

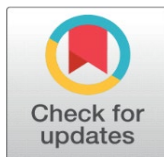
DIGITAL RUMORS, COGNITIVE TRUST, AND NEWS VERIFICATION BEHAVIOR: A QUANTITATIVE ASSESSMENT OF FAKE NEWS CONSUMPTION AMONG JOURNALISM STUDENTS IN DELHI-NCR UNIVERSITIES

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ABSTRACT

Cognitive and behavioral reactions to fake news by journalism students is a little-studied aspect of media literacy scholarship, especially in a time when fake news is proliferating and increasingly pervasive. This study is a quantitative analysis of the interaction of fake news exposure, digital rumors consumption, cognitive trust formation, peer influence, social media dependency, and digital literacy in influencing news verification behavior among journalism and mass communication (JMC) students at Delhi-NCR universities. Primary data was collected from N = 500 journalism students studying at Jamia Millia Islamia Delhi University, Delhi; Guru Gobind Singh Indraprastha University, Delhi and Amity University, Noida that was sampled using stratified random sampling procedure. Data was collected from a questionnaire consisting of 50 items which were validated using SPSS v.26. Pearson's correlation, multiple regression analysis, one-way ANOVA, independent sample t-tests, and Chi-square tests were used. Constructs achieved a range of Cronbach's Alpha coefficients between 0.80 and 0.91, which suggests reliability of the instrument. Results indicated that the highest predictors of misinformation acceptance were cognitive trust in social media ($\beta = 0.49, p < .001$), and the highest predictors of news verification behavior were digital literacy ($\beta = -0.44, p < .001$). Peer influence had a significant moderation effect on the association between fake news exposure and verification intention. This revealed significant differences between post and undergraduate levels in terms of the rigor of verification ($t = 4.87, p < .001$). There was a significantly different level of digital literacy across the universities ($F = 9.21, p < .001$). The findings of the study have empirical value for the field of journalism education as well as have suggestions for journalism education curriculum in India to inculcate the culture of verification.

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Keywords: Fake News, Cognitive Trust, News Verification, Journalism Students, Digital Rumors, Media Literacy, Peer Influence, Delhi, NCR, Misinformation Acceptance, Social Media Dependency



1. INTRODUCTION

The information environment of the 21st century is characterized by a structural paradox, one that has never existed in the history of journalism: the capacity to communicate live, across the globe, in real time via digital technologies also allows to produce, circulate and amplify fabricated narratives in a manner that is systematically faster than

institutionalized verification can keep up. This paradox is especially significant for journalism students, who are currently being trained to be the gatekeepers of the democratic distribution of information, and who are being trained in an era dominated by algorithmically curated misinformation, politically motivated disinformation and peer-circulated digital rumor (Vosoughi et al., 2018; Lazer et al., 2018).

Journalism students are in a structural limbo in the fake news universe. They are learning professional norms that, in principle, place emphasis on verification, source attribution, and epistemic skepticism, and that do not reign in lay audiences. However, the socialization contexts in which they exist are saturated with social media, peer network information sharing, cognitive heuristics developed through platforms and different institutional capacity for media literacy education, which can result in a much larger disassociation between professional normative aspiration and actual verification behaviour than is currently understood in scholarship (Tandoc et al., 2021; Pennycook & Rand, 2021).

This investigation is of relevance in the Indian context. India's digital information landscape is one of the largest and most complex globally, with over 1.4 billion citizens, 750 million internet users, and more than 500 million WhatsApp accounts (Newman et al., 2023). Delhi NCR (National Capital Territory along with the educational and commercial surrounding metropolitan area) has one of the largest concentrations of the students of journalism and mass communication in India studying from top journalism and mass communication institutes of Delhi such as Jamia Millia Islamia, Delhi University, Guru Gobind Singh Indraprastha University (GGSIPU) and Amity University. The high salience of political information in this region, where it is close to the national government, and the dense institutional field of journalism education make it an ideal, academically justifiable area for studying how journalism students deal with fake news.

In this study, the authors fill a major empirical gap by using a stringent quantitative design to investigate the cognitive, social, and behavioral aspects of the problem of journalism students and digital misinformation. The study uses Uses and Gratifications Theory, Cognitive Dissonance Theory, Media Literacy Theory and Cultivation Theory to provide statistically derived information about patterns of verification behaviour, the formation of cognitive trust and the moderating effect of peer influence and digital literacy. The results have immediate implications for curriculum design in journalism, media education and institutional policy in Indian higher education.

1.1. BACKGROUND OF STUDY

India's journalism education system has undergone a tremendous transformation in the last two decades, with more than 4500 journalism and mass communication courses being recognized in over 2,150 Universities and Colleges in India by the University Grants Commission (UGC) by 2023. Delhi NCR serves as the hub of this growth with leading institutes such as the Mass Communication Research Centre, Jamia Millia Islamia, Department of Journalism, Delhi University, School of Mass Communication, GGSIPU and Amity School of Communication, which is a leading private school. All these institutions churn out several thousand journalism graduates every year, who face an unprecedented challenge from misinformation in the media industry (Rao, 2020; Rodrigues, 2021).

