JOURNAL OF INTERNATIONAL CRISIS AND RISK COMMUNICATION RESEARCH
ISSN: 2576-0017
2023, VOL 6, No 4

Crisis Communication in the Age of Artificial Intelligence: Exploring the Ethical Implications of AI-driven Risk Management

Shreyansh Srinivasan

ssrinivasan@alliant.edu
Student, Alliant International University
orcid id- 0009-0000-7435-7633

Abstract

The study examines ethical crisis communication behavior enabled by artificial intelligence by examining stakeholder trust together with transparency as determinants for shaping communication outcomes. The investigation examines emergency response AI system performance through ethical factors using quantitative survey methods. The study reveals that fairness combined with transparency as well as ethical guideline monitoring strongly contribute to crisis communication success while stakeholder trust lacks similar effects. Businesses implementing AI for crisis response should prioritize ethical aspects because these components create better results while building better stakeholder trust relations. Through this research organizations gain better knowledge of ethiCrcal standards for AI management in crises while receiving specific guidance to enhance their AI communication effectiveness.

Key Word: Crisis Communication, Ethical Implications of AI-Driven Risk Management, Fairness and Transparency in AI Systems, Effectiveness of crisis communication, Stakeholder Trust in AI, Ethical Guideline Follow-up

Introduction

Background and Research Problem

The essential organisational management requirement is crisis communication which deals with unexpected challenging situations. A crisis communication stands as an organisational method of speaking to stakeholders throughout crisis periods for controlling information flow to decrease damage and create trust according to Coombs (2020). Public relations teams traditionally led decision-making for crisis communication by creating news releases through human operatives. Artificial Intelligence (AI) technology brought about significant changes in the way organisations deploy crisis communication strategies since the last few years. AI systems enhance crisis communication operations by producing automatic responses and performing large-scale data analysis and predicting crises while supplying continuous stakeholder information (Farrokhi et al., 2020).

AI technological developments generate diverse reactions about its prospective crisis communication applications either positive or negative. AI offers expedient service for crisis communication that delivers precise information quickly so businesses require these services to respond effectively in environments marked by rapid changes including natural disasters health

emergencies and corporate scandals according to Xiao and Yu (2025). AI enables emergency response organisations to perform quick emergency assistance while contacting numerous recipients simultaneously while controlling misinformation dissemination as Cheng et al. (2024) explain. As AI systems expand their role in managing crisis communication the ethical ramifications increase substantially through problems that contain three core elements: fairness standards and transparency requirements and reputation maintenance for stakeholders.

An essential matter arises from employing AI for crisis responses because AI systems can make biassed choices. The analysis performed by AI systems uses existing data sources but flawed or biassed datasets result in the AI systems generating biassed communication outputs (Panda et al., 2019). Transparent understanding of AI black boxes presents challenges to stakeholders because it compromises both transparency along with trust (Cheng et al., 2024). The absence of clear process understanding within AI decision processes causes public trust to decline and produce backlash that disrupts crisis management operations (Xiao and Yu, 2025).

Organisations encounter major ethical obstacles when implementing standards for ethical practises throughout the development and deployment phases of their AI crisis communication applications. AI systems provide benefits to organisations through the implementation of ethical standards which ensure fair transparent operations with complete organisational accountability. Maintaining public trust depends on ethical procedures since organisations utilise AI systems to handle major or privacy-dependent crisis situations (Choi, 2024). Organisations suffer negative consequences when AI systems deliver unsatisfactory performance to stakeholders due to improper ethical supervision through damage to their reputation and public trust levels.

The research issue extends to study relationships between ethical elements of AI fairness and transparency while understanding how stakeholder trust supports AI-driven crisis communication strategy operations. The technical assessment of AI implementation success in crisis communication exists but additional research is essential to reveal the roles ethical factors play when AI operates emergency public discourse. Crisis communication achieves success by involving stakeholders while they evaluate the information disseminated to them. The combination of fairness issues in AI systems and stakeholder doubts about the system produces negative effects on crisis communication results.

The study investigates the connections between AI system fairness and transparency with stakeholder trust while evaluating their effects on crisis communication success. The research directs its attention to this information gap to create valuable AI crisis management content and to establish practical application methods for ethical AI system implementation that enhances stakeholder participation along with confidence levels.

Aim:

The research aims to analyse AI driven risk management in crisis communication as a case to explore the ethical implications of using or advancing AI to manage risk. Specifically, it focuses on the application of concepts like fairness, transparency and stakeholder trust in how the crisis communication is done.

Objectives:

1. To assess the level of fairness and transparency in AI systems used for crisis communication and its impact on the effectiveness of crisis communication.
2. To evaluate the relationship between stakeholder trust in AI and the effectiveness of crisis communication during crises.
3. To examine the role of ethical guideline follow-up in ensuring the responsible use of AI in crisis communication and its influence on the effectiveness of communication.
4. To identify key ethical challenges faced by organizations in integrating AI systems into crisis communication strategies.

