Emoticons as Self-Disclosure in Social Media and Its Meaning for People Who are Deaf

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ABSTRACT

Purpose: The limitations in communication for people who are deaf or unable to speak are evident. Like other people with disabilities, they too seek to acquire knowledge, search for information and understand its content, but there are barriers to self-expression and self-disclosure. This study provides insights into opportunities for people who are deaf, yet are able to access digital communication technology. It analyses their use of social media and emoticons for messages and communication. Online interaction enables self-disclosure to other people with deafness, as well as to people without disabilities.

Method: The study used a qualitative approach with a phenomenological design. The interpretation of data was carried out with 5 key informants from the deaf community and 12 members of the deaf community, who use social media applications and various types of emoticons for self-disclosure on WhatsApp and Facebook. Selection of various emoticons took place through in-depth interviews, observations, and analysis of the conversations among themselves as well as people without disabilities.

Results: The findings show that the motives for using social media, emoticons, and communication technology are to build online interactions and enable self-disclosure among people who are deaf. The use of emoticons in social media helps people who are deaf to express their feelings towards others, to communicate with their families and build intimate interpersonal relationships, making it easier to get along in their community. The ability to interact and understand social media content and communication technology, in general, depends on their experience and ability to master and give meaning to signs, words, emoticons, and language.

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Conclusion: People with hearing impairment have had significant benefits from using social media and communication technology. Access to information and knowledge about the personal lives of individuals and their communities, through social media, has added cohesiveness within the community of people who are deaf. By using various emoticons, people with hearing impairment can apply signs, words, and symbols to express emotions and feelings. This makes the meaning of a sentence or interaction between individuals more robust and precise, creates stronger messages, and at the same time can be a medium for self-disclosure. However, due to difficulty in distinguishing between messages on social media that may be true or false, people who are deaf tend to feel at times uncertain and confused.

Keywords: communication technology, deafness, emoticons, people with disabilities, self-disclosure, social media

INTRODUCTION

People who are deaf are described as a group of people who have some problems in communication, such as limited understanding to recognise spelling and limited ability to speak. They cannot use voice- and sound- technology with ease as their impairment often makes it difficult to produce sounds, articulate words, or speak clearly. In Indonesia, the term "deafness" represents a pathological view, with hearing loss in the medical world being regarded as the result of a disease or damage caused by an accident. From a medical point of view, deafness results from a disorder of the inner ear. "Deafness" is also associated with stigma because it is regarded as medical damage that needs to be normalised. However, the deaf community in Indonesia do not see themselves as having a disability or incapacity. People who are deaf consider themselves as part of a "deaf culture" and do not feel defective or impaired, and surprisingly do not wish to be capable of hearing (Barnett, 2002). Called a linguistic minority group, they build their culture and sign language as they develop and become empowered; this enables them to communicate. Sign language is created to be used in communication wherever individuals have hearing disabilities (Lim, Susiapan & Gopalkrishnan, 2020).

The empowerment of individuals who are deaf is crucial, particularly from the perspective of communication. In order to understand this, one should understand the concept of deafness. According to Munoz-Baell and Ruiz (2000), hearing loss is a complex phenomenon with severe consequences and involves

many factors and problems.

Today, people who are deaf face various challenges in carrying out activities in society. They try to be like other people but face limitations for which social media may become the solution. Social media can unite, can play a role in forming family and friendship networks, and help them maintain long-term relationships. Bharoto's study (2018) stated that among Indonesians, people with disabilities, including people who are deaf, are a vulnerable group who still face various issues in fulfilling their needs. Lack of public awareness about the challenges faced by people who are deaf in terms of accessing information, has a significant impact on their acceptance in society. Many people think that because they cannot hear, they cannot communicate well. Consequently, people who are deaf are perceived to be unable to understand current and new technological developments, such as communication technology.

"The communication methods used by people who are deaf not only depends on their communication abilities but also depends on people with whom they communicate," according to Chang (2014). Often, when people who are deaf are considered intellectually backward, it discourages them from improving their ability to communicate with other people. Deafness requires the ability to communicate, to expose oneself in terms of feelings and emotions, and interact with one's environment, which in many cases means with other people who are deaf. People who are deaf find it more challenging to acquire specific life skills, such as receiving information and expressing themselves clearly and interactively. These challenges make them potentially encounter various problems such as being disconnected from various types and sources of information, having difficulties interacting with other people, and facing obstacles to social and cognitive development (Schick, De Villiers, De Villiers & Hoffmeister, 2007). According to Barnett (2002), people with disabilities sometimes feel insecure because of their inability to communicate fluently, in that they cannot convey exactly what they mean to others; in this case, each individual must be more sensitive in choosing words to accommodate communication with people who are deaf.

