Usage of Social Media and Perception of Fake News Among University Students

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Abstract

In the current world, where virtual space is considered as important as the real world, the representation of individuals on social media platforms has a significant role. Hence, the current study attempts to analyze the extent of social media usage among university students and their emotional, behavioral, and cognitive responses to fake news. 203 convenience-sampled university students were studied. The researcher employed a social media and false perception survey to acquire data. The study, which adopted a descriptive research design, was backed up with statistical analysis, including measures of central tendencies, percentage analysis, and content analysis. 34% of the population used social media for more than four hours, which exceeds the recommended screen time for children and adults, according to the American Academy of Child and Adolescent Psychiatry (2022). The sample utilized Instagram and WhatsApp the most. Study participants believed and spread good false news more. Negative social media material confused users and made them less inclined to share or transmit it. According to the research, fake news affects viewers' emotions, behavior, and cognition. The research sheds light on social media use and stresses the need for critical content analysis.

Keywords: Social Media, Fake News, University Students, FaceBook, Twitter, fact-checking

1. Introduction

In this digital era dependence on social media has intruded everyone's judgement. The impact created by social media have a significant influence on different sectors like government, corporates, retailing, etc. This also been a tool used by different fringe elements to create hatred and seed mistrust among public through spread of fake news to misuse the benefits provided by social media for their personal motives(van der Linden et al., 2020). In this regard, social media misusage can lead to adverse effect on society and individual accept false belief misappropriate notion towards others. Fake news is information which are promoted to have a viewpoint, where they are completely deceptive and untrue, deliberately vested to create a mislead to another person (e.g., (Potthast et al., 2018)). Fake news can be focused on any nature of field

like religion, politics, education etc. which are to create a grave endangered scenario for the receiver, where it turns out to be an opposite set of belief for them (Bryanov & Vziatysheva, 2021).

According to Indian Express¹, Supreme court of India stated that fake news is the cause of numerous riots and communal clashes across states in India. These bogus accounts are instigating casteism and religiosity among youth to disrupt the fraternity and unity of India (Punj, 2022)². According to the survey submitted to Supreme Court, India is home to 35 million user of Twitter and 350 million users of Facebook, here experts say 10 percent (3.5 million) users are not

¹ https://indianexpress.com/article/cities/pune/pune-police-warn-against-rumour-mongering-about-child-kidnappers-8171617/

² https://indianexpress.com/article/opinion/columns/face-the-facts-on-communal-violence-in-india-8174277/

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legit user, who use others photos, Id's to create an account, where those are fake, duplicate, bogus (Mahapatra, 2021)³. To understand the fake news menace, we can take rife prevalence of affecting whole world the coronavirus.

It can be understood that fake news spread faster than coronavirus in India. Even before the prevalence or identification of first case in India. Social media started raking up wild rumors, conspiracy theories, tampered videos about the disease's origin. The spread of misinformation through social platforms like WhatsApp, Twitter, Instagram, Tik-Tok etc (Creech, 2020). As data compiled by the International Fact Checking Network (IFCN) misinformation is categorized into five sets: "content about causes, symptoms, and cures, spread of the virus, government documents and misrepresentation of comments, videos and photos of misinformation circulating about other countries by politicians, blaming certain groups, religion, country for the cause of virus" (UNESCO, 2018)4. India is a base of 376 million users of social media widespread of fake news sometime triggering communal riots, lynching, negative stereotyping of individuals, specific groups and communities (Krishnan, 2020)5.

Fake news can severely damage the economic condition of people too. The WhatsApp forward stated that eating chicken causes coronavirus, which caused the poultry industry to loss around staggering 2000 crore. And it also affected the small-time poultry farmer whom were growing broilers on contractual farming for big corporates (Sahoo, 2020)⁶. India has taken various steps curb this fake news menace by few states imposing sedition law on individuals causing stigmatization on groups sharing and forwarding messages. Government of India also proved

(Section 54) of the Disaster Management Act (DMA), 2005⁷ to curb this menace.