Research Questions:

1. How do fairness and transparency in AI-driven crisis communication systems affect the effectiveness of crisis communication?
2. To what extent does stakeholder trust in AI influence the effectiveness of AI-driven crisis communication during crises?
3. What role does the follow-up on ethical guidelines play in enhancing the effectiveness of AI-driven crisis communication?
4. What are the key ethical challenges associated with using AI for crisis communication, and how do they impact communication outcomes?

Literature Review

Introduction to Crisis Communication

The crisis communication is a critical factor to the survival of organisations both before and after a crisis. Coombs (2020) states that crisis communication is how an organisation communicates and informs its stakeholders during a crisis. Crisis communication is aimed at minimising damage to the crisis and keeping stakeholders on board. Typically, crisis communication methods are weighted toward human efforts, (Wadhera and Marlowe, 2013) where public relations professionals work quickly and deliver the messaging over an issue in a credible, coherent fashion. Still, the use of Artificial Intelligence (AI) in crisis communication is becoming an important innovation because of the accumulation of technological advancements. With the AI systems delivery of rapid, automated responses are possible, enhanced communication speed, and accurately handle complex situations with minimal Human intervention (Cheng et al, 2024).

AI's Role in Crisis Communication

New dynamics are created to AI rise in crisis communication, creating new ways on how crises are handled. Chatbots, automated messaging systems, as well as predictive analytics which belongs to the AI systems are capable of making the flow of communication more responsive and accurate (Banasik and Pikiewicz, 2023). In this regard, according to Cheng et al. (2024), many organisations will have opportunities to use AI, which includes speeding up decision making and precise targeting of stakeholders through data driven communication strategies. In the arena of social media however, this capability holds a special resonance in light of the vast speed and volume of information that overwhelmes traditional human based communication strategies (Cheng, 2018). On top of it, AI can be used for automating crisis management systems, predetermine potential crises by data analytics, and feed real time feedback to the organisation and stakeholders (Farrokhi et al., 2020).

However, any role of AI in crisis communication features a number of challenges. According to Farrokhi et al. (2020), although AI is able to identify the early warning signs of a crisis, the idea still haunts around using AI in real time decision making. Given that AI will be integrated in crisis communication, fairness, transparency and accountability of AI systems need to be addressed (Prahl and Goh, 2021). However, by means of proper ethical frameworks, AI can prevent itself from making these problems worse, such as AI bias, lack of transparency and the loss of control in decision making.

Ethical Implications of AI in Crisis Communication

The main ethical concerns on AI's use in crisis communication are related to fairness and transparency. Cheng et al. (2024) argue that transparency of AI decision making process is a must. The public's trust in the communication provided by an organisation during crises is important. By not understanding which decisions are made, or how information is processed by where an AI system is made, will also cause an organisation or her communication strategy to lose trust (Xiao and Yu, 2025). Because of the need for stakeholders to discern critically the information presented by AI systems, and how it impacts them, transparency is necessary.

Fairness is another piece of important ethical consideration. AI systems are based on the data and if the data used in crisis communication systems is biassed, then obviously their decisions are biassed as well. This biases can cause the fair treatment of certain groups, making impossible the effectiveness of communication efforts (Panda and al. 2019). This can include, for example, that if an AI system data is represented disproportionately in favour of one group over others and then this system is used to provide information in a crisis, it can actually worsen the problem (Banasik and Pikiewicz, 2023). However, to be fair, AI systems need to perpetually be tested and adjusted to prevent discriminatory results.

In addition to this, ethical guidelines and frameworks affect the way AI is used properly and responsibly in crisis communication. Choi (2024) explores how the ethics of care must be deployed in AI mediated crisis communication with implication that organisations must have to understand the relational aspects of crisis communication which AI systems may not fully figuratively experienced or addressed. Organisations use ethical guidelines to keep their own use of AI in cheque and to make sure that in critical situations, AI adds to rather than replace human judgement and empathy.

Stakeholder Trust in AI Utilisation

One of the key success factors of AI driven crisis communication is trust in AI. In his study, Xiao and Yu (2025) examine how stakeholder satisfaction and responsibility attribution are vulnerable to AImediated crisis communication. They discover that the use of AI can positively or negatively affect an organisation's stakeholders perception of how an organisation handles a crisis. Assuming that the AI Systems are perceived by stakeholders as both effective and fair will increase the stakeholders' trust in the organisation as well as the acceptance of the information provided by the system. On the other hand, if stakeholders think that AI systems cannot be trusted due to lack of transparency or being unfair, there would be less trust, thus, harming the overall efficiency of crisis communication (Kim et al., 2019).

It is not simply about the accuracy and timeliness of the information shared, but also the opinion of the fairness and transparency of the decision making mechanism. This allows us to foster trust in AI by having AI systems work with clear ethical standards, be able to explain their decisions and refrain from bias in crisis communication (Choi, 2024). As Cheng et al. (2024)

stated, transparency of the AI systems is crucial to establish a setting in which stakeholders feel informed and in which they can trust the AI during a crisis. Finally, stakeholders' willingness to trust AI systems in crisis communication directly influences the success of the crisis communication efforts because the absence of trust leads to scepticism and disengagement in the crisis communication process.