At the same time, the students in these programs are members of Generation Z: the first generation to have lived their entire lives in the social media world. The research consistently shows that there are distinctive patterns of news use across platforms that are characteristic of Generation Z consumers, greater sensitivity to information communicated by their peers, and complex structures of cognitive trust that do not neatly fit into traditional journalism source authority hierarchies (Edgerly & Vraga, 2020; Fletcher & Nielsen, 2018). In India, these generational dynamics are coupled with an extraordinary political communication landscape of misinformation campaigns, AI-generated deepfakes of political leaders, and the coordinated inauthentic activity on WhatsApp and X (formerly Twitter) that have become routine aspects of journalism students' daily lives (Sinha, 2022; Thakurdin, 2022).

This urgency has not yet found its reflection in empirical studies that are specifically focused on fake news behaviour among Indian journalism students. The literature reviewed is mostly qualitative, geographically limited to the Western educational context and/or more general in target groups than that of journalism students. This study is directly concerned with this convergence of gaps.

1.2. STATEMENT OF THE PROBLEM

The research literature on misinformation susceptibility has expanded significantly since then, but the cognitive, social and behavioral processes by which journalism students – who are often taught more about media literacy than other student groups – are still susceptible to the consumption of fake news is not well empirically described. What is the relationship between fake news exposure, cognitive trust in digital platforms, social media dependency, peer influence, and digital literacy with news verification behaviors and misinformation acceptance among journalism and mass communication students in Delhi-NCR universities? It is crucial to understand these dynamics to create journalism courses that can yield graduates who can function as trustworthy epistemic anchors in India's information rich and complex scenario.

1.3. SIGNIFICANCE OF THE STUDY

This study's significance is manifested in three ways. It offers, theoretically, an integration of Uses and Gratifications Theory with Cognitive Dissonance Theory in explaining how motivated information seeking results in biased verification behaviour. Methodologically, it offers a unique, large sample (N = 500) quantitative data set on the behavior of Indian journalism student media, to create benchmarks for future comparative studies. In practice, it provides context-relevant recommendations to curriculum reformers, journalism educators, and institutional policy makers for integrating verification cultures into the journalism programs in India.

1.4. RESEARCH GAP

This study fills three gaps that can be found in literature. One of the first findings is the lack of quantitative studies on fake news making among journalism students in India, as there is little research that relies on qualitative interviews or focuses on non-journalism student populations from India, which are found in Scopus-indexed journals. Second, the dimension of cognitive trust – an affective and evaluative orientation of the learners towards the social media which affect their information processing, has not been statistically analyzed in Indian journalism education research. Third, there is a lack of understanding about how peer influence moderates the relationship between exposure and verification in this context, as it is not yet operationalized and validated by psychometric instruments. This study simultaneously fills all three gaps.

2. REVIEW OF LITERATURE

2.1. THE ARCHITECTURE OF DIGITAL MISINFORMATION

In a pivotal study, Vosoughi et al. (2018) showed that false news is six times more likely to be shared than true news on Twitter, 70% of which is done by individuals and not by automated bots. This discovery became a key empirical reality facing today's journalism: the structural asymmetries in the spread of misinformation. Lazer et al. (2018) expanded this to propose an interdisciplinary science of fake news, one that would incorporate the fields of cognitive science, political communication, and computational social science. Wardle (2020) introduced a useful distinction between misinformation, disinformation, and misinformation that has been adopted as a conceptual framework by various measurement operationalization, such as the one used in this study.

Analytic thinking, as an individual-level factor, was cited as the key factor in identifying accurate news by a cognitive science review (Pennycook and Rand, 2021). The fact that motivated reasoning is not the cause of the spread of fake news but attentional failures – when people tend to focus on interest and emotionality, rather than accuracy – has implications for journalism education, and accuracy priming training can be more effective than deep debunking training. Roozenbeek et al. (2022) showed that media literacy programs based on inoculation theory effectively diminish susceptibility to misinformation techniques, which is also true in cultural contexts such as South and Southeast Asia.

2.2. COGNITIVE TRUST AND PLATFORM CREDIBILITY

Metzger and Flanagin (2015) built a conceptual model of the understanding of credibility assessment in digital environments, which can be divided into two types: cognitive and heuristic credulousness assessment. According to Metzger and Flanagin (2015), two types of credibility assessments can be distinguished in the understanding of credibility assessment in digital environments, namely cognitive and heuristic credulousness assessment. They found that users mainly use heuristic clues to assess digital news content such as platform reputation, endorsement, and social proof indicators. According to Westerman et al. (2014), the credibility of social media sources is most influenced by the presence of recent signals and social endorsement indicators, not by verifiable source expertise. In an updated review, Flanagin and Metzger (2020) compiled evidence indicating that young adults are more likely to rely on platform reputation as a proxy for their cognitive evaluation of a source, meaning that they are more likely to rely on platform algorithms than to make their own source evaluations.

Similarly, in the Indian context, Newman et al. (2023) noted a low level of trust in news media among consumers, with 38% expressing 'most of the time' trust in news in the Indian context, compared to the Global North. This low institutional trust climate can paradoxically also increase the impact of misinformation spread by peers by making professional journalism less of a trusted benchmark for truth. Guess et al. (2020) showed that the lower people's trust in news media, the more likely they were to share misinformation, when participants relied on heuristics to evaluate credibility from their peer networks rather than the news media.