Recently government had intervened to bring rigid rules and regulation to curb circulation of fake news and to teach digital literacy among users. Government too introduced fact-checking model to check and verify whether the news is from an authentic source or its bogus. Higher impulsivity is caused for an individual, who is having low media literacy and cultural biases. In 2018, there was a news circulating in social media stating a child kidnapping gang functioning in western state of Maharashtra. This bogus news has costed five immigrants live, who had returned to their native are suspected of being kidnappers(Li et al., 2021; Notley & Dezuanni, 2019) (Indian express, 2022)⁸.

Indian fact-checking portal stated that "people get access to cheap internet-based apps on their smart phones and they don't have the knowledge to know the veracity of claims made in the messages (Saxena, 2021)9. Many dubious messages on recruitments, money transfer, recharge etc. also lure individual to be as an easy prey" (Saxena, 2021)10. The role of emotion is to be more emphasized, but we wouldn't be using it for fact checking more often because of our Clickbait feature which instigate our curiosity to know what's behind the title. By inducing, flashy use of colors and photos and larger font tiles to attract the audience to initiate rationalizing our intuitiveness through "heuristics" leads to "biases" where this's cognitive distortion on other hand leads to misinterpretation of text. Studies have shown that people who are more prone to depression, religion, fundamentalism, disappointment, suspicion, are larger susceptible to these contents.

Role of fake news is not a new topic among media or education intellects. Date back to time of Black Death in 1347 a wide plague caused many lives,

 $[\]frac{3}{\rm https://timesofindia.indiatimes.com/india/social-media-platforms-must-be-accountable-supreme-court/articleshow/84058025.cms}$

https://en.unesco.org/sites/default/files/journalism_fake_news_disinformation_print_friendly_0.pdf

⁵ https://www.dw.com/en/whatsapp-in-india-scourge-of-violence-inciting-fake-news-tough-to-tackle/a-52709823

⁶ https://www.orfonline.org/expert-speak/how-fake-news-complicating-india-war-against-covid19-66052/

⁷

 $[\]frac{\text{https://www.disastermanagement.gov.in/sites/default/files/acts}}{\text{rules/The}\%20\text{Disaster}\%20\text{Management}\%20\text{Act,}\%202005.pdf}$

https://indianexpress.com/article/opinion/columns/facethe-facts-on-communal-violence-in-india-8174277/

⁹ https://www.dw.com/en/india-fake-news-problem-fueled-by-digital-illiteracy/a-56746776

 $^{^{10}}$ <u>https://www.dw.com/en/india-fake-news-problem-fueled-by-digital-illiteracy/a-56746776</u>

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this role of spreading a deadly virus is attributed to Jewish people by accusing them stating they've poisoned water well in intention to kill Christians (Freckelton QC, 2020). "During 1960, the blame put on disease spreaders, astral influences, or poisonous exhalations, and been termed as so-called miasmas" (Freckelton QC, 2020). This phenomenon is called scapegoat; we intrigue to assign the responsibility by identifying someone as culprit. When people can be exploited in the name of religious conviction, ethnicity, social class, or gender identity and stimulating societal conflict between people and government that friction leads to information bias (Lemos et al., 2021; Li et al., 2021; Scheibenzuber et al., 2023).

Considering all the above, the present study intends to verify how an individual good at integrating the correct information from the fake news by understanding the authenticity of the news, where a structured interview is given to samples to analyze the behavior of sharing the content and their thought, feeling, attitude towards the information.

2. Method

Aim

The present study aimed to find out the usage of social media as well as, emotional, cognitive and behavioral response elicited by university students to fake news circulating in social media.

3. Research Design

Descriptive research design was used in the study. **Sample**

The sample of the present study consists of 202 college students including both male and females of which the majority belongs to the age group of 17- 40 years. The sample were selected through convenience sampling method (Dumford et al., 2023).

Method of data collection

Data was collected using survey method. Online method was used to collect data. Well-designed Google form was send to the participants through email and WhatsApp. The responses were automatically saved in the Google drive.

