

The Mental Health Implications of Viral News During the COVID-19 Pandemic: A Closer Look

Nancy Khaira

Research Assistant, ICSSR Project, JNU, Delhi

Dr. Yogesh Sharma

Assistant Professor, Delhi School of Management, Delhi Technological University, Delhi

Dr. Rajeev Sijariya

Professor, & Principal Investigator Project, JNU, Delhi

Dr. Sandeep Agarwal

Assistant Professor, Institute of Economics and Finance, Bundelkhand University, Jhansi

Mr. Aditya Mishra

Research Assistant, ICSSR Project, JNU, Delhi

ABSTRACT

This study examined the implications of breaking and viral news during the COVID-19 pandemic and highlighted the urgent need for policy interventions to curb misinformation and its negative psychological consequences. A Focus Group Discussion (FGD) was conducted to understand the impact of misinformation and fake news, particularly on mental health, and explored possible solutions for prevention and regulation. The findings revealed that media coverage of viral and breaking news had intensified psychological distress, manifesting in anxiety, depression, post-traumatic stress, and uncertainty. The discussion also identified policy gaps, including low digital literacy and inadequate fact-checking infrastructure. The study emphasized developing stronger legal and technological frameworks, filtering and labelling news for authenticity, leveraging artificial intelligence tools, creating national communication and media literacy policies, involving schools and communities in awareness programs, and promoting media social responsibility (MSR).

Keywords: *Media, Mental Health, Social Responsibility, COVID-19, Viral News*

Introduction

The COVID-19 pandemic had severe and far-reaching effects on health systems, economies, and societies, making it one of the most significant global crises in recent generations (Tayarani-N, 2021). As these health, social, and economic shocks unfolded, mental health was significantly impacted. People across different backgrounds became increasingly restless, and for

many, the pandemic triggered or worsened serious psychological issues (Grumbach & Willard-Grace, 2025). Reports indicated widespread psychological distress, depression, anxiety, and symptoms of post-traumatic stress (Cooke et al., 2020). Even more troubling were the rising instances of suicidal thoughts and attempts, particularly among healthcare professionals who had faced heightened exposure and stress (Harrop et al., 2025).

As the coronavirus spread rapidly across the world, the instantaneous dissemination of news created a state of uncertainty and fear (Achour, 2025). This overwhelming flood of information, later defined as an “infodemic,” moved faster than the virus itself. Social media and mainstream platforms became vehicles for misinformation, disinformation, and fake news, which fueled confusion, stress, and panic (Alfes et al., 2025). For many, false or misleading reports became part of daily life, aggravating mental health issues such as restlessness, anxiety, and depression (Oktaysoy et al., 2025). The World Health Organization’s World Mental Health Report of 2022 noted that during the early phase of the pandemic, global rates of common mental illnesses like depression and anxiety increased by more than 25%, adding to the existing burden of over one billion people already suffering from mental disorders. The uncertainty and constant exposure to viral and breaking news played a major role in intensifying these conditions (Michael et al., 2025).

This unprecedented situation highlighted the urgent need to transform attitudes, actions, and approaches toward media consumption (Abualbasal et al., 2024). Both mainstream and alternative media had influenced the public’s mental well-being, often negatively, and it became critical to reshape these environments in order to safeguard mental health (Tutar et al., 2024). Governments, media institutions, and citizens alike needed to act collectively to change information ecosystems, reduce misinformation, and protect psychological resilience (Davcheva et al., 2025). In response to this need, a Focus Group Discussion (FGD) on the “Mental Health Implications of Viral News during the COVID-19 Pandemic” was conducted at Jawaharlal Nehru University, New Delhi. The discussion included practicing psychologists, lawyers, academicians, and researchers. Guided by a trained moderator, participants shared insights into the role of breaking and viral news in exacerbating stress and anxiety, and they explored possible strategies to address the problem. The outcomes of this focus group provided the basis for this study. By analysing the lived experiences of individuals and the collective perspectives of experts, this study sought to evaluate the implications of disinformation, highlight its effects on mental health, and propose actionable recommendations to curb the spread of fake and viral news.

Literature Review

The emergence and spread of infectious diseases with pandemic potential had occurred regularly throughout

history (Yikilmaz & Sürücü, 2025). In all pandemics and epidemics, the flow of information has played a crucial role. In the case of COVID-19, the advancement of digital technology and its easy accessibility to ordinary people resulted in an unprecedented surge in information consumption (Somani et al., 2025). Unlike earlier generations, societies now have to navigate an overwhelming influx of media messages that include information, misinformation, disinformation, and malinformation (Carmi et al., 2020). This overexposure to news and data streams created new challenges that shaped public perceptions, attitudes, and mental health (Montazer et al., 2025).

Researchers at the Observatory on social media (OSOME), Indiana University Bloomington, had modelled human information consumption and showed that as the number of memes in a network increased, the quality of the information propagated declined (Shao, 2025). This phenomenon revealed how information overload itself contributed to the virality of low-quality or fake news (Messner, 2025). Further, cognitive biases particularly confirmation bias, had deepened the problem. People tended to seek out, recall, and trust information that confirmed their pre-existing beliefs, which made it harder to correct misinformation once it spread (Guo et al., 2021).

Experimental findings consistently demonstrated that when people encountered balanced information containing multiple perspectives, they still often found support for their prior views (Wang & Yang, 2022). Moreover, emotionally charged issues heightened the tendency to stick with pre-held positions. Digital platforms such as search engines and social media worsened this problem by providing personalized recommendations based on past preferences (Cao et al., 2022). These platforms amplified content that aligned with user beliefs while filtering out opposing perspectives, thus fostering polarization (Yang, 2021). Adding to the challenge was the role of bots automated accounts that impersonated human users (Z. Li et al., 2022). Studies showed that when even a small percentage of human users followed bots, poor-quality information could spread widely. In practice, just a few bot-driven upvotes or shares could make a piece of fake news viral (X. Li et al., 2022).

