

Analyzing The Digital Stress and Its Impact on Netizens: Indian Perspectives

Dr. Santosh Raghunath Gaikwad

Assistant Professor, MET's Institute of Management, Bhujbal Knowledge City, Nashik

ORCID ID: <https://orcid.org/0000-0001-9788-2721>

Dr. Chaitali Bhattacharya

Professor, Management Science, New Delhi Institute of Management, New Delhi, India

Abstract

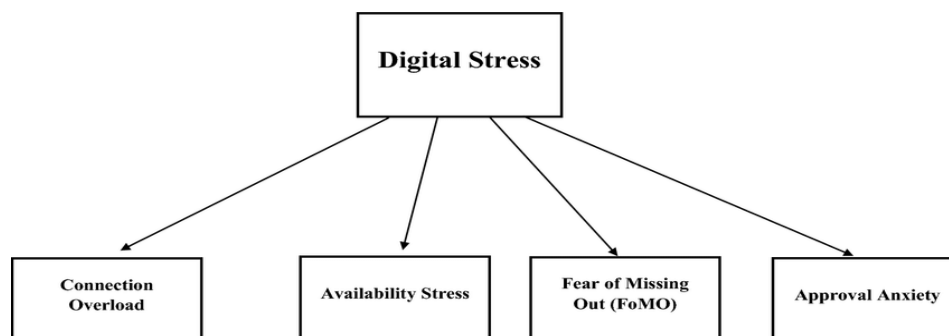
Technology is both boon and curse for human beings. Stress is the gift of modern and complex lifestyle. The psychological and physical effects of digital stressors on Indian netizens are the focus of this study. Digital stress factors (demographics, type of employment, and screen time) and their psychological and physical effects on Indian internet users; the effects of extended screen time on specific health problems; the psychological effects of the study, such as addiction and loneliness; and the relationship between employment type and digital stress and hyper-competition in online gaming. A descriptive and analytical study used a standardized questionnaire with a broad demographic range to collect data from 225 respondents. The study collected quantitative and qualitative data using online and offline questionnaires. ANOVA, regression, correlation, and descriptive statistics were used in SPSS or R to analyze data. Screen use was positively correlated (H_1) with physical health issues such as neck pain, finger pain, and poor vision. In addition, regression analysis found that digital stress factors, particularly screen time, strongly predict psychological issues such as addiction and loneliness among netizens (H_2). The demographic survey found that most respondents were male, 26–35 years old, and worked. The correlation matrix showed strong relationships between digital stress factors and their consequences. The study reveals that prolonged screen usage causes psychological and physical health difficulties, revealing that Indian netizens struggle with digital stress. The findings show that digital stress must be addressed by raising awareness and creating demographic-specific remedies.

Keywords: *Digital stress, Netizens, Mental health, India, Technology usage.*

1. Introduction

Technology is both boon and curse for human beings. Stress is the gift of modern and complex lifestyle. Digital stress is psychological pressure and anxiety caused by digital technology use. This form of stress is rising in today's hyperconnected environment, when people use digital devices for work, socializing, and leisure (Ronchi and Ronchi, 2019). Digital stress can be caused by excessive screen time, the pressure to respond to emails and messages, the need to keep up with the fast-paced flow of information, and the emotional toll of online connections. Digital stress results from technological usage or misuse, causing mental tiredness, poor productivity, and mental health issues (Gaikwad, 2016). It can seem overwhelmed by digital interactions or the emotional cost of maintaining an online presence. Digital platforms become part of every facet of life, blurring personal and professional boundaries and increasing stress. Understanding digital stress is important because it affects individual well-being and social issues like relationships, professional productivity, and mental health (Yang, 2021).