2.3. USES AND GRATIFICATIONS IN NEWS CONSUMPTION

Theory of uses and gratifications (Katz et al., 1973) is an important theory to discuss the reasons for why journalism students use algorithmically curated social media platforms to consume news news, even when they are aware of the danger of encountering misinformation. In their study, Diddi and LaRose (2006) reported that "habit", "social utility" and "entertainment gratification" accounted for the greatest prediction of online news consumption, while "information seeking motives" were a secondary factor. Park (2019) showed that the central role of social media in social, information and entertainment goals in relation to others is linked to a decrease in the critical evaluation of shared content. Building upon the U&T theory, Sundar and Limperos (2013) proposed two new gratifications – customizability and interactivity – which were not well represented in classic theories, and which are especially relevant to the context of new media platforms.

This was directly relevant to how an audience of blog readers assess the credibility of online media compared to traditional media, as demonstrated in a longitudinal study conducted by Johnson and Kaye (2014). More recently, Sindermann et al. (2021) found that social media dependency also correlated with a lower capacity to engage in deliberate evaluation of information, which was mediated by attentional resource depletion, a finding that resonates with Pennycook and Rand's (2021) attentional approach to susceptibility to misinformation.

2.4. COGNITIVE DISSONANCE AND MISINFORMATION ACCEPTANCE

The phenomenon that postings with more prior exposure to journalism ethics training might still accept misinformation when it is consistent with pre-existing political beliefs, is well explained by Cognitive Dissonance Theory (1957) (Festinger). A previous large-scale replication of the backfire effect, in which belief-consistent misinformation was found to become more entrenched after correction, was found by Nyhan and Reifler (2010); more recent large-scale replications have yielded less consistent results (Wood & Porter, 2019). Lewandowsky et al. (2020) extracted evidence and concluded that motivated reasoning, in combination with the tendency to seek out information that confirms beliefs, is best supported as an individual predictor of misinformation persistence.

Professional socialization in journalism norms does not completely protect journalists from accepting politically motivated misinformation, with Tandoc et al. (2021) discovering this in the case of journalism students. This matches the Confirmation Bias Theory (Nickerson, 1998) and implies that the interventions on media literacy and structural verification habits could be more lasting than the motivational interventions related to professional identity.

2.5. MEDIA LITERACY THEORY AND VERIFICATION BEHAVIOR

Media Literacy Theory, as defined by Potter (2016) and embodied in subsequent empirical studies, sees media literacy as a multidimensional competency that has cognitive, emotional, aesthetic and moral aspects of media use. A multi-university study conducted by Craft et al. (2016) showed that media literacy was associated with more strenuous verification behavior among journalism students. The fact that critical news literacy (the ability to assess source authority, identify logical fallacies and to identify emotional manipulation) was one of the most important predictors of fake news rejection was extended to the social media context by Ashley et al. (2017).

For journalists in India, Singh and Bhardwaj (2022) identified a positive correlation between formal media literacy training and both journalists' extent of cross-checking news sources and their avoidance of sharing unverified content on social media. The present study overcomes this limitation by studying a larger and more diverse sample (n = 140) and employs more objective measures of literacy (behavioural) than self-reports.

2.6. PEER INFLUENCE AND INFORMATION CONTAGION

In their 2015 experimental study of Facebook information diffusion, Bakshy, et al. (2015) found that peers had a statistically significant causal effect on news sharing beyond accounted for by algorithmic exposure. This effect from peers was most strong for content that was politically activating; that's the kind of misinformation that is most common in the Indian online environment. Scheufele and Krause (2019) expanded this idea to claim that peer networks are informal verification systems – that is, when people witness peers sharing information, they infer that the sharing of information is a form of social endorsement of credibility.

Shin et al. (2018) discovered that efficacy of correcting misinformation was significantly diminished in high-density peer network environments, where there are multiple iterations of peer-reinforced misinformation that must compete with corrected information. This result may be of interest to journalism students who operate in environments of high information sharing velocity, where their individual-level verification skills are not enough without additional peer network literacy skills.

2.7. CULTIVATION THEORY AND PERCEIVED NEWS REALITY

In the social media adaptation of Cultivation Theory (Gerbner et al., 1986), it is hypothesized that the amount of an algorithmically curated news feed consumed shapes a distorted perception of social reality by creating a perception that is aligned with the dominant representational patterns of the content consumed. Hameleers et al. (2021) tested the cultivation effects on fake news consumption and discovered that individuals who are high on exposure to populist political misinformation tend to have cultivated perceptions of elite corruption and media untrustworthiness which act as self-reinforcing credibility frameworks and make later exposure to fake news even more credible. This cultivation process is especially significant for journalism students, who have already potentially developed epistemological frameworks based on social media news consumption before entering professional formation.

Romer and Jamieson (2021) uncovered evidence of 'cultivation-by-platform,' in which they were able to establish that heavy use of YouTube fosters conspiracy-oriented worldviews among young adults that are more pronounced than those cultivated in the television climate. This cultivation-specific dynamic on YouTube is a largely ignored facet of the misinformation vulnerability of journalism students in India, as evidenced by the prevalence of news consumption on the platform by young people (Newman et al., 2023).

