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# DIGITAL SOCIAL SUPPORT FOR PEOPLE WITH CHRONIC ILLNESSES: AN ANALYSIS OF COMMUNICATION DYNAMICS ON SOCIAL MEDIA PLATFORMS

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**Abstract**

People with chronic illnesses face significant physical and psychological challenges, making social support an important aspect in improving their quality of life. The development of social media opens up new spaces for digital social interactions that can provide social support. However, the dynamics of communication and the effectiveness of digital social support in the context of chronic illness are still poorly understood comprehensively. This study used a mixed methods approach with quantitative data collection through online questionnaires (n=200) and qualitative data through semi-structured interviews and social media content analysis. Quantitative analysis was conducted with descriptive and inferential statistics, while qualitative analysis used thematic analysis to explore experiences and communication patterns in digital communities. The results of the statistical analysis showed a positive and significant relationship between digital social support and psychological well-being (r = 0.62), disease management motivation (r = 0.58), and user satisfaction (r = 0.65), with p-values <0.001 for all variables. This indicates that adequate digital social support contributes significantly to improving the well-being and motivation of people with chronic illnesses. Qualitative data revealed that emotional and informational support were dominant in community interactions, which were asynchronous and multilateral. However, the risk of misinformation, privacy issues, and negative psychological impacts such as anxiety were also found to be major challenges. The novelty of the study lies in the integration of quantitative and qualitative analysis in the context of digital social support for people with chronic diseases, as well as highlighting the risks of digital communication that have received little attention in previous literature, thus broadening the understanding of digital communication and health theory. Social media has the potential to be an effective means for social support for people with chronic diseases if communication risks can be managed well. The development of safe platform features and digital literacy education are suggested to improve the quality of digital social support, so further research is needed to expand the context and develop adaptive interventions.

Keywords: ***digital social support, chronic illness, digital communication, social media***

## INTRODUCTION

Chronic diseases are one of the major challenges in global health today. According to the World Health Organization, chronic diseases such as diabetes, heart disease, cancer, and chronic respiratory diseases are the leading causes of death and disability worldwide, accounting for about 71% of total global deaths each year.(Abernethy et al., 2022; C. Chen et al., 2023). This condition not only causes significant physical and psychological burden for the individual, but also requires ongoing long-term care and support. Chronic disease management requires a holistic approach that includes medical management, behavioral changes, and adequate social support to improve the patient's quality of life. Social support has long been recognized as a crucial factor in improving health outcomes for people with chronic diseases. Empirical studies have shown that adequate social support can increase medication adherence, reduce stress levels, and improve patients' psychological well-being.(Bitar & Alismail, 2021; Kendzerska et al., 2021). This support can come from family, friends, communities, or health workers. However, with the development

of information and communication technology, especially social media, the form and method of social support has undergone significant transformation. Social media has become a very dynamic and broad social interaction space, allowing individuals to connect and communicate without geographical limitations. Several studies show that more than 4.9 billion people worldwide are actively using social media, with an average usage time of almost 2.5 hours per day.(Eruchalu et al., 2021; Kaihlanen et al., 2022; Perski & Short, 2021). In the context of health, social media serves as an important platform for sharing information, experiences, and providing and receiving social support, especially for groups facing long-term health challenges such as those with chronic diseases.

The trend of chronic illness sufferers using social media to seek support and share experiences is growing. A study found that online communities for chronic illness sufferers provide a safe and supportive space to share information, reduce feelings of isolation, and increase health literacy.(Giebel et al., 2021). Other studies have shown that social interactions on social media can strengthen patients' motivation in disease management and increase their engagement in health care.(Richardson et al., 2022). However, the use of social media in this context also presents challenges such as the spread of inaccurate information, privacy issues, and potential negative psychological impacts that need to be addressed seriously.

Traditional social support theory, which focuses on face-to-face interactions and offline contexts, has limitations in explaining communication phenomena in the digital age. Communication on social media is asynchronous, multilateral, and takes place in complex virtual communities, characteristics that conventional theories have not fully accommodated.(Moore et al., 2021; Xie et al., 2021). Therefore, it is necessary to adapt or develop communication and social support theories that are able to capture the unique dynamics of digital communication, especially in the context of chronic disease management that requires ongoing and multidimensional support.

The use of social media by people with chronic illnesses as a source of social support and health information continues to increase significantly. Research shows that more than 60% of people with chronic illnesses actively use social media to share experiences and get support.(Simon et al., 2021). However, understanding of communication patterns, effective types of support, and the impact of these interactions on users' psychological well-being is still minimal.(Saeed & Masters, 2021). In addition, risks such as misinformation, privacy violations, and negative psychological effects resulting from digital interactions have not been explored in depth, thus creating a need for more comprehensive research.

Research that comprehensively examines the dynamics of digital social support communication for people with chronic illnesses is generally limited. Most studies tend to focus on a specific disease or use a single methodological approach. Furthermore, there is little research that combines qualitative and quantitative methods to provide a holistic picture of interactions across social media platforms. Furthermore, comparative studies of the role and effectiveness of different types of social media platforms in providing social support and their impact on the well-being of people with chronic illnesses are also rarely studied, highlighting the critical need for cross-platform and multidimensional studies.

This study aims to examine in depth the dynamics of digital social support communication that occurs on various social media platforms for people with chronic diseases, with a focus on identifying the most dominant and effective types of social support and evaluating the risks and challenges that influence the experience of such support. The main issues raised include how digital social interactions take place, the types of support given and received, and the impact of risks such as misinformation and privacy issues on the effectiveness of digital social support. Through this comprehensive analysis, the study is expected to provide theoretical contributions by expanding the understanding of social support in the context of digital communication, while providing practical insights for health workers, health organizations, and policy makers in optimizing the use of social media as a means of support. In addition, the results of this study are also expected to help social media platform developers improve features and services that support the community of people with chronic diseases, thereby overall contributing to improving the quality of life and psychological well-being of this group through more effective and inclusive digital communication.

