Jurnal Sosial, Politik dan Budaya (SOSPOLBUD)
Vol.3, No.2, 2024: 157-168

Analysis of Medical Personnel Communication Competence Prof. Dr. Chairuddin Panusunan Lubis University of Sumatera Utara Hospital with Coronavirus Disease Patients Through the Use of Telemedicine in Medan

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ARTICLE INFO

Keywords: Communication Competence, Telemedicine, Coronavirus Disease

Received : 15, June
Revised : 30, June
Accepted: 31, July

ABSTRACT

This study analyzes the communication competence of medical staff at Prof. Dr. Hairuddin Panusunan Lubis Hospital, Universitas Sumatera Utara, in interacting with COVID-19 patients through the utilization of telemedicine. The purpose of this research is to evaluate how effectively medical staff communicate with patients in a virtual environment, focusing on clarity, empathy, and professionalism. The research was conducted using a mixed-method approach, including surveys and interviews with both medical staff and patients. The results indicate that while telemedicine has facilitated continued care, there are significant challenges in maintaining effective communication. Recommendations for improving communication skills in telemedicine are discussed.

ISSN-E: 2962-2417
DOI: https://doi.org/10.55927/sospolbud.v3i2.11313
https://journal.formosapublisher.org/index.php/sospolbud

INTRODUCTION

The COVID-19 pandemic has brought significant changes to various aspects of life, including healthcare services. Prof. Dr. Hairuddin Panusunan Lubis Hospital, Universitas Sumatera Utara, like many other hospitals in Indonesia, faces challenges in providing medical services amid physical restrictions and social distancing. One of the solutions adopted to overcome these limitations is telemedicine, a medical service delivered virtually through digital platforms.

Telemedicine offers various conveniences, including reducing the risk of virus transmission for both medical staff and patients. However, the transition from face-to-face interactions to virtual communication presents new challenges, particularly in terms of communication competence. In this context, communication competence not only includes the ability to provide clear and accurate medical information but also the ability to demonstrate empathy, understand patient needs, and build trust in a virtual environment.

Although telemedicine has become the primary choice during the pandemic, questions remain about the effectiveness of the communication carried out by medical staff. Do patients feel understood and heard? How do medical staff ensure that the information conveyed is correctly understood by patients? This study aims to analyze the communication competence of medical staff at Prof. Dr. Hairuddin Panusunan Lubis Hospital in interacting with COVID-19 patients through telemedicine.

Contribution of the Research

This research provides important insights into the dynamics of communication between medical staff and patients in the context of telemedicine, especially during the COVID-19 pandemic. The findings from this research are expected to serve as a basis for developing communication training for medical staff, thereby improving the overall quality of healthcare services.

IMPLEMENTATION AND METHODS

Research Location and Duration

This research was conducted at Prof. Dr. Chairuddin Panusunan Lubis Hospital, Universitas Sumatera Utara, which served as a referral center for COVID-19 cases in North Sumatra. The hospital was chosen due to its central role in combating the pandemic and its adoption of telemedicine as a part of its strategy to continue providing medical services during periods of lockdown and social distancing. The study spanned over six months, from January to June 2022. The timeline allowed for extensive observation and evaluation of the telemedicine system, considering the heavy patient load during this period and the urgency of remote medical care during the peak of the pandemic.

Participant Background

The participants in this study were drawn from two main groups: medical staff who were directly involved in providing telemedicine services, and COVID-19 patients who received consultations and treatments via telemedicine. A total of 50 medical staff members participated in the study,

including doctors, nurses, and health administrative staff, all of whom were essential to the telemedicine process. The healthcare professionals had diverse educational backgrounds, varying from general practitioners to specialists, with different levels of experience in both traditional and telemedicine settings.

The patient group consisted of 100 individuals who had contracted COVID-19. These patients experienced a range of symptoms, from mild to severe, requiring various levels of medical attention. They were selected based on their engagement with telemedicine services during their treatment period. The diversity of the patients in terms of health condition, age, and technological competence provided a broad spectrum of data for the study, allowing the researchers to assess the effectiveness of telemedicine across different patient demographics.

Research Methods

The study employed a **mixed-method approach**, combining both qualitative and quantitative research techniques to ensure a comprehensive understanding of the effectiveness of telemedicine.

