

THE INFLUENCE OF AI-GENERATED FAKE NEWS ON MILITARY COMMUNICATION: A CASE STUDY OF THE *TITU FIREFIGHTERS'* *DETACHMENT*

Claudiu Gabriel STAN, Valentina Ofelia ROBESCU

"Valahia" University of Targoviste, Targoviste, Romania

claudiugabby@yahoo.com

robescu_ofelia@yahoo.com

Abstract: *The rapid proliferation of artificial intelligence (AI) technologies has significantly transformed the information ecosystem, enabling the large-scale production and dissemination of highly convincing synthetic content. Within the context of emergency response institutions, this phenomenon raises critical concerns regarding the integrity of communication, operational efficiency, and public trust. This study examines the influence of AI-generated fake news on military-style communication structures, focusing on a case study of the firefighters' detachment in Titu, Romania. The research is based on a structured questionnaire administered to operational and administrative personnel within the unit, aiming to assess their perceptions, experiences, and level of preparedness in relation to digital disinformation. The study explores key dimensions such as awareness of fake news, perceived risks associated with AI-generated misinformation, the ability to distinguish between authentic and fabricated information, and the perceived effectiveness of institutional communication mechanisms in countering false narratives. Preliminary findings indicate a high level of concern among respondents regarding the growing difficulty of differentiating between real and AI-generated information, as well as the potential of fake news to undermine public confidence and complicate crisis management. The results also highlight a perceived need for enhanced training programmes, improved communication strategies, and more rapid and transparent institutional responses to misinformation. Furthermore, social media platforms are identified as primary vectors for the dissemination of false information, amplifying the challenges faced by emergency services during critical interventions. The study contributes to the broader academic discourse on information security and crisis communication by providing empirical insights from a frontline emergency response unit. It underscores the necessity of integrating digital literacy and disinformation resilience into professional training frameworks, as well as strengthening inter-institutional coordination in combating AI-driven fake news. Ultimately, the research emphasises that maintaining credible, timely, and authoritative communication is essential for preserving operational effectiveness and public trust in emergency response systems.*

Keywords: *AI-generated Fake News; Emergency Communication; Disinformation; Firefighters; Crisis Management*

JEL Classification: *D80; D83; H56; L86*

1. Introduction

The accelerated development of artificial intelligence (AI) technologies has profoundly reshaped the contemporary information environment, facilitating not only the rapid dissemination of data but also the large-scale generation of synthetic and potentially misleading content. Among the most concerning manifestations of this transformation is the emergence of AI-generated fake news, which possesses an unprecedented capacity to imitate credible sources, distort reality, and influence public perception. Within critical sectors such as emergency response and public safety, the implications of such phenomena extend beyond informational integrity, directly affecting operational effectiveness and institutional trust.

Emergency intervention structures, including firefighter units, operate within a highly dynamic and time-sensitive communication framework, where the accuracy, clarity, and timeliness of information are essential. In this context, the infiltration of false or manipulated information, particularly when amplified through digital platforms can generate confusion among the population, hinder coordinated responses, and compromise decision-making processes. Furthermore, the increasing sophistication of AI-generated content complicates the ability of both professionals and the public to distinguish between authentic and fabricated information, thereby intensifying the risks associated with misinformation.

This study focuses on analysing the influence of AI-generated fake news on military-style communication within emergency services, using the firefighters' detachment in Titu as a case study. The research is grounded in empirical data collected through a structured questionnaire administered to personnel within the unit, aiming to capture their perceptions, experiences, and level of preparedness in addressing digital disinformation. Particular attention is given to issues such as awareness of fake news, perceived vulnerabilities in communication processes, the effectiveness of institutional responses, and the necessity for specialised training in identifying and countering misleading information.

The selection of this research topic is closely linked to both the contemporary informational context and the author's direct professional experience within the field of emergency response. As commander of the firefighters' detachment in Titu, I am actively involved in coordinating operational activities and managing communication processes in high-pressure, time-sensitive situations. This position provides not only practical insight into the dynamics of intervention but also a clear perspective on the emerging challenges posed by the digital information environment. The motivation behind this study therefore stems from a dual perspective: on the one hand, the need to better understand the impact of AI-generated disinformation on institutional communication, and on the other, the desire to contribute to improving the resilience of emergency services against such threats.

