

The Contribution of Instagram Influencers to Medication Literacy: A Digital Communication Perspective

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Abstract

Purpose: This study investigates the role of pharmacist-influencer Rinaldi Nur Ibrahim (@rinaldi_ni) in promoting medication literacy among Indonesian society through digital communication on Instagram. The increasing prevalence of self-medication and difficulties in interpreting medication-use instructions highlight the need for accessible and credible medication information.

Methods: This study employed a qualitative approach using a descriptive case study method. Data were collected through in-depth interviews with Rinaldi, the communicator and account owner, and non-participant observation of his Instagram activities and content.

Findings: The findings indicate that Rinaldi applies the 4C concepts of social media communication: Context, Communication, Collaboration, and Connection. His content addresses current health issues using accessible language and communication styles that resonate with Generation Z. In contrast, collaborations with health institutions and other influencers strengthen credibility and audience reach. Although audience interaction remains largely one-way, particularly in comment sections, direct messages and broadcast channels support closer relationships with followers.

Originality: This study offers a novel communication perspective by examining pharmacist-influencer communication for medication literacy and safe self-medication through Instagram using the 4C framework. Unlike previous studies focusing on consumer behavior, beauty products, general health literacy, or disease-specific campaigns, this study connects professional pharmaceutical expertise with digital influencer communication in the Indonesian context. It demonstrates how the 4C framework supports accessible, credible, and engaging medication information for younger audiences.

Keywords: Health Education, Digital Communication, the 4C Concepts of Social Media Communication.

Introduction

Health literacy is widely recognized as a critical determinant of health outcomes, as it encompasses the ability to obtain, process, and apply the information needed to make informed health decisions. In Indonesia, self-medication is prevalent, with surveys showing that over 90% of individuals have engaged in self-medication at some point in their lives ([Wibowo et al., 2021](#)). While self-medication may appear practical for addressing minor ailments, it often leads to adverse consequences when undertaken without sufficient knowledge of dosage, medication interactions, or contraindications. A cross-sectional study in Yogyakarta Province found that more than half of respondents exhibited poor knowledge and low medicine literacy, which strongly correlated with inappropriate self-medication practices ([Siraj et al., 2022](#)). Health knowledge remains

very low for some individuals. This is due to a lack of awareness and understanding of proper health practices.

These findings highlight that deficiencies in health literacy not only diminish the effectiveness of medication but also increase the likelihood of harmful outcomes such as overdose and organ damage. Sociodemographic factors such as education level and chronic disease history have been identified as significant determinants of medication literacy in Indonesia. Respondents with lower educational attainment were less capable of interpreting medication labels. At the same time, individuals with chronic conditions often engaged in repeated self-medication without professional consultation ([Bernardes et al., 2021](#)). This is consistent with findings in other low- and middle-income countries, where limited literacy exacerbates risks of irrational medication use.

As a result, there is an urgent need for innovative approaches to enhance public understanding of safe medication practices, particularly through accessible channels such as digital media and community-based health campaigns. Efforts to promote rational medication use in Indonesia have been supported by programs like the ‘Smart Use of Medications Campaign,’ where pharmacists engage directly with communities to educate them about medication classifications, appropriate usage, and safety measures. This initiative has been shown to improve community knowledge and practices regarding responsible self-medication ([Wibowo et al., 2020](#)). Similarly, cadre-based training models have proven effective in empowering local volunteers to act as agents of change and promote rational antibiotic use at the community level ([Christanti et al., 2024](#)). Despite these positive outcomes, such programs remain limited in their reach and sustainability, often constrained by resource availability and lack of continuous engagement with broader audiences. Parallel to community-based efforts, the rapid penetration of internet technologies has facilitated unprecedented access to health information through digital platforms.

In Indonesia, Instagram has emerged as the most widely used social media channel for seeking health-related content due to its visual appeal, ease of access, and interactivity. However, while digital platforms create opportunities for health education, they also demand sufficient digital literacy for users to discern credible from misleading information. Evidence suggests that older adults with stronger digital literacy skills are more likely to engage in safe self-medication practices and access trustworthy health resources ([Hernowo et al., 2025](#)). This underscores the intertwined nature of digital and health literacy in determining health behaviors in the digital era. Social media influencers have become central figures in shaping consumer behavior, extending beyond fashion and lifestyle into health domains. A growing body of research on ‘patient influencers’ illustrates how individuals with lived experiences of illness share personal narratives that not only enhance relatability but also increase audience understanding of complex medical information ([Abrol et al., 2023](#)). Similarly, experimental studies demonstrate that illness disclosure by influencers reduces persuasion knowledge, thereby enhancing narrative transportation and influencing electronic word of mouth (eWOM) as well as health-seeking behaviors ([Kim, 2022b](#)). Such findings underscore the persuasive power of influencers in health communication, suggesting their potential role in advancing medication literacy. ([Hernowo et al., 2025](#)) emphasized that digital literacy plays an important role in health education management by supporting elderly individuals in accessing appropriate health information and practicing safer self-medication. Thus, strengthening digital literacy is not only relevant to improving access to health information but also to promoting responsible medication practices and reducing the risks

associated with inappropriate self-medication. These findings underscore the intertwined nature of digital and health literacy in determining health behaviors in the digital era.