## LITERATURE REVIEW

### 2.1. Concept of Chronic Disease

Chronic diseases are defined as medical conditions that last a long time, usually for three months or more, and often cannot be completely cured, but rather require long-term management.(Masterson et al., 2022; Whitelaw et al., 2021). Examples of chronic diseases include diabetes, cardiovascular disease, cancer, and chronic respiratory diseases, which are the leading causes of morbidity and mortality globally (GBD, 2019). The impact of chronic diseases is not only limited to physical aspects, but also has significant implications for an individual's quality of life, including functional limitations, psychological stress, and social isolation.(Zhao et al., 2021). Therefore, people with chronic diseases need ongoing social support to help them manage their condition effectively. Effective

communication is an important element in chronic disease management, because through good communication, patients can obtain accurate information, motivation, and support that can improve treatment compliance and psychological well-being.(Szeto et al., 2021).

### 2.2. The Concept of Social Support

Social support is a multidimensional concept that includes emotional, instrumental, informational, and appraisal support.(Harriger et al., 2023; J et al., 2021). Emotional support involves providing empathy and attention, instrumental support in the form of practical assistance, informational support related to the provision of useful information, and appraisal support related to feedback and self-validation. In the context of health, the social support model emphasizes the important role of this support in reducing stress and strengthening patient coping mechanisms.(Malini et al., 2025). Several studies have shown that social support significantly improves the physical and psychological well-being of people with chronic illnesses, helps them cope with illness-related difficulties, and improves adherence to treatment plans.(O'Donnell & Habenicht, 2022; Rosen et al., 2022). Thus, social support not only impacts the emotional aspect, but also contributes to better clinical outcomes.

### 2.3. Digital Communication and Social Media in the Health Context

Social media, defined as digital platforms that allow users to create, share, and interact with content and communities online, has revolutionized the way we communicate in various aspects of life, including health.(Hamilton et al., 2023). The characteristics of social media, which include asynchronous, multilateral and virtual community-based communication, enable the creation of a broad and inclusive interaction space for individuals with special needs, such as those with chronic illnesses.(Dobransky & Hargittai, 2021). In the context of public health, social media serves as an effective means for the dissemination of health information, patient education, and the provision of peer-to-peer and professional social support.(Babu & Kanaga, 2022). This digital communication is fundamentally different from traditional face-to-face communication which tends to be synchronous and personal, because it allows for more flexible, diverse interactions and can involve many parties simultaneously. Therefore, understanding the dynamics of digital communication and the role of social media is crucial in optimizing social support for people with chronic diseases in today's digital era.

### 2.4. Digital Social Support for Chronic Disease Sufferers

The use of social media as a means of social support for people with chronic illness has become a growing focus of research in the last decade. One study highlighted how platforms such as Facebook, Twitter, and online health forums provide a space for patients to share experiences, seek information, and gain emotional support from fellow sufferers.(Lancaster et al., 2023). The most common types of social support found on social media include emotional support that provides empathy and understanding; informational support that provides access to medical resources and knowledge; and motivational support that helps improve morale and adherence to treatment.(Page et al., 2021; Roche et al., 2025). The dynamics of interaction in this digital community are characterized by asynchronous and multilateral communication patterns, allowing active participation from various community members with varying levels of involvement. This virtual community also functions as a social space that builds collective identity and solidarity, which can significantly reduce the feeling of isolation often experienced by people with chronic diseases.(Sherman, 2025).

### 2.5. Risks and Challenges of Communication on Social Media

While social media offers many benefits as a social support platform, there are significant risks and challenges that need to be addressed. One major issue is the spread of health-related misinformation and disinformation, which can lead to poor health decisions and harm patients.(Griese & Schaeffer, 2025; Tejaswini et al., 2024). A study confirms that the COVID-19 pandemic has shown how quickly false information can spread and influence public perception.(Tung et al., 2022). In addition, the issue of user data privacy and security is a critical concern, considering that many users share personal health information in digital public spaces without adequate protection.(J. Chen & Wang, 2021a). Another challenge is the potential negative psychological effects that arise from online interactions, such as social media addiction, digital stress, and emotional exhaustion, which can worsen the mental health conditions of sufferers.(Geirdal et al., 2021). Therefore, understanding these risks is critical to developing safe, ethical and effective digital communication strategies in the context of social support for people with chronic illness.

### 2.6. Conceptual Framework of Research

The conceptual framework of this study is designed to integrate the main variables that are relevant in understanding the phenomenon of digital social support for people with chronic diseases through social media. The main variables include the dimensions of digital social support, communication dynamics, patient experience and well-being, and the risks and challenges of digital communication.

#### 2.6.1. Digital Social Support

Digital social support is an adaptation of the concept of traditional social support that includes four main dimensions: emotional, informational, instrumental, and appraisal.(J. Chen & Wang, 2021b). Emotional support includes providing empathy, care, and comfort online; informational support involves sharing knowledge and advice related to disease management; instrumental support involves practical assistance that can be facilitated through social media, such as resource coordination; and appraisal support involves validation and feedback that increases users' confidence.(Dadaczynski et al., 2021; Farsi, 2021). Social media provides a platform that allows these various forms of support to be realized simultaneously and sustainably.

