing Minds, 2022a). First, lying creates anxiety and arousal, either because of cognitive dissonance caused by opposing ideals and conduct, or because of dread of being detected. Speech faults and hesitations, lie detectors, repetitions, blinking, fidgeting and displacement

activity, pupil dilation, and increased voice tone can all be used to identify this. Second, people attempt to avoid revealing themselves through their body language. However, leakage occurs frequently, such as when people are controlling their face and their legs give them away. Third, when people lie, their emotions shift. For instance, duping enjoyment, in which the liar secretly enjoys their success, may occur. Guilt may also manifest. Facial muscle micro-movements can reveal concealed emotions. Finally, people normally have to think much more to deceive, such as to maintain coherence in their arguments. As a result, people speak more slowly and with more pauses. People also employ more generalities to avoid getting caught up in detailed details (Vrij, Mann & Fisher; Changing Minds, 2022a).

ii) Information Manipulation Theory

The second theory that is relevant to the discussion of lying is the information manipulation theory, which proposes that a person intentionally violates one of the four conversational maxims: quantity, quality, relation, and manner, to convince or deceive (Changing Minds, 2022b). First, in terms of quantity, the information provided shall be complete (as expected by the listener) and without omission. Second, in terms of quality, the information provided will be accurate. Third, in terms of relation, the information will be pertinent to the conversation. Finally, in terms of manner, things will be presented in a way that others can comprehend, as well as with aligned nonverbal language. A person may use this theory to convince by omitting facts, telling lies, deviating from the topic, and confusing the other person.

In summary, the four-factor theory and the information manipulation theory offer valuable insights into the mechanisms of lying. By understanding the various components involved in deception, individuals may be better equipped to detect and prevent the spread of false information

Conceptual Framework

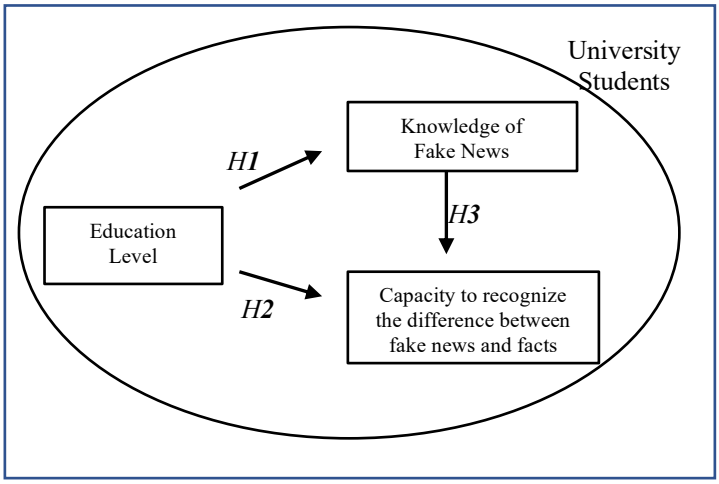

Figure 1. The Framework of the Study

Figure 1 illustrates the three main components that form the conceptual framework for this study. The framework consists of university students' education level, the university students' knowledge of fake news and the university students' capacity to recognize the difference between fake news and real news. The first part of the study is the university students' education level in the socio-demographic status. The researcher determines the education level of the university students. The second part is the university students' knowledge of fake news which have been adopted from Lewandowsky et al. (2017) (Believing and disbelieving misinformation), Belova and Georgieva (2018) (Fake news and digital literacy), Funke and Flamini (2019) (The Value of Counter-Speech), Carter-Ruck (2018) (The Rise of Fake News) and TRU Libraries (2022) (Fake News: A Resource Guide). The last part is the university students' capacity to recognize the difference between fake news and real news which have been adopted from Tarran (2017) (Critical thinking and fake news), Paul (2018) (Recognizing Fake News), Jane (2019) (Educating for Misunderstanding: How Approaches to Teaching Digital Literacy Make Students Susceptible to Scammers, Rogues, Bad Actors, and Hate Mongers), Kiely and Robertson (2016) (How to spot fake news), TRU Libraries (2022) (Fake News: A Resource Guide), and Karlsson (2017) (Developing critical thinking and digital literacy to counter fake news). Two theories are being applied in this study. The study is also supported by the four-factor theory (Changing Minds,

2022a) (Four-factor theory) and information manipulation theory (Changing Minds, 2022b) (Information Manipulation Theory).