The widespread circulation of online mis/disinformation can also contribute to vaccine hesitancy and highlights the importance of strengthening individuals' eHealth literacy so that they can critically evaluate and interpret health information encountered online (Dib et al., 2022). Despite their potential, influencer-led health communication carries risks. Scholars caution that influencer content may oversimplify medical advice, omit critical details, or propagate misinformation, which can undermine safe health practices (Kaňková et al., 2024). Inaccurate or exaggerated claims on social media may mislead audiences into inappropriate self-medication behaviors, particularly when influencers lack medical expertise. In this study, researchers used Instagram to analyze content and communication. According to (Yonathan, 2025), the number of Instagram users in Indonesia is expected to reach 458.1 million in 2025. This high demand creates an opportunity for individuals to build their personal brand and use effective communication strategies to establish connections. Instagram helps individuals build their brand and improve their ability to communicate with their audience. Personal branding is built by educating and teaching others. Instagram provides this opportunity through its Reels, Stories, and ads features. According to (Mujianto et al., 2021), Instagram has become a social media platform with a significant impact on people's lives. Individuals can demonstrate a wide range of behaviors by sharing photos, videos, and content on Instagram. Building a personal brand is seen as a way to increase marketability and enhance one's character. In this digital era, individuals are turning personal branding into a profession to earn income.

Personal branding can be formed through structured visual and narrative communication on social media. In this regard, an individual's ability to design appropriate communication is crucial to creating a positive impression in customers' minds. Through personal branding, an individual becomes better known to the public. This not only benefits the individual but also provides the audience with learning and education tailored to their needs (Idelia & Putranto, 2025). According to (Pramestiningrum & Sadono, 2022), Instagram helps individuals discover their identity and express themselves by sharing their activities with their audience. The rapid growth of social media platforms requires a much better communication strategy. This is because changes are so rapid that they have an impact on human behavior. Branding plays a role in improving quality and influencing audience perception. Therefore, communication strategies must be implemented appropriately to change audience perceptions of a phenomenon (Mulitawati & Retnasary, 2020).

Instagram is used as a tool to find health-related information because it makes it easy to access information. Health literacy is essential for every individual, especially when it comes to accessing health services and using medications (Anisah et al., 2021). Understanding health is essential to avoid misusing medications. The ease of accessing information through social media makes access faster, especially for education. Therefore, using Instagram is a powerful tool for conveying information to audiences. However, effective implementation requires strategic design, including content, communication, collaboration, and connections. This helps individuals convey messages appropriately.

Therefore, ensuring the credibility and professional background of health influencers is crucial to maximize benefits and minimize harms. Recent reviews emphasize that the effectiveness of influencer health communication depends heavily on

factors such as message framing, storytelling, credibility, and audience engagement. A comprehensive scoping review of health-related influencer communication found that visual content, authenticity, and interactivity were particularly influential in shaping audience perceptions and behaviors (Kaňková et al., 2025). These insights align closely with theoretical frameworks like the 4C model, Context, Communication, Collaboration, and Connection, which highlight the dynamic interplay between message design, relational engagement, and collaborative efforts in digital spaces. Applying the 4C model in communication strategy research has shown strong results by explaining Context, Communication, Collaboration, and Connection. Given their wide reach and interactive communication style, influencers represent an underutilized yet promising avenue for improving medication literacy in Indonesia. Unlike traditional campaigns, influencers can embed health messages into everyday content, making them more accessible and relatable to diverse audiences, particularly younger generations. Their ability to establish parasocial relationships with followers enhances trust, which is critical for influencing health behaviors. Importantly, when influencers have professional health backgrounds, such as being certified pharmacists, they can bridge the gap between medical expertise and public understanding, delivering credible and engaging content on safe medication practices.

