

Risk Communication for Raising the Thai's Risk Perception Regarding COVID-19 via "Thailand's Know How to Fight With COVID-19" Social Media Initiative

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Abstract

COVID-19, a respiratory infection caused by a novel coronavirus, was first identified in December 2019 in Hubei Province, China, and rapidly spread around the globe. On February 4, 2020, the World Health Organisation declared it a Public Health Emergency of International Concern (PHEIC). Thailand reported its first case on January 12, 2020, and classified COVID-19 as a dangerous communicable disease effective March 1, 2020, establishing a COVID-19 Situation Administration Center under then-Prime Minister General Prayuth Chan-o-cha. The pandemic profoundly impacted global health, resulting in widespread illness and death while altering social behaviors and creating a "New Normal." The rapid dissemination of both accurate and misleading information led to public panic and risky health behaviors. In response, the Ministry of Public Health launched the "Thai Roo Soo COVID" or "Thailand's Know How to Fight With COVID-19" social media initiative on March 4, 2020, aimed at providing reliable information and fostering public trust. This effort included platforms such as Facebook, Line, Twitter, Instagram, TikTok, and YouTube, amassing over 5.146 million followers and generating more than 7.878 million interactions daily. The platform's success is attributed to its effective communication strategy, which emphasizes positive messaging and engages diverse age groups. It has improved access to health services and vaccinations, ultimately reducing illness and mortality rates while boosting public confidence in government actions. This study offers valuable insights for healthcare professionals and policymakers to enhance risk communication and health awareness for future health crises.

Keywords: risk communication, risk perception, COVID-19, Thailand's Know How to Fight With COVID-19, Thai Roo Soo COVID-19

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Background

The COVID-19 pandemic has had a profound and far-reaching impact on global health, leading to widespread illness, overwhelming healthcare systems, and causing significant loss of life across all regions of the world (World Health Organization, 2024). Beyond its direct health consequences, the pandemic has also triggered substantial social and economic disruptions, prompting changes in daily routines, work environments, and social interactions. These shifts have not only affected individual behaviors but have also led to a reevaluation of societal norms, often referred to as the “New Normal.” This new paradigm is characterized by increased emphasis on personal hygiene practices, such as frequent handwashing and mask-wearing, widespread adoption of social distancing measures, and a shift toward remote work, online education, and virtual social engagements. These adaptations have been essential in curbing the spread of the virus but have also altered the fabric of daily life in profound ways (World Health Organization, 2024).

Thailand reported its first confirmed case of COVID-19 on January 12, 2020. Since that initial detection, the country has faced numerous challenges in managing the outbreak, including the need to implement effective public health measures, address economic repercussions, and manage public perception and compliance. As of recent reports, Thailand ranks 33rd among countries in terms of total reported COVID-19 cases, with approximately 4.77 million confirmed infections and over 34,500 fatalities. The rapid and extensive spread of the virus underscored the critical importance of clear, consistent, and effective communication strategies to inform the public about the risks, preventive measures, and updates related to the pandemic. However, the early response exposed notable gaps in communication from key government agencies such as the Ministry of Public Health (MOPH) and the Department of Disease Control. These deficiencies contributed to a climate of mistrust and confusion among the population, which in turn hampered efforts to promote adherence to preventive behaviors.

Moreover, the widespread dissemination of both accurate information and misinformation through various channels fueled public panic, anxiety, and, in some cases, risky health behaviors—such as panic buying or resistance to vaccination. Social media platforms played a dual role in this context. On one hand, they served as vital tools for rapid information dissemination, enabling health authorities to reach broad audiences quickly and interactively. On the other hand, social media also became conduits for misinformation, rumors, and false narratives, which could undermine public health efforts, exacerbate fear, and promote risky behaviors. The effects of social media on risk communication are complex: while these platforms can enhance engagement, foster community support, and promote health literacy when used effectively, they can also amplify misinformation and sensationalism if not properly managed (Cuello-Garcia et al., 2020).