Effectiveness of AI-Driven Crisis Communication

The effectiveness of the AI-driven crisis communication lies in the speed, accuracy, as well as clarity of the information received. Cheng, Lee, and Qiao (2024) argue that AI systems have the potential to substantially enhance the efficiency of the communication process during a crisis by automating the responses to routinely asked questions and empowering human responders to deal with more high quality issues. Additionally, AI's power to examine immense amounts of data in real time also helps ascertain quickly to changing crises, which is exceptionally helpful in quick environments, like social media (Cheng, 2018).

Reduction of misinformation during crises is also handled by AI. As Christensen and Lægreid (2020) opine, information during crisis may spread very fast and formation of fake news is possible in digital world. Meanwhile, AI systems can aid by delivering constant and dependable info that can fight back rumors and false information that regularly appear during abnormalities. Organisations can make sure their messaging is straightforward, steady, and arrives at the expected group at the right time by using AI's capacity to concentrate patterns and examples (Xiao and Yu, 2025).

Unfortunately, the success of AI in crisis communication depends as much on the degree to which the systems are ethically designed and implemented as it does on the technological use of AI in public relations. Assuming that AI driven crisis communication is implemented without consideration for fairness and transparency principles, it will not serve stakeholders' needs and expectations, which will decrease the effectiveness of such online crisis communication system (Whims, 2024). In order for AI to be truly effective in this case, it must be constantly being fine tuned, ethically controlled and continually tested to ensure that it is compliant to the needs of both the organisation, as well as the organisation's stakeholders.

Challenges and Opportunities

AI can be used in crisis communication but it poses a lot of opportunities and challenges. While AI can make communication in times of crises faster and more efficient, it can also lead to a systematic abandonment of human empathy and judgement important aspects in dealing with sensitive crisis situations (Prahl and Goh, 2021). AI will need to be complementing, not supplanting, human decision making in a crisis context and human oversight will be required therein. Moreover, due to the ethical concerns of AI in crisis communication, it must be renewed and improved in order to be effective (Bunker, 2020).

It can also contribute to the predictive crisis management. This means that AI can process big data volumes to recognize a crisis in its early stages when it is less likely to fully disappear before organizations can take steps to proactively manage risks (Farrokhi et al., 2020). Predictive analytics enable organisations to take preventive action to contain the impact of a crisis until it goes out of hand and improves their overall crisis management strategy.

Research Gap

Increasing integration of Artificial Intelligence (AI) in crisis communication has attracted a lot of interest in its capability of enhancing crisis management efficiency, accuracy and of involving stakeholders. Nevertheless, what the literature makes available about the ethical aspects and real outcomes of these AI based systems presents gaps in knowledge.

Second, since there is plenty of research on common crisis communication strategies (Coombs 2020, Cheng 2018), the ethical issues are underexplored about AI. Existing studies on AI systems in crisis communication fail to address new causal complexities concerning fairness, transparency, and accountability of AI systems. As an example, although studies such as those carried out by Xiao and Yu (2025) arrive at an analysis of AI's role in communications, they do not heavily focus on how fairness and transparency impact public trust and the efficiency of crisis communications. Furthermore, important ethical issues, like bias in AI systems and erosion of human judgement in decision making in crises, are currently not well known (Panda et al., 2019; Prahl and Goh, 2021).

In addition, most of the existing empirical research focuses on evaluating the relation between the ethical attributes of artificial intelligence systems, such as fairness, transparency, and adherence to ethical guidelines, on the perceived effectiveness of the crisis communication. Although it has been pointed out that AI may enhance communication speed and performance (Xiao and Yu, 2025; Farrokhi et al., 2020), the connection of ethical AI utilization and AI effectiveness to sustain stakeholder confidence when encountering emergency situations is still underexplored. Even though the majority of the studies conducted in recent times revolve around the technical benefits of AI, they fail to consider any socio and ethical factors that could minimise or amplify the success of AI in crisis communication.

Additionally, leading academic studies in the AI literature have largely focused on the use of AI in certain selected industries (e.g. healthcare and B2B contexts, see Sarella and Mangam, 2024; Farrokhi et al., 2020), whereas gaps still remain with respect for the way AI is utilised across various industries, especially in public facing and highly important events such as the natural disasters, pandemics, or corporate scandals. Therefore, in addressing the gaps, this research empirically looks into the role of fairness, transparency, and adherence to ethical guidelines in AI driven crisis communication and how any of these contributes or impedes the effectiveness of communication during crises.