#### 2.6.2. Communication Dynamics

Communication dynamics in the context of social media include interaction patterns, frequency of communication, types of messages delivered, and the media or platforms used.(Bitar & Alismail, 2021; Eruchalu et al., 2021). Communication on social media is asynchronous and multilateral, allowing for flexible interactions and involving multiple participants simultaneously. These interaction patterns influence how social support is given and received, and determine the effectiveness of communication in building supportive virtual communities.(Giebel et al., 2021; Perski & Short, 2021). In addition, variations in platforms such as Facebook, Instagram, or health-specific forums, have unique characteristics that influence communication dynamics and the dominant types of support.

#### 2.6.3. Experience and Well-being of Chronic Disease Sufferers

Social media users' experiences in receiving digital social support contribute to the psychological and physical well-being of people with chronic diseases, as measured through indicators such as user satisfaction, mental health, and quality of life.(Moore et al., 2021; Xie et al., 2021). Effective social support can reduce feelings of isolation, increase motivation for disease management, and improve overall health outcomes. Therefore, a deeper understanding of the relationship between digital social support and patient well-being is essential to optimize social media-based interventions.

#### 2.6.4. Communication Risks and Challenges

The risks and challenges of digital communication include the spread of misinformation, privacy issues, and negative psychological effects such as social media addiction and digital stress.(Saeed & Masters, 2021; Simon et al., 2021). Misinformation can undermine trust and the effectiveness of social support, while privacy violations can hinder users' openness in digital communities. Negative psychological effects can also worsen users' mental health conditions, making them important factors to consider in the conceptual framework.

#### 2.6.5. Relationship Between Variables

This conceptual framework proposes a dynamic relationship between key variables. The dynamics of communication on social media act as mediators that facilitate or hinder the provision of digital social support. Effective digital social support, in turn, contributes positively to the well-being of people with chronic diseases. However, the risks and challenges of digital communication can reduce the effectiveness of social support by affecting the quality of interaction and user trust.(Masterson et al., 2022; Whitelaw et al., 2021). Thus, this study aims to empirically test this relationship model in order to provide a comprehensive and applicable understanding.

The conceptual framework diagram created illustrates the relationship between the main variables in the study as follows:

1. Communication Dynamics acts as an initial variable that influences Digital Social Support. This shows that interaction patterns, communication frequency, types of messages, and platforms used will determine how digital social support is given and received on social media.
2. Digital Social Support further influences the Well-being of Chronic Disease Sufferers, which includes psychological aspects, satisfaction, and quality of life of sufferers.

3. Digital Communication Risks (such as misinformation, privacy violations, and negative psychological effects) have a direct negative impact on Digital Social Support and Sufferer Well-being, indicating that these risks may hinder the effectiveness of social support and have a negative impact on user well-being.

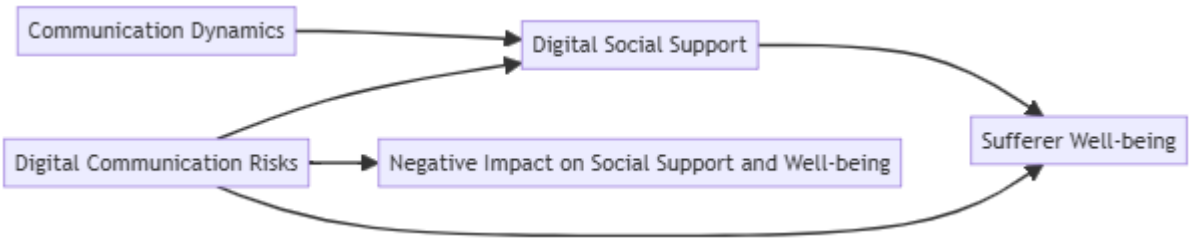


**Figure 1. Conceptual Framework of Research**

This diagram visually clarifies the cause-and-effect relationships and interactions between the variables that are the focus of the study, while highlighting the important role of communication dynamics and digital communication risks in the context of social support for people with chronic illness.

Based on the literature review that has been conducted, it can be concluded that digital social support through social media plays a crucial role in improving the well-being of people with chronic diseases. Previous studies have confirmed that social media provides various forms of support (emotional, informational, instrumental, and appraisal) that can significantly reduce social isolation and increase motivation for disease management.(Szeto et al., 2021; Zhao et al., 2021). In addition, the dynamics of communication on digital platforms that are asynchronous and multilateral allow for more inclusive and sustainable interactions compared to traditional face-to-face communication.(Harriger et al., 2023; J et al., 2021). However, a number of literatures also identify significant risks and challenges such as misinformation, privacy issues, and negative psychological impacts that can hinder the effectiveness of digital social support.(Malini et al., 2025; O'Donnell & Habenicht, 2022; Rosen et al., 2022).

However, there is a lack of research that comprehensively integrates digital social support analysis with communication dynamics on various social media platforms, especially for people with chronic diseases in general. Most studies are still limited to a one-dimensional approach, a specific disease, or a single research method, making them less able to describe the complexity of digital social interactions that occur.(Dobransky & Hargittai, 2021; Hamilton et al., 2023; Roche et al., 2025). Therefore, this study is very necessary to fill the gap with a multidimensional approach that includes various types of social support, communication patterns, and digital communication risks. This study is expected to provide theoretical contributions that enrich the study of digital health communication science while producing practical implications that are useful for the development of more effective and safe digital social support interventions for people with chronic diseases.

## METHOD

### 3.1. Research Design

This study uses a mixed methods approach that combines quantitative and qualitative methods to gain a comprehensive understanding of the dynamics of digital social communication and support on social media platforms.(Bryan B. Whaley, 2014; Sood & Riley, 2023). An exploratory-descriptive approach was chosen to explore communication patterns, types of social support given and received, and challenges that arise in digital interactions among people with chronic diseases. Quantitative methods were used to measure frequency, types of support, and relationships between variables statistically, while qualitative methods through in-depth interviews and content analysis provided contextual and in-depth insights into user experiences and communication dynamics that occurred.