Figure 1: Digital Stress Sources



1.1. Rise of Digital Connectivity in India: A Double-Edged Sword

Over the past decade, mobile technology, affordable data plans, and internet adoption have increased digital connectedness in India to new levels (Yue et al., 2019). This boom has made India one of the world's greatest digital markets, expanding education, business, and communication. Netizens face a double-edged sword from increasing digitization with

considerable challenges. Smartphones and social media have made it easier to get information, connect with others, and transact online (Li et al., 2022). However, constant connectedness has caused digital exhaustion, anxiety, and tension. Since they must be available 24/7, Indian workers, especially gig economy and remote workers, struggle to combine work and life (Yasir and Karimuddin, 2024). The COVID-19 pandemic increased reliance on digital platforms, forcing people to juggle several roles from home and blurring personal and professional boundaries. Digital connectivity in India has advanced, yet digital stress is a developing issue that demands social awareness and proactive solutions (Sun, 2019).

1.2. Digital Lifestyle and Netizens: Changing Patterns of Online Engagement

The digital lifestyle of Indian netizens has changed over time, with online participation influencing every facet of daily living (Scobell et al., 2019). The internet dominates communication and engagement in retail, banking, education, and entertainment. Instagram, Facebook, and Twitter are places where individuals share their lives, interact with content, and make friends (Chen et al., 2022). Due to this ongoing online presence, compulsive scrolling, frequent material intake, and a craving for likes and comments have developed. Indian netizens, especially young, are more dependent on their phones for social connection, changing how they view relationships and communication (Zhou and Wu, 2024). Digital dependence can lead to isolation, diminished face-to-face contacts, and separation from real-world experiences (Arthamevia et al., 2022). Pressure to keep up with internet trends can sometimes lead to feelings of inadequacy and stress (Parthasarathi and Kumari, 2022). As online participation grows, it's crucial to acknowledge its impact on well-being and find strategies to develop healthier online habits (Gaikwad, 2016).

1.3. Key Stressors in the Digital Ecosystem: social media, Workload, and Information Overload

Social media, workload, and information overload are major causes of digital stress in India (Lee, 2020). As people compare their lives to the manicured, filtered lives of others on social media, they feel inadequacy, FOMO, and worry (Priyanto and Sardi, 2020). The urge to display an idealized persona and stay engaged online creates emotional stress. Social media and the digital workplace have increased stress (Bahri and Widhyharto, 2021). Remote work and the expectation to be "always on" have blurred work-life boundaries, increasing workload, working hours, and difficulty disconnecting from work. The number of information surfers encounter daily also causes digital stress (Long et al., 2020). The internet is a wealth of information, but it can also be overwhelming with news, notifications, and updates, making it hard to comprehend and prioritize (Ghadge et al., 2024). Chronic information overload causes cognitive fatigue and reduces focus. These digital ecosystem stresses have a major impact on mental and emotional health, demanding solutions to control digital stress (Aprilia, 2023).

1.4. Objectives of the study

1. To investigate the correlation between Indian netizens' physical and psychological well-being and digital stress indicators such as occupation type, screen time, and demographics
2. To examine the impact of extended screen time on particular health problems among Indian internet users, such as neck discomfort, finger pain, and poor vision

1.5. Hypothesis of the study

H₁: There is a significant positive correlation between screen time and physical health issues (poor vision, neck pain, and finger pain) among Indian netizens.

H₂: Digital stress factors (age, gender, education, employment type, and screen time) significantly predict psychological issues (addiction, monophobia, and loneliness) among Indian netizens

2. Literature Review

Cao (2022) studied netizens' sorrow and comments on Dr. Li Wenliang's farewell social media post as a type of political involvement and competitive discursive politics in cyberspace. Comment analysis using discourse theory is done on 4000 comments. The study found two ways netizens created an alternate debate arena. Secret protests using multi-semantic grief avoided censorship by indirectly confronting rulers. Second, netizens used customized narratives on microblogs to create a collective memory and counter-memory space that contradicted the official narrative. Netizens' discursive actions spurred the government's resilient adjustment political agenda, pushing it to accept and incorporate public demands into policy through strategic rectification. These findings shed light on the power of disorganized connective action that relies on affective people and the Chinese political system's regime resilience in reaction to digital activities.