Conceptual Framework

Based on this, the study conceptualises the effectiveness of AI-driven crisis communication to be based on three important independent variables, namely, fairness, transparency, and stakeholders' trust on AI. Transparency and fairness of AI systems are key when AI systems' decisions must evenly be perceived as unbiased and understandable to stakeholders. The presence of these elements helps stakeholders to trust in the system, thereby increasing the audience's reception to crisis communication (Cheng et al., 2024; Xiao and Yu, 2025). AI communication is important for success, especially when it comes to stakeholder trust in the AI system, if the stakeholders trust the AI system to provide accurate and impartial information, they will have greater chances of accepting and acting on the information in the context of a crisis, enabling better outcomes (Kim et al., 2019; Banasik and Pikiewicz, 2023).

Additionally, ethical guideline follow up mediates this framework such that the AI systems are directed by the ethical values. The practise of ethical guidelines makes AI systems more likely

to exhibit fairness and transparency which promotes resultant high levels of stakeholders' trust (Choi, 2024; Prahl and Goh, 2021). The ethical adherence to communication effectiveness relationship is motivating and critical in supporting ethical oversight in AI driven crisis management. Therefore, based on the framework, ethical AI practise are assumed to have direct and indirect effects on the effectiveness of crisis communication through increasing trust and fairness with transparency (Xiao and Yu, 2025; Cheng et al., 2024).

Methodology

The research applies a positivist research philosophy to examine how ethical AI principles work together with crisis communication effectiveness through the use of objective empirical data. A positivist approach enables the study to measure data that tests hypotheses which results in findings that generalise to aid AI implementation within crisis communication frameworks. The research study used quantitative methods which developed surveys for data collection. The chosen research approach functioned to measure the objective effects of fairness together with transparency and stakeholder trust along with ethical guideline adherence on AI-driven crisis communication performance. The research executed a quantitative design to develop statistical links between independent variables and dependent measures and collect empirical data about AI uses in crisis communication matters.

Three main groups of participants were included in the research: crisis communication professionals and AI ethics specialists and representatives of stakeholders involved in AI crisis management in practice. The specific method of random sampling method adopted for sampling was stratified sampling which consisted of selecting appropriate numbers of members from each subgroup. Setting the desired sample number at 187 participants based on the power analysis results made the study achieve statistical validity. Participants responding to these questions belonged to different domains so that they could also bring with them their own professional view on evaluating AI systems for crisis communication from ethical as well as performance perspectives.

Likert-scale assessments were the basis for research data obtained in the form of participants' opinions on AI systems with regard to fairness transparency stakeholder trust ethical guidelines and their assessment of the effectiveness of the AI driven crisis communication. To easily collect a wide range of data, the survey was made available by using an online questionnaire platform Google Form. The analysis has been done with the use of SPSS to get statistical analysis of the data. Descriptive statistics were the basis of the analysis to observe sample features and variable characteristics. The study was conducted using inferential statistics where correlation analysis and regression analysis was used to detect the relation between fairness and transparency with stakeholder's trust and ethical guidelines with the effectiveness of crisis communication. The studies verified hypotheses and determined levels of relationship of existing variables in data.

Ethical factors formed an essential foundation of this research design. Under the study's procedures each participant obtained complete understanding of both research intentions and methodological procedures as well as potential dangers they might encounter. All participants provided consent to take part in the study while the researchers protected anonymity of their responses for complete confidentiality. The research data was securely administered before researchers utilised it exclusively for their research investigation. Every stage of the study

implemented ethical guidelines which protected participant rights including upholding their privacy standards.

Results and Discussion

Demographic Analysis

The statistical analysis of the survey participants demonstrates specific information about their age groups and gender distribution. The study population contains equal distributions of both genders as male respondents represent 51.9% of the sample participants while female respondents make up 48.1%. The majority of research participants belong to the age bracket of 30 to 39 years, with a percentage of 40.1. A significant number of survey participants belong to the age range of 20-29 years since they comprise 25.7% of the total sample. The age segment from 40 to 49 encompasses 21.9% of participants and younger than 20 group members make up 8.0% of the demographic. Only 4.3% of the participants belong to the age range of 50 years and older. The research data shows that participants mostly belong to young-to-middle age ranges especially within the 30s and 20s age brackets.