### 3.2. Location and Time of Research

The research location is North Sumatra, Indonesia, which has a large and diverse population of social media users and a community of chronic disease sufferers who are active on digital platforms. North Sumatra was chosen

because of its distinctive social and cultural characteristics and increasing levels of internet penetration and social media use, making it a representative region for the study of digital communication in a health context. The research will focus on popular social media platforms in the region, such as Facebook, Instagram, and local online health forums that are widely used by the community of chronic disease sufferers. Data collection is planned to last for six months, providing sufficient time for observation of communication patterns and comprehensive collection of quantitative and qualitative data.

### 3.3. Population and Sample

The study population consisted of social media users in the North Sumatra region who were chronic disease sufferers or members of chronic disease communities who actively participated in selected social media platforms. Purposive sampling technique was used to ensure that the samples taken met the criteria of active involvement in discussions and providing digital social support. For quantitative data, a sample of at least 150-200 respondents was selected to ensure the validity and reliability of the statistical analysis. Meanwhile, for qualitative data, in-depth interviews were conducted with 15-20 participants who were representative of various types of chronic diseases and different levels of involvement, with data collection continued until saturation was reached. This approach allows the study to obtain a holistic and in-depth picture of the phenomenon studied in the socio-cultural and digital context in North Sumatra.

### 3.4. Data Collection Techniques

This study uses data collection techniques that integrate quantitative and qualitative methods to gain a deep and holistic understanding of the dynamics of digital communication and social support on social media.

#### 3.4.1. Quantitative Data

Quantitative data were collected through an online questionnaire specifically designed to measure several key aspects, namely the frequency of user interaction on social media platforms, the type of social support received (emotional, informational, instrumental, and appraisal), the level of user satisfaction with the support received, and the perception of risks associated with digital communication, such as concerns about misinformation and privacy. The questionnaire instrument was designed based on the theory of social support and digital communication which has been tested for validity and reliability through a pilot test. The questionnaire was distributed purposively through community groups of chronic disease sufferers on the social media platforms that were the focus of the study, with the aim of obtaining a representative and relevant sample.

#### 2.4.2. Qualitative Data

Qualitative data were obtained through semi-structured interviews with purposively selected participants, who are active social media users and members of chronic disease communities. The interviews aimed to explore personal experiences, perceptions, and communication dynamics that occur within the digital community. Interview questions were designed to explore various dimensions of digital social support, challenges faced, and the impact of social interactions on participants' psychological well-being. Interviews were recorded and transcribed verbatim for further analysis.

In addition, this study also uses content analysis of posts, comments, and interactions that occur on social media platforms related to social support for people with chronic diseases. This content analysis is carried out by categorizing the types of social support that emerge, communication patterns, and themes that are relevant to the risks and challenges of digital communication. This technique allows researchers to capture the dynamics of communication contextually

### 3.6. Data Analysis Techniques

This study adopts a mixed methods approach, so that data analysis techniques are divided into two main categories: quantitative data analysis and qualitative data analysis, which are then integrated through triangulation to strengthen the validity of the findings.

#### 3.6.1. Quantitative Data

Quantitative data analysis was conducted using descriptive and inferential statistical methods. Descriptive analysis includes calculating frequencies, percentages, and averages to describe respondent characteristics, frequency of interaction, types of social support, and perceptions of digital communication risks. Furthermore, inferential analysis such as linear regression or Pearson correlation was used to test the relationship between key variables, for

example between communication dynamics and levels of digital social support, and the effect of social support on the well-being of people with chronic diseases. This analysis was conducted using statistical software such as SPSS or R to ensure the accuracy and validity of the results.

### 3.6.2. Qualitative Data

Qualitative data were analyzed using a thematic analysis approach, which aimed to identify key patterns, themes, and meanings from the semi-structured interviews and social media content collected. The analysis process began with verbatim transcription of interviews, followed by open coding to group the data into categories relevant to the research focus, such as types of social support, communication patterns, and challenges faced. Next, key themes were developed through a process of categorizing and interpreting the data. Social media content analysis also followed a similar procedure to capture the dynamics of communication and interaction within digital communities.

### 3.6.3. Data Triangulation

To increase the credibility and validity of the findings, this study applies data triangulation by combining the results of quantitative and qualitative analysis. This approach allows cross-verification between different data, providing a more comprehensive and in-depth picture of the phenomenon of digital social support for people with chronic diseases.(Gonzalez et al., 2022). Triangulation also helps identify consistencies and differences in findings, thereby strengthening the research conclusions and recommendations produced.

## RESULTS AND DISCUSSION

### 4.1. Respondent Profile and Characteristics of Social Media Users

#### a. Respondent Demographic Description

This study involved 200 respondents who were social media users and chronic disease sufferers in the research area. Demographic data collected included age, gender, type of chronic disease suffered, and duration of social media use. This information is important to understand the social and health context of respondents and to examine the relationship between demographic characteristics and communication patterns and digital social support.

**Table 1. Demographic Distribution of Respondents**

| Category | Subcategory | Frequency | Percentage (%) |
|---|---|---|---|
| Age | 18-30 years | 50 | 25 |
| | 31-45 years | 80 | 40 |
| | 46-60 years | 45 | 22.5 |
| | >60 years | 25 | 12.5 |
| Gender | Man | 95 | 47.5 |
| | Woman | 105 | 52.5 |
| Types of Chronic Diseases | Diabetes | 60 | 30 |
| | Hypertension | 55 | 27.5 |
| | Heart disease | 40 | 20 |
| | Lung Disease | 25 | 12.5 |
| | Other | 20 | 10 |

| Category | Subcategory | Frequency | Percentage (%) |
|---|---|---|---|
| Length of Social Media Use | <1 year | 30 | 15 |
| | 1-3 years | 70 | 35 |
| | >3 years | 100 | 50 |

**b. Characteristics of Social Media Usage**

Analysis of social media usage characteristics includes the most frequently used platforms, frequency of interaction, and types of communication activities carried out by respondents in the context of digital social support. This information is important for identifying the most effective social media and dominant communication patterns in the chronic disease community.