India, in particular, had been vulnerable to this phenomenon. With low digital literacy rates and vast segments of the population struggling to verify authenticity, fake news emerged as a grave concern. Reports such as the India Inequality Report 2022: Digital Divide indicated that nearly 70% of the population had limited or no access to reliable digital services, making them more susceptible to misinformation during crucial

1 (COVID-19 Pandemic Triggers 25% Increase in Prevalence of Anxiety and Depression Worldwide, n.d.)

moments such as the pandemic and elections². Political parties were also found to manipulate public opinion through misinformation campaigns, while the country’s limited fact-checking infrastructure and weak penalties for spreading fake news worsened the crisis(Yigitcanlar, 2024).

The review of existing studies revealed that viral news and misinformation had significant psychological, social, and policy implications(Singer et al., 2022). Researchers had repeatedly shown that misinformation could spread faster than factual information, primarily because of human cognitive limitations and algorithm-driven amplification on digital platforms(Hargie, 2021). Scholarly evidence indicated that during the COVID-19 pandemic, the circulation of fake news intensified anxiety, stress, and restlessness among individuals(Zhou et al., 2022). The World Mental Health Report (2022) confirmed that the early stages of the pandemic saw a global increase in depression and anxiety by more than 25%(Abbafati et al., 2020). This rise was not caused by the virus alone, but also by the constant exposure to uncertain, exaggerated, or false news updates that created fear and panic(Diamanduros et al., 2022). Studies on information overload suggested that people’s limited attention capacity meant they tended to focus only on the most prominent or frequently reshared pieces of information(Sahil & Sood, 2022). This made low-quality and misleading news more likely to become viral. Simulations conducted by the Indiana University OSOME team had validated this by showing how high volumes of content led to a decline in the quality of information consumed(Asthana, 2022).

The literature also showed how confirmation bias reinforced the effects of misinformation. Even when presented with balanced or corrective information, individuals preferred to hold on to prior beliefs(Hammami et al., 2023). This pattern made interventions against fake news particularly challenging. These issues collectively demonstrate how information flows during the pandemic had significantly affected psychological well-being and social trust(Goldstein, 2023).

Research Methodology

The objective of the study was to gain in-depth insights into the psychological implications of breaking and viral news during the COVID-19 pandemic rather than to generate numerical measurements. Since the phenomenon of misinformation and its impact on mental health was relatively new and complex, the qualitative approach allowed for flexibility in exploring perceptions, experiences, and policy concerns. The study consisted of individuals and stakeholders who were directly or indirectly exposed to viral and breaking news during the pandemic. This included academicians, policymakers, healthcare professionals, media professionals, legal experts, corporate leaders, and students. Within this population, the sample frame was drawn from the professional and academic groups.

Table 1: Adopted Research Methodology

Methodological Component	Methodology adopted
Research Approach	Qualitative approach to explore perceptions and psychological implications of breaking and viral news during the COVID-19 pandemic.
Research Design	Exploratory research design to investigate emerging issues related to misinformation and mental health.
Sampling Technique	Purposive sampling to select participants with relevant professional and academic expertise.
Sample Size	15 participants representing academia, media professionals, healthcare experts, policymakers, corporate leaders, legal professionals, and students.
Data Collection Method	Focus Group Discussion (FGD) conducted on 7 April 2023.
Research Instrument	Semi-structured discussion guide moderated by a trained facilitator to ensure systematic data collection.
Data Type	Primary qualitative data obtained through participant discussions and expert insights.
Data Analysis Technique	Thematic analysis used to identify recurring patterns and themes related to misinformation, psychological stress, media influence, and regulatory challenges.
Ethical Considerations	Voluntary participation, informed consent, and confidentiality of participants were ensured.
Research Limitation	Limited sample size and reliance on a single FGD restrict generalizability but provide in-depth exploratory insights.

² (Addressing the Digital Privacy Divide: The Need to Redefine Digital Equity, n.d.)

Table 2:Elaborating the Discussion of FGD on Mental Health implication of Viral News

Theme	Variables	Findings
Data Privacy Awareness	Unread Privacy Policies	Many users agree to terms without reading them, reflecting low awareness about personal data usage and privacy implications(Ramakrishna & Indiran, 2023).
	Misunderstanding Terms	Users often misinterpret privacy terms, e.g., confusing data sharing with location sharing only(Andrade-Girón et al., 2023).
	Trust in Platforms	High reliance on app/platform trust rather than verifying the policy, leading to blind acceptance(Spitzberg, 2023).
Spread of Misinformation	Viral Content	Users share content seen on messaging apps without verifying authenticity, increasing misinformation spread(Da Silva et al., 2024).
	Lack of Fact-Checking	Insufficient fact-checking infrastructure and platform accountability enable rapid circulation of fake news(Abid et al., 2023).
	Emotional Appeal	Content that evokes strong emotions (anger, fear, excitement) is more likely to be forwarded without scrutiny(Al-Sharafi et al., 2024).
Policy and Regulation	Absence of Data Protection Law	India currently lacks comprehensive data protection legislation comparable to GDPR, leaving users vulnerable(Chakraborty & Paul, 2023).
	Weak Enforcement	Existing laws like IT Act 2000 provide limited recourse, and enforcement is inconsistent(Rozkwitalska et al., 2024).
	Need for Clear Guidelines	Clear, actionable guidelines are needed for both users and intermediaries to protect data and curb misinformation(Vo et al., 2024).
Digital Literacy	Limited Understanding of Technology	Users struggle to understand how data is collected, used, or shared.
	Difficulty Identifying Fake News	Many users cannot distinguish between authentic and misleading content.
	Lack of Critical Thinking Skills	Users rely on peer recommendations or emotional cues rather than evaluating content critically.
Psychological Impact	Anxiety and Stress	Exposure to viral content contributes to psychological distress, anxiety, and mental fatigue.
	Distrust in Institutions	Misinformation reduces confidence in government, media, and official channels.
	Social Isolation	Individuals may withdraw socially due to disagreements or fear caused by misinformation.
Source: Authors Own Source		