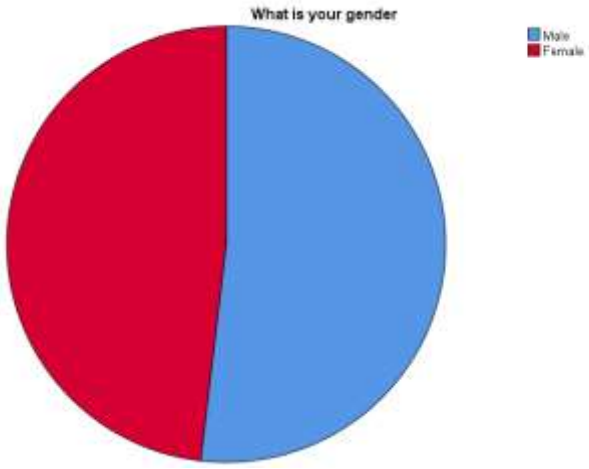

Figure 1 Gender Demographics

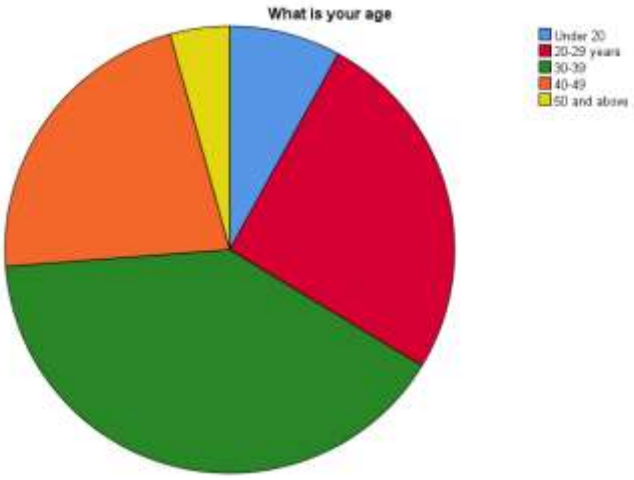

Figure 2 Age Demographics

Reliability Analysis

Cronbach's Alpha evaluated the reliability of the Effectiveness of Crisis Communication scale by tracking the unified connection between its measurement items. The research finds a reliability score of 0.648 based on the three items used to evaluate crisis communication effectiveness. The scale's reliability meets standard criteria since Cronbach's Alpha exceeds 0.7 (George and Mallery, 2003) while values between 0.6 and 0.7 are acceptable (George and Mallery, 2003). The 0.648 reliability score shows a moderate connection between scale items yet additional scale adjustments should be made to optimise future research studies.

Correlation Analysis

The research evaluates how Fairness and Transparency in AI Utilisation beside Stakeholder Trust in AI Utilisation with Ethical Guideline Follow-up directly influences Effectiveness of Crisis Communication through correlation analysis. The relationship between Fairness and Transparency in AI Utilisation and Effectiveness of Crisis Communication shows a very strong positive link ($r = 0.735$, $p < 0.001$). When AI operation becomes more transparent and fair the outcome of crisis management efforts shows greater effectiveness. This study discovers an extensive positive relation between Stakeholder Trust in AI Utilisation and the measured variables ($r = 0.661$, $p < 0.000$) as stakeholders tend to trust AI systems based on their perceived fairness and transparency. The adherence of ethical guidelines determines both AI fairness and transparency as indicated by research results ($r = 0.726$, $p < 0.002$).

The study establishes a direct connexion between Stakeholder Trust in AI Utilisation and Effectiveness of Crisis Communication ($r = 0.661$, $p = 0.007$) and Ethical Guideline Follow-up ($r = 0.685$, $p < 0.000$). AI system trust enhances crisis communication effectiveness and follows directly from correct adherence to ethical guidelines for AI applications. Organisations that maintain ethical guideline compliance within their AI usage achieve outstanding outcomes in crisis communication according to statistical computations ($r = 0.853$ and $p = 0.001$). The analysis reveals that both fairness in AI utilisation and ethical commitment along with transparency and trustworthy communication with stakeholders produce optimal AI-based crisis communication

outcomes. Every single element among these factors plays an essential role in enhancing crisis communication results.

Regression Analysis

A regression analysis evaluated the link between Fairness and Transparency in AI Utilisation, Stakeholder Trust in AI Utilisation, and Ethical Guideline Follow-up concerning Effectiveness of Crisis Communication.

Model Summary

The value of 0.770 obtained from the regression model demonstrates that independent variables strongly determine the outcome variable. The R Square value equals 0.721 which demonstrates that about 72.1% of the effectiveness of crisis communication variance stems from the included independent variables. The prediction model demonstrates stability through its Adjusted R Square value of 0.708 after augmenting the analysis with extra variables. The values observed in the regression fall on average 0.67289 units from the regression line.

ANOVA

The model achieves statistical significance according to an F value of 17.240 combined with a p-value of 0.000. All crisis communication effectiveness prediction variables together demonstrate substantial statistical significance regarding their ability to determine effectiveness levels.

Coefficients

The regression coefficients measure the unique impact which each variable makes towards crisis communication effectiveness levels. The value of 1.797 in the constant term signifies the fundamental crisis communication effectiveness level which exists when independent variables maintain a zero value. The positive unstandardized coefficient of 0.736 determines that Fairness and Transparency in AI Utilisation ($t = 6.047$, $p < 0.001$) affects crisis communication effectiveness through a standardised coefficient (Beta) of 0.424. The data demonstrates that an increase of 0.736 occurs in crisis communication effectiveness with each unit improvement in fairness and transparency. Such level of fairness and transparency emerges as a vital positive parameter for affecting communication effectiveness.

The unstandardized value of Stakeholder Trust in AI Utilisation points to -0.125 while its standardised value equals -0.121. The calculated p-value stands at 0.199 thereby indicating that no statistical significance exists. Trusting AI correlates to crisis communication effectiveness although multi-variate analysis shows its effect to be non-significant. The research shows ethical guideline follow-up produces a unstandardized coefficient of 0.870 and standardised coefficient of 0.239 accompanied by a t-value of 2.666 and a p-value of 0.008. Crisis communication effectiveness displays a substantial positive relationship with ethical guideline adherence since it increases by 0.870 whenever organisations follow ethical guidelines.