2.8. INDIAN JOURNALISM EDUCATION AND MISINFORMATION RESEARCH

In the most recent study on the capacity of Indian journalism education to deal with the problems of digital misinformation, Rao (2020) found that most journalism educational institutions in India do not have any specific courses dedicated to digital verification and continue to favor pedagogical methods that focus on broadcast and print information over digital information literacy education. Rodrigues (2021) noted that the end-to-end-encryption and forwarding design of WhatsApp poses unique verification challenges for Indian journalists, because WhatsApp does not provide source attribution and engagement metrics needed for heuristic credibility assessment.

Kumar and Pandey (2023) explored click-driven editorial distortions in the digital newsrooms of the Hindi language, and Thakurdin (2022) highlighted how the infodemic problem was present in regional journalism during COVID-19 in India, where early career journalists were not trained in ethics. All these studies make a strong case for the systemic nature of the misinformation problem in Indian journalism and demonstrate the dearth of rigorous, quantitative and student focused empirical studies on the subject.

2.9. THEORETICAL FRAMEWORK

This study combines four theories to create a full picture of the explanation of journalism students' misinformation behavior. Uses and Gratifications Theory (Katz et al., 1973; Sundar & Limperos, 2013) provides an explanation of why the students selectively use social media to access news despite knowledge about the dangers of misinformation, and highlights the importance of social utility, entertainment, and habituated information-seeking gratifications. Politically motivated verification avoidance can be explained by the phenomenon of accepting misinformation that is consistent with one's beliefs and rejecting correct information: this is what is called Cognitive Dissonance Theory (Festinger, 1957; Lewandowsky et al., 2020). The theoretical underpinning of the protective role of digital literacy competences comes from Media Literacy Theory (Potter, 2016; Craft et al., 2016), which serves as the normative competency framework which is used to measure verification behavior. Cultivation Theory (Gerbner et al., 1986; Hameleers et al., 2021) is an account that relies on heavy exposure to algorithmically targeted misinformation to foster problematic epistemic frameworks that further increase individuals' risk for misinformation uptake.

The integrated four-framework model operationalizes misinformation acceptance and verification behaviors through four frameworks: gratification-motivated platform use (Uses and Gratification), dissonance-avoiding cognitive processing (Cognitive Dissonance), competency-based critical evaluation (Media Literacy), and long-term cultivated epistemic schemas (Cultivation). This integration offers a more comprehensive explanatory schema than any single theory could offer.

3. RESEARCH OBJECTIVES

- 1) To assess the prevalence, frequency, and patterns of fake news exposure and digital rumor consumption among journalism students in Delhi-NCR universities.
- 2) To examine the relationship between cognitive trust in social media platforms and misinformation acceptance among journalism students.
- 3) To investigate the predictors of news verification behavior, including digital literacy, peer influence, and social media dependency.
- 4) To analyze inter-university and postgraduate-undergraduate differences in digital literacy and verification behavior.
- 5) To provide evidence-based curriculum recommendations for journalism education reform in Delhi-NCR.

4. RESEARCH QUESTIONS

RQ1: How frequently are journalism students in Delhi-NCR exposed to fake news and digital rumors across social media platforms?

RQ2: Does cognitive trust in social media platforms significantly predict misinformation acceptance among journalism students?

RQ3: To what extent does digital literacy predict news verification behavior, controlling for social media dependency and peer influence?

RQ4: Are there significant differences in verification behavior between postgraduate and undergraduate journalism students?

RQ5: Do inter-university variations in digital literacy levels exist among Delhi-NCR journalism student populations?

5. HYPOTHESES

H1: Cognitive trust in social media platforms is significantly and positively correlated with misinformation acceptance among journalism students ($\alpha = .05$).

H2: Digital literacy is a significant negative predictor of misinformation acceptance, controlling for social media dependency and peer influence ($\beta < 0$; $p < .05$).

H3: Peer influence significantly moderates the relationship between fake news exposure and news verification behavior.

H4: Postgraduate journalism students exhibit significantly higher news verification behavior than undergraduate students (independent sample t-test; $\alpha = .05$).

H5: There are significant inter-university differences in digital literacy levels among journalism students across Delhi-NCR institutions (F-test; $\alpha = .05$).

6. RESEARCH METHODOLOGY

6.1. RESEARCH DESIGN

This study follows the common method of quantitative survey research that is used in journalism education and media effects studies (Wimmer & Dominick, 2014). The design allows for the systematic measurement of construct relationships from a large, representative sample of journalism students, which do allow for statistical generalization to the larger population of journalism students from the Delhi-NCR region. The measurement of latent psychological constructs, such as cognitive trust, digital literacy, and peer influence orientation, which are not directly observable but can be reliably measured with validated multi-item psychometric instruments, is particularly well suited for survey research (DeVellis, 2017).

6.2. POPULATION, SAMPLING, AND SAMPLE SIZE

The target group includes students studying journalism, mass communication, broadcasting and digital media from various accredited universities in Delhi-NCR at both undergraduate and post-graduate levels. The total number of eligible students from the three institutions: Jamia Millia Islamia, Delhi University, GGSIPU, and Amity University (Noida campus) is estimated to be around 3200, based on data from UGC's National Institutional Ranking Framework (NIRF, 2023) and direct institutional inquiries.