Furthermore, the topic is particularly relevant in the current socio-technological context, where the boundaries between authentic and fabricated information are becoming increasingly blurred. For emergency response institutions, maintaining credibility, transparency, and efficiency in communication is essential for ensuring public trust and effective crisis management. Consequently, this research is motivated by both professional responsibility and academic interest, aiming to bridge the gap between theoretical analysis and practical application in the field of emergency communication.

Moreover, the relevance of this research lies in its contribution to understanding how emerging technological risks intersect with organisational communication in high-stakes environments. By examining the perceptions of frontline responders, the study seeks to identify gaps in current practices and propose directions for enhancing resilience against AI-driven disinformation. Ultimately, ensuring reliable communication in emergency situations is not only a matter of operational efficiency but also a fundamental condition for maintaining public confidence in institutions responsible for safety and crisis management.

2. Literature Review

The phenomenon of fake news has been extensively analysed in recent years, particularly in the context of rapid technological advancement and the expansion of digital communication platforms. Scholars have emphasised that fake news is not a novel occurrence; however, its scale, speed of dissemination, and level of sophistication have significantly increased due to the development of artificial intelligence technologies. According to Allcott Hunt and Matthew Gentzkow, fake news can be defined as intentionally false information designed to mislead readers, often mimicking the format of legitimate news sources “to exploit cognitive biases and attract attention” (Allcott & Gentzkow, 2017, p. 213).

The integration of AI into content generation has further complicated this landscape. Advanced models are now capable of producing highly realistic text, images, and videos, which significantly reduces the ability of individuals to distinguish between authentic and fabricated information. Chesney Robert and Danielle Citron argue that deepfakes and AI-generated media represent a new category of informational threat, noting that such technologies “undermine trust in information ecosystems and create plausible deniability for malicious actors” (Chesney & Citron, 2019, p. 1763).

Within the field of crisis communication, the impact of misinformation has been identified as particularly significant. Effective communication during emergencies relies on accuracy, timeliness, and credibility. According to Timothy Coombs, misinformation can disrupt these core principles, as “conflicting or false messages during crises can intensify uncertainty and reduce public compliance with official guidance” (Coombs, 2015, p. 142). This perspective is particularly relevant for emergency services, where operational success often depends on the public’s ability to respond appropriately to official information.

Moreover, the role of social media as a primary vector for the dissemination of fake news has been widely documented. Sinan Aral and colleagues demonstrate that false information spreads more rapidly and widely than truthful content, largely due to its novelty and emotional appeal, stating that “falsehood diffuses significantly farther, faster, deeper, and more broadly than the truth” (Vosoughi, Roy & Aral, 2018, p. 1146). This dynamic poses a substantial risk in emergency contexts, where rapid information flows can either support or hinder response efforts.

In the specific context of public institutions and emergency response organisations, trust plays a central role. Niklas Luhmann conceptualises trust as a mechanism for reducing social complexity, arguing that “without trust, coordinated action becomes significantly more difficult” (Luhmann, 1979, p. 25). When fake news targets institutions such as fire services, it can erode this trust, leading to scepticism, reduced cooperation, and challenges in managing crisis situations effectively.

Recent studies have also highlighted the importance of digital literacy and institutional preparedness in countering misinformation. Claire Wardle emphasises that combating fake news requires both individual competencies and organisational strategies, noting that “understanding the mechanisms of information disorder is essential for developing effective responses” (Wardle & Derakhshan, 2017, p. 7). Training personnel to recognise and respond to disinformation is therefore increasingly viewed as a necessary component of modern emergency management.

As we can observe, the existing literature underscores the growing complexity of the informational environment shaped by AI technologies and highlights the significant risks posed by fake news, particularly in high-stakes domains such as emergency response. However, there remains a need for empirical studies focused on specific operational units, such as firefighter detachments, to better understand how these challenges manifest in practice and how they can be effectively addressed.