Methods

Sample

When conducting a study on a large population, collecting data from every participant might not be practical. To address this, researchers use a sample, which is a smaller group selected from the target population that is believed to represent the entire population. In this investigation, a sample of university students was chosen because they are heavy consumers of both traditional and modern media and are better able to distinguish between true and fake news compared to other groups. This study employed a cross-sectional design and used purposive sampling to select samples of full-time university students from various programs who were active users of social media. The sample consisted of 261 eligible participants (131 males and 130 females) who completed the questionnaire. The researchers targeted students with higher levels of education to investigate the relationship between the subject of study and the understanding of false news. While the sample was not representative in terms of proportional representation, it was selected to obtain a specific sample quickly. Determining the appropriate sample size requires consideration of factors such as error margin, degree of confidence, and standard deviation (Crossman, 2020; Nicolas, 2021; QuestionPro, 2022).

The Survey Questionnaire

The survey questionnaire was divided into three main sections, as noted by the researchers. The first section asked about respondents' socio-demographic status, including sex, average age, students' education level, parents' occupation and their highest level of education, number of hours spent on social media, and family monthly income. The second section of the survey asked about their familiarity with fake news. Finally, the impact of misleading information on people was assessed through hypothesis testing in the last section of the questionnaire. Due to the growing seriousness of the pandemic and the need to stem the spread of COVID-19, the researchers collected data using a Google form. Mahmutovic (2021) notes that online surveys are faster and more efficient than traditional research methods, taking on average two-thirds less time to complete, and responses are received almost immediately. The researchers reviewed all the returned surveys for accuracy and consistency (Smith & Jones, 2021). Then, the researchers entered the data into Excel and social sciences statistical software (SPSS) for further analysis (Garcia & Martinez, 2021). Responses to the level of knowledge statement were coded, with 1 representing the lowest level of knowledge and 10 representing the highest level of knowledge (Brown, 2021). Next, the 10 questions that made up their impression of how to determine the difference between fake news and real news comprised their agreement, which included strongly agree, agree, neutral, disagree, and strongly disagree (Johnson, 2021). To determine if there was a significant connection or relationship in their profile regarding their knowledge and how they distinguish between false news and actual news, Pearson Correlation was used (Field, 2013). Pearson Correlation was used to determine if there was a significant relationship between participants' profiles, their knowledge, and their ability to distinguish between fake and real news (Davis et al., 2020). A negative correlation is indicated by a Pearson correlation coefficient (r) between 0 and -1, where changes in one variable result in opposite changes in the other variable (Turney, 2022).

Data Analysis

Data analysis refers to the examination of official data to gain insights into a proposition (Gerlach, 2020). In this section, the study's findings are presented and discussed in relation to the research objectives. The relationship between the variables is compared to establish the validity of the hypothesis. The results of the data analysis are displayed in tables and graphs below:

Background of Respondents

Table 1. Profiles of Respondents

Demography Profile	Frequency (f)	Percentage (%)
Gender		
Male	131	50.2
Female	130	49.8
Age		

18 – 20	33	12.6
21 – 23	127	48.7
24 – 26	73	28.0
27 – 29	28	10.7
Education level		
Foundation	11	4.2
Year 1	18	6.9
Year 2	34	13.0
Year 3	98	37.5
Year 4	60	23.0
Master	40	15.3
Education level of father		
Elementary	17	6.5
High school	95	36.4
College / University	149	57.1
Education level of mother		
Elementary	14	5.4
High school	120	46.0
College / University	127	48.7
Occupation of father		
Professional	66	25.3
Skilled	73	28.0
Unemployed	17	6.5
Business / Self-employed	91	34.9
Oversea foreign worker	14	5.4
Occupation of mother		
Professional	58	22.2
Skilled	52	19.9
Unemployed	19	7.3
Housewife	115	44.1
Oversea foreign worker	17	6.5
Family monthly income		
Less than RM2000	29	11.1
RM2000 to RM4999	66	25.3
RM5000 to Rm7999	107	41.0
More than Rm8000	59	22.6
Hours spent on social media		
Below 1 hour	11	4.2
1 hours to 2 hours	48	18.4
3 hours to 4 hours	103	39.5
5 hours to 6 hours	58	22.2
More than 6 hours	41	15.7