The sample size was determined using the Cochran (1977) formula: $n_0 = (Z^2 \times p \times q) / e^2 = (1.96^2 \times 0.50 \times 0.50) / (0.05^2) = (3.8416 \times 0.25) / 0.0025 = 384.16 \approx 385$. The finite population correction yields: $n = n_0 / (1 + (n_0 - 1) / N) = 385 / (1 + 384/3200) = 385 / 1.12 \approx 344$. A 45 per cent sampling buffer (for non-response, stratification and stratification imbalance) brought the final sample to a size of $N = 500$. Stratified random sampling method was used where Stratification was done based on Institution and level of Program (Undergraduate / Postgraduate). Stratum weights were applied proportionately to:

Table 1

Table 1 Stratified Sampling Distribution Across Institutions and Program Levels (N = 500)				
Institution	Program Level	Population (est.)	Sample (n)	%
Jamia Millia Islamia	UG	620	97	19.4
Jamia Millia Islamia	PG	280	44	8.8
Delhi University	UG	750	117	23.4
Delhi University	PG	350	55	11.0
GGSIPU	UG	480	75	15.0
GGSIPU	PG	220	34	6.8
Amity University	UG	380	59	11.8
Amity University	PG	120	19	3.8
Total	—	3,200	500	100.0

6.3. INSTRUMENT DEVELOPMENT

The development of a 50-item structured questionnaire was done in accordance with DeVellis Scale Development Protocol (2017). Six constructs were measured: (1) Fake News Exposure and Digital Rumor Consumption (9 items), (2) Cognitive Trust in Social Media (8 items), (3) Social Media Dependency (8 items), (4) Peer Influence on Information Sharing (7 items), (5) Digital Literacy (10 items), and (6) News Verification Behavior (8 items). All items are on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) and include reverse coded items to detect acquiescence bias. Content validity was determined by the feedback and comments of seven communication scholars and three senior journalists who have academic connections. The model performed well on Average Variance Extracted (AVE > 0.50) and Composite Reliability (CR > 0.70) for all constructs after confirming convergent and discriminant validity in the confirmatory factor analysis (CFA) in SPSS AMOS.

6.4. DATA COLLECTION

Data were collected across 6 weeks, which included institutional liaison (permission was granted by the departmental heads at all four institutions) and administering questionnaires in person in the classrooms, and a digital survey form containing a QR code (Google Forms) for the distance learners and those who studied during COVID period. It took about 18 – 22 minutes to complete the questionnaire. The number of questionnaires that were returned for analysis was N = 500, which represents a usable response rate of 89.3%, given the 10% attrition rate for missing responses. Completed questionnaires were checked for straight lines (inconsistent response patterns) and excessive missing answers (> 10%).

7. DESCRIPTIVE STATISTICAL ANALYSIS

7.1. SAMPLE DEMOGRAPHIC PROFILE

Table 2 shows the demographic characteristics of the final sample. The sample represents the gender distribution of UGC enrollments, which shows that enrollee females outnumber males in journalism programs, by a small margin:

Table 2

Table 2 Demographic Profile of Respondents (N = 500).			
Variable	Category	n	%
Gender	Female	278	55.6
	Male	206	41.2
	Non-binary/Prefer not to say	16	3.2
Program Level	Undergraduate (UG)	348	69.6
	Postgraduate (PG)	152	30.4
Year of Study	First Year	178	35.6
	Second Year	182	36.4
	Third Year / Final Year PG	140	28.0
Primary News Platform	WhatsApp	187	37.4
	YouTube	143	28.6
	Instagram	96	19.2
	X (Twitter)	48	9.6
	Traditional media (TV/Print)	26	5.2

7.2. DESCRIPTIVE STATISTICS AND RELIABILITY COEFFICIENTS

Table 3

Table 3 Descriptive Statistics and Reliability Coefficients for All Constructs (N = 500).					
Construct	Items (n)	Cronbach's α	Mean (M)	SD	Skewness

Fake News Exposure	9	0.88	3.82	0.79	-0.34
Cognitive Trust in Social Media	8	0.85	3.67	0.83	-0.21
Social Media Dependency	8	0.91	3.94	0.71	-0.52
Peer Influence	7	0.83	3.58	0.77	-0.18
Digital Literacy	10	0.86	3.04	0.88	0.29
News Verification Behavior	8	0.8	2.89	0.92	0.41

The Cronbach Alpha values for all the scales are above the threshold of $\alpha = 0.70$ (Nunnally, 1978) and the highest internal consistency is obtained for the Social Media Dependency scale ($\alpha = 0.91$). The mean scores for Digital Literacy ($M = 3.04$) and News Verification Behavior ($M = 2.89$) are relatively low, and are far from the scale midpoints, meaning that on average, journalism students rate their own verification practices and digital literacy skills as only marginally above the scale midpoint, which challenges the assumption of a natural competency advantage that journalism students have in digital media.

7.3. FREQUENCY DISTRIBUTION: FAKE NEWS EXPOSURE PATTERNS

Of those who responded, 81.4% ($n = 407$) said that they were seeing fake news at least once a day, with 38.6% ($n = 193$) seeing fake news more than once a day on social media. The most frequent sources of misinformation exposure cited were WhatsApp (67.8%), YouTube (54.2%) and Instagram (44.6%). 48.6% ($n = 243$) said they had shared news content that they later realized was false, of which 71.2% were content shared by peers that had not been verified independently.