Recognizing these challenges, the Thai Ministry of Public Health (MOPH) identified the necessity of establishing communication platforms that are semi-formal, friendly, and easily accessible designed to foster two-way interaction and build trust with the public. As part of this effort, the “TRSC-Thai Roo Soo COVID-19” initiative was launched on March 4, 2020. This campaign aimed to provide trustworthy, timely information, combat misinformation, and strengthen public confidence in health authorities. It sought to effectively communicate critical health messages not only to Thai nationals but also to foreigners residing in Thailand, recognizing the diverse cultural and linguistic needs of the population.

This article specifically examines how risk communication through the social media initiative “Thailand’s Know How to Fight With COVID-19” has contributed to increasing risk perception among the Thai population. It explores the strategic approaches employed, assesses the effectiveness of messaging, and evaluates the overall impact on public awareness, attitudes, and behaviors during this ongoing pandemic. Furthermore, it considers the influential role social media platforms played in shaping public perception—highlighting both their potential to facilitate rapid, interactive communication and their risk of spreading misinformation. The study aims to provide insights into how digital communication strategies can be optimized for future public health emergencies, emphasizing the importance of trust, clarity, cultural relevance, and effective management of social media’s dual effects in health communication efforts (Taisuwan et al., 2018; Tambo et al., 2021).

Objectives

This study seeks to identify how risk communication efforts via the “Thailand’s Know How to Fight With COVID-19” social media initiative have influenced Thai citizens’ perception of COVID-19 risks, thereby supporting more informed decision-making and health behaviors.

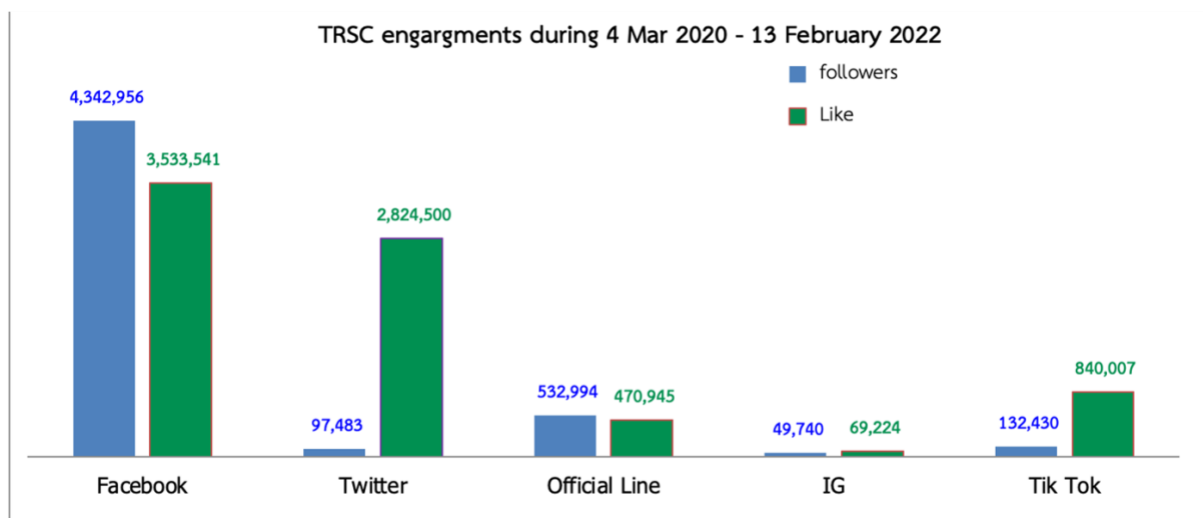
Method and Methodology

This study employed a mixed-methods approach, integrating both quantitative and qualitative data collection. Quantitatively, data were gathered through surveys comprising 59 questions from the Department of Disease Control (DDC) polls. Qualitatively, information was collected from social media comments and shares. The analysis examined follower engagement, including shares, comments, and the frequency of mentions related to three key keywords: mask-wearing, handwashing, and physical distancing. Additionally, vaccination was included as a focus for evaluation. Data collection took place from March 4, 2020, to February 13, 2022, yielding a total of 229,253 responses.