Although substantial literature exists on influencer marketing in consumer behavior and disease-specific awareness campaigns, little research has focused on the strategic use of influencers for advancing medication literacy in Indonesia. Most studies either emphasize general health literacy, community campaigns, or the commercial role of influencers in product promotion, leaving a gap in understanding how influencers can prevent unsafe self-medication by enhancing medication literacy. Researchers chose Rinaldi Nur Ibrahim (@rinaldi_ni) as the subject of this study because of the influencer's ability to communicate appropriately about medication literacy. Rinaldi has 809.000 followers and provides a variety of educational and engaging content. Rinaldi provides communication strategies related to medication use and health to help improve health literacy among his audience. This large following, along with the audience's responses in the comments section, is among the reasons researchers were interested in analyzing Rinaldi's content. Rinaldi's content strategy demonstrates distinctive characteristics and uniqueness that distinguish him from other creators.

This study addresses that gap by examining how a pharmacist-influencer on Instagram employs communication strategies aligned with the 4C framework to educate audiences about safe medication practices. By doing so, the study contributes new insights into the intersection of health literacy, digital literacy, and influencer communication, providing both theoretical and practical implications for public health promotion in the digital age. From this perspective, this study aims to analyze the communication strategy implemented by @rinaldi_ni through his Instagram account using the 4C framework. This research is expected to serve as a reference to deepen our understanding of communication strategy.

Methods

The data in this study consisted of primary and secondary data. Primary data were obtained through in-depth interviews with the selected informants, particularly the influencer as the key informant and health communication specialists as expert informants. The interview with @rinaldi_ni focused on the process of developing and delivering medication literacy content, including content selection, message formulation,

audience considerations, use of Instagram features, collaboration activities, and strategies for maintaining audience connections. Expert interviews were conducted to obtain an independent assessment of the influencer's communication strategies and their relevance to medication literacy communication.

Researchers conducted non-participant observation by systematically examining the Instagram account @rinaldi_ni and its medication-related content. The observation focused on the application of the four elements of the 4C framework: Context, Communication, Collaboration, and Connection. Researchers examined how medication-related messages were presented, the use of visual and textual elements, audience interaction, collaborations with other parties, and the use of Instagram features such as Reels, Stories, comments, direct messages, and broadcast channels. Documentation data consisted of relevant Instagram posts, captions, videos, audience interactions, and other materials supporting the analysis.

Data from interviews, observations, and documentation were compared to strengthen the credibility of the findings through data triangulation. The collected data were analyzed using [Miles, Huberman and Saldaña's \(2018\)](#) interactive model, consisting of data reduction, data display, and conclusion drawing/verification. During data reduction, relevant information related to the research questions and 4C framework was selected and categorized. The reduced data were then organized into thematic displays to identify patterns in the influencer's communication strategies. Finally, conclusions were drawn by comparing findings across interviews, observations, and documentation and were continuously verified against the collected evidence.

The credibility of the findings was strengthened through the use of multiple sources of evidence, including social media content, visual materials, and interview data. The use of multiple data sources enables researchers to examine different facets of a phenomenon and supports triangulation, thereby contributing to greater accuracy and credibility in case study research ([Sibbald et al., 2021](#)).

Results

As a result, there is an urgent need for innovative approaches to enhance public understanding of safe medication practices, particularly through accessible channels such as digital media and community-based health campaigns. Pharmacists play an important role in promoting responsible self-medication through community education, particularly by providing accessible information about appropriate medication use, medication classification, and safety considerations ([Setiadi, et al., 2020](#)). Such pharmacist-led educational interventions demonstrate the potential of professional pharmaceutical expertise to improve public understanding and support more responsible self-medication practices. Efforts to promote rational medication use in Indonesia have also been supported by community-based programs in which pharmacists engage directly with communities to provide education on appropriate medication use and safety measures.

The impact of Rinaldi Nur Ibrahim's scholarship initiative is also reflected in his efforts to communicate youth empowerment through digital media. His personal commitment to supporting education is presented not only through scholarship provision but also through public storytelling that highlights educational opportunities and inspires young people. [Figure 1](#) illustrates how Rinaldi communicates his scholarship initiative and personal achievements, emphasizing his role in expanding access to education from junior high school to master's degree level. These visual narratives strengthen the

representation of Rinaldi as a young social actor who uses his personal resources and digital presence to encourage educational advancement and empower Indonesian youth.