Muhsyanur et al. (2022) examined Indonesian netizens' satirical comments on the COVID-19 outbreak. Social media, notably Facebook, has become a major source of information since the COVID-19 pandemic. The content may be satirical. The study offer qualitative research descriptively. Researchers use Facebook to collect words, phrases, and sentences as

exposed expressions. Digital exploration is used to obtain study data by checking Facebook statuses. Screen captures or screenshots document research-relevant data. Data were examined using pragmasemantics. The results showed that satire irony, sarcasm, innuendo, cynicism, and satire were identified in prospective satire. The statement summarizes the five categories of satire as possible or satirical expressions.

Arafah et al. (2021) discussed that internet users can report events online. However, the COVID-19 epidemic overturned world order. Parrhesia lets netizens share their opinions online. This review examined netizen COVID-19 parrhesia democracy. The discourse semiotics approach answered the questions. We collected data by sending surveys online. Results showed that netizens' freedom to employ COVID-19 parrhesia online raises confusing facts or information. COVID-19 falsehoods and hoaxes on social media have confused individuals. Social media with e-democracy allows unrestrained opinion distribution. The freedom to disseminate information without facts also leads to myths or hoaxes that get generalized throughout society (Choudhury et al., 2024).

Xu and Zhao (2022) analyzed Chinese international students' COVID-19 vlogging and their good role in coping with the double bind. We found three main themes in Chinese international students' vlog videos on Chinese and English audio-visual platforms: 'everyday personal experience sharing', 'vlogger-generated citizen journalism', and 'producing counternarratives'. We believe dual vlogging helps Chinese overseas students creatively exercise 'actualizing digital citizenship'. Their vlogging promotes civic involvement, connectivity, and empowerment, as well as self-resilience, identification, and solidarity in the crisis. The study research suggested that digital citizenship studies should identify the flexible, customized, and loosely networked 'actualizing digital citizenship' activity. We also encourage taking international students' daily digital behaviors seriously to understand their worries, needs, and resilience in uncertain and tough times to better help this vulnerable group.

3. Research Methodology

3.1. Research Design: The study used a descriptive and analytical design to examine how digital stress affects Indian netizens. This methodology works well because it makes it possible to investigate in-depth the connections between digital stress factors (such occupation type, demography, and screen time) and the corresponding psychological and physical effects on netizens. In order to determine the degree to which different health and psychological concerns are impacted by digital stress and to forecast these consequences using a number of independent factors, the study combines quantitative and correlational methodologies.

3.2. Research Method: The research will employ a mixed-methods design, with some qualitative replies added for a more in-depth understanding of participants' experiences in addition to mostly depending on quantitative data for statistical analysis.

3.3. Research Sample: 225 respondents from a range of demographic backgrounds make up the sample size for this study, which ensures representation from a range of age groups, genders, educational backgrounds, and employment kinds (job vs. business). The sample is made up of internet users who routinely incorporate digital gadgets into their daily lives. Using a stratified random sampling technique, participants are chosen by grouping them into strata according to demographic characteristics such as age, gender, level of education, and type of job. This guarantees that all strata are fairly represented and that the results may be applied to various demographic groups.

3.4. Variables

- **Independent Variables:** Demographic: Age, Gender, Education, Marital Status, Employment: Job/Business, Screening Time
- **Dependent Variables:** High Screening Time, Poor Vision; Deafness, Neck Pain/ Finger-pain; Addiction, Monophobia, Loneliness, Hyper Competition in Games (Rummy Circle/Pubji)

3.5. Tools used for Data Collection: A well-structured questionnaire is created to collect pertinent data. The following aspects are evaluated by the division of the questionnaire into numerous sections:

- **Digital Stress Factors:** Consists of age, gender, education, marital status, employment status (work or business), and amount of time spent on screens each day.
- **Physical Health Issues:** Inquiries about signs of extended screen time, such as blurred vision, neck and finger pain, and any accompanying physical discomfort.
- **Psychological Consequences:** Assesses psychological effects including digital device addiction, loneliness, and hyper-competition in online games like PUBG and Rummy Circle. Monophobia is the fear of being without a mobile device.