Finding

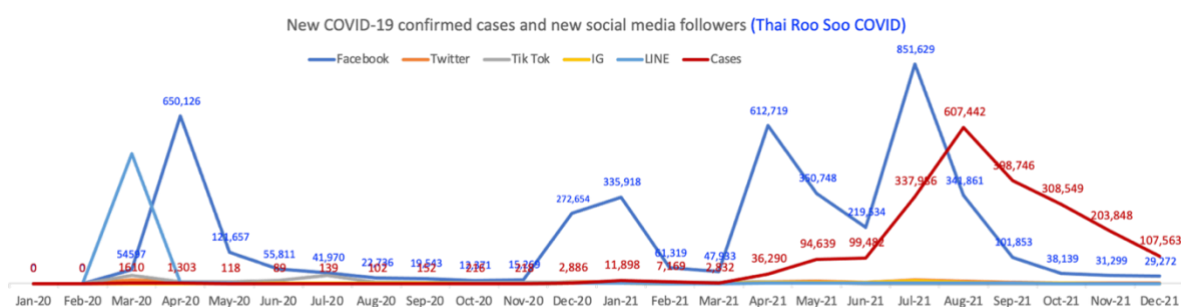
Thailand’s Know How to Fight With COVID-19 Social Media Engagement

This initiative utilized platforms such as Facebook, Line, Twitter, Instagram, TikTok, and YouTube, collectively reaching over 5.146 million followers and generating more than 7.878 million interactions daily. Further details and trends are depicted in Figure 1. The data indicate that the TRSC Fan base consists of approximately 4.3 million followers on Facebook, 97,483 on Twitter (X), 0.53 million on Line, 49,740 on Instagram, and 130,000 on TikTok.

Figure 1*Thailand's Know How to Fight With COVID-19 Social Media Engagement*

Perception of COVID-19 Risks Among Thai Citizens: The Influence of Information Dissemination

Thai citizens' perceptions of COVID-19 risks are influenced by the information circulating within society, which includes both "air war" and "ground war" communication strategies. The "air war" involves the dissemination of information through mass media, official statements, and government briefings, providing authoritative updates and guidance. In contrast, the "ground war" encompasses grassroots communication, community engagement, and interpersonal interactions that help shape public understanding at the local level, as illustrated in Figure 2. These combined communication efforts contribute to fluctuations in how citizens perceive and respond to the risks associated with COVID-19.

Figure 2*New COVID-19 Confirmed Cases and Social Media Followers of TRSC*

However, in the digital age, social media platforms have become increasingly influential in shaping public perception. As the number of COVID-19 cases and deaths reported rises, social media's role intensifies, often amplifying the emotional responses of the public. The rapid spread of information—both accurate and misleading—can heighten fear, anxiety, or complacency among citizens, depending on the nature and framing of the messages they encounter.