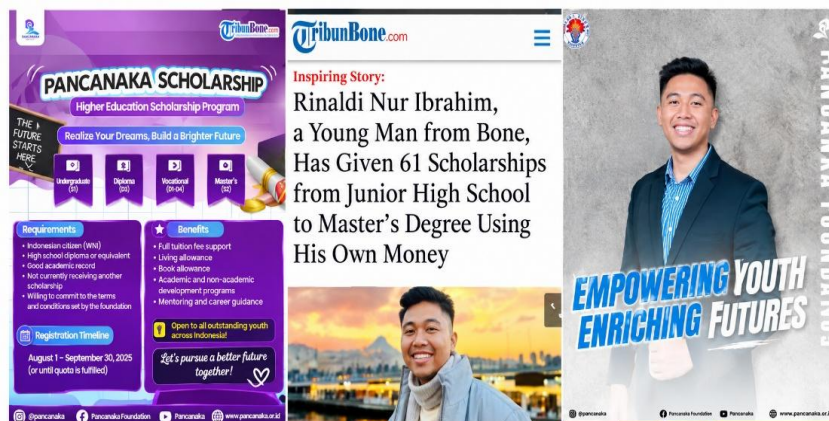


Figure 1. Rinaldi Nur Ibrahim has inspired many young people by providing 61 scholarships, from junior high school to a master's degree, using his own funds to empower youth and create brighter futures (source: [Instagram.com/rinaldi_ni](https://www.instagram.com/rinaldi_ni))

The image above is content uploaded by Rinaldi and targets Generation Z, encouraging scholarship applications and empowerment for young people. In terms of educational background, the two informants held advanced degrees, with 100% of them possessing at least a Master's degree (S2). This high level of education indicates strong academic competency and professional credibility, as both informants combine theoretical understanding with practical application in their respective fields. The educational attainment of the informants also illustrates their capability to critically analyze, interpret, and communicate complex information in ways that are accessible to wider audiences. Regarding occupational roles, one informant (80% of this small sample) was directly engaged in the pharmaceutical and digital content creation sector, serving as both an influencer and the Director of PT Kreasi Potensi Indonesia. This role positioned him as the *key informant* responsible for sharing first-hand insights about health literacy campaigns on Instagram. The second informant (20%) was an academic lecturer specializing in Communication Studies at Universitas Negeri Yogyakarta, who also actively participates in national digital literacy networks. His expertise provided a complementary academic and evaluative perspective, strengthening data triangulation.

Together, these backgrounds show that the informants were not only professionally engaged in communication practices but also actively contributed to academic and societal discourses on health and media literacy. Their professional diversity reflects a balance between practical digital communication strategies, as implemented by the influencer, and critical scholarly evaluation, as provided by the academic. This combination offers a more comprehensive perspective on how health-related information is communicated, interpreted, and evaluated within contemporary digital media environments. Furthermore, the contrasting yet complementary backgrounds of the informants strengthen the analysis by connecting practical communication experiences with academic perspectives on media literacy and public health discourse.

This study aims to explore how influencer Rinaldi Nur Ibrahim utilizes Instagram @rinaldi_ni to convey medicine literacy by applying the 4C framework (Context, Communication, Collaboration, and Connection). Through the perspectives of the key informant (Rinaldi) and the expert informant (Gilang Jiwana Adikara), the research seeks to uncover strategies, challenges, and implications of digital communication practices in

promoting health literacy, particularly among Generation Z audiences. By analyzing both practical experiences and academic insights, this study intends to provide a comprehensive understanding of how social media influencers can contribute to the dissemination of credible health information in the digital era.

Rinaldi, a pharmacist and influencer, has played a significant role in promoting medication literacy on Instagram. Rinaldi has 663,000 followers as of 17 February 2024. Researchers also discovered three explanations for Rinaldi's role as a health influencer based on interviews: (1) sharing his medication expertise with the general public, (2) assisting in the enhancement of medication literacy within the community, and (3) educating the public about the profession of pharmacy. Rinaldi's commitment to promoting public awareness of medications as an influencer is evident in these reasons. All things considered, Rinaldi's Instagram account (@rinaldi_ni) frequently addresses health-related topics; hence, Rinaldi is seen as qualified to offer fact-based health opinions supported by factual data. According to interviews, Rinaldi has made good use of social media. Below is a detailed analysis of the communication strategy through the 4Cs:

Rinaldi creates persuasive health-related content by ensuring that the information he provides is relevant to patients' needs and medical concerns. His approach is informed by current health issues in society and his professional background as a pharmacist, which enables him to identify topics that require accessible and responsible public education. One example is his content concerning the safe use of medications for individuals experiencing stomach disorders. Rinaldi explained: *"So far, I have been creating health education content, particularly about medications, following current and past events in society. For example, stomach disorders are a common problem, and I also have a background as a pharmacist. From there, I feel a great responsibility to provide education about which medications are safe for people with stomach disorders"* (Interview with Rinaldi, 24 December 2023, 3:30 PM WIB, South Tangerang).

The interview above emphasizes the need to give complete and precise information on medication-related health debates in public life. Expert informants stated that Rinaldi's language and messaging effectively convey awareness and instruction about medication use. Rinaldi is noted for his knowledge, with each piece of material suited to the community's needs. *"I also see Rinaldi's success in delivering medication literacy as being based on his ability to select trending topics and craft messages in a style that resonates with his audience. Furthermore, Rinaldi has been able to create content that can positively impact people's lives and improve medication literacy"* (Interview with Gilang, 28 December 2023, 10.20 AM WIB, Zoom Meeting).