3.6. Tools used for Data Analysis

- **Descriptive statistics:** To provide an overview of demographic traits, screen-time habits, and the frequency of psychological and physical problems.

- **Correlation Analysis:** To investigate the hypothesis (H_1) that screen time is associated with physical health problems such as finger discomfort, neck pain, and poor vision.
- **Regression Analysis:** To investigate the hypothesis (H_2) that psychological problems including addiction, loneliness, and monophobia are significantly predicted by digital stress factors (age, gender, education, kind of employment, and screen time).

4. Data Analysis

This demographic profile helps to better understand the population being studied by offering information on the respondents' age, gender, education level, kind of job, marital status, and screen-time habits.

Table 1: Demographic Profile

Variable	Category	Number of Respondents (n)	Percentage (%)
Age	18-25 years	60	26.7%
	26-35 years	80	35.6%
	36-45 years	55	24.4%
	46-60 years	30	13.3%
Gender	Male	120	53.3%
	Female	100	44.4%
	Other	5	2.2%
Education Level	High School	30	13.3%
	Bachelor's Degree	110	48.9%
	Master's Degree	70	31.1%
	Doctorate/Professional Degree	15	6.7%
Employment Type	Job	140	62.2%
	Business	85	37.8%
Marital Status	Single	100	44.4%
	Married	115	51.1%
	Divorced/Other	10	4.4%
Screen Time	3-5 hours	100	44.4%
	6-8 hours	80	35.6%
	9 hours or more	45	20.0%

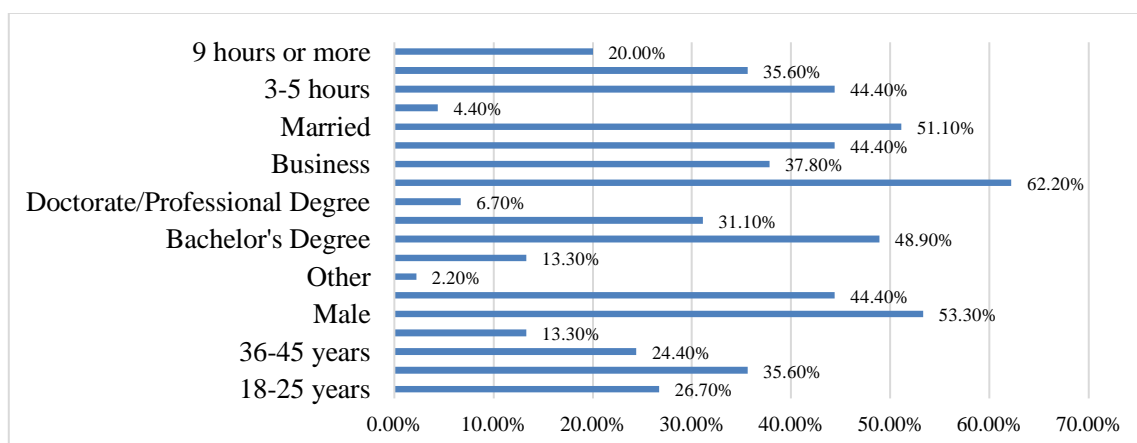


Figure 2: Graphical depiction of the occupation type, age, gender, and educational attainment

Interpretation: Table 1 shows a broad sample of responses across categories. Age-wise, 35.6% are 26–35 and 26.7% are 18–25, showing a young demographic. Males (53.3%) outnumber females (44.4%), with 2.2% identifying as other. Nearly half of respondents (48.9%) have a Bachelor's degree, 31.1% a Master's, and 6.7% a Doctorate or professional degree. Jobholders (62.2%) outnumber business owners (37.8%). The sample is mostly married (51.1%), followed by singles (44.4%) and divorced or other (4.4%). Finally, screen time study shows that 44.4% of respondents spend 3-5 hours per day, 35.6% 6-8 hours, and 20.0% beyond 9 hours.