3. Methodology

This methodology of research employs a quantitative research design, based on the use of a structured questionnaire aimed at assessing the perceptions, experiences, and level of awareness of personnel regarding AI-generated fake news and its impact on emergency communication. The methodological approach was selected in order to obtain empirical data directly from practitioners operating within a real intervention environment, thus ensuring the practical relevance and applicability of the findings.

The research instrument consisted of a questionnaire comprising 24 items, designed to capture multiple dimensions of the analysed phenomenon. The items included both closed-ended questions (using Likert-scale responses and multiple-choice options) and open-ended questions, allowing respondents to elaborate on their experiences and opinions. The questionnaire was structured around several key themes: professional background (function and seniority), level of exposure to training on disinformation, perception of risks associated with AI-generated fake news, ability to identify false information, sources and frequency of encountered misinformation, and evaluation of institutional communication and response mechanisms. Additionally, several items focused on identifying perceived vulnerabilities, risks, and potential measures for improving resilience against disinformation within emergency services. The questionnaire is available at <https://forms.gle/vRhG6gXy1cCQR6FXA>.

The target population consisted of personnel from the Firefighters' Detachment in Titu, ensuring a homogeneous sample in terms of organisational context and operational responsibilities. A total of 104 respondents participated in the study, representing both operational and administrative staff. This sample size provides a relevant basis for identifying trends and patterns in perceptions related to fake news and its impact on professional activity. Data collection was conducted through an online survey, using the Google Forms platform. This method was chosen due to its accessibility, efficiency, and ability to facilitate anonymous participation, thereby encouraging honest and unbiased responses. The questionnaire was distributed internally within the unit, and participation was voluntary. The collected data were subsequently analysed using descriptive statistical methods, focusing on frequency distributions, percentages, and comparative interpretations of responses.

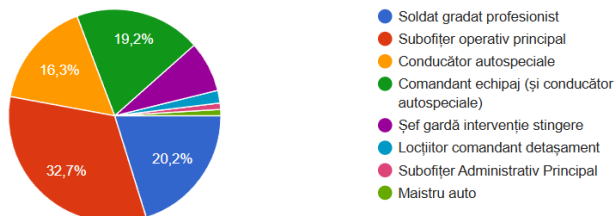
Qualitative answers obtained from open-ended questions were analysed through thematic categorisation, allowing for the identification of recurring ideas and relevant insights. Overall, the chosen methodology ensures a balanced approach, combining quantitative measurement with qualitative interpretation, and provides a solid empirical foundation for examining the influence of AI-generated fake news on communication within emergency response structures.

4. Results and Discussion

From the perspective of occupational roles, the respondents represent a diverse range of professional categories, which enhances the robustness of the analysis. The largest group is composed of senior operational non-commissioned officers (32.7%), followed by professional enlisted personnel (soldiers and corporals) (20.2%), crew commanders and vehicle operators (19.2%), and vehicle operators (16.3%). Smaller proportions of the sample include respondents occupying other operational and administrative roles, such as fire intervention shift leaders, deputy detachment commanders, administrative non-commissioned officers, and technical personnel (auto mechanics). This distribution indicates that the collected perspectives are not limited to a single hierarchical level but rather reflect the views of a heterogeneous professional body with varied responsibilities in both intervention and support activities (view *Figure 1*).

Figure 1: Position held within the detachment

104 răspunsuri



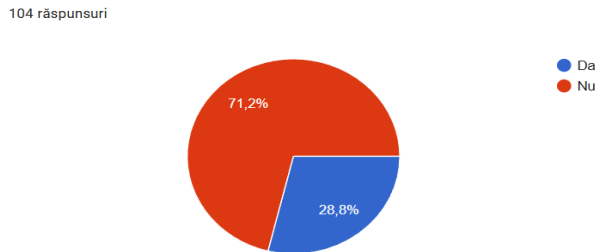
Source: Google Forms

In terms of length of service, the majority of respondents fall within the 10–20 years of experience category (59.6%), suggesting a high degree of professional maturity and prolonged exposure to the operational realities of emergency response. Additionally, 23.1% of respondents have less than 5 years of experience, 10.6% have over 20 years, and 6.7% fall within the 5–10 years interval. This distribution is particularly relevant for the interpretation of results, as it indicates that the perceptions expressed are largely shaped by personnel with substantial field experience.