Procedure

Initially, individual informed consent from the participants were obtained and recorded. Later

socio-demographic details and responses to the survey tool were collected. Second part of the tool contained ten WhatsApp content materials which were confirmed as frequently forwarded and baseless. Responses of the participant to all this news were recorded in a descriptive manner by highlighting emotional, behavioral and cognitive aspects of their reaction. Queries and confusions that the participants had were cleared simultaneously. Collected data was generally categorized based on their nature of content (fake news entailing positive content and fake news entailing negative content). Responses were also coded under the category of emotion, thought and behavior.

4. Statistical Analysis

In addition to frequency, percentage analysis was also used to analyze the collected data.

Table 1Indicates the demographic profile of the sample

VARIABLE	CATEGORIES	FREQUENCY
AGE	10-20	57
	20-30	130
	30-40	15
GENDER	MALE	67
	FEMALE	135
EDUCATION	UG	61
	PG	141
DOMICILE	RURAL	85
	URBAN	117

Table 2Indicates the emotional, cognitive and behavioral response of participants to fake news.

Response	Frequency Percent				
News 1: Teachers Logo ("A	message circulated				
with a logo stating supreme court has approved					
the logo for teachers and it's a pride for teachers")					

Emotions	Positive		178	88.1
	Negative		11	5.4
	Neutral		13	6.4
Thoughts	Genuine		163	80.7
	Fake		10	5.0
	Confused		29	14.4
Behavior	Forward		157	77.7
	Ignore		28	13.9
	Check	for	17	8.4
	authenticity			

NEWS 2: D	aracotame! FCC	/"I loo of	Daracetamal		authonti situ.		
	aracetamol 500	•		Name Co C	authenticity	F00 +	oc of CO12
	ing a type of viru			News 6: Gold in India ("3500 tonnes of GOL found in Sonbhadra, UP Extraction work will soc			
Emotions	Positive	46	22.8				
	Negative	132	65.3	_	t goes to Geolog	•	
	Neutral	23	11.4	_	hind this since 20		
Thoughts	Genuine	112	55.4		ves in world wa		
	Fake	33	16.3		will be called	Golden Bi	rd (Sone Ki
	Confused	53	26.2	Chidiya")			
Behavior	Forward	101	50.0	Emotions	Positive	179	88.6
	Ignore	53	26.2		Negative	7	3.5
	Check for	47	23.3		Neutral	16	7.9
	authenticity			Thoughts	Genuine	166	82.2
NEWS 3:	Trump's Visit (("Viral pho	oto of man		Fake	4	2.0
urinating o	n Ahmedabad	wall ahea	d of Trump		Confused	32	15.8
visit")				Behavior	Forward	165	81.7
Emotions	Positive	15	7.4		Ignore	5	2.5
	Negative	158	78.2		Check for	32	15.8
	Neutral	29	14.4		authenticity		
Thoughts	Genuine	84	41.6	News 7: Co	ronavirus in Chic	ken ("A Fa	cebook user
	Fake	49	24.3	Jits Scenic	has posted image	es of chick	en with the
	Confused	69	34.2	message, "(Corona virus has	been fou	nd in boiler
Behavior	Forward	85	42.1	chicken. Re	equest to all of	you not t	o eat boiler
	Ignore	53	26.2	chicken. An	chicken. And please share i		e".)
	Check for	64	31.7	Emotions	Positive	51	25.2
	authenticity				Negative	101	50.0
NEWS 4: M	umbai Museum	(The Indian Na	vv sets by museum		Neutral	50	24.8
	e historical treasures of	•		Thoughts	Genuine	149	73.8
and models of shi	,	maia obtainea ii	om other countries		Fake	8	4.0
Emotions	Positive	17	8.4		Confused	45	22.3
21110110110	Negative	157	77.7	Behavior	Forward	103	51.0
	Neutral	28	13.9	20.101.01	Ignore	40	19.8
Thoughts	Genuine	99	49.0		Check for	59	29.2
mougnts	Fake	32	15.8		authenticity	33	23.2
	Confused	71	35.1	Nows 8: "F	Rs.2000 Note in	India will	not he used
Behavior	Forward	99	49.0		ange them quickl		not be used
Dellavioi	Ignore	35	17.3	Emotions	Positive	у 169	83.7
	Check for			EMOLIONS			
		00	33.7		Negative	8	4.0
N	authenticity			Th	Neutral	25	12.4
-	IIT Professor gi	-	-	Thoughts	Genuine	162	80.2
	epts of Physics' f				Fake	8	4.0
Emotions	Positive	126	62.4	.	Confused	32	15.8
	Negative	21	10.4	Behavior	Forward	167	82.7
	Neutral	55	27.2		Ignore	7	3.5
Thoughts	Genuine	122	60.4		Check for	28	13.9
	Fake	15	7.4		authenticity		
	Confused	65	32.2		C 233 ("A girl w	-	
Behavior	Forward	118	58.4	raped by a	person has the	legal right	s to kill the
	Ignore	14	6.9	man")			
	Check for	70	34.7	Emotions	Positive	154	76.2