Rinaldi uses a new communication strategy to share medication literacy information with his Instagram followers through the account @rinaldi_ni. This strategy combines auditory and visual illustrations, including photos, videos, and running text, to present information in a more engaging and easy-to-understand manner. By using these multimedia elements, Rinaldi seeks to make medication literacy messages more accessible to his audience and encourage greater engagement with the information he provides. Rinaldi also explained this approach during a face-to-face interview in Tangerang. *"Whenever I create content, I always use audiovisuals so that the audience can immediately understand the message. Especially when discussing medications, I always make the content as engaging as possible"* (Interview with Rinaldi, 24 December 2023, 3:35 PM WIB, South Tangerang).

This communication strategy is further demonstrated through Rinaldi's use of

visual storytelling to convey medication literacy messages in a concise and accessible format. By combining his on-camera presentation with illustrations and running text, he translates potentially complex information about medication effects into content that is easier for Instagram followers to understand. Figure 2 illustrates this approach through educational content explaining the potential side effects of spironolactone use in men, showing how audiovisual and visual elements are integrated to strengthen message comprehension. The use of such engaging visual representations reflects Rinaldi's effort to make medication literacy content informative while maintaining audience attention and encouraging greater awareness.

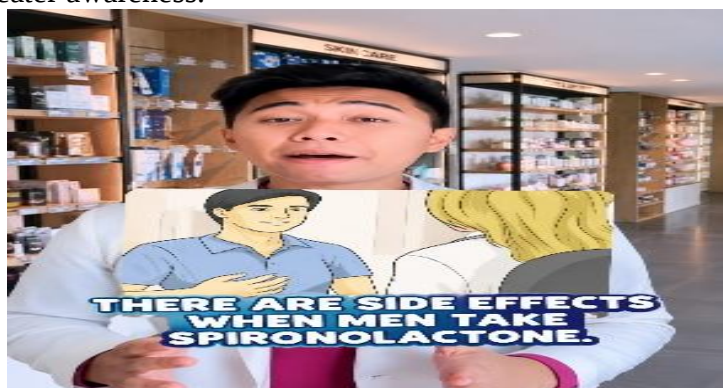


Figure 2. Educational content highlighting the potential side effects of spironolactone use in men, presented through an engaging visual illustration (source: [Instagram.com/rinaldi_ni](https://www.instagram.com/rinaldi_ni))

In the image above, Rinaldi uses the phrase 'guys' within the first five seconds to connect with the audience. The audience remembers him better when his word use and pronunciation are consistent. Rinaldi makes full use of the Instagram Reels feature to market Spironolactone by presenting information about its properties and negative effects. Furthermore, Rinaldi engages with the audience using emotions and emoticons in the comments area of social media.

Rinaldi's collaboration strategy involves a variety of stakeholders, including the Ministry of Health, pharmaceutical companies, health-related non-profit organizations, and other influencers. These collaborative activities enable Rinaldi to engage with individuals and organizations that have specific knowledge and expertise in medication and health. By involving these stakeholders in the dissemination process, Rinaldi demonstrates his commitment to providing accurate, credible, and accessible medication information to the general public.

"There are many collaborations related to medicines. I have collaborated with the Ministry of Health, brands that sell medicinal products, a health-related non-profit organization that appointed me as a tuberculosis ambassador until 2024, and other influencer partners. Of the many collaborations I have received, the most common are collaborations with brands to help promote medicinal products through storytelling" (Interview with Rinaldi, 24 December 2023, 3:40 PM WIB, South Tangerang).

Rinaldi has collaborated with the Minister of Health, brands, influencers, and non-profit organizations (see Table 1). This was done to increase audience interest in seeking information about medicines. Furthermore, this collaboration was formed to increase the effectiveness and efficiency of message delivery. The collaboration fostered cooperation between communicators and recipients through messaging to improve effectiveness and efficiency. Collaboration helps improve the ability to share messages with audiences, especially through social media. Rinaldi's involvement with brands, health non-profit

organizations, and other influencers improved how messages were conveyed to audiences. Collaboration creates capacity and demonstrates credibility in disseminating health education. Understanding of medicines is more credible when shared by people with experience. Rinaldi provided information on the benefits of medicines to increase audience trust. Gilang demonstrated that Rinaldi's content had a positive impact, even though it lacked consistency. When forming collaborations, communicators must demonstrate consistency in their work.