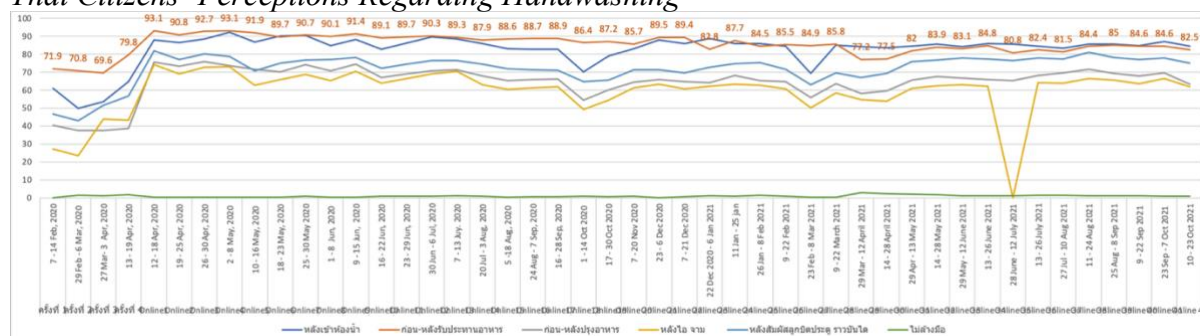
Furthermore, the continuous influx of reports about high case numbers and fatalities contributes to heightened risk perception, which may influence individuals' behavior and compliance with health measures. The dynamic interplay between official communications and social media content creates a complex environment where citizens' perceptions are constantly evolving, often affected by the tone, credibility, and volume of information circulating.

Thai Citizens' Perception Regarding the Three Key Keywords

Thai Citizens' Perception Regarding Handwashing

Figure 3

Thai Citizens' Perceptions Regarding Handwashing



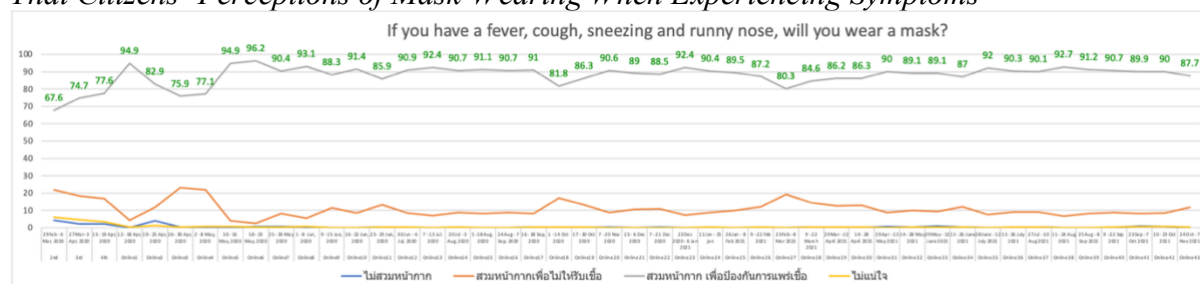
Among the key preventive behaviors during the COVID-19 pandemic, handwashing has been emphasized as a fundamental measure to reduce transmission of the virus. In Thailand, surveys and studies have shown that the majority of Thai citizens recognize the importance of hand hygiene. Specifically, approximately 80% of respondents perceive handwashing as a necessary practice, particularly after using the toilet, before meals, and before cooking. This high level of awareness indicates that public health messaging around hand hygiene has been relatively effective in reaching the population.

However, despite this generally positive perception, there are variations in compliance and understanding. For example, the lowest perception or adherence levels are observed in certain groups or specific situations—such as among some regions or age groups—where the importance of handwashing in other contexts, like after touching surfaces or before leaving the house, may be less emphasized or less practiced. Additionally, gaps in proper technique, frequency, and duration of handwashing can still exist, which may affect its effectiveness in preventing disease spread. Overall, while the perception of handwashing is high among Thai citizens, ongoing education and reinforcement are necessary to ensure consistent and proper practices across all segments of society.