Information concerning fake news is derived from		
Television	10	3.8
Social media	199	76.2
Radio	20	7.7
Family members and friends	22	8.4
Newspaper and magazine	10	3.8

The findings of this study are presented in Table 1, which illustrates that a total of 261 respondents participated, with almost an equal split between genders at 49.8% female and 50.2% male. The age group with the highest percentage of respondents was 21-23 years old at 48.7%, and the highest percentage of university students were in their third year, at 37.5%. The majority of respondents' fathers (57.1%) had obtained a college or university degree, and 48.7% of their mothers had the same level of education. Regarding their fathers' occupation, the most common response was self-employment or owning a business, with 34.9% of respondents indicating this as their father's profession, while 44.1% of mothers were housewives. The family income of the majority of respondents (41.0%) was between RM5000 to RM7999. In terms of time spent on social media, the highest percentage of respondents (39.5%) reported spending between 3 to 4 hours per day. Finally, a substantial percentage of respondents (76.2%) cited social media as their primary source of information on fake news.

Next, a total of 20 questions been asked, the statements are drawn from various sources and identified in the table below. The questions aim to assess social media users' knowledge and familiarity with fake news, with respondents asked to rate their level of knowledge on a scale of 0 to 10. The results of the questionnaire are analyzed in the following sections. The reliability and validity of the questionnaire have been assessed using Cronbach's alpha, with a result of .968 for N=20 in this section, indicating high reliability and consistency of the measuring tool. The specific items for each variable can be found in Table 2.

Table 2. Familiarity with Fake News

Item Statements	**Weighted Mean/S.D.**	**Verbal Interpretation**
1. Hoaxes or the purposeful distribution of false information are examples of fake news (Lewandowsky et al., 2017).	8.19±1.65	**Nearly perfect knowledge**
2. It's simple to produce fake news (Lewandowsky et al., 2017).	8.45±1.49	**Nearly perfect knowledge**
3. Fake news is an emerging problem (Lewandowsky et al., 2017).	8.54±1.49	**Nearly perfect knowledge**
4. A news report is not fabricated just because it is rude or handy (Tarran, 2017).	8.24±1.68	**Nearly perfect knowledge**
5. Fake news is information that may or may not be entirely accurate (Tarran, 2017).	8.36±1.52	**Nearly perfect knowledge**
6. The problem of fake news already affects national security (Tarran, 2017).	8.32±1.47	**Nearly perfect knowledge**
7. You can find every fake news story online (Belova and Georgieva, 2018).	8.52±1.50	**Nearly perfect knowledge**
8. In 24/7 news cycle, fake news may readily propagate and be absorbed (Belova and Georgieva, 2018).	8.47±1.49	**Nearly perfect knowledge**
9. By creating fake news, clickbait headlines and stories generate advertising income (Paul, 2018).	8.41±1.49	**Nearly perfect knowledge**
10. Fake news is published on fake websites (Paul, 2018).	8.24±1.70	**Nearly perfect knowledge**
11. Fake news reports are more likely than real ones to be tweeted (Funke and Flamini, 2019).	8.47±1.52	**Nearly perfect knowledge**
12. Fake news uses exaggeration, satire, or rumour (Funke and Flamini, 2019).	8.43±1.52	**Nearly perfect knowledge**
13. False information has been produced in order to profit or amuse (Haskins, 2019).	8.37±1.50	**Nearly perfect knowledge**

14.Fake news headlines are ambiguous and make social commentary (Haskins, 2019).	8.39±1.52	**Nearly perfect knowledge**
15.Not every false information being disseminated online is wholly untrue (Carter-Ruck, 2018).	8.30±1.54	**Nearly perfect knowledge**
16.Fake news consists of articles which has misleading readers (Carter-Ruck, 2018).	8.48±1.47	**Nearly perfect knowledge**
17.The effect is more significant for fake political news (Carter-Ruck, 2018).	8.44±1.44	**Nearly perfect knowledge**
18.A deformation lawsuit is the primary legal remedy for fake news (Kiely and Robertson, 2016).	8.30±1.68	**Nearly perfect knowledge**
19.The idea of using AI to combat fake news is frequently put out (Kiely and Robertson, 2016).	8.28±1.69	**Nearly perfect knowledge**
20.There are some laws that can be used to protect people (Kiely and Robertson, 2016).	8.56±1.57	**Nearly perfect knowledge**
Grand Weighted Mean	**8.39±1.55**	**Nearly perfect knowledge**