	Negative		30	14.9	
	Neutral		18	8.9	
Thoughts	Genuine		136	67.3	
	Fake		19	9.4	
	Confused		47	23.3	
Behavior	Forward		133	65.8	
	Ignore		32	15.8	
	Check	for	37	18.3	
authenticity					
News 10: National Anthem- ("UNESCO announced					
Indian National Anthem as the best Anthem of the					

World")				
Emotions	Positive		149	73.8
	Negative		29	14.4
	Neutral		24	11.9
Thoughts	Genuine		128	63.4
	Fake		27	13.4
	Confused		47	23.3
Behavior	Forward		122	60.4
	Ignore		42	20.8
	Check	for	38	18.8
	authenticity			

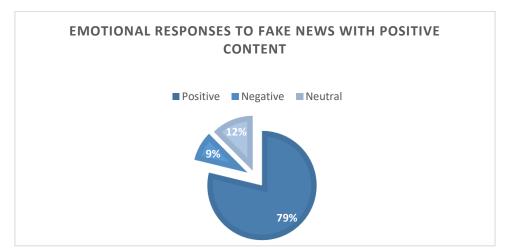


Figure 1: Indicate the emotional response of participants to fake news with positive content

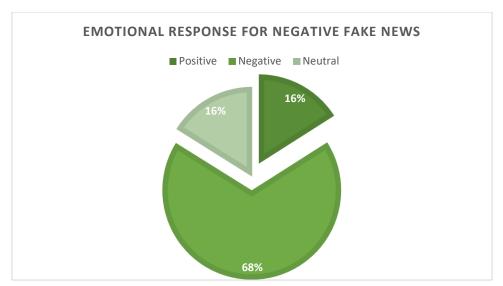


Figure 2: Indicate the emotional response of participants to fake news with negative content



Figure 3: Indicate the general behavioral pattern of participants to fake news

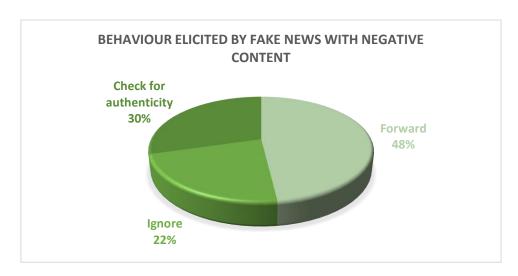


Figure 4: Indicate the behavioral pattern of participants to fake news embedding negative content

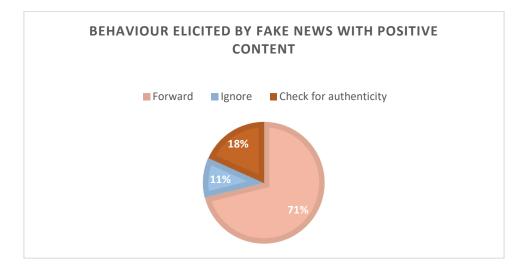


Figure 5: Indicate the behavioral pattern of participants to fake news embedding positive content