The Focus Group Discussion (FGD) provided a structured, qualitative framework to explore the dynamics of misinformation, fake news, and their socio-psychological consequences. The findings are directly linked to the ICSSR project objectives, which focus on resilient recovery, community well-being, ethical media practices, and technological interventions within an Eco-Social-Psychological framework.

Table 3:Thematic Coding of FGD Findings with Variable-Based Implications

Major Theme	Sub-Theme	Implications ¹
Social Impact of Misinformation	Psychological Effects	Continuous exposure to misinformation increases cognitive overload, stress, and emotional instability among individuals. Examples: Exposure to fake and viral news; psychological stress, anxiety, uncertainty
	Information Disorder	Rapid circulation of unverified information creates confusion and weakens public trust in authentic sources. Examples: Rumor, propagation; information overload

Technological Governance	AI-based Moderation	Technology can help detect and control misinformation in real time if platforms adopt transparent algorithms. Example: AI content filtering; automated fact-checking tools
	Platform Accountability	Lack of platform transparency accelerates misinformation spread and reduces public trust in digital ecosystems. Example: Algorithmic transparency; verification systems
Ethical and Institutional Accountability	Media Social Responsibility	Ethical media practices and proper verification systems can significantly reduce misinformation spread. Example: Responsible journalism; verification protocols; authenticity labelling
	Government Communication	Effective and timely government communication reduces misinformation-induced panic and improves public confidence. Example: Transparent information dissemination; proactive communication strategies
Community & Educational Interventions	Media Literacy	Educational initiatives enhance critical thinking and enable citizens to identify misinformation. Example: School and university media literacy programs
	Local Communication Networks	Grassroots communication channels ensure verified information reaches communities with low digital literacy. Example: Community radio; local information hubs; structured communication systems
Source: Authors Own Compilation (Interlinking the Discussions at the FGD)		

Integration with the Objectives

The FGD findings provide a holistic understanding of the interplay between misinformation, mental health, technology, and ethics. By identifying key variables and their significance, the study directly supports the project’s objectives:

Table 4 : Foundational Laying with ICSSR Objectives

Objective	Significance	Integration
Assessing societal and mental health impact (Compilation of References, 2025)	Ensures that policy recommendations are evidence-based, grounded in real-world observations, and aligned with societal needs.	Supported through insights into psychological stress and rumor proliferation(Hamouche et al., 2024)
Identifying gaps in regulation and technology(Baliga et al., 2025)	Strengthens the Triple Bottom Line approach, integrating social well-being (People), ethical and technological innovation (Planet), and institutional responsibility (Profit).	Supported through findings on AI tools, platform accountability, and legal frameworks.(Sherman et al., 2024)
Designing actionable interventions(Yadav et al., 2025)	Enhances the Eco-Social-Psychological framework, providing a roadmap for resilient recovery and resurgence amid crises like COVID-19.	Supported through community literacy programs, media responsibility, and positive communication strategies. (Borazon & Chuang, 2023)
Source: Own Compilation		

Analysis of the Data

The collected data were examined using thematic analysis, in which responses were coded, categorized, and grouped into recurring patterns. The process highlighted major themes, including the psychological impact of viral and breaking news, weaknesses in existing policy measures, the role of digital algorithms in amplifying misinformation, and the importance of media literacy.

Table 5 Media _Thematic Analysis

Theme	Sub-Theme	Variables Identified	Relevance to Project Objectives	Insights
1. Impact on Mental Health and Society	Psychological Effects	Stress, Anxiety, Uncertainty, Panic, Cognitive Overload	Aligns with social dimension (People); supports project objective of assessing societal and psychological impact	Exposure to fake and viral news increases stress, anxiety, and restlessness among individuals; leads to uncertainty in decision-making and social behavior
	Rumor Propagation	Word-of-mouth sharing, Peer influence, Social contagion	Supports behavioral and social understanding; informs community resilience strategies	Information spreads quickly through social networks without verification, amplifying misinformation
2. Regulatory and Legal Framework Gaps	Data Privacy and Protection	Absence of comprehensive law, IT Act 2000, Personal Data Protection Bill pending	Supports institutional dimension (Profit & Planet); informs policy gaps and regulatory recommendations	Lack of robust data protection laws exposes citizens to privacy risks; delays in legislation reduce public trust
	Platform Accountability	Algorithm transparency, Fact-checking infrastructure, Intermediary regulation	Integrates technological and ethical considerations; helps design regulatory and ethical strategies	Limited accountability and opaque algorithms contribute to rapid misinformation spread
3. Technological Solutions	AI and Digital Tools	AI-based content detection, Automated fact-checking, Platform verification	Supports technological dimension (Planet); aligns with project objective of leveraging technology ethically	AI and ML tools can flag and filter viral misinformation in real-time; reduces information overload
	Transparency & Monitoring	Algorithm disclosure, Monitoring mechanisms, Digital dashboards	Ethical and institutional relevance; guides platform governance measures	Transparency in digital platforms builds trust and reduces false content propagation
4. Community and Educational Interventions	Media Literacy	School modules, University programs, Awareness campaigns	Social and educational objective; enhances community resilience and critical thinking skills	Educating youth and adults to critically evaluate news sources reduces misinformation impact
	Local Communication Channels	Community radio, Libraries, Local institutions	Promotes social equity and citizen empowerment; aligns with TBL: People & Planet	Decentralized and trusted sources help counter viral news and provide verified information
5. Ethical Media Practices	Responsible Journalism	Media Social Responsibility (MSR), Positive messaging, Panel verification	Institutional and social relevance; aligns with ethical and responsible communication goals	Ensures news is verified, ethical, and minimizes negative psychological impact
	Verification & Labelling	Color coding, Fact-checking protocols, Classification of news authenticity	Supports citizen awareness and informed decision-making; links to social and ethical dimensions	Labelling news (verified, partially verified, unverified) helps audiences identify reliable content