According to the results presented in Table 2, it is evident that the majority of respondents exhibited an exceptional understanding of fake news. The weighted means of the survey responses, which were scored on a scale of 0 to 10, ranged from 8.19 to 8.56. The standard deviations for these scores were 1.65 and 1.57, respectively. The grand weighted mean score is 8.39 and overall standard deviation 1.55. These findings indicate that the participants' knowledge of fake news was consistently high across all 20 items that were tested in the study. Overall, the data suggest that the respondents possessed a near-perfect understanding of fake news, which bodes well for their ability to critically evaluate information in today's media landscape.

The following section aimed to assess respondents' ability to distinguish between fake news and real news using a Likert scale of five points: strongly agree, agree, neutral, disagree, and strongly disagree. This section included ten questions, and to ensure the questionnaire's reliability and validity, Cronbach's alpha coefficient was used, resulting in a high reliability coefficient of .930 for N=10 in this section. The specific items for each variable can be found in Table 3. In exploring the potential relationship between respondents' knowledge profiles and their ability to differentiate between false and actual news, Pearson correlation has been applied.

Table 3. Respondents' Capacity to Recognise the Difference between Fake News and Real News

Item Statements	Weighted Mean/S.D.	Verbal Interpretation
1. It can be identified by considering the source.	4.53±0.72	**Strongly agree**
2. Consider the article's author.	4.51±0.69	**Strongly agree**
3. Verify if other reputable news outlets have picked up the story.	4.58±0.66	**Strongly agree**
4. Verify the publication date.	4.53±0.73	**Strongly agree**
5. Foster a critical outlook.	4.54±0.68	**Strongly agree**
6. Search for online photos.	4.53±0.77	**Strongly agree**
7. Look past the headlines.	4.54±0.70	**Strongly agree**
8. Talk to the professionals.	4.61±0.65	**Strongly agree**
9. Pay attention to the quotes in the article.	4.51±0.73	**Strongly agree**
10. Consider the quotations' sources.	4.57±0.69	**Strongly agree**
Grand Weighted Mean	**4.55±0.70**	**Strongly agree**

Based on the results presented in Table 3, it is apparent that the majority of respondents displayed a remarkable ability to distinguish between fake news and real news. The survey responses were scored on a scale of 1 to 5, and the weighted means ranged from 4.51 to 4.61, indicating a high level of capability in their ability to recognize the difference between the two types of news. Overall weighted mean is 4.55, with the standard deviation 0.70 suggesting that the participants' responses were consistent across all 10 items tested in the study. These results indicate that the respondents exhibited a high level of proficiency in distinguishing between fake news and real news.

Hypothesis Testing

H1: There is a relationship between the respondents' education level and their knowledge of fake news.

Table 4. Relationship between the Respondents' Education Level and Their Knowledge of Fake News

Pearson Correlations			
		Education level	Knowledge of fake news
Education level	Pearson Correlation	1	-.020
	Sig. (2tailed)		.353
Knowledge of fake news	Pearson Correlation Sig. (2tailed)	-.020 .353	1

To investigate the potential relationship between the respondents' education level and their knowledge of fake news, Pearson Correlation was conducted. As presented in Table 4, the analysis revealed a p-value of .353, which is greater than the alpha level of 0.05. These findings suggest that there is weak evidence to support the hypothesis (H1) and that the relationship between the respondents' education level and their knowledge of fake news is not statistically significant.

H2: There is a relationship between respondents' education level and their capacity to recognise the difference between fake news and real news.

Table 5. Relationship between Respondents' Education Level and Their Capacity to Recognise the Difference between Fake News and Real News

Pearson Correlations			
		Education level	Capacity
Education level	Pearson Correlation	1	-.022
	Sig. (2-tailed)		.324
Capacity	Pearson Correlation	-.022	1
	Sig. (2-tailed)	.324	

Pearson Correlation was used to analyse the relationship between the respondents' education level and their ability to recognize the difference between fake news and real news. Table 5 shows that the p-value of the relationship between the respondents' education level and their ability to recognize the difference between fake news and real news is .324, which is >0.05. With a p-value of .324, the evidence is weak. Therefore, H2 has been statistically tested and found to be insignificant and unsupported.