A particularly significant aspect in relation to the research topic is participation in training or courses on disinformation / fake news. The data reveal that only 28.8% of respondents have participated in such training, while a substantial majority of 71.2% reported no prior involvement in this type of professional development. This finding is noteworthy, as it highlights a gap in institutional training in an area that is becoming increasingly critical for emergency response organisations. At the same time, it provides an explanatory framework for the strong emphasis placed by

respondents, in subsequent sections, on the need for systematic training in identifying and countering digital misinformation (view *Figure 2*).

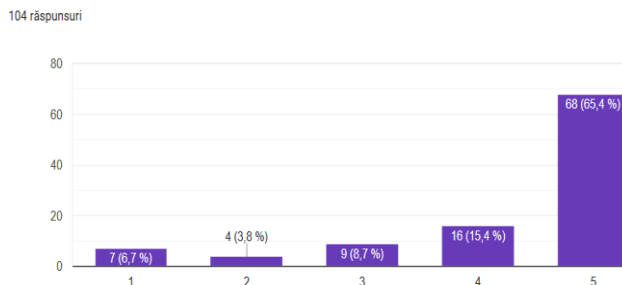
Figure 2: Participation in courses or training on disinformation / fake news



Source: Google Forms

The empirical results broadly confirm the theoretical assumptions identified in the literature review, namely that AI-generated fake news increases informational uncertainty, accelerates the circulation of false narratives, and may weaken institutional credibility in crisis contexts. As Wardle and Derakhshan argue, the contemporary information environment is marked by a complex form of “information disorder” that requires both institutional and individual resilience (Wardle & Derakhshan, 2017, p. 7). In the specific case of the Titu Firefighters’ Detachment, the questionnaire data indicate that respondents perceive this phenomenon not as a hypothetical threat, but as a concrete operational and communicational challenge. A first significant result concerns the perception of risk associated with AI-generated fake news. For Item 4, 65.4% of respondents selected the highest agreement category, while a further 15.4% selected the next highest category. Thus, more than four-fifths of the sample regarded AI-generated fake news as a real risk for intervention institutions (view *Figure 3*). This result is fully consistent with the literature on synthetic media and deepfakes, which emphasises that advanced AI systems can generate highly persuasive content capable of undermining trust, distorting events, and creating operational vulnerabilities. Chesney and Citron warn that deepfakes pose serious risks for “privacy, democracy, and national security” (Chesney & Citron, 2019, p. 1763), and the present findings suggest that emergency institutions should also be added to this area of concern.

Figure 3: AI-generated fake news represents a real risk for emergency response institutions



Source: Google Forms

The responses to Item 5 reinforce this interpretation. A combined 66.3% of participants selected the upper two categories when asked whether it is becoming increasingly difficult to distinguish between real information and AI-generated content, while 24% chose the middle category. This indicates not only awareness of the problem, but also recognition of a deteriorating epistemic environment. The result directly reflects the argument advanced by Vosoughi, Roy and Aral that false information spreads more efficiently than truthful information and benefits from novelty, emotional salience, and platform dynamics. Their conclusion that “falsehood diffused significantly farther, faster, deeper, and more broadly than the truth” (Vosoughi, Roy & Aral, 2018, p. 1146) helps explain why operational personnel perceive growing difficulty in verifying digital content under conditions of urgency.