The idea of connection in this study relates to the connections Rinaldi formed by providing health information, tips and techniques, and his former life story via broadcast channels. In general, Instagram's broadcast channel function is an innovation that enables artists to engage with their followers in a one-way manner. This tool allows producers to share messages, photographs, polls, and reactions with their followers all at once. The broadcast channel functionality functions similarly to a WhatsApp group community: only the administrator or creator can send messages, and other users can only make restricted answers. *"I also use the broadcast channel feature to share information related to my past travels, so I can maintain a connection with my followers and motivate them to do something positive even though my name is not yet widely known"* (Interview with Rinaldi, 24 December 2023, 3:50 PM WIB, South Tangerang).

Table 1. 4C's Theory Framework

No.	Theoretical Framework	Findings/Data	Interpretation
1.	Context (CON)	Rinaldi uses compelling copywriting and easy-to-understand language to make medication-related information more accessible to Generation Z. The content is presented within a clear context and supported by visual elements that help simplify complex information.	This finding indicates that Rinaldi applies the Context dimension by adapting the presentation of medication information to Generation Z's characteristics. Simple language and contextual explanations reduce the difficulty of understanding health-related information and can increase audience interest and viewership.
2.	Communication (COM)	Rinaldi utilizes social media to communicate medication information through engaging content that combines text, photographs, and background music. These elements encourage audiences to respond, comment, and interact with the content.	This demonstrates the Communication dimension through interactive, multimodal social media content. Rather than delivering information in a one-way manner, Rinaldi creates content that encourages audience participation and feedback.

No.	Theoretical Framework	Findings/Data	Interpretation
3.	Collaboration (COLL)	Rinaldi collaborates with influencers and other knowledgeable individuals through podcast-based content to discuss and provide education about medicines. The collaboration allows medication-related information to be presented by individuals with relevant experience or expertise.	This finding reflects the Collaboration dimension because Rinaldi involves external stakeholders in the communication process. Such collaborations can strengthen the credibility and diversity of medication information while making educational content more engaging for the audience.
4.	Connection (CONN)	Rinaldi uses broadcast/live-streaming and Q&A features to facilitate direct interaction with his audience. These features give followers opportunities to ask questions, receive responses, and participate in discussions about medication information.	This finding demonstrates the Connection dimension by establishing two-way interaction between Rinaldi and his audience. Interactive features help maintain audience engagement and build a stronger relationship between the content creator and followers.

Note: The table presents the categorization of findings based on the four dimensions of the 4C framework.

Discussion

This part contains analysis of the findings and reflection/discussion according to the research findings. In presenting the discussion, use a comprehensive explanation. The 4Cs hypothesis of social media use aligns with these results. Aspects such as context, communication, collaboration, and connection are used in social media, as outlined by Heuer in (Mustaqimah & Rahmah, 2022). According to (Yang et al., 2021), Rapid technological developments have brought new vitality to medical development. The use of digital literacy, the ability to recognize information and communicate, requires cognitive and technical skills. (Nascimento et al., 2022) support this perspective, stating that social media use focuses on crisis communication and management. Information shared on social media can influence health and medication awareness. (Dib et al., 2022) stated that health literacy is the ability to understand health information and process it. (Katz & Nandi, 2020) supported this argument by stating that social media creates interactive action through the sharing of information.

The context of medication literacy communicated through Rinaldi's Instagram

platform, a health influencer, can provide precise information on health concerns directly tied to pharmaceuticals within current public discourse. Any information presented by an individual must be persuasive. Many youths are influenced by social media literacy because of the helpful information they find. Youth often share important information with their families, friends, and peers (Crane et al., 2023). Knowledge of medications and appropriate treatment helps individuals guide their families (Volkow & Blanco., 2023). Seeking more health information can help individuals gain more knowledge (Bishop et al., 2025).

Improving health literacy is crucial for providing knowledge to the public. In this regard, the information presented must be accessible and enable individuals to understand the health concepts being presented (Fitzpatrick, 2023). (Sercu, 2024) states that the frequency of using social media to search for information significantly impacts an individual's knowledge. Rinaldi's content utilizes a literacy concept consistent with his background as a pharmacist. This context is conveyed through a unique language style to ensure the audience understands the message. Generation Z has its own preferences when analyzing and viewing content (Bílková et al., 2023). Content must align with these preferences to enhance engagement. Rinaldi can convey medication literacy clearly and in a well-packaged way. His messages involve concerning health issues. This strategy is one context that needs to be considered, namely by following current trends and diseases.

According (Walter et al., 2021), social media can threaten to spread misinformation. Despite its significant impact, social media use must be contextualized to reduce misinformation and provide fact-based information. When deciding whether to take medication, individuals first seek clear information. This behavior is related to trust. Audiences consider the quality of the information (Thapa et al., 2021).