H3: There is a relationship between respondents' knowledge of fake news and their capacity to recognise the difference between fake news and real news.

Table 6. Relationship between Respondents' Knowledge of Fake News and Their Capacity to Recognise the Difference between Fake News and Real News

Pearson Correlations

		Knowledge of fake news	Capacity
Knowledge of fake news	Pearson Correlation	1	.720**
	Sig. (2-tailed)		.000
Capacity	Pearson Correlation	.720**	1
	Sig. (2-tailed)	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

Pearson Correlation was used to analyse the relationship between the respondents' knowledge of fake news and their capacity to recognize the difference between fake news and real news. Table 6 shows that the p-value of the relationship between the respondents' knowledge of fake news and their capacity to recognize the difference between fake news and real news was significant at the 0.01 level, with a value of .000, indicating strong evidence. As a result, H3 has been statistically tested, found to be significant, and supported. The researcher has concluded that a significant relationship exists between the respondents' knowledge of fake news and their capacity to recognize the difference between fake news and real news at the 0.01 level. However, no significant relationship was found between their education level and knowledge of fake news.

Results and Discussions

The results of this study demonstrate that the majority of participants exhibited a high level of knowledge and understanding of fake news. This is encouraging news in an age where misinformation and disinformation are extensive, as it suggests that people are capable of critically evaluating information and making informed decisions. However, it is important to continue to promote media literacy and critical thinking skills in order to ensure that individuals are equipped to navigate the complex and ever-changing media landscape. (Mele et al., 2017; Torres et al., 2018; Fardiah et al., 2020; Apuke and Omar, 2020; Al Zou'bi, 2022) who also noted that media literacy can reduce the impact of false information. Besides, the results of this study also suggest that the majority of participants demonstrated a strong ability to differentiate between fake news and real news. This is a positive finding, as it indicates that people have the skills to identify and avoid misinformation in their daily lives. However, it is important to continue to educate individuals on how to recognize and evaluate news sources in order to ensure that they are equipped to navigate the complexities of the media landscape. Overall, the findings of this study provide encouraging evidence that people are capable of discerning between real and fake news with a high degree of accuracy (Gunter and Gunter, 2017; Pennycook and Rand, 2020).

The results of H1 and H2, which tested the relationship between respondents' education level and their knowledge of fake news and capacity to distinguish between fake and real news, respectively, were found to be insignificant and unsupported. In contrast, the result of H3, which tested the relationship between respondents' knowledge of fake news and their capacity to distinguish between fake and real news, was found to be significant and supported. The findings from H1 indicated that most respondents were knowledgeable about fake news, consistent with The National Literacy Group's study in 2017 (National Literacy Trust, 2017). However, while children are more technologically savvy than their parents, they are still unable to distinguish between real and fake news, according to Anderson (2017). The respondents appeared to be aware of the concept of fake news but had dubious understanding of its significance and limited capacity to recognize it.

The respondents' average knowledge score on false news revealed that many of them had practically excellent knowledge across the board. Although many students tend to think they are competent when analysing information, particularly information received from the internet, the reality is quite different. When evaluating students' information literacy abilities, the researcher discovered they were overconfident in their capacity to evaluate the reliability of information. This finding may be related to students' technical proficiency and capacity to function in an online context. Students had "unrealistic beliefs about their information literacy skills," according to Wang (2007), and they believed they knew more than they actually did. It proved that the respondents' education level never affects their

knowledge of fake news, and H1 is invalid. Further research is necessary to develop effective strategies for educating the public and limiting the spread of fake news (Mihai-Ionuț and ENE, 2019; Gerosa et al., 2021; Duplaga, 2020; Radwan et al., 2020; Sun et al., 2020; Rocha et al., 2021; Guimarães et al., 2021; Hayat et al., 2020).