This perception of informational ambiguity is especially important in emergency communication. In intervention settings, decisions must often be taken rapidly, and trust in the accuracy of available information becomes a functional necessity. In Luhmann’s terms, trust is “a mechanism for the reduction of social complexity” (Luhmann, 1979, p. 25). When information can no longer be assessed quickly and reliably, complexity increases, and both institutional action and public response may become less coordinated. The answers offered by the respondents indicate precisely this fear: that AI-generated fake news introduces an additional layer of uncertainty into an already highly demanding operational environment.

The questionnaire also shows a strong belief that fake news has consequences beyond the internal informational environment of the institution. Item 6 indicates that respondents largely consider fake news capable of influencing public perception of firefighters’ activity. Although the transcription of this item contains some formatting irregularities, the dominant tendency is clearly one of high agreement. This result is corroborated by the open-ended responses, where participants repeatedly referred to “image”, “credibility”, “public perception”, and “loss of trust”. Such answers are theoretically grounded in the work of Allcott and Gentzkow, who describe fake news as intentionally false content designed to resemble legitimate news forms and exploit audience vulnerabilities (Allcott & Gentzkow, 2017, p. 213). In the case of emergency services, the danger is particularly acute because reputation is not merely symbolic; it conditions compliance, cooperation, and legitimacy in crisis situations.

The operational implications are even more visible in Items 10 and 12. For Item 10, 51% of respondents selected the highest category and a further 19.2% selected the next highest, indicating that over 70% believe false information can create confusion among the population during interventions. Similarly, for Item 12, 49% selected the highest category and 25% the next highest, meaning that nearly three-quarters of respondents consider disinformation capable of making crisis management more difficult. These results are strongly aligned with crisis-communication theory, which stresses that uncertainty and contradictory messages reduce the effectiveness of institutional response and increase public anxiety. In practical terms, the qualitative data show how respondents translate this general risk into concrete operational consequences: panic, unnecessary calls to 112, delayed access to intervention sites, hostile reactions from citizens, false alarms, resource wastage, and distorted judgements regarding response times.

The answers to Item 21 are especially relevant in this respect. Respondents most frequently identified panic among the population, the erosion of trust in firefighters,

reputational damage to the institution, false alarms, unnecessary mobilisation of resources, delayed interventions, and even verbal or physical aggression towards personnel. These concerns reflect a clear understanding that fake news does not remain confined to the symbolic sphere; rather, it can transform into behavioural effects that directly hinder operational efficiency. Several respondents explicitly mentioned recurring online accusations that firefighters arrive late or travel “without water in the tank”, demonstrating that misinformation often targets visible aspects of intervention and seeks to simplify complex operational realities into emotionally charged accusations. In this sense, the findings confirm that fake news functions not only as disinformation, but also as reputational sabotage.

Another important set of results concerns the sources from which false information is believed to emerge. The answers to Item 8 show a very clear concentration around social media platforms. A frequency count of the open-ended responses indicates that TikTok was mentioned 85 times and Facebook 67 times, followed by online press (39 mentions), television (34), private groups (11), and WhatsApp (9). This distribution is analytically significant. It shows that respondents perceive the principal vectors of misinformation not in traditional official channels, but in fast-moving, socially amplified digital environments. This is entirely consistent with the literature, which identifies social media as the ecosystem in which fake news gains speed, reach, and visibility. The prominence of TikTok is especially noteworthy, as it suggests that short-form video platforms are viewed as major carriers of simplified or manipulated narratives about emergency interventions.

Table 1: Main Sources of False Information Regarding Emergency Situations

Source of misinformation	Frequency (mentions)	Percentage (%)
TikTok	85	81.7%
Facebook	67	64.4%
Online press	39	37.5%
Television	34	32.7%
Private groups	11	10.6%
WhatsApp	9	8.7%

Source: Google Forms

The answers to Item 9 further strengthen this interpretation. Of the 104 respondents, 50 stated that they had encountered false information about firefighters’ interventions online “sometimes”, 36 answered “rarely”, 15 “frequently”, and only 3 “never”. In other words, 97.1% of respondents had encountered such content at least occasionally. This is an extremely important empirical result, because it indicates that fake news is not perceived merely through abstract media narratives or academic discourse; it is encountered directly by personnel working in the field. The case study therefore offers evidence of experiential rather than merely theoretical awareness.