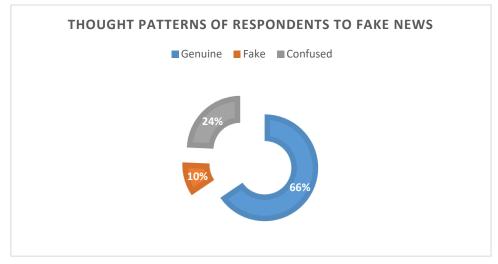


Figure 6: Indicate the general cognitive pattern of participants to fake news

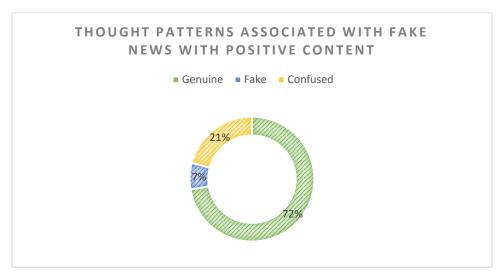


Figure 7: Indicate the cognitive pattern of participants to fake news entailing positive content

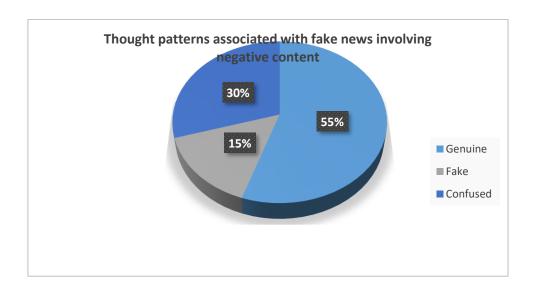


Figure 8: Indicate the cognitive pattern of participants to fake news entailing negative content

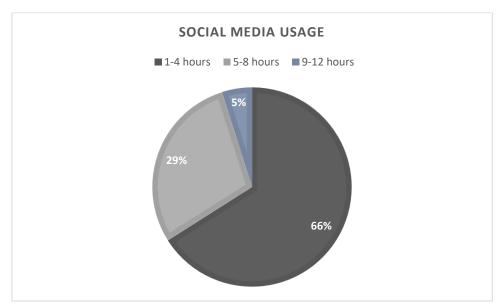


Figure 9: Indicates the extent of social media usage among university students

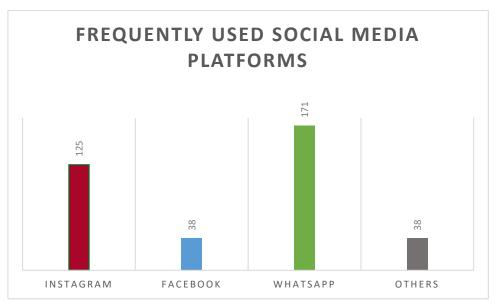


Figure 10: Indicates the frequently used social media platforms among university students

Discussion

Since the beginning of the COVID-19 pandemic, the online "fake news" explosion has raised urgent concerns across the globe. Social media platforms both facilitate the quick dissemination of this false information and make it more challenging to determine the reliability of online sources. Thus, this study attempted to understand the extent of social media usage among university students, their ability to identify and evaluate fake news, as well as their emotional, cognitive, and behavioural response to fake news(Bryanov & Vziatysheva,

2021; Dumford et al., 2023; Lewin et al., 2022). The results indicated that 34% of the total population is using social media for more than four hours, which exceeds the appropriate screen time for teens and adults according to the American Academy of Child and Adolescent Psychiatry

(2022)¹¹. The majority of the sample in the study belonged to an age group of 20–30, which is considered by researchers across the globe as the generation that spends the most time in social media (Auxier & Anderson, 2021). They are observed to utilise social media platforms for multiple purposes, including to ensure social connection, engage in virtual communication, involve in educational aspects due to the FOMO phenomenon (Fear of Missing Out), and provide entertainment (Bloemen & De Coninck, 2020). This often results in higher screen time among the users. This might be the reason behind the overuse of social media in the current sample.