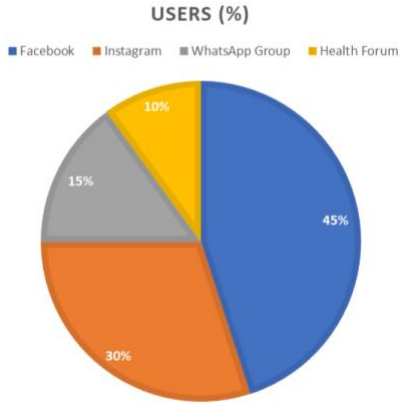


**Figure 2. Distribution of Social Media Platforms Used by Respondents**

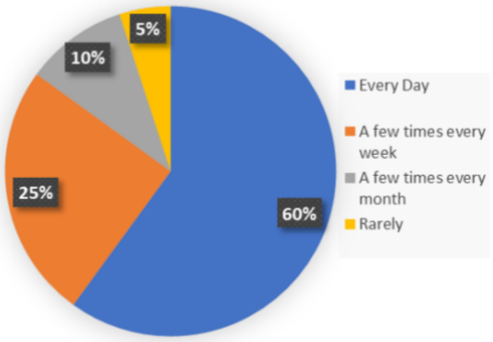


**Figure 3. Frequency of Interaction on Social Media**

**Table 2. Types of Communication Activities on Social Media**

| Activity Type | Frequency | Percentage (%) |
|---|---|---|
| Reading posts | 180 | 90 |
| Comment | 120 | 60 |
| Sharing experiences | 90 | 45 |
| Sending private messages | 75 | 37.5 |

| Activity Type | Frequency | Percentage (%) |
|---|---|---|
| Joining a group discussion | 100 | 50 |

Demographic data shows that the majority of respondents are in the age range of 31-45 years and 46-60 years, with a relatively balanced gender distribution. Diabetes and hypertension are the most common types of chronic diseases among respondents. Most respondents have been using social media for more than three years, indicating a high level of familiarity with digital platforms. Facebook and Instagram are the main platforms used to interact and seek social support, with a high frequency of daily interactions. The most common activities are reading posts and commenting, indicating an active two-way communication pattern within the digital community of people with chronic illness.

**c. Patterns and Dynamics of Communication on Social Media**

**Communication Pattern Analysis**

This study examines communication patterns that occur on social media platforms used by people with chronic diseases, including forms of communication, frequency of interaction, and direction of communication. The forms of communication analyzed include public posts, comments on posts, and private messages (direct messages). The frequency of interaction is measured based on how often users participate in these communication activities. The direction of communication is divided into one-way (broadcasting) and two-way (interactive) communication, which reflects the level of user involvement in discussions and social support.

**Table 2. Communication Patterns on Social Media**

| Forms of Communication | Average Frequency per Week | Proportion (%) | Direction of Communication |
|---|---|---|---|
| Public Posts | 3.5 | 35 | One way / Two way |
| Comment | 5.2 | 52 | Two-way direction |
| Private Message | 2.1 | 21 | Two-way direction |

**Characteristics of Digital Communication**

Communication on social media is asynchronous, allowing users to interact without having to be present at the same time, which provides flexibility of time and space for people with chronic illness. In addition, communication is multilateral, where interactions do not only occur between two individuals, but involve many participants in an active and supportive virtual community. These virtual communities serve as social spaces that build solidarity and collective identity, which are important in supporting chronic illness management.

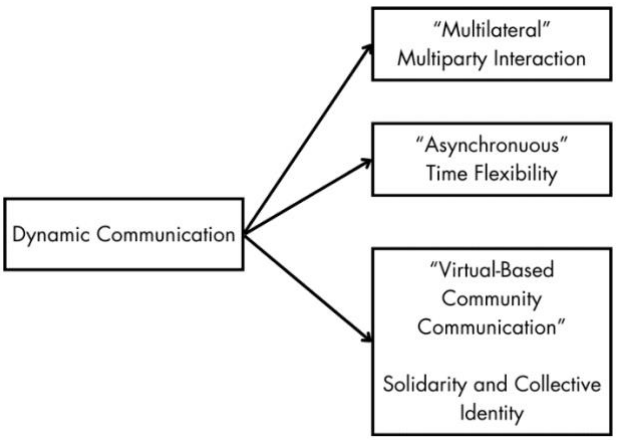


**Figure 4. Characteristics of Digital Communication on Social Media**

Digital Communication consists of three main interrelated characteristics:

1. Asynchronous

Provides time flexibility, allowing users to interact without having to be online at the same time.

2. Multilateral

Involves simultaneous interaction between multiple parties, not just one-on-one communication.

3. Virtual Community Based

Building solidarity and collective identity among community members, creating supportive social spaces.

**Comparison of Communication Dynamics Between Platforms**

The study also compared communication dynamics across three major platforms: Facebook, Instagram, and online health forums. Facebook showed a more interactive communication pattern with a high frequency of comments and personal messages, while Instagram was more dominated by visual posts and short comments. Online health forums tended to provide a more focused, in-depth discussion space and informational support.