Discussion of Results

The regression analysis results show meaningful patterns between factors affecting the results of AI-driven crisis communication particularly for Fairness and Transparency and Stakeholder Trust as well as Ethical Guideline Follow-up. Organisations pursuing benefit from AI technologies in their crisis communication efforts should consider these results. A critical evaluation of these research outcomes follows with full support from existing scholarly works.

Fairness and Transparency in AI Utilisation

The positive and significant relationship between Fairness and Transparency in AI Utilisation and the Effectiveness of Crisis Communication ($r = 0.735$, $p < 0.001$) underscores the importance of these ethical principles in the success of AI-driven communication during crises. Current research supports these findings since transparent AI systems must exist for stakeholders to trust AI systems and maintain effective communication (Cheng et al., 2024). Under these conditions stakeholders develop stronger confidence because they understand how AI-based decisions are formed. Transparency adopts a central role according to Cheng et al. (2024) because it reduces the concerns about manipulation or bias within AI systems enabling credible communication processes.

As a part of AI system integrity all stakeholders should receive equitable treatment and emergency crisis decisions must operate without prejudice. During crises public perception centres on how fairly organisations respond according to Panda et al. (2019) thus making fairness in communication purposes essential. Even when organisations remain transparent and fair their communication effectiveness during a crisis may be insufficient by itself. For stakeholders to view these elements as truthful organisations must maintain active dialogue with their audience to make communication both clear and accessible even after the initial messages were released (Xiao and Yu, 2025).

Stakeholder Trust in AI Utilisation

The relationship between Stakeholder Trust in AI Utilisation and crisis communication effectiveness was statistically significant ($r = 0.661$, $p = 0.007$) but Stakeholder Trust did not prove a meaningful predictor in the regression model ($p = 0.199$). Although trust holds importance it seems to be less crucial than fair and transparent practises for determining the success of AI-driven crisis communication efforts. The effect of stakeholder trust on successful AI communication remains essential but other ethical aspects like transparency and fairness can additionally influence its impact as per previous research (Kim et al., 2019).

The level of stakeholder trust in AI strongly influences their behaviour during interactions with AI-evolved crisis communication according to Xiao and Yu (2025). Stakeholders may trust the system based on its observed ethical performance alongside its clear decision disclosure. The researchers found evidence that trust in AI systems builds over time depending on how well developed and ethically sound AI systems function (Banasik and Pikiewicz, 2023).

Ethical Guideline Follow-up

Follow-up actions originating from ethical guidelines served as the most crucial indicator of Crisis Communication success because their relationship ($r = 0.853$) with effectiveness proved statistically significant ($p = 0.001$). Proper ethical frameworks need to be followed in order to effectively utilise AI systems for crisis communication activities. Organisational excellence in handling crisis communication functions from both ethical practise adoption and regular ethical audit performance. Choi (2024) provides conclusive evidence of ethical guidance being essential to achieve responsible AI application within crisis communication. Organisations gaining trust from the public and creating a positive image through emergency situations can use economical AI systems which follow ethical standards. The effectiveness of emergency communication increases when organisations sustain their ethical guidelines through Prahl and Goh (2021). Organisations need to continuously examine their AI systems to maintain ethical accountability as well as crisis management preparedness since ethical follow-up operations act as fundamental communication effectiveness elements.

Implications for AI in Crisis Communication

The study introduces practical proof which demonstrates the positive effects ethical standards like transparency and fairness together with ethical guideline compliance have on AI solution success in crisis communication. The study results confirm the dual requirement in technology skills and moral standards for achieving effective AI crisis management identified by Cheng et al. (2024) and Banasik and Pikiewicz (2023.

Multiple elements act as obstacles for stakeholder trust development concerning AI systems according to research findings. The achievement of crisis communication success depends on trust yet trust itself does not represent the complete outcome. The development of AI trust depends on how transparent the system is and how fair it operates with correct adherence to ethical principles (Xiao and Yu, 2025). Organisations must establish a procedure for crisis communication with AI that should combine technological advancement with embedded ethical guidelines for AI development methods and deployment techniques.

Conclusion

The study demonstrates that fair practices along with transparent systems and proper ethical follow-up protocols determine AI-based crisis communication effectiveness. The analysis results showed that organisations achieve better crisis communication results through the combination of transparent and equitable implementation of AI systems into their operations. Therefore ethical AI approaches remain vital for building successful crisis messaging. The follow-up process of ethical guidelines proved to be the primary determinant of communication effectiveness because it demonstrates the necessity of continuous ethical monitoring for AI implementation. Trust between stakeholders showed a positive relationship with effectiveness yet it failed to function as a critical predictor probably because ethical issues beyond trust drive its formation.

Recommendations

Organisations using AI for crisis communication should adopt the research recommendations to build superior crisis management capabilities.