The present study identified WhatsApp as the most popular social media platform among the participants. The popularity of social media is said to vary based on geographical locations, age groups, and accessibility. The reason for WhatsApp's popularity among the current population can be its user friendliness, accessibility, and promising variety of contents. Since the pandemic, WhatsApp has been acting as an active educational platform, unlike many other social networking sites. It was often considered an online learning space that facilitated the sharing of educational materials and served as a platform for both official and unofficial communication. Considering the fact that selected participants were university students, this might also be a reason behind the popularity of WhatsApp among them over other social media(Lewin et al., 2022). Analysing the emotional, behavioural, and cognitive response of the participants to fake news was one of the major objectives of the study. It was evident from the response pattern of the students that news embedding positive contents had a higher reach and influence among the sample than news with negative contents. Especially, it was visible that most of them had an inclination towards news that arouses patriotism, excitement, happiness, and pride feelings. Such

genuine by 72% of the participants. As a result of this emotional and cognitive influence, 71% of the population forwarded the same news to their contacts. It was noteworthy that only 7% of the population believed it to be fake, whereas 21% were confused. Still, it was hopeful to see that, when people were confused, 18% went to check for the authenticity of the news before forwarding it.

While looking at news involving negative content such as fear, worry, sadness, and anxiety, it was

news succeeded in evoking positive emotions

among 79% of the sample and was thought to be

While looking at news involving negative content such as fear, worry, sadness, and anxiety, it was visibly evident that these stories were more critically evaluated by the sample. In terms of emotional response, almost all news with negative content aroused desirable emotion among 68% of the sample, which was a slight low when compared to emotion evoked by news with positive contents. Whereas a noticeable difference was there in the percentage of people who believed this news to be genuine. Only 55% blindly considered such news to be genuine, and out of them, 48% forwarded it without going for an authenticity check. These results clearly indicate that when confronted with negative content, people tend to be more cautious. This could be because, once shared, news stories with negative emotions can have far-reaching consequences for society.

Out of the ten news stories considered in the study, the one that evoked the strongest emotional response among the majority of the sample was related to the charity work done by an IIT professor. 89% of the sample experienced a positive emotion after reading this news, and 82% believed it to be genuine and forwarded it to their contact. The verbal responses related to this news indicated that this fabricated piece of information was really influential among the students. Most of them had a tendency to model the behaviour of the person narrated in the news and appreciate the behaviour. The following statements by participants validate the same: I was personally motivated by his behaviour, then I worked hard to achieve my goals" (F, 20). "He is a good teacher; good teachers always care for students and poor people, and they won't be selfish. Hats off, Verma Sir" (S, 18).

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https://www.aacap.org/AACAP/Families and Youth/Fac ts_for_Families/FFF-Guide/Children-And-Watching-TV-054.aspx Similarly, another news item that evoked maximum emotional, cognitive, and behavioural responses was a story about the national maritime museum set up by the Indian Navy in Mumbai. This news, which included elements of patriotism, was considered to be genuine by 80.2% of people and forwarded by 82% without confirmation. Responses associated with this news are also affirming a lack of critical evaluation among the sample towards such news involving positive contents. "That is awesome. I would want to visit that museum one day. It seems grand. I will forward it" (KV, 19). "Feel proud and share (unmaiyana Indiana iruntha share pannunga)" (SKR, 25). These responses clearly show how well strong emotions such as patriotism can influence our thinking and associated behaviours.