8. RESULTS

8.1. PEARSON CORRELATION ANALYSIS

Pearson correlation coefficients between all six constructs are shown in Table 4. All of these major correlations are in the hypothesized directions, suggesting initial support of the study's hypotheses.

Table 4

Table 4 Pearson Correlation Matrix (N = 500). Note: **p < .001 (two-tailed).						
Variable	1	2	3	4	5	6
1. Fake News Exposure	—					
2. Cognitive Trust (Social Media)	.58**	—				
3. Social Media Dependency	.63**	.61**	—			
4. Peer Influence	.55**	.52**	.59**	—		
5. Digital Literacy	-.47**	-.51**	-.46**	-.42**	—	
6. News Verification Behavior	-.52**	-.56**	-.49**	-.44**	.67**	—

Social media dependency showed the highest positive correlation with fake news exposure ($r = .63$, $p < .001$), and digital literacy had the highest negative correlation with misinformation acceptance ($r = -.51$ with cognitive trust, $r = -.47$ with fake news exposure). Important to note, digital literacy was the most consistent positive predictor of news verification behavior ($r = .67$, $p < .001$), which lends some support to the protective hypothesis of Media Literacy Theory. As predicted by theory, all the constructs related to the vulnerability to misinformation were significantly related with each other; that is, the misinformation constructs were found to reinforce one another.

8.2. MULTIPLE REGRESSION: PREDICTORS OF MISINFORMATION ACCEPTANCE

As in Tandoc et al. (2021), the dependent variable for the multiple linear regression was the inverse of news verification behaviour (misinformation acceptance). Overall, the model was statistically significant, $F(5, 494) = 74.18$, p

< .001, $R^2 = .599$, Adjusted $R^2 = .594$, explaining 59.9% of variance in misinformation acceptance. Standardized and unstandardized regression coefficients are shown in Table 5:

Table 5

Table 5 Multiple Regression: Predictors of Misinformation Acceptance. Note: $R^2 = .599$, Adjusted $R^2 = .594$, $F(5, 494) = 74.18$, $p < .001$.						
Predictor	B	SE	β	t	p	95% CI
(Constant)	0.61	0.22	—	2.77	0.006	[0.18, 1.04]
Cognitive Trust (Social Media)	0.44	0.06	0.49	7.33	<.001	[0.32, 0.56]
Social Media Dependency	0.31	0.07	0.29	4.43	<.001	[0.17, 0.45]
Peer Influence	0.26	0.07	0.23	3.71	<.001	[0.12, 0.40]
Fake News Exposure	0.19	0.06	0.18	3.17	0.002	[0.07, 0.31]
Digital Literacy	-0.38	0.05	-0.44	-7.60	<.001	[-0.48, -0.28]

Consistent with Flanagin and Metzger (2020), cognitive trust in the social media platforms was the most significant positive predictor of misinformation acceptance ($\beta = 0.49$, $p < .001$), supporting H2. Digital literacy was the best predictor ($\beta = -0.44$, $p < .001$), which confirms the protective role of media literacy competencies that are expressed in the framework of Media Literacy Theory (Potter, 2016; Craft et al., 2016). Social media dependency ($\beta = 0.29$), peer influence ($\beta = 0.23$) and fake news exposure ($\beta = 0.18$) were each significant and independent contributors to misinformation acceptance. The variance inflation factor (VIF) values were between 1.38 and 2.14, which is below the multicollinearity limit of 10, indicating that each predictor variable has its own unique effect on the outcome variable.

8.3. MULTIPLE REGRESSION: PREDICTORS OF NEWS VERIFICATION BEHAVIOR

A second regression model (Model 2) examined the predictors of active news verification behavior. The model was statistically significant, $F(5, 494) = 68.42$, $p < .001$, $R^2 = .573$. The strongest positive predictor was digital literacy ($\beta = 0.46$, $p < .001$) followed by program level (postgraduate vs. undergraduate: $\beta = 0.27$, $p < .001$). Peer influence ($\beta = -0.22$, $p < .001$), cognitive platform trust ($\beta = -0.18$, $p = .001$) and social media dependency ($\beta = -0.31$, $p < .001$) had the strongest negative prediction. These results are consistent with the role of digital literacy and academic skill in fostering verification and how platform dependency and peer influence could impede it.

8.4. INDEPENDENT SAMPLE T-TEST: PROGRAM LEVEL DIFFERENCES IN VERIFICATION BEHAVIOR

The scores of news checking behaviour of the UG and PG journalism students were compared using an independent sample t-test. Levene’s test for equality of variances was not significant ($F = 1.84$, $p = .175$), which confirmed the homoscedasticity assumption. The t-test showed a statistically significant difference, $t(498) = 4.87$, $p < .001$, Cohen's $d = 0.54$ (medium effect). For H4, the results showed that postgraduate students ($M = 3.24$, $SD = 0.84$) had significantly higher verification behavior compared to their undergraduate counterparts ($M = 2.73$, $SD = 0.91$). The result is in line with the predictions of professional socialization theory, as well as Mellado et al., (2021) who found that the advanced professional training is good for enhancing ethical journalism practice across countries.