Social media facilitates communication and can bring everyone together around one piece of content (Bhandari & Bimo, 2022). Social media has become a useful platform for accessing information because its systems facilitate ongoing communication. Social media provides a tool for real-time chatting, commenting, interacting, and sharing knowledge with others (Mohammed et al., 2023). According to (Khamis & Geng, 2020), opinions expressed as information can influence others' perceptions and views. In this context, social media gives communicators opportunities to share information about treatment. This communication helps build awareness and education. Furthermore, social media communication helps audiences understand general information. Online platforms can powerfully persuade others (Brockhaus et al., 2023).

Rinaldi uses voice and facial expressions to encourage audience responses through the comments section. Essentially, communication conveys a message by sharing information with the public. In this situation, two-way communication is established between the communicator and the audience. Communication helps shape the meaning of messages that affect people's lives. In this case, communication is used as a tool to build relationships and interactions with the audience. Interview results show that Rinaldi communicates by providing concise and clear information about medication literacy. In this context, the communication process combines images and messages through captions to persuade and educate the audience.

Rinaldi's communication uses visuals and background sound as strategies to support understanding. Audiences can better understand messages about medications through clear, easy-to-understand communication. He utilizes features on social media platforms like Instagram, such as comment sections, broadcast channels, and direct messages. By utilizing these features, a communication pattern is formed, but it is one-way. According

to Gilang, Rinaldi still lacks strong engagement because he does not involve the audience in the communication process. In this case, interaction between users and influencers is crucial for building stronger communication (Enke & Borchers., 2021). The virtual world makes it easier for individuals to communicate with their audiences. Communication through content guides users in disseminating messages (Mackay et al., 2021).

Rinaldi implements communication by engaging with his audience through direct messages. Although he has already implemented this communication, Rinaldi still needs to improve it by responding to comments and story comments from his audience. Chris Heuer demonstrated that communication should be packaged to make information more visible. Text should be displayed more prominently with brighter colors to attract the audience's attention. This creates more effective communication, especially when the audience responds positively. Basically, audiences feel more comfortable when the communicator involves them in the communication (George, 2023).

Technology is one innovation that can improve communication with audiences. The communication process can run more smoothly because of the reactions generated by the audience (Bonnevie et al., 2020). According to (Oncioiu et al., 2021), social media provide a way to improve customers' awareness and behavior towards health. Using social media, users can create and exchange content. In this case, communication can also change according to what users and communicators need.

Social media facilitates collaboration with others to improve performance (Qureshi et al., 2023). Celebrities and communities can easily share information on social media. Furthermore, social media also allows people to demonstrate an open mind in discussions. To build trust, influencers need to share more credible information (Abdoh, 2022). Collaborating with influencers will attract new audiences. Influencers can also significantly shape their audience's perceptions. According to (Willis et al., 2023), changing audience perceptions requires influencers to influence them indirectly. Influencers deliver a more persuasive communication strategy because they are already well known to the public. Collaborating with influencers helps audiences raise awareness more effectively. Not only influencers, but experienced communities like the Ministry of Health can also help disseminate information through social media. Rinaldi used content collaborations with influencers and video podcasts to discuss medications that can help individuals quit smoking. This collaboration resulted in high engagement, reflected in the number of views, likes, and comments.

From (Sadio et al., 2021)'s perspective, WHO is one of the organizations best equipped to provide recommendations regarding medication. WHO needs to inform the public about the appropriate use of antibiotics to reassure them. Collaborating with WHO helps instill confidence and trust in the audience. Each audience will have a more nuanced perspective when an organization with experience in its field is involved. In this regard, influencers must collaborate, especially when educating their audience. Influencers seeking to educate require validation from others to ensure the accuracy of the information they convey. In this context, a collaborator with experience in the health sector is essential.

Influencers act as trusted communicators who can change audience behavior. In this context, influencers help distribute information to audiences (Gupta et al., 2022). Influencers demonstrate their ability to speak effectively and support activities that lead to digital interactions with audiences (Kim, 2022a). The role of influencers extends beyond being mere spokespersons; they must possess credibility to ensure content is implemented and engages audiences (Kapitan et al., 2022; Pöyry et al., 2021). This

credibility allows audiences to evaluate message quality, thereby fostering trust (Fisher et al., 2021). Rinaldi collaborated with audiences by using views, likes, and shares to ensure the message reached the intended audience. Messages about medication literacy were delivered to increase knowledge. However, collaboration with experienced individuals is necessary to ensure the information conveyed about medications is based on accurate facts.