1. **Quantitative Methods:** Quantitative data were primarily gathered through **surveys** that were distributed to both medical personnel and patients. These surveys included structured questionnaires designed to assess key aspects of the telemedicine experience. For the patients, the questions focused on their satisfaction with the medical services provided, the clarity of the medical information they received, the level of empathy and engagement demonstrated by medical staff, and their adherence to treatment protocols. Medical staff, on the other hand, were surveyed on their perceptions of their communication abilities, their comfort using the telemedicine platform, and any barriers they faced in ensuring effective care through remote interactions.
2. **Qualitative Methods:** To supplement the quantitative data, **in-depth interviews** were conducted with selected participants from both groups. These interviews allowed for more nuanced insights into the participants' experiences. For medical personnel, interviews focused on the challenges of maintaining communication standards in a virtual environment, their adaptability to digital tools, and their strategies for ensuring patient engagement and understanding. Patients were asked about their comfort level with telemedicine, how well they felt their needs were addressed, and any difficulties they faced in using the technology or understanding the medical advice given.

The mixed-method approach ensured that the research not only captured statistical trends but also the lived experiences of the participants, providing a more complete picture of the dynamics of telemedicine in a pandemic context.

Conceptual Framework

The conceptual framework for this study was based on analyzing the **communication competence of medical personnel** in telemedicine,

understanding how the telemedicine platform itself mediated the interactions, and exploring the outcomes in terms of patient satisfaction, understanding, and trust. The framework also took into account the **readiness and acceptance** of patients to use telemedicine services, considering factors such as digital literacy and cultural attitudes toward technology.

Independent Variable: Communication Competence of Medical Personnel

This variable represents the central focus of the study. The research examined the communication skills of medical professionals and how these skills were adapted to the telemedicine context. Four key sub-components were analyzed:

1. **Verbal Communication Skills:** This included the clarity of explanations provided by doctors, their ability to break down complex medical information into layman's terms, and their responsiveness to patient queries.
2. **Non-verbal Communication Skills:** Despite telemedicine being a digital interface, non-verbal cues, such as tone of voice, facial expressions (in video calls), and attentiveness, were still crucial in conveying empathy and building trust with patients.
3. **Empathy and Patient Engagement:** The ability of healthcare professionals to show care, concern, and emotional support, even through a virtual medium, was critical to maintaining patient confidence and adherence to treatment.
4. **Technical Medical Knowledge:** While communication was important, medical personnel's ability to deliver accurate, up-to-date information about COVID-19 treatments and to tailor their advice to the individual needs of patients was an essential component of effective telemedicine communication.

Mediating Variable: Telemedicine Platform

The telemedicine platform acted as a mediator in the communication process, impacting how effectively medical personnel could deliver care and how well patients could receive and understand that care. The study identified three key aspects of the platform:

1. **Technology Usability:** This included the ease of use of the telemedicine system for both medical personnel and patients. A user-friendly platform reduced the time spent on technical troubleshooting and allowed both parties to focus on the medical consultation itself.
2. **Connectivity and Accessibility:** Stable internet connections and accessible platforms were vital for ensuring uninterrupted consultations. The study assessed how connectivity issues, or lack of access to adequate technology, affected the quality of the telemedicine experience.
3. **Security and Privacy of Data:** Given the sensitive nature of medical information, the platform's ability to safeguard patient privacy and ensure data security was essential in maintaining trust between patients and medical professionals.

Dependent Variable: Patient Outcomes

The study aimed to measure several patient outcomes that were directly influenced by the communication competence of the medical personnel and the efficacy of the telemedicine platform. These outcomes included:

1. **Patient Satisfaction:** How satisfied patients were with the overall telemedicine service, including the quality of the care they received, the communication with their medical providers, and their ease of use of the telemedicine platform.
2. **Clarity of Medical Information:** This outcome focused on whether patients felt that the medical information provided was understandable and comprehensive, especially considering the technical complexity of COVID-19 treatments.
3. **Treatment Adherence:** The research assessed whether patients followed the medical advice given to them through telemedicine, and how much of this adherence was influenced by their understanding of and trust in the information provided.
4. **Patient Trust in Medical Services:** A key outcome was how much trust patients had in the medical services provided via telemedicine. This included their trust in the competence of the medical personnel, the accuracy of the advice given, and the security of their data on the telemedicine platform.