Thai Citizens' Perception on Mask-Wearing When Experiencing Symptoms

Figure 4

Thai Citizens' Perceptions of Mask-Wearing When Experiencing Symptoms

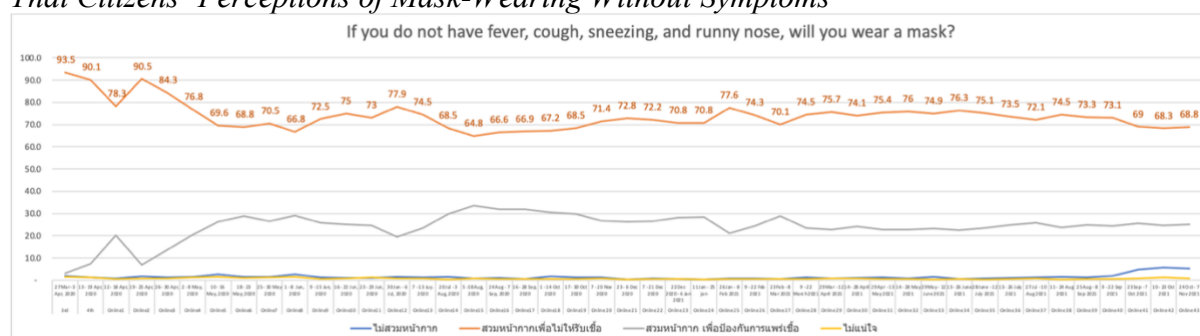


In Thailand, awareness of the importance of mask-wearing as a preventive measure during the COVID-19 pandemic is relatively high, with an average perception rate of approximately 84%. Specifically, this indicates that most Thai citizens recognize the need to wear masks if they experience symptoms such as fever, cough, sneezing, or a runny nose—common indicators that could suggest a contagious illness, including COVID-19. This high level of perception reflects effective public health messaging emphasizing personal responsibility and community protection through mask usage in symptomatic individuals.

Nonetheless, while the majority understand the importance of wearing masks when experiencing these symptoms, there may still be variations in actual practice. Some individuals may not consistently adhere to this behavior due to factors such as discomfort, social stigma, or lack of access to masks. Additionally, the perception does not always guarantee proper mask usage—such as wearing masks correctly covering both nose and mouth or replacing masks regularly. Maintaining this high perception level is crucial in curbing the spread of respiratory infections, especially during outbreaks, and ongoing public education efforts are vital to reinforce consistent and correct mask-wearing practices among the population.

Figure 5

Thai Citizens' Perceptions of Mask-Wearing Without Symptoms



Thai Citizens' Perception on Mask-Wearing When Without Symptoms

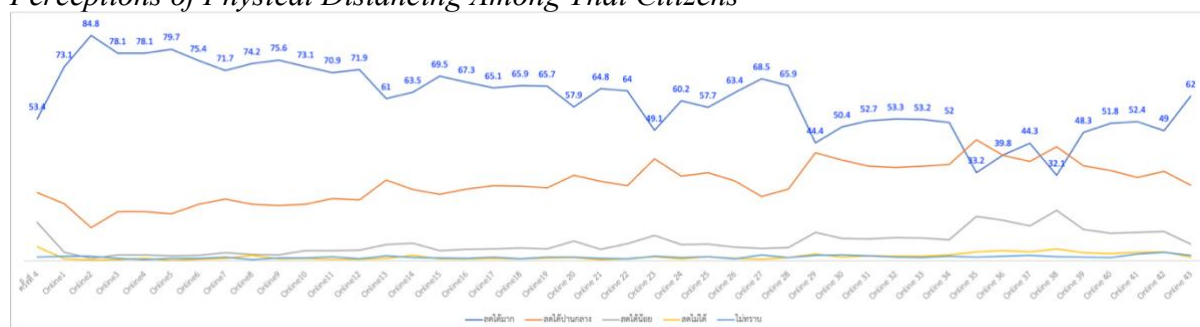
While awareness of the importance of mask-wearing among Thai citizens remains high overall, the perception of wearing masks when feeling asymptomatic (i.e., without symptoms such as fever, cough, sneezing, or runny nose) is comparatively lower, averaging around 72%. This indicates that although most people understand the need to wear masks if they are symptomatic, a slightly smaller proportion recognize the importance of mask-wearing as a preventive measure even when they feel healthy.