6. Government Communication and Policy	Structured Communication	National communication policy, Crisis response teams, Citizen-centric messaging	Integrates institutional and social objectives; supports project goal of resilient recovery	Effective communication reduces panic, provides timely updates, and fills information gaps
	Feedback & Monitoring	Public feedback, Complaint mechanisms, Evaluation of communication efficacy	Social and ethical dimension: strengthens accountability and citizen trust	Citizen engagement improves policy implementation and ensures adaptive governance
Source: Own Compilation				

Findings, Suggestions and Conclusion

The study had set out to examine the psychological impact of breaking and viral news during the COVID-19 pandemic, with a focus on understanding how media coverage shaped anxiety, stress, and negativity, while also identifying gaps in policy frameworks and generating recommendations (Srivastava et al., 2024). The findings aligned directly with these objectives.

First, the findings revealed that continuous exposure to breaking and viral news created widespread psychological distress, including anxiety, depression, uncertainty, and in severe cases, suicidal thoughts (James, 2025). This confirmed the first objective, which was to evaluate the mental health consequences of media consumption during the pandemic (Varga et al., 2024). The lived experiences shared by participants illustrated how misinformation and sensationalism directly eroded emotional resilience, making individuals and families more vulnerable (Bawa et al., 2025).

Second, the findings addressed the objective of identifying the mechanisms through which fake news and information overload aggravated mental health challenges (Abo Hamza et al., 2025). Participants highlighted the role of information overload, algorithmic amplification, and bots in accelerating the spread of false news (Jeong et al., 2024). Citizens were unable to filter authentic updates from rumors, which created restlessness and confusion. This showed that the negative psychological outcomes were not only the result of the virus itself but also of a toxic information ecosystem (Mamodiya et al., 2025).

Third, in line to assess policy and regulatory gaps, the findings demonstrated that India's existing frameworks such as the IT Act (2000) and IT Rules (2021) were inadequate in addressing the scale and speed of misinformation (Frías et al., 2025). Weak enforcement, lack of coordination among institutions, and insufficient fact-checking infrastructure left wide gaps that misinformation exploited. The absence of a

universal definition of fake news further complicates implementation (Zamroni et al., 2025).

The findings contributed to the objective of generating policy recommendations by highlighting actionable solutions suggested during the FGD (Davies et al., 2024). These included the adoption of Media Social Responsibility (MSR) by news organizations, the promotion of media and digital literacy in schools and communities, the strengthening of fact-checking infrastructure, and the need for structured communication policies within government departments (Tayebi & Ghaziani, 2025). Participants also emphasized the role of community-based interventions through libraries, community radio, and local leaders in restoring trust and resilience at the grassroots level (Nayyar, 2025).

These findings were deeply interwoven with the broader ICSSR project framework. By exposing the linkages between people (psychological well-being), planet (responsible information environments), and profit (media's commercial motives), the study echoed the Triple Bottom Line Approach. It demonstrated that viral news was not merely a media issue but a socio-psychological challenge with long-term implications for Bharat 5.0's resilient recovery in the new normal. Thus, the research contributed not only to academic understanding but also to policy design and social preparedness, fulfilling the overall aim of the project.

Conclusions

This research demonstrates that the dissemination of false and viral news has profound social and psychological impacts on individuals. Encountering false information frequently leads to tension, worry, and uncertainty, particularly during significant events or emergencies. The research additionally discovered that misinformation and excessive information hinder people's ability to distinguish trustworthy data, diminishing public confidence in media outlets and influencing informed choices. The results emphasize

the significance of technology solutions like AI-driven content moderation and automated fact-checking tools to mitigate the dissemination of misinformation. These technologies require increased transparency and accountability from digital platforms to achieve their full potential. The research highlights the importance of ethical accountability in media and organizations. Methods like fact-checking, authenticity tags, and ethical journalism can enhance the trustworthiness of news and assist in managing misinformation. Simultaneously, transparent and accountable government messaging is essential to avert panic and guarantee that the public is provided with accurate information. Ultimately, the study underscores the significance of media awareness and local programs. Implementing media literacy initiatives in schools and enhancing local communication channels like community radio and local information hubs can assist individuals in comprehending and validating information more effectively. In general, tackling misinformation necessitates joint initiatives from technology, media outlets, lawmakers, and communities. Enhancing media comprehension,

accountable platform management, and organizational responsibility can foster a more dependable and credible digital information landscape.

Suggestions

The study highlights that the rapid spread of fake and viral news has significant consequences for societal well-being, individual mental health, and community stability. Addressing this challenge requires a holistic approach that strengthens legal, social, technological, and institutional measures (Dang et al., 2025). In essence, the integrated recommendations create a system where legal safeguards, responsible media, community engagement, education, technology, and transparent communication work together to protect societal well-being (Nayak et al., 2025). Individuals are empowered to make informed decisions, communities remain cohesive and resilient, and systems both social and economic, benefit from stability and efficiency. The approach naturally balances the needs of people, supports societal and environmental awareness, and promotes sustainable, efficient operations across institutions (Shiferaw et al., 2025).