1. Organisations need to implement fair design structures for their AI systems when developing new solutions to make the systems transparent. Organisations must present thorough technical details for their AI decision programs while providing equal opportunities to all stakeholders in their processes.
2. The regular assessment of AI ethics stands vital because it helps organizations to verify that AI systems comply with moral standards. AI system cheques need to be performed by organizations on a regular basis with the goal of detecting biases to enable bias correction as well as solving transparency issues and ethical concerns.
3. Collaborating with stakeholders provides essential support in achieving AI-driven communication but does not function alone as a separate predictive factor. The development of lasting stakeholder relationships demands organizations to confirm their AI systems follow ethical standards that their stakeholders actively anticipate.
4. The continuous research of AI by companies must focus on ethical system upgrades for better crisis communication solutions as well as AI crisis management efficiency maintenance.

References

Banasik, A. and Pikiewicz, P., 2023. APPLICATION OF AI IN CRISIS MANAGEMENT. *Scientific Papers of Silesian University of Technology. Organization and Management/Zeszyty Naukowe Politechniki Slaskiej. Seria Organizacji i Zarzadzanie*, (186).

Benaben, F., Fertier, A., Montarnal, A., Mu, W., Jiang, Z., Truptil, S., Barthe-Delanoë, A.M., Lauras, M., Mace-Ramete, G., Wang, T. and Bidoux, L., 2020. An AI framework and a metamodel for collaborative situations: Application to crisis management contexts. *Journal of Contingencies and Crisis Management*, *28*(3), pp.291-306.

Bunker, D., 2020. Who do you trust? The digital destruction of shared situational awareness and the COVID-19 infodemic. *International Journal of Information Management*, *55*, p.102201.

Cheng, Y., 2018. How social media is changing crisis communication strategies: Evidence from the updated literature. *Journal of contingencies and crisis management*, *26*(1), pp.58-68.

Cheng, Y., Lee, J. and Qiao, J., 2024. Crisis communication in the age of AI: Navigating opportunities, challenges, and future horizons. *Media and crisis communication*, pp.172-194.

Cheng, Y., Lee, J. and Qiao, J., 2024. Crisis communication in the age of AI: Navigating opportunities, challenges, and future horizons. *Media and crisis communication*, pp.172-194.

Choi, S., 2024. *The Role of Ethics of Care Messaging in AI Crisis Communication: Examining the Interplay Role of Ethics of Care and Crisis Response Strategies on Organization-Public*

Relationship, Organizational Reputation and Behavioral Intention (Doctoral dissertation, Colorado State University).

Christensen, T. and Lægreid, P., 2020. The coronavirus crisis—crisis communication, meaning-making, and reputation management. *International public management journal*, *23*(5), pp.713-729.

Coombs, W.T., 2020. Conceptualizing crisis communication. In *Handbook of risk and crisis communication* (pp. 99-118). Routledge.

Dwiedienawati, D., Tjahjana, D., Faisal, M., Gandasari, D. and Abdinagoro, S.B., 2021. Determinants of perceived effectiveness in crisis management and company reputation during the COVID-19 pandemic. *Cogent Business and Management*, *8*(1), p.1912523.

Ehlers, R.R., 2021. *The Effects of Artificial Intelligence on Crisis Communication Rebuild Strategies* (Master's thesis, University of South Dakota).

Farrokhi, A., Shirazi, F., Hajli, N. and Tajvidi, M., 2020. Using artificial intelligence to detect crisis related to events: Decision making in B2B by artificial intelligence. *Industrial marketing management*, *91*, pp.257-273.

Hinsberg, K.L. and Lamanna, A.J., 2024. Crisis communication in construction: Organizational strategies for worksite fatalities. *Journal of safety research*, *88*, pp.145-160.

Kalogiannidis, S., Kalfas, D., Papaevangelou, O., Giannarakis, G. and Chatzitheodoridis, F., 2024. The role of artificial intelligence technology in predictive risk assessment for business continuity: A case study of Greece. *Risks*, *12*(2), p.19.

Kapucu, N. and Ustun, Y., 2018. Collaborative crisis management and leadership in the public sector. *International Journal of Public Administration*, *41*(7), pp.548-561.

Kim, Y., Kang, M., Lee, E. and Yang, S.U., 2019. Exploring crisis communication in the internal context of an organization: Examining moderated and mediated effects of employee-organization relationships on crisis outcomes. *Public Relations Review*, *45*(3), p.101777.

Lovari, A. and Bowen, S.A., 2020. Social media in disaster communication: A case study of strategies, barriers, and ethical implications. *Journal of Public Affairs*, *20*(1), p.e1967.

Moolchandani, S., 2025. AI-driven risk platform automating data aggregation and risk insight generation. *International Journal of Science Engineering and Technology*, *13*(1), p.12.

Ozanne, L.K., Ballantine, P.W. and Mitchell, T., 2020. Investigating the methods and effectiveness of crisis communication. *Journal of Nonprofit and Public Sector Marketing*, *32*(4), pp.379-405.