The lower perception in asymptomatic individuals may be attributed to several factors, including a sense of personal health and reduced perceived risk, discomfort or inconvenience associated with mask-wearing, or misconceptions about the necessity of masks for prevention without symptoms. Despite this, maintaining mask usage even when asymptomatic is crucial in mitigating silent transmission of COVID-19 and other respiratory illnesses, especially in crowded or enclosed settings. Public health campaigns continue to emphasize that mask-wearing is a collective responsibility and a key preventive behavior, regardless of whether one is feeling ill or not.

Perception of Physical Distancing Among Thai Citizens

Figure 6

Perceptions of Physical Distancing Among Thai Citizens



During the initial outbreak of COVID-19, awareness and adherence to physical distancing measures were relatively high, driven by urgent public health messaging and heightened concern about the virus. At that time, the perception of the importance of maintaining physical distance was notably strong, with an average adherence rate of around 56%. However, as the pandemic progressed and prolonged restrictions impacted daily life, adherence to physical distancing gradually decreased. Factors contributing to this decline include pandemic fatigue, economic pressures, social and cultural norms favoring close contact, and challenges in sustaining long-term behavioral changes.

Despite the decrease, maintaining physical distancing remains an essential component of infection control, particularly in crowded places and during surges. Public health authorities continue to promote awareness about the importance of physical distancing, emphasizing that it reduces virus transmission, especially when combined with other measures like mask-wearing and hand hygiene. Reinforcing these behaviors is vital to prevent future outbreaks and protect vulnerable populations.

Thai Citizens' Perception Regarding COVID-19 Vaccination at the Beginning of the Outbreak

At the onset of the COVID-19 pandemic, public perception among Thai citizens strongly favored vaccination as a critical measure to prevent infection and protect public health. Despite the COVID-19 vaccine not yet being available, many believed that vaccination would be essential once it became accessible, reflecting a high level of trust in vaccines as a safe and effective tool against the virus. However, as the vaccination campaign progressed, misinformation about vaccine safety and side effects began to spread rapidly through social media and other channels.

A significant concern arose from reports and rumors claiming severe side effects, including adverse reactions and even deaths attributed to the vaccine. This misinformation led many individuals to hesitate or outright refuse to receive the vaccine, fearing potential harm. The perception of risk associated with vaccination was heightened by stories of vaccine-related fatalities, which contributed to vaccine hesitancy and reduced vaccination uptake in some communities. This phenomenon underscored how misinformation could undermine public health efforts and emphasized the importance of transparent, credible communication to address fears and misconceptions.

Efforts to counteract these negative perceptions and misinformation are ongoing, aiming to rebuild confidence in the safety and efficacy of COVID-19 vaccines, which are essential for achieving herd immunity and controlling the pandemic in Thailand.

Increase in COVID-19 Vaccination Acceptance Among Thai Citizens

As the pandemic progressed and more information became available, public perception toward COVID-19 vaccination improved significantly. Initially, vaccine hesitancy was high due to fears and misinformation, but over time, efforts to promote vaccine safety and efficacy, along with increasing vaccine availability, helped reshape public attitudes. Consequently, the vaccination rate among Thai citizens rose markedly from near zero at the beginning of the campaign to approximately 77.6% of the population receiving at least one dose of the vaccine. This substantial increase reflects the success of public health initiatives, government outreach, and community engagement in building confidence and encouraging widespread vaccination. Achieving high vaccination coverage has been crucial in reducing COVID-19 transmission, severe cases, and mortality, and continues to be a key strategy in Thailand's pandemic response.

Discussion

Perceptions of COVID-19 risks among Thai citizens are highly fluid and tend to change in response to the information circulating within society. A higher perception of risk generally correlates with greater compliance with preventive behaviors and social distancing measures. Furthermore, awareness of the risk is linked to four key factors: demographic characteristics, individual traits, geographical location, and the timing of information dissemination (Cipolletta et al., 2022). The underlying reasons for vaccine hesitancy and acceptance are largely similar across different groups, with low vaccine uptake associated with lower levels of education and awareness, as well as perceived inadequacies in government efforts and initiatives (Shakeel et al., 2022).