With regard to institutional preparedness, the findings reveal both confidence and concern. On the one hand, responses to Item 17 suggest a relatively strong self-assessment of individual ability to identify AI-generated fake content: 54 respondents rated their capacity as “good”, 42 as “very good”, and only 8 as “average”. This indicates that personnel generally trust their own judgement. On the other hand, this individual confidence does not eliminate the perceived need for

structured training. Item 7 shows a strong orientation towards the view that operational staff should be trained to identify false digital information, while the answers to Item 18 repeatedly classify such training as “important” or “very important”. This apparent tension is analytically meaningful: respondents believe they possess a reasonable baseline capacity but also recognise that the sophistication of AI-generated content is increasing and that institutional training is necessary to maintain readiness. This conclusion is fully compatible with Wardle and Derakhshan’s argument that the response to information disorder must combine individual literacy with organisational strategy (Wardle & Derakhshan, 2017, p. 7).

The results concerning official communication are more nuanced. For Item 13, which asked whether the institution’s official communication process is sufficiently rapid to combat false information, responses were distributed more evenly: 32.7% selected the middle category, while 26% and 27.9% selected the upper two categories. This suggests cautious rather than unqualified confidence. A similar pattern appears in Item 14, regarding whether the leadership of the Department for Emergency Situations publicly recognises the risks generated by disinformation: 30.8% chose the middle category, while 24% and 29.8% selected the upper categories. These results imply that respondents do not reject institutional efforts, but neither do they perceive them as fully adequate or consistently proactive.

By contrast, the pattern for Item 15 is much clearer. Here, 87 respondents expressed total agreement that the public positions of intervention-structure leadership contribute to combating false information, while 17 expressed total disagreement. This indicates that leadership communication is seen as important and potentially effective when it occurs. The issue, therefore, is not whether official communication matters, but whether it is sufficiently rapid, systematic, and visible. The open-ended answers support precisely this reading: the most common proposed measures were faster official communication, immediate clarification of false claims, active monitoring of social media, collaboration with the press, public education, and stronger sanctions for those spreading fake news.

The qualitative material provided for Items 19, 22 and 23 is particularly rich and reveals a coherent practical doctrine emerging from within the detachment itself. Respondents most frequently recommended: periodic training for personnel; rapid verification of online information; faster and more transparent official communication; closer collaboration with the media; public education campaigns; monitoring teams dedicated to social media; and legal or administrative sanctions, including fines, account closures, and stronger punishment for deliberate disinformation. Particularly notable is the repeated demand for speed. In many answers, respondents implicitly argue that the best antidote to fake news is not simply denial, but immediate, clear, visible, and authoritative counter-information. This insight is closely aligned with crisis-communication theory, which holds that institutions must respond early and consistently in order to preserve credibility and reduce uncertainty.

Finally, the open-ended answers to Item 24 provide concrete illustrations of how fake news can affect professional activity. Although many respondents stated that they had not personally experienced a severe case, a significant number described recurrent patterns: false claims about major fires, rumours that crews arrived late or without water, edited or fragmentary videos circulated on TikTok, panic generated among relatives and the public, unnecessary calls to 112, and increased hostility at

intervention sites. These examples are valuable because they show that even when AI-generated fake news has not yet produced catastrophic organisational failure, it already imposes communicational burdens, consumes attention, and shapes the emotional climate in which emergency response unfolds.

5. Conclusions

We examined the influence of AI-generated fake news on communication within an emergency response structure, using the Titu Firefighters' Detachment as a case study. The findings provide strong empirical support for the central premise advanced in the literature, namely that the evolution of artificial intelligence technologies has significantly amplified the risks associated with misinformation, particularly in high-stakes operational environments.

First, the results demonstrate a clear and consistent perception among respondents that AI-generated fake news constitutes a real and growing threat to emergency institutions. The overwhelming majority of participants acknowledge not only the existence of this risk, but also its increasing complexity, especially in relation to the difficulty of distinguishing between authentic and manipulated information. This confirms the theoretical perspective that the contemporary information environment is characterised by heightened uncertainty and reduced epistemic clarity.