Panda, G., Upadhyay, A.K. and Khandelwal, K., 2019. Artificial intelligence: A strategic disruption in public relations. *Journal of Creative Communications*, *14*(3), pp.196-213.

Prahl, A. and Goh, W.W.P., 2021. “Rogue machines” and crisis communication: When AI fails, how do companies publicly respond?. *Public Relations Review*, *47*(4), p.102077.

Sarella, P.N.K. and Mangam, V.T., 2024. AI-driven natural language processing in healthcare: transforming patient-provider communication. *Indian Journal of Pharmacy Practice, 17*(1).

Whims, T., 2024. AI at the Helm: Transforming Crisis Communication Through Theory and Advancing Technology.

Xiao, Y. and Yu, S., 2025. Can ChatGPT replace humans in crisis communication? The effects of AI-mediated crisis communication on stakeholder satisfaction and responsibility attribution. *International Journal of Information Management*, *80*, p.102835.

Xiao, Y. and Yu, S., 2025. Can ChatGPT replace humans in crisis communication? The effects of AI-mediated crisis communication on stakeholder satisfaction and responsibility attribution. *International Journal of Information Management*, *80*, p.102835.

Appendix: Questionnaire

Variable	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Fairness and Transparency in AI Utilisation	1. The AI system used in crisis communication treats all stakeholders equally, without bias.					
	2. The decision-making process of the AI system is explained clearly to stakeholders.					
	3. The AI system used for crisis communication operates with full transparency, making it easy for stakeholders to understand how it works.					
Stakeholder Trust in AI Utilisation	1. I trust AI systems to provide accurate and reliable information during a crisis.					
	2. Stakeholders are confident in the AI's ability to effectively manage communication during a crisis.					
	3. The use of AI in crisis communication increases my trust in the organization's ability to handle the situation.					
Ethical Guideline Follow-up	1. AI systems used in crisis communication strictly follow ethical guidelines (e.g., transparency, fairness, accountability).					

Variable	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	2. Crisis communication professionals are trained in ethical AI practices, ensuring the responsible use of AI.					
	3. Regular audits are conducted to ensure AI systems follow ethical standards in crisis communication.					
Effectiveness of Crisis Communication	1. The AI-driven crisis communication system effectively conveys accurate and timely information to the public.					
	2. The use of AI in crisis communication helps reduce misinformation and confusion during a crisis.					
	3. The AI system enhances the overall efficiency of crisis management by providing clear, actionable communication.					

Analysis Tables

What is your gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	97	51.9	51.9	51.9
	Female	90	48.1	48.1	100.0
	Total	187	100.0	100.0	

What is your age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 20	15	8.0	8.0	8.0
	20-29 years	48	25.7	25.7	33.7
	30-39	75	40.1	40.1	73.8
	40-49	41	21.9	21.9	95.7
	50 and above	8	4.3	4.3	100.0
	Total	187	100.0	100.0	

Case Processing Summary

		N	%
Cases	Valid	187	100.0
	Excluded[a]	0	.0
	Total	187	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.648	3

Correlations

		Fairness and Transparency in AI-Utilisation	Stakeholder Trust in AI Utilisation	Ethical Guideline Follow-up	Effectiveness_of_Crisis_Communication
Fairness_and_Transparency_in_AI_Utilisation	Pearson Correlation	1	.661**	.726**	.735**

	Sig. (2-tailed)		.000	.002	.000
	N	186	186	186	186
Stakeholder_Trust_in_AI_Utilisation	Pearson Correlation	.661**	1	.685**	.661**
	Sig. (2-tailed)	.000		.000	.007
	N	186	186	186	186
Ethical_Guideline_Followup	Pearson Correlation	.726**	.685**	1	.853**
	Sig. (2-tailed)	.002	.000		.001
	N	186	186	186	186
Effectiveness_of_Crisis_Communication	Pearson Correlation	.735**	.661**	.853**	1
	Sig. (2-tailed)	.000	.007	.001	
	N	186	186	186	186

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.770[a]	.721	.708	.67289

a. Predictors: (Constant), Ethical_Guideline_Followup, Fairness_and_Transparency_in_AI_Utilisation, Stakeholder_Trust_in_AI_Utilisation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.417	3	7.806	17.240	.000[b]
	Residual	82.406	182	.453		
	Total	105.824	185			

a. Dependent Variable: Effectiveness_of_Crisis_Communication

b. Predictors: (Constant), Ethical_Guideline_Followup, Fairness_and_Transparency_in_AI_Utilisation, Stakeholder_Trust_in_AI_Utilisation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.797	.294		6.114	.000
	Fairness_and_Transparency_in_AI_Utilisation	.736	.056	.424	6.047	.000
	Stakeholder_Trust_in_AI_Utilisation	-.125	.097	-.121	-1.288	.199
	Ethical_Guideline_Followup	.870	.101	.239	2.666	.008

a. Dependent Variable: Effectiveness_of_Crisis_Communication