Information dissemination during the pandemic can be broadly categorized into two strategies: “air war” and “ground war.” The “air war” involves mass media, official statements, and government briefings aimed at delivering authoritative updates and guidance. In contrast, the “ground war” encompasses grassroots communication, community engagement, and interpersonal interactions that influence local understanding. As depicted in Figure 1, these combined channels play a crucial role in shaping public perception and response to the ongoing pandemic (Taisuwan et al., 2018).

In today's digital age, social media platforms have become increasingly influential in shaping public perception. As the reported cases and fatalities rise, social media's role intensifies, often amplifying emotional responses—both positive and negative—among citizens. The

rapid spread of information, whether accurate or misleading, can heighten feelings of fear, anxiety, or complacency, depending on how messages are framed and perceived. This constant influx of reports about high case numbers and deaths contributes to an elevated risk perception, which in turn influences individual behaviors and compliance with health measures (Cuello-Garcia et al., 2020).

The complex interaction between official communications and social media content creates a constantly evolving environment where perceptions are shaped by the tone, credibility, and volume of circulating information. Recognizing how these channels influence public perception is crucial for developing effective risk communication strategies. Such strategies should aim to foster trust, mitigate misinformation, and encourage health-protective behaviors during ongoing and future health crises (Ataguba & Ataguba, 2020; Centers for Disease Control and Prevention, 2002).

The platform's success in engaging the public can be attributed to its effective communication strategy, which emphasizes positive messaging and actively involves diverse age groups. The policy guiding this effort includes maintaining consistency across six social media platforms—ensuring that the same core message is delivered in different formats tailored to each platform. A small team of 1–2 administrators manage these channels, providing regular updates at 06:00 a.m., 11:00 a.m., and as situations evolve. This approach underscores the importance of timely, transparent, and accessible communication (Taisuwan, 2025).

Initially, public perception regarding COVID-19 vaccination among Thai citizens was characterized by high demand, with many believing vaccination was essential even before vaccines were available. However, misinformation about side effects, especially stories claiming severe adverse reactions and deaths, caused significant vaccine hesitancy, leading many to avoid vaccination. Over time, as more information and credible communication campaigns emerged, public confidence gradually increased. The vaccination rate rose from nearly zero at the outset of the campaign to approximately 77.6% of the population receiving at least one dose. This dramatic increase reflects the effectiveness of targeted communication efforts, community engagement, and efforts to counter misinformation. Public perception of preventive behaviors also evolved: awareness of handwashing remained high at around 80%, with some variations in practice; mask-wearing was perceived as important by about 84% when experiencing symptoms, while perception when asymptomatic was slightly lower at around 72%. Adherence to physical distancing was highest at the beginning of the outbreak but decreased over time, with an average adherence rate of about 56%. Meanwhile, perceptions of mask-wearing and handwashing in specific contexts indicate ongoing challenges and the need for continuous education. These dynamics illustrate that effective, transparent, and culturally relevant communication is vital for fostering trust, encouraging preventive behaviors, and increasing vaccine uptake amid an evolving pandemic situation (Taisuwan, 2025; Taisuwan et al., 2018; Tambo et al., 2021).

This study offers valuable insights for healthcare professionals and policymakers aiming to enhance risk communication and health awareness during crises. It highlights several factors that contribute to high engagement levels, notably the role of semi-formal social media interactions that foster a sense of community involvement. Moreover, the introduction of the TRUST concept—encompassing Truth and Transparency, Respect for Audience Diversity, Addressing Uncertainty, Meeting Satisfaction and Support Needs, and Timeliness—serves as a guiding framework for effective communication (Taisuwan et al., 2018).