Secondly, the study highlights the direct operational and communicational consequences of fake news. Respondents identified multiple concrete effects, including public confusion during interventions, unnecessary emergency calls, delays in operational response, reputational damage, and even hostile reactions from citizens. These findings emphasise that fake news is not merely a reputational or informational issue, but a factor that can actively interfere with crisis management and the effectiveness of intervention activities.

Another important conclusion concerns the central role of social media platforms—particularly Facebook and TikTok—as primary vectors for the dissemination of false information. The speed and reach of these platforms amplify the impact of misleading content, making rapid institutional response essential. At the same time, the study reveals that exposure to fake news is widespread among personnel, with nearly all respondents having encountered false information related to firefighting interventions in the online environment.

In terms of institutional capacity, the findings reveal a dual dynamic. On the one hand, respondents express a relatively high level of confidence in their individual ability to identify false information. On the other hand, there is a strong and consistent demand for systematic training programmes, indicating an awareness that individual intuition is insufficient in the face of increasingly sophisticated AI-generated content. This highlights the need for integrating digital literacy and disinformation detection into the professional training of emergency personnel.

Furthermore, the evaluation of institutional communication suggests that, although official responses are generally perceived as useful and necessary, there is a need for greater speed, consistency, and visibility in countering fake news. The most frequently proposed measures, such as rapid official communication, real-time monitoring of online platforms, collaboration with media, public education, and stricter sanctions point towards a comprehensive, multi-layered approach to combating misinformation.

The study demonstrates that AI-generated fake news represents a significant emerging risk for emergency response systems, affecting not only public perception

but also operational effectiveness and institutional trust. Addressing this challenge requires a combination of organisational adaptation, technological awareness, and proactive communication strategies. For institutions such as the firefighters' detachments, maintaining credibility and ensuring the rapid dissemination of accurate information are essential conditions for effective crisis management in the digital age.

Future research could expand this analysis to multiple units or regions, as well as explore the integration of technological tools for detecting AI-generated content. Additionally, developing standardised protocols for countering disinformation in emergency contexts represents an important direction for both academic inquiry and institutional practice.

6. Practical Implications and Recommendations

The findings of this study highlight the urgent need for emergency response institutions to adapt their communication strategies and operational practices to the evolving challenges posed by AI-generated fake news. Given the direct impact of misinformation on public behaviour, institutional credibility, and intervention efficiency, a proactive and structured approach is required. The following practical implications and recommendations are derived from both the empirical results and the theoretical framework.

First, there is a clear necessity to implement systematic training programmes for personnel in the field of digital disinformation. Although many respondents expressed confidence in their ability to identify false information, the majority had not participated in formal training. This indicates a gap between perceived competence and institutional preparedness. Training should include modules on identifying AI-generated content, verifying sources, understanding misinformation dynamics, and responding appropriately in both operational and communicational contexts.

Secondly, emergency institutions should develop rapid and standardised communication protocols for countering fake news. The data suggest that delays in official responses can allow false information to spread and consolidate. Therefore, communication structures within institutions such as the Ministry of Internal Affairs (MAI) and the Department for Emergency Situations (DSU) should prioritise speed, clarity, and consistency. Establishing predefined procedures for issuing rapid clarifications, including templates and designated spokespersons, could significantly improve response effectiveness.

A third key recommendation is the creation of dedicated monitoring units responsible for tracking misinformation in real time. These teams should actively monitor social media platforms, particularly Facebook and TikTok, identified by respondents as primary sources of fake news in order to detect emerging narratives and intervene promptly. Such units could collaborate with communication departments, operational command structures, and external partners, including media organisations and digital platforms.

Furthermore, the study emphasises the importance of public education and awareness campaigns. Since misinformation often exploits gaps in public understanding, educating citizens on how to verify information and rely on official sources can significantly reduce the impact of fake news. Campaigns could include informational materials, social media content, school-based programmes, and

collaborations with journalists and influencers to promote responsible information consumption.