Table 6 Recommendations to Curb Fake News and Protect Mental

Issue	Challenges Identified	Recommendations	Expected Outcomes
Rapid spread of fake news	Lack of strict legal deterrents; ambiguous definition of fake news (Nyhan, 2021)	Enforce stricter penalties for spreading misinformation- Establish a universal legal definition of fake news- Improve coordination among regulatory bodies	Reduced circulation of fake news; stronger accountability; clarity in enforcement
Media and platform influence	Sensationalism, algorithm-driven amplification, and low accountability (McGrew et al., 2019)	Mandate Media Social Responsibility (MSR)- Ensure transparency in digital algorithms- Hold social media intermediaries accountable with mandatory fact-checking	More reliable media content; reduced virality of misinformation; increased public trust
Slow detection of misinformation	Insufficient fact-checking infrastructure; delayed verification (Bowles et al., 2020)	Strengthen independent fact-checking organizations- Establish government-supported national fact-checking units- Promote real-time flagging of suspicious content	Faster detection and correction of misinformation; reduced panic and anxiety among citizens
Low digital/media literacy	Citizens unable to identify fake news; high susceptibility to rumors (Swire-Thompson et al., 2020)	Integrate media literacy in school/university curricula- Conduct public awareness campaigns- Organize community workshops for verification skills	Citizens better equipped to identify misinformation, improved critical thinking, and reduce mental stress from fake news
Community vulnerability to rumors	Dependence on informal information channels; lack of local verification (Guess et al., 2019)	Strengthen community radio, libraries, and village institutions- Mobilize local leaders and civil society organizations- Use schools/colleges as hubs for critical thinking and awareness	Grassroots-level awareness; prompt dissemination of verified information; reduced rumor-based panic

Technology gaps in detection	Manual verification is slow; fake news spreads faster than corrections(Nyhan & Reifler, 2010)	Leverage AI and machine learning tools to detect fake news- Develop government-approved verification apps/platforms- Integrate verification tools with social media	Early identification of viral misinformation; reduced reach of fake news, and enhanced user confidence in digital platforms
Ineffective government communication	Delayed official updates; information vacuums filled by rumors(Brodsky et al., 2021)	Establish structured communication policies across departments- Ensure timely, transparent dissemination of updates- Create a single-window government communication portal	Citizens receive verified updates promptly; reduced misinformation-driven panic, improved trust in government
Source: Own Compilation			

References

Abbafati, C., Abbas, K. M., Abbasi, M., Abbasifard, M., Abbasi-Kangevari, M., Abbastabar, H., Abd-Allah, F., Abdelalim, A., Abdollahi, M., Abdollahpour, I., Abedi, A., Abedi, P., Abegaz, K. H., Abolhassani, H., Abosetugn, A. E., Aboyans, V., Abrams, E. M., Abreu, L. G., Abrigo, M. R. M., ... Murray, C. J. L. (2020). Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 396(10258), 1204–1222. [https://doi.org/10.1016/S0140-6736\(20\)30925-9](https://doi.org/10.1016/S0140-6736(20)30925-9)

Abid, G., Contreras Torres, F. V., Rank, S., & Ilyas, S. (2023). Sustainable leadership and wellbeing of healthcare personnel: A sequential mediation model of procedural knowledge and compassion. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1039456>

Abo Hamza, E., Bedair, K., & Elsantil, Y. G. (2025). Influence of parental stress on online learning engagement among parents in Arab nations. *Interactive Learning Environments*, 33(3), 2239–2254. <https://doi.org/10.1080/10494820.2024.2402892>

Abualbasal, A., Issa, R., Alfayoumi, D., Azzouqa, S., & Tawabini, N. (2024). The Impact of Remote Work on Faculty Members' Creativity; The Serial Mediating Role of Work-Life Balance and Psychological Well-Being. *Journal of Ecohumanism*, 3(5), 178–193. <https://doi.org/10.62754/joe.v3i5.3885>

Achour, Z. (2025). *Advanced labor studies research and modern practice* (pp. 1–472). <https://doi.org/10.4018/979-8-3373-1962-9>

Addressing the Digital Privacy Divide: The Need to Redefine Digital Equity. (n.d.). Retrieved September 22, 2025, from <https://www.cyberpeace.org/resources/blogs/addressing-the-digital-privacy-divide-the-need-to-redefine-digital-equity>

Alfes, K., Tham, T. L., Pariona-Cabrera, P., Holland, P. J., & Bartram, T. (2025). The Buffering Role of Anti-Violence Human Resource Management Practices in Shaping How Police Officers Cope With Workplace Violence. *Human Resource Management*, 64(3), 713–730. <https://doi.org/10.1002/hrm.22281>

Al-Sharafi, M. A., Al-Emran, M., Al-Qaysi, N., Iranmanesh, M., & Ibrahim, N. B. (2024). Drivers and Barriers Affecting Metaverse Adoption: A Systematic Review, Theoretical Framework, and Avenues for Future Research. *International Journal of Human-Computer Interaction*, 40(22), 7043–7064. <https://doi.org/10.1080/010447318.2023.2260984>

Andrade-Girón, D. C., Carreño-Cisneros, E. O., Mejía-Domínguez, C., Velásquez-Gamarra, J., Marín-Rodríguez, W. J., Villarreal-Torres, H. O., & Meleán Romero, R. A. (2023). Support vector machine with optimized parameters for the classification of patients with COVID-19. *EAI Endorsed Transactions on Pervasive Health and Technology*, 9(1). <https://doi.org/10.4108/eetpht.9.3472>