Key strategies such as simplifying complex data for public understanding and maintaining regular, transparent communication were instrumental in building trust and engagement. The insights from this case underscore the importance of adapting communication strategies to meet the evolving needs of the public during health emergencies, ensuring that messages are credible, relatable, and timely to effectively influence perceptions and behaviors (Tambo et al., 2021).

Conclusion

The effectiveness of many social determinants of health (SDH) in reducing the burden of the COVID-19 pandemic largely depends on effective communication, particularly in crisis and risk communication. Although countries have adopted various communication strategies during the pandemic, successful crisis and risk communication are essential for building trust, credibility, honesty, transparency, and accountability (Ataguba & Ataguba, 2020; Centers for Disease Control and Prevention, 2002). SDH are critical factors influencing health outcomes and inequalities, many of which are outside the direct scope of the health sector. Policies such as social distancing, good hygiene practices, avoiding large gatherings, cancelling social and sporting events, using personal protective equipment, closing schools and restaurants, and implementing country-wide lockdowns are measures promoted to prevent and mitigate COVID-19 transmission—despite not being solely within the health sector.

In times of emergencies and urgent situations, such as the COVID-19 pandemic, social media platforms serve as primary channels for disseminating information, impacting billions of people worldwide. However, these platforms often contain misinformation about the pandemic, which can lead to serious consequences. When used appropriately, social media can be a valuable tool for sharing and accessing relevant information among patients, healthcare providers, and researchers (Cuello-Garcia et al., 2020).

In this study, the success of the TRSC platform described in this case study is attributed to its strategic communication approach, which focuses on positive messaging, consistency across six social media platforms, and regular updates tailored to each channel. A dedicated team of 1–2 administrators ensured timely and reliable dissemination of information, providing updates at 06:00 a.m., 11:00 a.m., and as the situation evolved. This case offers valuable insights for healthcare professionals and policymakers aiming to improve risk communication and enhance public health awareness during crises.

Key factors contributing to high engagement include the adoption of semi-formal social media interactions that foster community involvement and the application of the TRUST framework—covering Truth and Transparency, Respect for Audience Diversity, Addressing Uncertainty, Meeting Satisfaction and Support Needs, and Timeliness. Simplifying complex data for public understanding and ensuring consistent, timely communication were crucial strategies.

The findings underscore the importance of establishing public trust through a combination of formal and semi-formal communication channels, emphasizing the need for two-way interactions. Regular updates and proactive communication of changes are crucial to accurately reflect current conditions. Additionally, providing accessible sources of information—such as hotlines, mobile apps, and social media platforms—allows individuals to seek assistance and remain informed. Overall, tailoring communication strategies to meet public needs during health crises is vital for fostering trust, engagement, and effective

response efforts. Furthermore, global solidarity requires strengthening governance, encouraging community participation, and building trust to enhance early pandemic preparedness and response. Promoting effective risk communication and community engagement (RCCE) interventions necessitates significant improvements in government health systems and proactive security measures, along with fostering community and individual resilience through confinement, trust, and supportive solutions (Taisuwan et al, 2018; Tambo et al., 2021).

Future Research Suggestions

1. **Evaluating Long-Term Impact of Social Media Strategies:** Future studies could investigate the sustained effects of social media communication on public trust, compliance with health measures, and behavior change over extended periods beyond the initial crisis phase.
2. **Comparative Analysis of Communication Platforms:** Research could compare the effectiveness of different social media platforms and communication formats (e.g., videos, infographics, live sessions) in enhancing risk perception and engagement among diverse demographic groups.
3. **Assessing Behavioral Outcomes:** Investigate the direct impact of social media messaging on health-related behaviors, such as vaccination uptake, mask-wearing, and social distancing adherence.
4. **Crisis Communication in Future Pandemics:** Comparative studies across different health crises can identify best practices and lessons learned to refine risk communication strategies for future pandemics or emergencies.

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