Moderating Variable: Patient Readiness and Acceptance

This variable acknowledged that patient outcomes were not solely determined by the actions of the medical personnel or the quality of the telemedicine platform. Several patient-specific factors could moderate these outcomes, including:

1. **Digital Literacy:** Patients with a higher level of comfort with technology were likely to have a smoother telemedicine experience, while those with lower digital literacy might struggle to engage fully with the platform.
2. **Attitudes Toward Technology:** Patients' preconceived notions about the efficacy and safety of telemedicine affected their engagement with the system. Those who were skeptical of telemedicine might be less likely to trust the medical advice given or to adhere to treatment plans.
3. **Cultural and Socioeconomic Factors:** Cultural attitudes toward traditional in-person medical care versus telemedicine, as well as socioeconomic factors such as access to reliable internet or appropriate devices, also played a role in moderating the effectiveness of telemedicine services.

The figure outlines the relationships between the independent variable (communication competence of medical personnel), the mediating variable (telemedicine platform), the dependent variable (patient outcomes), and the moderating variable (patient readiness and acceptance). As shown in the framework, the telemedicine platform plays a crucial role in facilitating the

communication process, while patient readiness and acceptance can significantly influence the ultimate outcomes of the telemedicine interaction.

- Cultural and Socioeconomic Factors

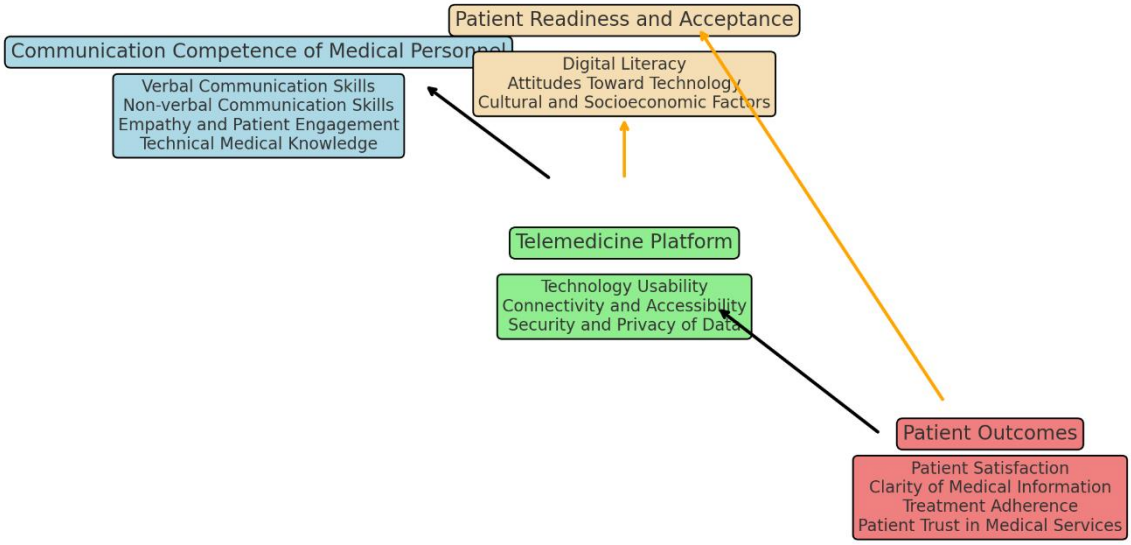

Figure 1: Conceptual Framework for the Analysis of Medical Personnel Communication Competence through Telemedicine

RESULT AND DISCUSSION

This research produced several important findings related to the communication competence of medical staff when interacting with COVID-19 patients through telemedicine at Prof. Dr. Chairuddin Panusunan Lubis University of Sumatera Utara Hospital. Telemedicine, which gained prominence during the COVID-19 pandemic, became a vital tool in maintaining patient-doctor communication while ensuring safety and minimizing physical contact. However, as with any form of digital communication, it comes with its own set of challenges, especially in terms of ensuring clear, empathetic, and effective communication. Below is a detailed discussion of the main findings.