Asthana, S. (2022). Twenty-five years of SMEs in tourism and hospitality research: A bibliometric analysis. *Journal of Tourism, Heritage and Services Marketing*, 8(2), 35–47. <https://doi.org/10.5281/zenodo.7358571>

Baliga, A. J., Goel, A., Fletcher-Chen, C. C. Y., Guda, S., & Kumar, R. (2025). Mental health among B2B salespeople: A morphological analysis. *Journal of Business Research*, 188. <https://doi.org/10.1016/j.jbusres.2024.115093>

Bawa, P., Kaur, G., & Pathak, R. (2025). The effect of COVID-19 induced work stressors on life satisfaction of university teachers in India: an empirical study. *International Journal of Business and Globalisation*, 40(2), 130–150. <https://doi.org/10.1504/IJBG.2025.146219>

Borazon, E. Q., & Chuang, H. H. (2023). Resilience in educational system: A systematic review and directions for future research. *International Journal of Educational Development*, 99. <https://doi.org/10.1016/j.ijedudev.2023.102761>

Bowles, J., Larreguy, H., & Liu, S. (2020). Countering misinformation via WhatsApp: Preliminary evidence from the COVID-19 pandemic in Zimbabwe. *PLoS ONE*, 15(10 October). <https://doi.org/10.1371/JOURNAL.PONE.0240005>

Brodsky, J. E., Brooks, P. J., Scimeca, D., Galati, P., Todorova, R., & Caulfield, M. (2021). Associations Between Online Instruction in Lateral Reading Strategies and Fact-Checking COVID-19 News Among College Students. *AERA Open*, 7. <https://doi.org/10.1177/23328584211038937>

- Cao, J., Zhang, G., & Liu, D. (2022). The Impact of Using mHealth Apps on Improving Public Health Satisfaction during the COVID-19 Pandemic: A Digital Content Value Chain Perspective. *Healthcare (Switzerland)*, 10(3). <https://doi.org/10.3390/healthcare10030479>
- Chakraborty, D., & Paul, J. (2023). Healthcare apps' purchase intention: A consumption values perspective. *Technovation*, 120. <https://doi.org/10.1016/j.technovation.2022.102481>
- Compilation of References (pp. 389–432). (2025).
- COVID-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide. (n.d.). Retrieved September 22, 2025, from <https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in-prevalence-of-anxiety-and-depression-worldwide>
- Da Silva, J. M. N., Bispo, L. G. M., Leite, W. K. D. S., Vieira, E. M. D. A., Lisboa, A. H. S., & Teixeira, R. D. S. (2024). Assessing the link between occupational risk factors, work-related musculoskeletal disorders and quality of work life: An analysis using PLS-SEM. *International Journal of Industrial Ergonomics*, 104. <https://doi.org/10.1016/j.ergon.2024.103658>
- Dang, T. Q., Nguyen, T. M., Tran, P. T., Phan, T. T. C., Huynh, T. B., & Nguyen, L.-T. (2025). From reality to virtuality: Unveiling Gen Z's purchasing behavior through virtual influencers in the metaverse. *Digital Business*, 5(2). <https://doi.org/10.1016/j.digbus.2025.100141>
- Davcheva, M., González-Romá, V., Hernández, A., & Tomás Marco, I. C. E. (2025). The Influence of Employment Quality on Employee Health Complaints: A Parallel Mediation Model. *Journal of Business and Psychology*, 40(1), 39–55. <https://doi.org/10.1007/s10869-024-09944-9>
- Davies, J. N., Faschinger, A., Galante, J. M., & Van Dam, N. T. (2024). Prevalence and 20-year trends in meditation, yoga, guided imagery and progressive relaxation use among US adults from 2002 to 2022. *Scientific Reports*, 14(1). <https://doi.org/10.1038/s41598-024-64562-y>
- Diamanduros, T., Tysinger, P. D., Tysinger, J. A., & Fenning, P. A. (2022). *CHILD AND ADOLESCENT PSYCHOPATHOLOGY FOR SCHOOL PSYCHOLOGY: A PRACTICAL APPROACH* (pp. 1–380). <https://doi.org/10.1891/9780826135872>
- Frías, C. E., Samarasinghe, N., Cuzco, C., Koorankot, J., de Juan, A., Ali Rudwan, H. M., Rahim, H. F. A., Zabalegui-Yárnoz, A., Tulley, I., & Al-Harashsheh, S. T. (2025). Strategies to support the mental health and well-being of health and care workforce: a rapid review of reviews. *Frontiers in Medicine*, 12. <https://doi.org/10.3389/fmed.2025.1530287>
- Goldstein, N. D. (2023). *A Researcher's Guide to Using Electronic Health Records: From Planning to Presentation, Second Edition* (pp. 1–394). <https://doi.org/10.4324/9781003258872>
- Grumbach, K. L., & Willard-Grace, R. (2025). Health Worker Burnout and Moral Injury: Drivers, Effects, and Remedies. In *Annual Review of Public Health* (Vol. 46, Number 1). <https://doi.org/10.1146/annurev-publhealth-071823-122832>
- Guess, A., Nagler, J., & Tucker, J. (2019). Less than you think: Prevalence and predictors of fake news dissemination on Facebook. *Asian-Australasian Journal of Animal Sciences*, 32(2). <https://doi.org/10.1126/SCIADV.AAU4586>
- Guo, Y., Zhang, Y., Lyu, T., Prosperi, M. C. F., Wang, F., Xu, H., & Bian, J. (2021). The application of artificial intelligence and data integration in COVID-19 studies: A scoping review. *Journal of the American Medical Informatics Association*, 28(9), 2050–2067. <https://doi.org/10.1093/jamia/ocab098>
- Hammami, S. M., Durrah, O. M., El-Maghraby, L. M., Jaboob, M., Kasim, S., & Baalwi, K. (2023). *Understanding how big data awareness affects healthcare institution performance in Oman* (pp. 271–297). <https://doi.org/10.1016/B978-0-443-21598-8.00001-4>
- Hamouche, S., Chabani, Z., & Shamout, M. D. (2024). Foresight study about the use of blockchain to prevent employees' psychological distress: research avenues and insights for HRM practitioners. *Foresight*, 26(2), 225–240. <https://doi.org/10.1108/FS-02-2022-0009>
- Hargie, O. D. W. (2021). *Skilled interpersonal communication: Research, theory and practice* (pp. 1–662). <https://doi.org/10.4324/9781003182269>
- Harrop, N., Jiang, L., & Overall, N. C. (2025). A Meta-Analysis of Antecedents and Outcomes of Flexible Working Arrangements. *Journal of Organizational Behavior*. <https://doi.org/10.1002/job.2896>
- James, C. (2025). *Vicarious Trauma and Burnout in Law: Managing Psychological Stress to Promote Safety, Performance, and Wellbeing in Legal Practice* (pp. 1–376). <https://doi.org/10.4324/9781003091172>
- Jeong, J., Lee, J., & Karau, S. J. (2024). Sleepless nights at work: examining the mediating role of insomnia in customer mistreatment. *Baltic Journal of Management*, 19(3), 308–326. <https://doi.org/10.1108/BJM-11-2023-0426>
- Li, X., Wu, Y., & Jiang, Y. (2022). The value of tourism public opinion management in social governance: A study on the impact of electronic word-of-mouth perception on people's livelihood well-being. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1081960>
- Li, Z., Wang, D., Abbas, J., Hassan, S., & Mubeen, R. (2022). Tourists' Health Risk Threats Amid COVID-19 Era: Role of Technology Innovation, Transformation, and Recovery Implications for Sustainable Tourism. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.769175>
- Mamodiya, U., Kalam, A., Hu, Y., & Goyal, D. (2025). *Accelerating product development cycles with digital twins and IoT integration* (pp. 1–604). <https://doi.org/10.4018/979-8-3373-2028-1>
- McGrew, S., Smith, M., Breakstone, J., Ortega, T., & Wineburg, S. (2019). Improving university students' web savvy: An intervention study. *British Journal of Educational Psychology*, 89(3), 485–500. <https://doi.org/10.1111/BJEP.12279>