Another important implication concerns the need for strengthening institutional transparency and visibility. Regular updates, clear explanations of intervention procedures, and post-intervention briefings can help build trust and reduce the susceptibility of the public to misleading narratives. In this regard, the use of modern communication formats, such as short videos, infographics, and real-time updates, which can enhance engagement and accessibility.

In addition, respondents frequently highlighted the necessity of legal and regulatory measures. This includes the application of stricter sanctions for individuals who intentionally disseminate false information, as well as collaboration with online platforms to remove or limit the spread of harmful content. While such measures must be balanced with principles of freedom of expression, they are considered essential for protecting public safety in emergency contexts.

Finally, it is recommended that institutions foster inter-institutional cooperation in combating disinformation. Effective responses require coordination between operational units, communication departments, governmental bodies, and external stakeholders. Developing integrated strategies at the national level, supported by shared resources and information exchange, would enhance overall resilience against AI-driven fake news.

7. Limitations and Future Research

While the present study provides valuable empirical insights into the influence of AI-generated fake news on communication within an emergency response structure, several limitations must be acknowledged to contextualise the findings and guide future research directions. Firstly, the study is based on a single-case design, focusing exclusively on the Titu Firefighters' Detachment. Although this approach allows for an in-depth analysis of a specific operational environment, it limits the generalisability of the results. The organisational culture, level of experience, and communication practices within this unit may not fully reflect those of other detachments or emergency institutions at regional or national levels. Future research should therefore extend the analysis to multiple units, enabling comparative studies and the identification of broader patterns.

Secondly, the research relies on self-reported data collected through a questionnaire. While this method is effective for capturing perceptions, attitudes, and experiences, it may be influenced by subjective biases, such as social desirability or overestimation of individual competencies. For instance, respondents' relatively high self-assessment of their ability to identify fake news may not necessarily correspond to their actual performance in real-world scenarios. Future studies could complement survey data with experimental methods or practical assessments designed to objectively measure detection skills.

Another limitation concerns the cross-sectional nature of the study. The data reflect perceptions at a specific point in time, within a rapidly evolving technological and informational context. Given the continuous advancement of AI technologies and the increasing sophistication of synthetic content, perceptions and challenges may change significantly over time. Longitudinal research would be particularly valuable in tracking these developments and assessing the effectiveness of implemented measures. Additionally, although the questionnaire included open-ended items, the

study does not fully capture the depth and complexity of individual experiences related to fake news in operational contexts. Qualitative methods such as in-depth interviews, focus groups, or case-based analyses of specific incidents could provide richer insights into how misinformation affects decision-making, communication, and behaviour during interventions. A further limitation lies in the lack of technical analysis of AI-generated content itself. The study focuses on perceptions and organisational responses, rather than on the technological characteristics of fake news or the specific mechanisms through which it is created and disseminated. Future research could integrate interdisciplinary approaches, combining insights from communication studies, information technology, and security studies to better understand both the production and detection of AI-generated misinformation. Finally, the research does not explore in detail the institutional communication strategies at higher organisational levels (e.g., national MAI or DSU structures), nor does it assess the effectiveness of existing policies or protocols in combating fake news. Expanding the scope of analysis to include strategic and policy-level perspectives would contribute to a more comprehensive understanding of institutional resilience. In terms of future research directions, several avenues can be identified. Comparative studies across different emergency services (e.g., police, medical emergency units, civil protection) could reveal sector-specific vulnerabilities and best practices. Experimental research could test the effectiveness of training programmes in improving the detection of AI-generated content. Furthermore, the development and evaluation of technological tools, such as automated detection systems or real-time monitoring platforms represent promising areas for applied research.

While the present study offers a valuable contribution to understanding the intersection between AI-generated fake news and emergency communication, addressing its limitations through expanded, interdisciplinary, and longitudinal research will be essential for developing effective strategies to counter disinformation in the future.

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