Involving influencers creates a communication network that signals quality to the audience (Brooks et al., 2021). Social media is more effective when used with appropriate collaborations, especially when the goal is audience engagement (Rozak et al., 2023). Leveraging social media significantly expands networks of interaction and communication. Health misinformation can occur when the person providing the information lacks experience and background in the healthcare industry; therefore, communicators should collaborate with experienced individuals. Influencers with a healthcare background make the information easier to understand (Bautista et al., 2021). Unconsciously, medication education is very limited in Indonesia. Therefore, individuals with a better understanding of medication are needed to support public literacy (Jacobson et al., 2021).

Content creation must focus on building engagement, as it requires forming connections and trust with the audience (Fitzpatrick, 2023). Gilang revealed that Rinaldi is still not optimal in building connections with his audience. This is due to Rinaldi's lack of involvement in responding to comments. However, Rinaldi still uses direct messages and broadcast channels to interact with his audience and provide information. Information regarding safe medication is provided through social media to increase audience engagement. This strategy helps Rinaldi forge stronger connections with his followers through effective communication. Social media interaction is a powerful tool for building connections with others (Aichner et al., 2021; Oncioiu et al., 2021). As connections form, emotions develop through awareness and understanding. People have different emotions when facing a problem, especially when receiving information (Alonzo & Popescu, 2021). According to (López et al., 2023), digital literacy is now used as a tool to increase patient knowledge. To build strong connections, literacy must be provided while considering the audience's trust and satisfaction with the information provided (Robinson et al., 2021). (Mahmoudi et al., 2024) have stated that the spread of misinformation, including fake news, will reduce connections with other people.

Connections form because people need to maintain continuity in relationships. Connections are the relationships digital influencers build with their audiences through the platforms they provide. These connections on a platform serve as a vehicle for followers to retain content. Connections created on social media increase engagement because they enable communication. However, building these connections requires consistency to increase trust (Mustaqimah & Rahmah, 2022). Communicators use connections to attract the audience's attention to the programs and activities the influencer (Susilo et al., 2022). According to (Lauren et al., 2022), influencers need to create connections to ensure smooth communication with their audiences. Every audience member seeks information, and with connections, they will be more engaged with each uploaded piece of content. (Saputra & Luthfi, 2023) stated that connection can be built through the information provided to people.

A limitation of this study is the limited involvement of informants, which only involved influencers and experts as communicators. Furthermore, this study did not delve deeply into the content delivered by influencers. It would have been better if this study

had focused on several audiences, such as Rinaldi's audience, social media, and editors. A weakness of this study is the lack of analysis of a single health-related piece of content uploaded by Rinaldi. The researcher did not discuss the content in detail but instead used the entire content.

Conclusion

Based on the analysis, it can be concluded that Rinaldi's role is as an influencer who conveys messages to increase literacy regarding medication use. Through his Instagram account, @rinaldi_ni, the uploaded content provides information and education regarding medication use. It can be concluded that Rinaldi's ability to use social media facilitates communication with his audience. In this case, the uploaded content includes an appeal. Generation Z is one of the generations that uses social media heavily, so social media communication strategies must involve content, communication, collaboration, and connection to increase awareness and educate the audience. Social media is essential for implementing content, communication, collaboration, and connection to build interactions and communicate with the audience. It is recommended that influencers implement appropriate communication strategies, focusing on content, communication, collaboration, and connection, to build strong relationships with their audiences. Furthermore, influencers are encouraged to build engagement with their audiences by utilizing social media features. Future researchers can expand this research further by using quantitative methods to measure the influence of the 4Cs on audience interest. Further research can examine the audience's role in providing different perspectives on the communication provided by influencers. This research implies that the results can provide an understanding of the importance of implementing the 4Cs in capturing audience attention.

Authors' Contributions and Responsibilities

The authors made substantial contributions to the study's conception and design. The authors were responsible for data analysis, interpretation, and discussion of results. The authors read and approved the final manuscript.

Conflict of Interest

We certify that there is no conflict of interest with any financial, personal, or other relationships with other people or organizations related to the material discussed in the manuscript.

Generative AI Statement

The authors used ChatGPT (OpenAI) to improve the language, grammar, and readability of the manuscript during preparation. All AI-generated outputs were carefully reviewed, revised, and verified by the authors, who take full responsibility for the accuracy, originality, and content of the manuscript.

Acknowledgements

The author wishes to express sincere gratitude to the thesis supervisor for her unwavering support and expert guidance. Her insightful feedback and consistent encouragement were pivotal to this study's successful completion. Special gratitude is extended to the key informants, Rinaldi (@rinaldi_ni) and Gilang, for their generosity in sharing their personal experiences and invaluable perspectives, which formed the core of

this research. We also thank the academic community of the postgraduate Communication Science program at Telkom University for fostering an intellectually stimulating learning environment. This study is a testament to the collective dedication of all individuals involved.

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