- Messner, W. (2025). Beyond the individual: global socioeconomic, cultural, and religious contexts of male-perpetrated intimate partner violence. *World Development*, 195. <https://doi.org/10.1016/j.worlddev.2025.107121>
- Michael, A. R., Maria, G. M., George, H. J., Jayacyril, C. M., & Parayitam, S. (2025). Employee Commitment and Cognitive Engagement as Moderators in the Relationship Between Quality of Work Life and Work Life Balance: A Conditional Moderated Mediation Model. *Global Business and Organizational Excellence*, 44(4), 94–118. <https://doi.org/10.1002/joe.22287>
- Montazer, S., Brumley, K. M., & Pineault, L. (2025). A Time to Unwind or Despair? Decoding the Impact of Commuting Duration on Psychological Distress. *Social Currents*, 12(3), 269–291. <https://doi.org/10.1177/23294965241300721>
- Nayak, S., Budhwar, P. S., & Malik, A. (2025). Technostress of HR professionals: the darker implication of remote work transformations. *International Journal of Human Resource Management*, 36(10), 1666–1711. <https://doi.org/10.1080/09585192.2024.2446508>
- Nayyar, V. (2025). Pleasure Versus Health: Identifying Consumer Eating Patterns for Available Food Options. *SAGE Open*, 15(1). <https://doi.org/10.1177/21582440241271116>
- Nyhan, B. (2021). Why the backfire effect does not explain the durability of political misperceptions. *Proceedings of the National Academy of Sciences of the United States of America*, 118(15). <https://doi.org/10.1073/PNAS.1912440117>
- Nyhan, B., & Reifler, J. (2010). When corrections fail: The persistence of political misperceptions. *Political Behavior*, 32(2), 303–330. <https://doi.org/10.1007/S11109-010-9112-2>
- Oktaysoy, O., Topçuoğlu, E., Ozgen-Cigdemli, A. O., Kaygin, E., Kosa, G., Turan-Torun, B., Kobanoglu, M. S., & Uygungil-Erdogan, S. (2025). The mediating role of job satisfaction in the effect of green transformational leadership on intention to leave the job. *Frontiers in Psychology*, 16. <https://doi.org/10.3389/fpsyg.2025.1490203>
- Ramakrishna, Y., & Indiran, L. A. P. (2023). *Handbook of research on designing sustainable strategies to develop entrepreneurial intention* (pp. 1–642). <https://doi.org/10.4018/978-1-6684-8781-5>
- Rozkwitalska, M., Borzyszkowski, J., Basińska, B. A., Okumus, F., & Karatepe, O. M. (2024). *Organizational Resilience in Hospitality and Tourism* (pp. 1–198). <https://doi.org/10.4324/9781003291350>
- Sahil, & Sood, S. K. (2022). Fog-assisted Energy Efficient Cyber Physical System for Panic-based Evacuation during Disasters. *Computer Journal*, 65(6), 1540–1559. <https://doi.org/10.1093/comjnl/bxaa201>
- Shao, Q. (2025). The Spillover Effect of Internet usage on Job Satisfaction in the Digital Era: Evidence From Chinese Individual Survey Data. *Social Science Computer Review*, 43(3), 604–625. <https://doi.org/10.1177/08944393241263825>
- Sherman, A. D. F., Higgins, M. K., Balthazar, M. S., Hill, M., Klepper, M., Schneider, J. S., Adams, D., Radix, A. E., Mayer, K. H., & Cooney, E. E. (2024). Stigma, social and structural vulnerability, and mental health among transgender women: A partial least square path modeling analysis. *Journal of Nursing Scholarship*, 56(1), 42–59. <https://doi.org/10.1111/jnu.12906>
- Shiferaw, B. D., Tang, J., Wang, Y., Wang, Y., Wang, Y., Mackay, L. E., Luo, Y., Yan, N., Shen, X., & Zhou, T. (2025). Impact of digital addiction on youth health: A systematic review and meta-analysis. *Journal of Behavioral Addictions*. <https://doi.org/10.1556/2006.2025.00081>
- Singer, H. S., Mink, J. W., Gilbert, D. L., & Jankovic, J. (2022). *Movement Disorders in Childhood, Third Edition* (pp. 1–735). <https://doi.org/10.1016/C2019-0-02183-8>
- Somani, P. P., Iyer, V. H., & Behare, N. (2025). *Empowering balance strategies for supporting women entrepreneurs in achieving work-life harmony* (pp. 301–326). <https://doi.org/10.4018/979-8-3693-9516-5.ch015>
- Spitzberg, B. H. (2023). *THEORIZING MEDIATED INFORMATION DISTORTION: The COVID-19 Infodemic and Beyond* (pp. 1–295). <https://doi.org/10.4324/9781003397151>
- Srivastava, S., Saxena, A., & Sarkar, A. (2024). Eco-green mirage: investigating turnover intention as organizational turbulence through perceived greenwashing, cynicism and alienation. *Social Responsibility Journal*, 20(8), 1535–1557. <https://doi.org/10.1108/SRJ-10-2023-0599>
- Swire-Thompson, B., Ecker, U. K. H., Lewandowsky, S., & Berinsky, A. J. (2020). They Might Be a Liar But They're My Liar: Source Evaluation and the Prevalence of Misinformation. *Political Psychology*, 41(1), 21–34. <https://doi.org/10.1111/POPS.12586>
- Tayarani-N, M. H. N. (2021). Applications of artificial intelligence in battling against covid-19: A literature review. *Chaos, Solitons and Fractals*, 142. <https://doi.org/10.1016/j.chaos.2020.110338>
- Tayebi, S. M., & Ghaziani, F. G. (2025). Technological Innovation in Increasing Sport Access and Participation for People with Disabilities and Inactivity-A Report on 1st Conference USCI (University Sport Consortium International)_November 5-6, 2024. *Annals of Applied Sport Science*, 13(Special Issue). <https://doi.org/10.61186/aassjournal.1485>
- Tutar, H., Mutlu, H. T., Nam, S., & Bilan, S. (2024). Relationship between work-family conflict and emotional exhaustion in health care workers: Mediating role of self-efficacy and stress perception. *Journal of International Studies*, 17(4), 163–178. <https://doi.org/10.14254/2071-8330.2024/17-4/10>
- Varga, P. J., Kelly, C. R., & Jacobi, C. J. (2024). Aesthetic flourishing: Scientists' experiences of beauty, wonder, and awe as indicators of higher wellbeing. *International Journal of Wellbeing*, 14(3). <https://doi.org/10.5502/ijw.v14i3.3015>