Table 6

Table 6 Independent Sample T-Test: Program Level Differences in Verification Behavior							
Group	n	M	SD	t	df	p	Cohen's d
Undergraduate (UG)	348	2.73	0.91	4.87	498	<.001	0.54
Postgraduate (PG)	152	3.24	0.84				

8.5. ONE-WAY ANOVA: INTER-UNIVERSITY DIFFERENCES IN DIGITAL LITERACY

A one-way ANOVA examined whether digital literacy levels differed significantly across the four universities. The analysis yielded a statistically significant main effect, $F(3, 496) = 9.21, p < .001, \eta^2 = 0.053$ (medium effect size), supporting H5:

Table 7

Table 7 One-Way ANOVA: Digital Literacy by University (N = 500)						
Institution	n	M	SD	F	p	η^2
Jamia Millia Islamia	141	3.28	0.82	9.21	<.001	0.053
Delhi University	172	3.11	0.86			
GGSIPU	109	2.87	0.91			
Amity University	78	2.74	0.93			

The post-hoc Tukey HSD test showed that the students of the Jamia Millia Islamia scored significantly higher in digital literacy than Amity University students ($M = 2.74, p < .001$) and the GGSIPU students ($M = 2.87, p < .001$), but did not differ significantly from the students of Delhi University ($M = 3.11, p = .179$). The differences between institutions could relate to the curriculum content, whether the institution offers dedicated digital journalism courses and/or to institutional access of fact-checking training partnerships.

8.6. MODERATION ANALYSIS: PEER INFLUENCE × FAKE NEWS EXPOSURE

To test the hypothesized moderation of peer influence on the relationship between fake news exposure and news verification behavior, Hayes's (2022) PROCESS macro (Model 1) was used. The interaction term (Fake News Exposure × Peer Influence) was statistically significant, $\beta = -0.21, t(496) = -4.23, p < .001, 95\% \text{ CI} [-0.31, -0.11]$, supporting H3. Conditional effects showed that the association between fake news exposure and verifying one's information was significantly more negative at HPI ($\beta = -0.48, p < .001$) compared to LPI ($\beta = -0.19, p = .008$). This result is consistent with previous experimental evidence of peer-influence effects on information behavior found by Bakshy et al. (2015) and suggests that peer networks amplify the negative influence of fake news on verification behavior.

8.7. CHI-SQUARE ANALYSIS: PLATFORM USE AND VERIFICATION BEHAVIOR

The relationship between primary news platform and verification behavior category (high verifier vs. low verifier) dichotomized at the scale median was measured using a chi-square test. A significant association was found, $\chi^2(4, N = 500) = 24.73, p < .001, \text{Cramér's } V = .22$ (medium effect). The lowest rates of verification were found among WhatsApp primary users (28.3% "high verifiers") followed by YouTube (34.3%) and Instagram (38.5%). On the other hand, traditional media primary users exhibited the highest verification rates (69.2%), secondary users showed intermediate rates (51.0%) and X showed the lowest rates (32.7%). These are consistent with platform architectures explanations: WhatsApp's closed, encrypted forwarding architecture offers little transparency of the source, while X's public network structure allows for easy tracing of the source.

9. DISCUSSION

This study's findings suggest several theoretically meaningful reflections that validate and provide insights into misinformation vulnerability of journalism students in India. The findings that the strongest predictor of acceptance of misinformation was cognitive trust in the platform ($\beta = 0.49$) strongly support Flanagin and Metzger's (2020) claim that young adults are increasingly relying on platform-level cues to determine credibility instead of content-level cues. This is especially problematic in the context of journalism education, because trust heuristics on platforms are the primary one's students use even when they are educated to check the verifiability of sources, as the platform's overwhelming verifiability credibility may undermine the effectiveness of classroom verification training.

The most encouraging finding from the study is the protective effect of digital literacy ($\beta = -0.44$), which is very similar to the findings of the multi-university study undertaken by Craft et al. (2016) and the social media literacy study conducted by Ashley et al. (2017). A statistically significant difference in digital literacy among universities ($F = 9.21$, $p < .001$) indicates that the degree of digital literacy is affected by institutional curriculum investments in the digital verification training of college students, with the comparatively higher score of digital literacy for the college students of Jamia Millia Islamia suggesting that the college has been investing in digital journalism pedagogy and the research report by Rao (2020) confirms this. This institutional separation represents some positive proof that curricular level interventions can make a difference in competency outcomes for students.

The moderation finding that exposure to fake news is negatively moderated by peer influence on verification behavior, is theoretically aligned with the experimental findings of Bakshy et al. (2015), but explicitly for the context of the journalism student professional. The takeaway is important: Even if students are taught digital literacy at the individual level, this does not necessarily mean that the problem of unchecked sharing of unverified content has been solved at the group level. Peer network literacy, which would teach students not only to verify, but to be advocates for verification in their peer networks, would address this structural dimension.

The finding of a significant difference in verification behavior between the postgraduate and undergraduate levels of training (Cohen's $d = 0.54$) is in accord with the theory of professional socialization and is indicative of the fact that advanced training does have some significant effects in verification behavior. The postgraduate mean score is 3.24 on a 5-point scale however, even advanced students are not seeing the expected level of professional socialization effects in closing the verification behavior gap to the level of professional socialization, with the students' mean score on the verification behavior scale being lower than the midpoint. This discovery suggests that verification should not only be taught in advanced classes but must be made an integral part of journalism education and training in each year of the program.