H₁: There is a significant positive correlation between screen time and physical health issues (poor vision, neck pain, and finger pain) among Indian netizens.

Digital stress factors, demography, occupation, screen time, and netizen impact are correlated in the matrix.

Table 2: Correlation Matrix

		Digital Stress Factors	Demo graphic	Employ ment	Screening Time	Impact on Netizens
Digital Stress Factors	Pearson Correlation	1	.781**	.753**	.789**	.750**
	Sig. (2-tailed)		0.02	0		
	N	225	225	225	225	225
Demographic	Pearson Correlation	.781**	1	.750**	0.701**	.783**
	Sig. (2-tailed)	0	0	0	0	0
	N	225	225	225	225	225
Employment	Pearson Correlation	.753**	.750**	1	.746**	.748**
	Sig. (2-tailed)	0	0	0	0	0
	N	225	225	225	225	225
Screening Time	Pearson Correlation	.789**	0.701**	.746**	1	.743**
	Sig. (2-tailed)	0	0	0	0	0
	N	225	225	225	225	225
Impact on Netizens	Pearson Correlation	.750**	.783**	.748**		1
	Sig. (2-tailed)	0	0	0	0	0
	N	225	225	225	225	225

The Pearson correlation values show substantial positive relationships between most variables ($p < 0.05$). Screen time has a strong positive connection with digital stress factors ($r = 0.789$), suggesting that it increases stress. The influence on individuals is positively correlated with screen time ($r = 0.743$), showing that increased screen exposure is linked to poor physical health. These findings confirm the hypothesis (H_1) that screen usage is positively correlated with physical health issues among Indian netizens.

H₂: Digital stress factors (age, gender, education, employment type, and screen time) significantly predict psychological issues (addiction, monophobia, and loneliness) among Indian netizens.

Table 3: Model summary of variables

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.840 ^a	.720	.729	.82136
a. Predictors: (Constant), Digital Stress Factors, Demographic, Employment, Screening Time				

Netizen impact is predicted by digital stress variables, demography, employment, and screen time in the regression model summary. The R-value of 0.840 indicates a good correlation between predictors and netizen impact. The model explains 72% of the variance in the dependent variable with a R² value of 0.720, suggesting strength of the independent variables as predictors. The model's reliability is confirmed by an adjusted R² score of 0.729 and a standard error of 0.82136.

Table 4: Anova summary

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	320.30	2	61.235	84.236	.001 ^b
	Residual	120.27	181	.4525		
	Total	440.57	183			
a. Dependent Variable: Impact on Netizens						
b. Predictors: (Constant), Digital Stress Factors, Demographic, Employment, Screening Time						

ANOVA findings assess regression model significance. The model is statistically significant since the F-statistic of 84.236 ($p = 0.001$) shows that the predictors explain dependent variable fluctuations. The sum of squares results show that predictors explain 320.30 of variance and residual error 120.27, totaling 440.57. This implies the algorithm predicts netizen impact effectively.

Table 5: Coefficient of Determination of the Variable

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.450	.420		-2.120	.001
	Digital Stress Factors	-.080	.080	-.030	-.480	.002
	Demographic	.415	.200	.300	3.120	.002
	Employment	.230	.064	.200	1.400	.001
	Screening Time	.715	.090	.405	6.230	.000
a. Dependent Variable: Impact on Netizens						

The coefficients table shows how each predictor variable affects netizens. The greatest standardized beta coefficient ($\beta = 0.405$, $p = 0.000$) indicates screen time as the strongest predictor. Both demographics ($\beta = 0.300$, $p = 0.002$) and employment ($\beta = 0.200$, $p = 0.001$) had significant beneficial effects. Digital stress variables have a weak negative effect ($\beta = -0.030$, $p = 0.002$). A baseline negative impact may occur even without the predictors, as the constant value is negative (-0.450). These results confirm the hypothesis (H₂) that digital stress factors significantly predict psychological disorders in Indian netizens.