The least-forwarded news among the data was a report on the spread of Corona virus through broiler chicken. This news evoked a negative emotion in 78% of the sample, of which only 42% considered the news to be genuine. This news, which entails a sense of worry and fear, left the majority of the sample confused. Rather than mere misinformation, such news is powerful enough to create a negative impact on society, including a reduction in the market for chicken, influence people's eating behaviours, and thereby affect their nutrient intake. Since such news may have a greater impact if shared, people usually step back from spreading such information without confirming it. This may be the reason why this particular news was not forwarded, unlike the others. "I forward this message to my friends, then I call my friends who are in those places (F, 20)". Nowadays, fake news about the Corona virus knows no bounds. "Feel very sad on this type of message. I won't forward this. This will create unwanted worries in the minds of humans and may affect any other diseases" (AA, 18). These responses of the participants also validated the impact of negative fake news among the students. A similar pattern was observed throughout when analysing the content of the news. Even when considered genuine news, stories embedding negative content were not widely forwarded. This may be mainly because of an empathetic concern to protect others from worrying. As well, most of the time, health-related news was checked for

authenticity before being believed and forwarded. Participants opined that this behaviour of checking authenticity was followed by the overspread of fake news and conspiracy theories during the COVID-19 outbreak (Apuke & Omar, 2021; Bermes, 2021; Gupta et al., 2023). Out of analysing the content and responses to the news, it is clear that people consider the emotion associated with the news, their individual connect with the news, the risk potential of the news, and the impact of the news on society before considering it as genuine and forwarding. It was also evident from the study that specific information-seeking behaviours and critical evaluation techniques linked to the identification and evaluation of fake news were considerably less prevalent among the current sample. Since youth critically lack the ability to distinguish fake from real news (Scheibenzuber et al., 2021, 2023), it is high time to bring more awareness among the community, ensure the censoring of digital contents, and thereby protect digital wellbeing.

6. Conclusion

In conclusion, the study conducted on the usage of social media and perception of fake news among university students has provided valuable insights into the impact of social media on young adults. The results revealed that 34% of the population was using social media for more than four hours, which is beyond the recommended screen time for teens and adults. WhatsApp was found to be the most frequently used platform, followed by Instagram. Fake news was found to be more trusted and shared among the participants when associated with positive emotions, whereas contents related to negative emotions generated confusion and were less shared or forwarded. Overall, the study highlights the need for greater awareness of the potential dangers of fake news and the importance of critical thinking and media literacy among young people. It also underscores the need for further research in this area to better understand the impact of social media on young adults and to develop strategies for promoting responsible social media usage.

Limitations

While this study aimed to provide insights into the usage of social media and perception of fake news among university students, it is important to acknowledge some limitations that may have affected the results.

- The study was conducted among a limited number of participants from one university in Tamil Nadu. The sample size was small, and thus it may not be representative of the entire population of university students in India. Hence, the results may not be generalizable to other universities or countries.
- The study relied on self-reported data, which may be subject to bias. Participants may have provided socially desirable responses, and their perceptions of fake news may have been influenced by their personal experiences or biases.
- Finally, the study could only incorporate a limited number of underlying factors that may affect the usage of social media and perceptions of fake news. Further research could be conducted to explore these factors and provide a more comprehensive understanding of the issue.

Implications

- The findings of this study have several implications for both academics and practitioners. Firstly, the study highlights the need for educators to integrate media literacy education into their curricula to equip students with the necessary skills to critically evaluate the information they consume from social media. This is especially important given that the study showed that social media usage among university students is high and that they are susceptible to fake news.
- The study emphasises the need for media organisations and social media platforms to develop mechanisms to detect and flag fake news. This can be achieved through the use of artificial intelligence and machine learning algorithms that can detect patterns of misinformation and flag them for users.
- The study highlights the need for policymakers to develop laws and regulations that can help combat the spread of fake news. This can

- include measures such as stricter regulations on online advertising, increased fines for media organisations that publish fake news, and penalties for individuals who spread fake news.
- The study suggests that further research is needed to better understand the impact of fake news on society. This can include studies on the impact of fake news on political attitudes and behaviours as well as the impact of media literacy education on fake news detection and prevention.
- Finally, this study underscores the importance of accurate and trustworthy news in our society. Fake news can have serious consequences, including the spread misinformation, the undermining democratic processes, and even physical harm in extreme cases. Thus, an integrated approach should be adopted by social media platforms, media organisations, and individuals to ensure that accurate and trustworthy news is widely available and accessible to everyone.

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