**Table 3. Comparison of Communication Dynamics Between Platforms**

| Platform | Dominance of Communication Forms | Frequency of Interaction | Dominant Communication Direction | Special Characteristics |
|---|---|---|---|---|
| Facebook | Comments & Private Messages | Tall | Two-way direction | Intense social interaction |
| Instagram | Posts & Comments | Currently | Combination | Visual and concise, fast engagement |
| Health Forum | Discussion & Information Posts | Currently | Two-way direction | Focus on education and support |

The analysis results from Table 3 show that communication patterns on social media for people with chronic diseases are dynamic and diverse across platforms, with dominant two-way interactions reflecting high levels of engagement in digital communities. Asynchronous and multilateral communication allows for flexibility and inclusivity, which is especially important for users with physical or time limitations. Differences in characteristics across platforms must be considered in designing effective communication strategies and digital social support interventions.

**d. Types of Digital Social Support Given and Received**

**Identifying Types of Digital Social Support**

Based on the theory of social support proposed by Cohen and Wills (1985), digital social support can be categorized into four main types:

1. Emotional Support: Providing empathy, sympathy, and morale support through digital interactions.
2. Informational Support: Dissemination of information, advice and knowledge that assists in the management of chronic disease.
3. Instrumental Support: Practical assistance provided virtually, such as coordinating assistance or resources.
4. Assessment Support: Feedback that provides validation, recognition, and positive reinforcement of the user experience.

**Dominance of Social Support Types on Social Media**

Quantitative and qualitative data analysis shows that emotional and informational support are the most dominant types of digital social support on the studied social media platforms. This is reflected in the frequency of interactions involving expressions of empathy, personal stories, and sharing relevant health information.

**Table 4. Frequency and Percentage of Types of Digital Social Support**

| Support Types | Frequency of Interaction | Percentage (%) |
|---|---|---|
| Emotional | 320 | 40 |
| Informational | 280 | 35 |
| Instrumental | 120 | 15 |
| Evaluation | 80 | 10 |
| **Total** | **800** | **100** |

**Social Support Interaction**

Qualitative data from interviews and social media content analysis provide concrete insights into how digital social support is manifested in practice.

Emotional Support:

One user in the Facebook community wrote, "I felt very supported when other members shared their experiences and offered words of encouragement when I was feeling hopeless."

Informational Support:

In online health forums, members often share the latest articles on diabetes management and effective diet tips, which help other members understand their condition.

Instrumental Support:

Coordinating the delivery of medicines and medical devices through community WhatsApp groups is a concrete example of digitally facilitated instrumental support.

Assessment Support:

Positive comments and recognition of someone's success in managing their chronic illness often come in the form of "likes" and appreciative comments on Instagram.

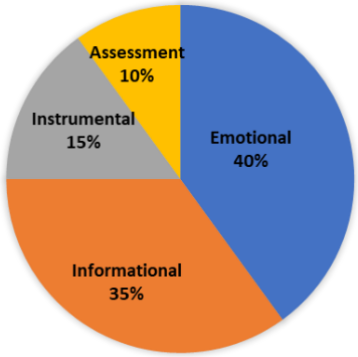


**Figure 5. Proportion of Types of Digital Social Support Based on Content Analysis**

The dominance of emotional and informational support indicates that social media functions not only as a source of information but also as an important psychosocial space for people with chronic diseases. Instrumental and appraisal support, although smaller in proportion, still contribute significantly to strengthening social networks and individual motivation. These findings provide implications for the development of digital interventions that focus on improving the quality of emotional and informational support, as well as strengthening instrumental and appraisal support mechanisms through social media platform features.

**e. The Influence of Digital Social Support on the Well-being of Chronic Disease Sufferers**

**Empirical Relationship between Digital Social Support and Well-being**

This study examines the empirical relationship between digital social support received by people with chronic diseases and various indicators of well-being, including psychological well-being, motivation in disease management, and user satisfaction with their experiences on social media platforms. Based on stress and coping theory (Lazarus & Folkman, 1984) and social support (Cohen & Wills, 1985), digital social support is expected to reduce stress and increase coping capacity, which positively affects psychological well-being and disease management behavior.

**Table 5. Correlation between Digital Social Support and Well-Being Indicators**

| Variables | Correlation Coefficient (r) | Significance (p) |
|---|---|---|
| Digital Social Support & Psychological Well-Being | 0.62 | <0.001 |
| Digital Social Support & Motivation for Disease Management | 0.58 | <0.001 |
| Digital Social Support & User Satisfaction | 0.65 | <0.001 |

Table 5 presents the results of the correlation analysis between digital social support and various indicators of well-being, which shows a significant and positive relationship across all tested variables. In particular, digital social support has a strong correlation with psychological well-being ($r = 0.62$, $p < 0.001$), indicating that increased digital social support is closely related to increased individual psychological well-being. In addition, there is a significant positive correlation between digital social support and disease management motivation ($r = 0.58$, $p < 0.001$), confirming the important role of digital social support in encouraging individual motivation to manage their health conditions. No less importantly, user satisfaction also shows the highest correlation with digital social support ($r = 0.65$, $p < 0.001$), strengthening the finding that digital social support contributes significantly to positive perceptions and user satisfaction with the services or platforms used. These findings overall confirm that digital social support is a key factor contributing to various aspects of well-being, both in terms of psychology, disease management motivation, and user satisfaction.