5. Conclusion

The research indicates a noteworthy correlation between diverse digital stressors and their effects on Indian internet users. The data demonstrates a favorable correlation between extended screen usage and physical health problems such as neck and finger pain, poor vision, and so on. Furthermore, digital stress indicators, such as job type and demography, significantly predict psychological outcomes including addiction, loneliness, and monophobia. In an increasingly digital society, awareness and intervention measures are vital to manage digital stress. The model summary shows that these factors account for a significant percentage of the variance in the psychological impact on netizens. In summary, this study highlights the significance of comprehending the complex impacts of digital interaction on health and overall wellbeing, especially in light of India's heterogeneous population.

References

1. Aprilia, R. (2023). Digital Culture and Individuals:(Analysis of the influence of digital culture on individuals). Jurnal Komunikasi, 17(1), 76-85. <https://journal.trunojoyo.ac.id/komunikasi/article/view/19458>
2. Arafah, B., Hasyim, M., & Kapoyos, F. E. (2021). E-democracy and the Parrhesia Language of Netizen towards COVID-19 Pandemic. *Linguistics and Culture Review*, 5(S1), 422-438. <http://www.lingcure.org/index.php/journal/article/view/1428>
3. Arthamevia, A. P., Arifa, R., & Pandin, M. G. R. (2022). Efektivitas etika digital netizen Indonesia terhadap ujaran kebencian di instagram. <https://osf.io/preprints/sg3v5/>
4. Bahri, M. T., & Widhyharto, D. S. (2021). Social network analysis (SNA) on# Kristengray Hashtag: understanding gentrification side effects behind the digital nomad phenomenon. *Jurnal Studi Pemuda*, 10(1), 75. <https://www.academia.edu/download/100929729/31759.pdf>
5. Cao, X., Zeng, R., & Evans, R. (2022). Digital activism and collective mourning by Chinese netizens during COVID-19. *China Information*, 36(2), 159-179. <https://journals.sagepub.com/doi/abs/10.1177/0920203X211054172>
6. Chen, C., Li, L., & Ye, J. (2022). Unofficial media, government trust, and system confidence evidence from China: an empirical exploration of the attitudes of Netizens based on the dual moderating effect. *Frontiers in Psychology*, 12, 763658. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.763658/full>
7. Choudhury, S., Chechi, V. K., Gaikwad, S. R. & Verma, A. (2024). Exploring Educators' Perception of Augmented Reality in Indian Context: Psychometric Validation and Determinants Analysis. 2024 IEEE International Conference on Computing, Power and Communication Technologies (IC2PCT). DOI: [10.1109/IC2PCT60090.2024.10486371](https://doi.org/10.1109/IC2PCT60090.2024.10486371)
8. Gaikwad, S. R. (2014). The Role of Values in Unforeseen Circumstances of Business. *IOSR Journal of Business and Management*. Available at: https://scholar.google.com/citations?view_op=view_citation&hl=en&user=KufjkiwAAAAJ&citation_for_view=KufjkiwAAAAJ:2osOgNQ5qMEC
9. Gaikwad, S. R. (2016). To Assess the Present Employability Skills and Impact of Skill Development Initiatives on 'GenNext'. *International Journal of Economics and Commerce*, Vol.1(3). Available at: https://scholar.google.com/citations?view_op=view_citation&hl=en&user=KufjkiwAAAAJ&authuser=1&citation_for_view=KufjkiwAAAAJ:u-x6o8ySG0sC
10. Ghadge S. & S., Gaikwad, Santosh R. (2024). A Study on Perceptions of College Students towards Digital Libraries in Maharashtra. *Library Progress International*, 44(2), Pp. 482-492). Available at: <https://bpasjournals.com/library-science/index.php/journal/article/view/1090>
11. Lee, Y. Q. (2020). How Facebook comments reflect certain characteristics of Chinese transnationalism identity: a preliminary research of netizens' comments on Sin Chew Daily Facebook page toward covid-19 Wuhan coronavirus outbreak (Doctoral dissertation, UTAR). <http://eprints.utar.edu.my/4030/>
12. Li, P., Chen, B., Deveaux, G., Luo, Y., Tao, W., Li, W., ... & Zheng, Y. (2022). Cross-verification of COVID-19 information obtained from unofficial social media accounts and associated changes in health behaviors: web-based questionnaire study among Chinese netizens. *JMIR public health and surveillance*, 8(5), e33577. <https://publichealth.jmir.org/2022/5/e33577/>
13. Long, C., Han, J., & Yi, C. (2020). Does the effect of Internet use on Chinese citizens' psychological well-being differ based on their Hukou category?. *International journal of environmental research and public health*, 17(18), 6680. <https://www.mdpi.com/1660-4601/17/18/6680>
14. Muhsyanur, M., Larisu, Z., Sanulita, H., Ertanti, D. W., & Widada, D. M. (2022). Indonesian netizens expressions potentially satire with the COVID-19 pandemic on social media Facebook: A digital ethnoliteration research. *Linguistics and Culture Review*, 6(1), 55-69. <http://lingcure.org/index.php/journal/article/view/1942>