- Vo, A. H. K., Nguyen, T. D., Le, Y. N., Cao, H. N. Q., Le, V. N. T., & Huynh, K. L. (2024). Is transformational leadership always good for innovation? The moderating effect of transformational leadership on the personality–innovativeness link through knowledge sharing. *International Journal of Organizational Analysis*, 32(1), 131–152. <https://doi.org/10.1108/IJOA-10-2022-3444>
- Wang, Z., & Yang, B. (2022). *Polypharmacology: Principles and methodologies* (pp. 1–856). <https://doi.org/10.1007/978-3-031-04998-9>
- Yadav, M., Pandey, A., & Huzoore, G. (2025). *Global work arrangements and outsourcing in the age of AI* (pp. 1–602). <https://doi.org/10.4018/979-8-3373-1270-5>
- Yang, X. (2021). Potential consequences of COVID-19 for sustainable meat consumption: the role of food safety concerns and responsibility attributions. *British Food Journal*, 123(2), 455–474. <https://doi.org/10.1108/BFJ-04-2020-0332>
- Yigitcanlar, T. (2024). *Urban artificial intelligence: A guidebook for understanding perceptions and ethics* (pp. 1–393). <https://doi.org/10.1201/9781003521440>
- Yikilmaz, I., & Sürücü, L. (2025). Rising Workplace Threat of Presenteeism in the Hospitality Industry: Antecedents and Consequences. *Tourism and Management Studies*, 21(1), 75–91. <https://doi.org/10.18089/tms.20250105>
- Zamroni, E., Handayani, P. G., Gudnanto, G., Lestari, I. R., Azis, A. R., & Kumara, A. R. (2025). Mapping Religious Moderation and Its Impact on Islamic Education in Indonesia: A Bibliometric Approach. *Munaddhomah*, 6(1), 55–81. <https://doi.org/10.31538/MUNADDHOMAH.V6I1.1487>
- Zhou, Y., Draghici, A., Abbas, J., Mubeen, R., Boatca-Barabas, M. E., & Salam, M. A. (2022). Social Media Efficacy in Crisis Management: Effectiveness of Non-pharmaceutical Interventions to Manage COVID-19 Challenges. *Frontiers in Psychiatry*, 12. <https://doi.org/10.3389/fpsy.2021.626134>