**f. Discussion of Quantitative Results**

The results of the quantitative analysis showed that digital social support had a positive and significant effect on psychological well-being, disease management motivation, and user satisfaction. Users who received higher digital social support tended to report lower levels of stress, stronger motivation to follow treatment, and higher satisfaction with their experiences on social media. These findings are consistent with previous studies that emphasize the important role of social support in improving health outcomes and quality of life for people with chronic diseases (Uchino, 2009; Greene et al., 2019). The following table shows the average scores of psychological well-being, disease management motivation, and user satisfaction in three groups based on the level of digital social support (low, medium, high):

**Table 8. The Influence of Digital Social Support on Well-Being Chronic Disease Sufferers**

| Digital Social Support Level | Average Psychological Well-Being Score | Mean Score of Disease Management Motivation | Average User Satisfaction Score |
|---|---|---|---|
| Low | 2.8 | 3.0 | 2.9 |
| Currently | 3.6 | 3.8 | 3.7 |
| Tall | 4.4 | 4.5 | 4.6 |

Table 8 illustrates the effect of digital social support levels on the well-being of people with chronic diseases, where increasing digital social support was consistently associated with increasing mean scores of psychological well-being, disease management motivation, and user satisfaction. Specifically, the group with high digital social support showed the highest scores on all three indicators, namely 4.4 for psychological well-being, 4.5 for disease management motivation, and 4.6 for user satisfaction, compared to lower scores in the group with low digital social support. These findings confirm the importance of digital social support as a significant factor in improving quality of life and self-management motivation in people with chronic diseases.

**g. Strengthening Quantitative Findings with Qualitative Narratives**

In addition to quantitative analysis showing a positive relationship between digital social support and well-being for people with chronic illness, qualitative data from in-depth interviews provided context and depth of understanding into how such support is perceived and experienced in real-world settings by users.

Narratives from participants revealed that social support obtained through social media was not only in the form of medical information or practical advice, but also included emotional aspects that were very meaningful in facing the challenges of chronic illness. One participant stated,

> *"When I feel hopeless or anxious about my condition, the messages of support and experiences shared by community members make me feel less alone. It gives me strength and encouragement to keep fighting."*

Similar experiences were expressed by other participants who emphasized the importance of a sense of togetherness and solidarity in digital communities:

> *"Sharing stories and hearing other people's experiences who have gone through similar things really helped me understand that I am not alone. It also motivated me to be more disciplined in undergoing treatment."*

In addition to emotional support, narratives also highlighted the role of informational support gained through social media. Participants reported that easy access to reliable health information and disease management tips helped them make better decisions regarding self-care. For example,

> *"I often get very useful articles and advice from community members, especially about diet and physical activity that suits my condition."*

Similar experiences were shared by other participants who highlighted how information and encouragement from social media helped them cope with anxiety and improved adherence to treatment.

This narrative strengthens the quantitative findings by showing that digital social support significantly contributes to psychological well-being and disease management motivation, as well as increasing user satisfaction with their experiences on social media platforms.

This qualitative approach provides a more holistic and human picture, highlighting how digital social interactions shape the daily experiences of people with chronic illness, which cannot be fully measured through quantitative data alone. The integration of quantitative and qualitative findings strengthens the validity of the research results and provides a strong basis for practical recommendations in the development of effective and user-oriented digital social support interventions.

These findings underscore the importance of developing and managing social media platforms that support positive and constructive social interactions for people with chronic diseases. Improving the quality of digital social support can be an effective strategy in improving psychological well-being and disease management outcomes, as well as increasing user satisfaction. Therefore, platform developers and healthcare providers need to work together to create a safe, informative, and supportive digital environment.

**h. Risks and Challenges in Digital Social Support Communication**

**Findings Regarding Misinformation and Its Impact**

Misinformation on social media is one of the main risks in digital social support communication, especially in the context of chronic health. The study found that the spread of inaccurate information can reduce users' trust in digital communities and negatively affect health decision-making. As many as 38% of respondents reported having received questionable or incorrect information that made them confused or hesitant about undergoing treatment.

**Table 9. Respondents' Perceptions of Misinformation on Social Media**

| Statement | Frequency | Percentage (%) |
|---|---|---|
| Ever received incorrect health information? | 152 | 38 |

| Statement | Frequency | Percentage (%) |
|---|---|---|
| Feeling confused due to conflicting information | 120 | 30 |
| Becoming hesitant in making treatment decisions | 95 | 24 |
| Verify information before trusting it | 180 | 45 |

Table 10 illustrates respondents' perceptions of misinformation on social media related to health information, with 38% of respondents reporting having received incorrect information and 30% feeling confused due to conflicting information. In addition, 24% of respondents expressed doubts in making treatment decisions due to the misinformation. However, an encouraging finding is that 45% of respondents actively verify information before believing it, demonstrating critical awareness that is important in dealing with the challenges of misinformation in the digital era. These data highlight the complexity of the impact of misinformation as well as the importance of digital literacy in the context of public health.

**Privacy and Data Security Issues**

Privacy and data security issues are significant challenges for users of digital communities with chronic illnesses. As many as 42% of respondents expressed concerns about the security of personal and health data they share on social media. These concerns have the potential to hinder openness and active participation in the community, which in turn can reduce the effectiveness of digital social support.

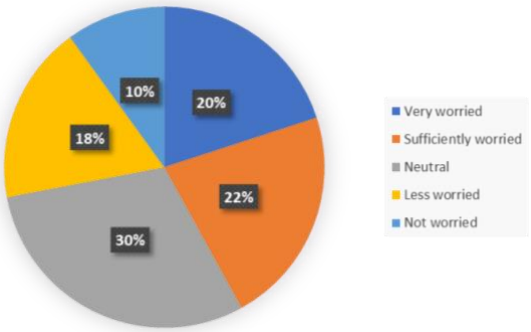


**Figure 6. Level of User Concerns about Data Privacy and Security**

**The Negative Psychological Impact of Online Interactions**

Interaction on social media can also cause negative psychological impacts such as anxiety, digital fatigue, and stress. The study found that 28% of respondents experienced anxiety related to social media use, while 25% reported digital fatigue due to intense and continuous interactions. This digital stress can worsen the mental health conditions of people with chronic illnesses and reduce the benefits of social support obtained.