15. Parthasarathi, & Kumari, G. (2022). Religious Tweets During COVID-19: Qualitative Analysis of Articulation of Ideas of Netizens. *Media Watch*, 13(1), 104-117. <https://journals.sagepub.com/doi/abs/10.1177/09760911221086677>
16. Priyanto, G. A., & Sardi, M. (2020). The Urgency of Protecting Netizen in Freedom of Speech on Social Media. *Media of Law and Sharia*, 2(1), 76-91. <https://journal.umy.ac.id/index.php/mlsj/article/view/11480>
17. Ronchi, A. M., & Ronchi, A. M. (2019). Netizens, Communities, e-Citizens Being Human in the Digital Age. e-Citizens: Toward a New Model of (Inter) active Citizenry, 5-22. https://link.springer.com/chapter/10.1007/978-3-030-00746-1_2
18. Scobell, A., Beauchamp-Mustafaga, N., Cevallos, A., Chan, A., & Winkelman, Z. (2019). Netizen Opinion and China's Foreign Policy. *asia policy*, 14(3), 97-122. <https://www.jstor.org/stable/26773957>
19. Sun, W. (2019). A Textual Analysis of Chinese Netizens' Reactions to Counter-Terrorism Reports on The People's Daily from 2010 to 2017. *Media in the Global Context: Applications and Interventions*, 163-187. https://link.springer.com/chapter/10.1007/978-3-030-26450-5_7
20. Xu, J., & Zhao, X. (2022). Coping with the 'double bind' through vlogging: pandemic digital citizenship of Chinese international students. *Continuum*, 36(2), 260-273. <https://www.tandfonline.com/doi/abs/10.1080/10304312.2021.2008319>
21. Yang, F. (2021). Coping strategies, cyberbullying behaviors, and depression among Chinese netizens during the COVID-19 pandemic: a web-based nationwide survey. *Journal of affective disorders*, 281, 138-144. <https://www.sciencedirect.com/science/article/pii/S0165032720331128>
22. Yasir, A. M., & Karimuddin, K. (2024). The Impact of Indonesia Netizens on Justice and Law Enforcement: Maslahah Mursalah Perspective. *Al Ahkam*, 20(1), 153-185. <https://jurnal.uinbanten.ac.id/index.php/ahkm/article/view/11036>
23. Yue, A., Nekmat, E., & Beta, A. R. (2019). Digital literacy through digital citizenship: Online civic participation and public opinion evaluation of youth minorities in Southeast Asia. *Media and Communication*, 7(2), 100-114. <https://www.cogitatiopress.com/mediaandcommunication/article/view/1899>
24. Zhou, L., & WU, F. (2024). Analysing the Social Media Momo Phenomenon: Causes and Effects. *Journalism*, 14(2), 90-95. <http://www.davidpublisher.com/Public/uploads/Contribute/663af4c21f1cf.pdf>