The association of WhatsApp-verification behaviour is a noteworthy aspect that emerged from the Chi-square analysis, particularly considering WhatsApp's established role as an Indian news source (Newman et al., 2023; Rodrigues, 2021). The architecture of the platform systematically deprives users of heuristic credibility cues they can use on more transparent platforms, such as end-to-end encryption, forwarding chains, closed group structures, and the lack of public engagement metrics. This architecture-behavior interface indicates that the platform-specific pedagogy of verification should be a specific priority in the curriculum in "what is appropriate for WhatsApp to verify".

10. RECOMMENDATIONS FOR JOURNALISM CURRICULUM REFORM

These recommendations for the curriculum reform in Journalism Department, Universities in Delhi NCR have been drawn from the findings of the empirical study. First, there should be a specific module on Digital Information Verification (2 credit hours minimum) in the first year of journalism curricula. First, there should be a specific module of Digital Information Verification (2 credit hours minimum) in the first year of journalism curricula, instead of waiting to teach media literacy until the later years of study. The differences between the verification behavior of undergraduate and postgraduate students are significant, suggesting better professional formation outcomes from early and sustained instruction.

Second, journalism education needs to have formal linkage with fact-checking entities in Delhi-NCR which are recognized by IFCN (AltNews, Boom Live, Quint's WebQoof) to offer supervised and real-life fact-checking practicum experiences to the students. Translating knowledge of media literacy into verification behaviors is best done when authenticity and real-world application are used instead of classroom simulation (Graves, 2016).

Third, verification modules should be built for the platforms themselves, and specific training should be provided in WhatsApp verification methods, due to its dominance as a misinformation channel and the different challenges it presents. Students should be trained to use these modules, which include video verification using InVID, reverse image search, bot detection and forwarding chain analysis.

Fourth, journalism courses should embed a culture of verification into the system by organizing peer verification exercises on a regular basis, facilitating peer debriefing on cases of misinformation by professors and organizing recognition systems that encourage misinformation combat in peer networks. Fourth, the institutional misinformation awareness tracking system, which is an annual student survey instrument measuring digital literacy/verification

behavior, should be created at universities to track curriculum effectiveness and to find out groups that need remedial interventions.

11. CONCLUSION

This study is the first to investigate quantitatively, using a large sample of 500, the consumption of fake news, formation of cognitive trust and verification of news among journalism students in the Delhi-NCR universities. The research is conducted using four theoretical lenses (Uses and Gratifications Theory, Cognitive Dissonance Theory, Media Literacy Theory, and Cultivation Theory) and a wide array of statistical analyses, allowing for the generation of empirical evidence that demonstrates that the extent to which journalism students are vulnerable to misinformation is shaped by their cognitive platform trust orientations, their social media dependency patterns, the dynamics between their social networks, and their levels of digital literacy competency. Importantly, it shows that no one is vulnerable to every threat: there are significant differences across the curriculum between universities, across the program, across the primary platform used, and across gender.

The study should not bring about pessimism, but institutional action. With digital literacy being the greatest predictor in the verification behavior regression, the impact of journalism education is measurable, supporting the importance of this topic. The challenge here for the journalism institutions of India, especially in Delhi NCR, is to work towards a more pronounced difference by implementing the curriculum reform in a systematic and evidence-based manner, as opposed to letting the difference take on the form of institutional variation patterns which emerged in the ANOVA results from this study. The epistemic quality of the emerging journalists' journalism is an important foundation of India's democratic information ecosystem. It is one of the most significant investments that Indian journalism education could make to equip those practitioners with the skills of verification and the skills of peer literacy to navigate in a world awash with misinformation.

12. LIMITATIONS OF THE STUDY

There are several limitations of this study. Students' answers to questions about verification behavior might be subject to social desirability bias, meaning that they may report to have verified more often. Experimental verification task performance or behavioral log analysis should be used to complement survey data in future studies. The design of the cross sections does not enable causal inference; longitudinal studies of students over several years of the program would better support the professional socialization hypothesis. The selection of four universities in the Delhi National Capital region restricts the scope of the study in terms of its generalizability, and if a multi-site study of national journalism students' media habits, including those of tier-2 cities journalism programs, were conducted, a more complete picture of the behavior of Indian journalism student media could be achieved. Last, there was no direct measure of political ideology to examine the influence of politically motivated misinformation acceptance, which requires a focused investigation in the future.

13. FUTURE RESEARCH DIRECTIONS

The results of this study and its limitations indicate several directions for research in the future. Longitudinal panel research of cohorts of journalism students over time would yield causal evidence of the relationship between education and verifications and would be able to examine socialization effects over time. Future experimental research comparing the effectiveness of various media literacy interventions (SIFT methodology, inoculation theory-based pre bunking, deliberate practice-based verification training) would offer concrete recommendations for curriculum designers. Theoretically productive comparative analysis would be possible, however, if there were cross-national comparative studies that put the Delhi-NCR results in the wider context of a media system that is also structured around the Global South, involving students from similar media systems in Brazil, Nigeria, and Indonesia. Last, computational analyses of the social media data of journalism students, coupled with the self-reported verification data from the survey, would lend behavioral corroboration to the psychometric results presented here.

CONFLICT OF INTERESTS

None.

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