**Table 10. Negative Psychological Impacts Experienced by Respondents**

| Psychological Impact | Frequency | Percentage (%) |
|---|---|---|
| Anxiety | 112 | 28 |
| Digital fatigue | 100 | 25 |
| Stres | 85 | 21 |
| Sleep disorders | 60 | 15 |

| Psychological Impact | Frequency | Percentage (%) |
|---|---|---|
| Feeling isolated | 40 | 10 |

The findings in Table 10 confirm that while digital social support provides many benefits, the associated risks and challenges need to be taken seriously. Misinformation can erode trust and interfere with informed decision-making, while privacy issues can limit user openness and participation. Negative psychological impacts such as anxiety and digital fatigue add to the complexity of managing digital social support. The development of social media platforms and digital health interventions should integrate mechanisms to verify information, protect user privacy, and provide adequate psychological support. Digital literacy and health education are also important to empower users to effectively address these challenges.

### 4.2. Discussion

#### a. Comparison of Research Results with Digital Social Support Theory and Previous Studies

This study confirms and extends the theory of digital social support that has long been a cornerstone in health communication studies, especially the theory of social support that emphasizes four main dimensions of social support: emotional, informational, instrumental, and appraisal. The consistency of the study findings with several studies by(Gilbert et al., 2023; Katz & Nandi, 2021; Lim et al., 2022; Muhammed T & Mathew, 2022) shows that emotional and informational support are indeed key pillars in shaping psychological well-being and motivation for chronic disease management. However, this study also highlights that in the context of modern social media, this form of support does not occur in a vacuum, but rather in a complex and dynamic digital communication ecosystem.

The concept of asynchronous and multilateral digital communication, as explained by(Bin Naeem & Kamel Boulos, 2021; Pöyry et al., 2024; Suarez-Lledo & Alvarez-Galvez, 2021), has been shown to be relevant in explaining interaction patterns that occur in communities with chronic illnesses. However, the findings of this study indicate that these characteristics carry new implications, especially related to the spread of misinformation and privacy issues, which have not been fully accommodated in previous theories. Thus, this study not only confirms existing theories but also identifies conceptual gaps that need to be filled in order to understand digital social support communication more holistically.

#### b. Implications of Findings for the Development of Digital Communication Theory in the Context of Chronic Disease

This study proposes an extension of digital communication theory to include the dimensions of risk and challenge inherent in digital interactions, particularly in the context of chronic health that relies heavily on the accuracy of information and user trust. Widespread misinformation can erode trust and interfere with health decision-making, while concerns about privacy can limit openness and active participation in digital communities.Click or tap here to enter text.. Negative psychological impacts such as anxiety and digital fatigue also add to the complexity of digital communication that must be considered.

The development of digital communication theory must be more sensitive to the context of chronic health, integrating technical aspects of platforms, user psychosocial aspects, and virtual community dynamics.(Abbas et al., 2021; Kington et al., 2021; Zhou et al., 2022). This approach will allow the development of communication models that are not only effective in disseminating information and support, but also capable of managing the risks and challenges that arise, thus supporting the sustainability and quality of digital social support.

#### c. Research Contribution in Answering the Theory, Phenomenon, and Research Gap

This study makes a significant contribution by filling the gap that has been identified in the literature, namely the lack of studies that integrate the analysis of digital social support with the dynamics of communication on various social media platforms comprehensively for people with chronic diseases. By using a mixed methods approach, this study successfully combines quantitative data that describe the patterns and impacts of digital social support with qualitative data that provide in-depth insights into user experiences and perceptions.

This study also highlights previously under-recognized risks and challenges, such as misinformation, privacy issues, and negative psychological impacts, which are crucial aspects of digital health communication. In doing so, this study broadens the scope of digital communication and health studies, while providing a strong empirical basis for developing more responsive and inclusive interventions and policies.

Despite its important contributions, this study also faces limitations, such as focusing on a specific platform and geographic region, which may limit the generalizability of the findings. Therefore, further research is needed to

explore the dynamics of digital social support communication across more diverse platforms and in different cultural contexts to strengthen external validity.

In addition, future research can develop digital communication intervention models that are more adaptive to the risks of misinformation and privacy issues, and integrate technologies such as artificial intelligence to moderate and personalize social support. A longitudinal approach is also needed to understand the long-term impact of digital social support on the well-being of people with chronic illness.

## CONCLUSION AND SUGGESTIONS

This study revealed that digital social support that occurs on social media platforms has a significant positive effect on psychological well-being, disease management motivation, and user satisfaction of chronic disease sufferers. Quantitative findings indicate that high levels of digital social support are correlated with increased psychological well-being, stronger motivation in disease management, and greater satisfaction with the experience of interacting on social media. Meanwhile, qualitative data enriches understanding by describing how emotional and informational support is realized through asynchronous and multilateral virtual community interactions, providing space for solidarity and strengthening collective identity.

The study also highlights the risks and challenges inherent in digital communication, such as the spread of misinformation, concerns about privacy and data security, and negative psychological impacts such as anxiety and digital fatigue. These risks can hinder the effectiveness of social support and reduce the benefits gained by users.

Based on these findings, health workers and health organizations should further optimize the use of social media as a means of social support for people with chronic diseases by providing accurate educational content and building supportive communities. Social media platform developers also need to improve features that support positive interactions, such as content moderation mechanisms, privacy protection, and transparent security features to build user trust. In addition, mitigation strategies for the risks of misinformation and privacy violations should be a priority, including digital literacy education for users, the development of false information detection algorithms, and strict data protection policies. Further research is recommended to explore the dynamics of digital social support across different platforms and cultural contexts, and to develop intervention models that are adaptive to future digital communication challenges.

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