Clarity of Medical Information

One of the primary findings in this research is related to the clarity of medical information communicated through telemedicine. Based on survey results, most patients expressed satisfaction with the clarity of the medical information provided by healthcare professionals during telemedicine consultations. Patients reported that doctors generally explained diagnoses, treatment options, and follow-up care in a way they could understand. This was particularly important for COVID-19 patients, who were often anxious and overwhelmed with their health conditions.

However, there was a subset of patients, particularly those without a background in healthcare, who struggled to understand the medical terminology used. In telemedicine, where there is limited opportunity for real-time clarification of non-verbal cues (such as body language or facial expressions), misunderstandings can more easily arise. Patients with lower

educational backgrounds or no prior experience with medical conditions found it challenging to follow explanations about their symptoms, medication regimens, or the progression of the disease.

From the interviews conducted with medical staff, it became evident that healthcare professionals themselves were aware of this challenge. Many doctors and nurses admitted that simplifying medical language without losing the precision of the information was one of the biggest obstacles in telemedicine. Telemedicine limits the natural rapport and trust-building that occurs during face-to-face consultations, making it more difficult for doctors to gauge a patient's understanding through body language or other visual cues.

The findings suggest that medical professionals need to be more conscious of how they present information in a telemedicine context. A more deliberate effort is required to avoid jargon, explain medical terms in layman's language, and actively ask patients to confirm their understanding. Additionally, providing supplementary written materials, diagrams, or digital resources through telemedicine platforms could help bridge this communication gap.

Emotional Connection and Empathy in Digital Communication

The emotional aspect of doctor-patient communication is crucial, particularly in treating COVID-19 patients who may experience anxiety, fear, and isolation due to the nature of the disease. One of the significant challenges identified in this study is maintaining emotional connection and empathy in a telemedicine setting, where physical cues such as eye contact, tone of voice, and body language are less pronounced or entirely absent.

While many medical staff indicated that they tried to compensate for the lack of physical presence by using a warm tone, verbal reassurances, and clear expressions of empathy, several patients felt that the telemedicine consultations were more transactional than empathetic. They described the interactions as feeling "rushed" or "impersonal," especially during periods when the healthcare system was overwhelmed by a high volume of COVID-19 cases.

Patients indicated that while they appreciated the convenience and safety of telemedicine, they sometimes felt a disconnect from their doctors. Empathy, a key component of effective healthcare communication, was harder to convey through a screen. This finding aligns with broader literature that suggests telemedicine poses challenges for healthcare professionals in establishing and maintaining an emotional bond with their patients, which is crucial for patient satisfaction and adherence to medical advice.

Medical staff in the interviews shared their struggles with this aspect of telemedicine. They expressed that while they tried to provide emotional support, the lack of in-person interaction limited their ability to fully assess a patient's emotional state. Doctors often rely on physical cues, such as facial expressions or body language, to gauge a patient's level of distress or anxiety. In the telemedicine context, the subtle emotional cues that help build trust and rapport are not as easily detectable, making the interaction feel less personal.

To address this, medical staff need to adopt more proactive communication strategies, such as asking more questions about a patient's emotional well-being and allowing more time for patients to express concerns. Training on "digital bedside manners," which emphasizes verbal expressions of empathy and attentiveness, could also help improve the patient experience in telemedicine consultations.

Technical Challenges and Access Issues

A recurring theme in this study was the technical challenges associated with telemedicine, which impacted the quality of communication between medical personnel and patients. Patients reported facing issues such as unstable internet connections, difficulty navigating telemedicine platforms, and lack of access to suitable devices. These technical issues often interrupted consultations or led to frustration for both parties, diminishing the overall effectiveness of the communication.

For example, when video calls were interrupted or lagged due to poor internet connections, it was difficult for patients to fully understand what their doctors were saying, and vice versa. In some cases, this led to miscommunication regarding medication instructions or follow-up appointments. Some patients even reported reverting to phone calls or text messaging as alternative means of communication when the telemedicine platform failed, which further reduced the quality and depth of the interaction.

Healthcare professionals also encountered difficulties in using telemedicine platforms effectively. While some medical personnel had prior experience with digital tools, many were not adequately trained on how to use telemedicine software. This sometimes resulted in delays or confusion during consultations, particularly for older doctors who were less familiar with the technology. Both patients and medical staff suggested that more comprehensive training on telemedicine tools is needed to improve the overall experience.