The findings from H2 showed that respondents agreed with all the claims required to distinguish between real and fake news. However, studies conducted by Nielsen and Graves (2017), Janetzko (2017), and Domonoske (2016) suggested that consumers struggle to accurately distinguish between real and fake news. The study conducted by Barthel et al. (2016) corroborated the results. They claim that most people think they can spot false news on social media. A website mentioned in a search engine may be trusted, and reputable media sources with a history of fact-checking broadcast the real news (McClure, 2017; Ofcom, 2017). However, according to Nielsen and Graves (2017) and Janetzko (2017), consumers are unable to accurately distinguish between real news and false news. They are more inclined to identify incorrect information intended to mislead with poor journalism than fake news. Additionally, Domonoske (2016) discovered that college students, kids, and teens have a limited capacity to distinguish between false and true information, and they failed to identify which material was untrue. It proved that the respondents' education level never affects their capacity to recognise the difference between fake news and real news, and H2 is invalid.

The relationship between respondents' knowledge of fake news and their capacity to recognize the difference between fake and real news was tested, and the result was significant and supported (Johnson, 2021). This suggests that media literacy skills might reduce the impact of false information on social media (Pennycook and Rand, 2020). According to reports, media literacy is one strategy for dealing with fake news, which supports this (Wardle & Derakhshan, 2017). This study sheds light on the importance of addressing the issue of fake news among university students and its potential impact on their ability to distinguish between real and fake news. By examining the impact of education levels on knowledge of fake news and the ability to distinguish between real and fake news, this study makes a significant contribution to the field of fake news research. The findings of this study have implications for media industry professionals, who should provide proper instruction to students and the wider public on how to distinguish between fake and legitimate news. Such training would help equip students with the tools they need to recognize fake news and make informed decisions based on accurate information. Furthermore, this study highlights the need for young children to receive education about fake news. By approaching the topic as a pipeline for learning and investigation, rather than just a means to complete assignments, young children can become better equipped to identify and avoid fake news in the future.

Conclusion

The findings of this study indicate that most university students have a high level of knowledge regarding fake news, which enables them to distinguish between fake news and factual information which is in line with Gunter and Gunter (2017). Interestingly, the education level of university students did not significantly affect their knowledge of fake news or their ability to differentiate between fake and real news (Al-Jaber & Al-Shehri, 2019; Chan & Tan, 2021). However, the study did reveal a positive relationship between students' knowledge of fake news and their ability to recognize the differences between fake and real news (Gunter & Gunter, 2017). The present study's findings differ from previous research, possibly due to the variation in cultures and habits of various nations, as majority of the samples in this study consisted of individuals from the same ethnic group. Despite students' confidence in their ability to analyze information, particularly information acquired through the internet, research indicates that such confidence is often misplaced. The results of this study suggest that many students tend to be overconfident in their capacity to evaluate the reliability of information. Therefore, it is crucial for children to learn how news claims are presented, to gain real-world experiences in news evaluation, and to develop critical thinking skills that enable them to distinguish between true and fake news (Hinck & Scheinfeld, 2018). As the information world is continually evolving, it is essential for students to be exposed to both true and false news to prepare them for the news they will encounter outside the classroom (Mihailidis & Viotty, 2017). In conclusion, the results of this study highlight the importance of promoting media literacy among university students to enable them to differentiate between real and fake news (Fardiah et al., 2020). Thereby reduce the impact of the spread of false information (Apuke & Omar, 2020; Torres et al., 2018). As Mele et al. (2017) noted that in order to battle fake news, individuals must be given the skills necessary to assess the false information they come across on social media. Future research can further investigate effective strategies for teaching media literacy and critical thinking skills to students.

Limitations and Future Studies

The present study has limitations that should be taken into consideration when interpreting its findings. Firstly, the sample size was limited to university students from Malaysia, and since cultural norms and habits vary across nations, the results may not be generalizable to other populations (Chen et al., 2021). Additionally, the survey only provided predetermined options to participants, which may not have fully captured the range of ideas and viewpoints held by students at different academic levels regarding their ability to differentiate between real and fake news (Pennycook et al., 2020). Furthermore, time constraints may have impacted the research negatively, potentially leading to inaccuracies in the data collected (Creswell & Plano Clark, 2018). To improve the study's outcomes, a larger sample size and a longer data collection period could have been beneficial (Guest et al., 2017). In summary, while this study offers valuable insights into university students' ability to differentiate between real and fake news, it is essential to consider its limitations and the need for further research to provide a more comprehensive understanding of the issue.

Acknowledgment

Acknowledgement to institution/universities/organization: We would like to thank Southern University College, Faculty of Humanities and Social Sciences, Department of Journalism & Communication Studies.

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