This finding highlights the importance of improving technological infrastructure and providing more robust training for both patients and healthcare professionals. Hospitals and telemedicine providers should invest in more reliable platforms, as well as offer clear guidance and support for users who are less familiar with digital healthcare. In addition, providing alternatives for patients who do not have access to the necessary technology (such as phone consultations) ensures inclusivity in telemedicine services.

Competence in Non-verbal Communication through Digital Platforms

While telemedicine provides a convenient platform for verbal communication, it presents challenges for non-verbal communication, which is a critical component of effective medical interactions. In face-to-face consultations, doctors and nurses rely heavily on non-verbal cues such as facial expressions, body posture, and gestures to communicate care, attentiveness, and empathy. These cues are significantly diminished in a telemedicine environment, particularly when consultations are conducted through audio calls or when video quality is poor.

The research found that healthcare professionals often struggled to convey empathy and understanding without the aid of these non-verbal signals. Patients, in turn, felt that the consultations lacked the warmth and personal connection they were used to in face-to-face interactions. This was particularly evident when technical issues, such as poor video quality or audio delays, further hindered the ability to communicate effectively.

The study suggests that medical professionals need to adapt their communication strategies for telemedicine. This includes focusing on verbal expressions of empathy, such as using a calm and reassuring tone, making frequent verbal acknowledgments, and asking open-ended questions to encourage patients to share their concerns. Additionally, healthcare professionals should be trained to make the most of the limited visual cues available in telemedicine, such as maintaining eye contact with the camera and using facial expressions to convey attentiveness and care.

Recommendations for Future Telemedicine Communication

Based on the findings of this study, several recommendations can be made to improve the communication competence of medical staff in telemedicine settings. These recommendations are aimed at addressing the challenges identified in the clarity of medical information, emotional connection, technical issues, and non-verbal communication.

1. **Simplification of Medical Language**: Medical staff should receive training on how to effectively communicate medical information in layman's terms, especially when dealing with patients who have limited health literacy. This could include developing standardized scripts or guidelines for explaining common medical conditions and treatments in a simple and understandable manner.
2. **Emotional Engagement in Telemedicine**: To compensate for the lack of in-person interaction, medical staff should be trained in digital empathy techniques. This could involve using specific phrases that convey understanding and support, as well as allowing more time for patients to express their concerns and emotions during telemedicine consultations.
3. **Addressing Technical Issues**: Hospitals should invest in more reliable telemedicine platforms and provide technical support for both patients and medical staff. Ensuring that both parties have access to stable internet connections and user-friendly software will help reduce the technical barriers that currently impede effective communication.
4. **Training on Digital Non-verbal Communication**: While non-verbal communication is limited in telemedicine, medical staff can still use strategies such as maintaining eye contact with the camera, smiling, and using verbal affirmations to create a more personal connection. Training programs should focus on how to maximize the impact of these limited cues in a digital environment.
5. **Patient Education on Telemedicine Use**: Patients should also be provided with clear instructions on how to use telemedicine platforms and troubleshoot common technical problems. This will empower

patients to make the most of their telemedicine consultations and reduce the frustration caused by technical difficulties.

CONCLUSIONS

Based on the results of this research, it can be concluded that telemedicine has provided an effective solution for continuing medical services during the COVID-19 pandemic, but there are still challenges to overcome, particularly related to the communication competence of medical staff. Clarity of information, empathy, and professionalism are critical aspects that need to be enhanced to maximize the benefits of telemedicine for patients.

RECOMMENDATIONS

Telemedicine Communication Training

It is recommended that the hospital provide specialized training for medical staff related to communication in a virtual environment. This training can include techniques for effectively delivering information, ways to express empathy verbally, and optimal use of telemedicine platforms.

Improvement of Technological Access

Collaboration between the government and healthcare providers is needed to improve technological access for patients, including providing devices and enhancing internet infrastructure in underserved areas.

Development of Telemedicine Protocols

The development of specific protocols for telemedicine, including communication guidelines, time management, and professional ethics, is essential to ensure consistent service quality.

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