Communication Technology and Social Media for People who are Deaf

In society today, communication technology is considered very important to interact, exchange information, and show one's identity. It is a modern trend of social life which has also had an impact on the group of people with hearing impairment. They take advantage of various social media and internet

features to connect with their friends or groups. The internet provides users with consequences such as online opportunities and online risks (Luthfia & Triputra, 2020). New media's transformative and dynamic nature enables them to assist people with disabilities (Alper, 2017). The use of new media in various communication technology tools for ordinary people is commonplace but unique for the people who are deaf, especially if examined in the context of a narrative approach which is very meaningful to help create a healthier climate for community interaction (DeVault, Garden & Schwartz, 2011).

People who are deaf interpret communication technology as advancement in gaining the freedom to communicate and obtain information practically. Maiorana-Basas and Pagliaro (2014) state that as society becomes increasingly dependent on technology, information about the use, preferences and accessibility of devices and services commonly used among deaf and hard of hearing individuals is essential. In the modern era, the evolution in technology and internet innovation caused the emergence of new media and various features such as social media. New media is a form of concept in communication science. According to Dewdney and Ride (2013), new media is the preferred term for various media practices that use digital and computer technology. New media definitions are continually changing and evolving, with some definitions of new media focusing exclusively on computer technology and digital content production, while others emphasise cultural forms and the contexts in which technology was used. Various groups widely use social media for communication in today's modern society because of its many advantages; it is a form of new media evolution, the most effective communication media, which simultaneously uses text, audio, and visual features. It also benefits people with disabilities, such as those who are deaf.

Based on the Ministry of Social Work of the Republic of Indonesia, the data on persons with various disabilities in 2019, especially about people who are deaf, shows a high prevalence rate (https://simpd.kemsos.go.id). Hearing impairment was in the top five categories of the most significant number of groups of people with disabilities in Indonesia. Today, for most people who are deaf, social media can be among the most significant opportunities in their communication and interactions. Ensuring equitable access to technology, mainly to social media features, allows individuals with disabilities to take advantage of the benefits social media can provide, such as collaboration, knowledge-building, information sharing, and advocacy (Cifuentes, Sharp, Bulu, Benz & Stough, 2010). This phenomenon makes it possible for people who are deaf to express themselves or

self-disclose on social media through online interaction. Self-disclosure on social media is necessary for them to convey information about their identity and share what and how they feel with others. Emoticons and other signs can be used.

Self-Disclosure and Online Interaction on Social Media

Human beings are social beings who need interactions with other people. In conducting interactions, an individual will convey information about himself/herself to others. This is related to the concept of self-disclosure for everyone who engages in an interaction. Self-disclosure is an activity to share feelings and familiar information with others. Several studies show that social media is a place to make new friends and participate in communities and, as such, the value of social media is increasingly understood and appreciated (Kim & Kim, 2017). Studies show that social media can connect individuals even from different cultures (Miller, 2016). Interaction through social media can develop and maintain modern relationships (Fan, Jiang, Deng, Dong & Lin, 2020) and increase self-esteem (Hughes, Champion, Brown & Pedersen, 2021). Social media can also help to know how people who are deaf show their feelings and the obstacles they encounter. It is regarded as an essential medium that affects interaction and self-disclosure.

Self-disclosure and online interaction on social media are not enough to replace the spoken word. People who are deaf experience a certain weakness in interpreting words. This can be overcome with the help of additional visuals or symbols in the form of emoticons. Dresner and Herring (2010) state that the term "emoticons" - short for "emotional icons" - refers to graphic signs, such as smiling faces, that often accompany computer-mediated textual communication. The visual is most often characterised as an iconic indicator of emotion, conveyed through communication channels parallel to linguistic ones.

Objective

Disability is not just a person's lack of body structure or function (impairment) but relates to the interaction of the individual with the impairment and social and cultural structures. This study recognises persons with disabilities as people who are part of a group of people with a high level of cohesiveness (Oliver, 1990).

This study aims to analyse the use of social media - WhatsApp and Facebook - among people with hearing impairment in Indonesia. It aims to determine

the effectiveness of social media as a medium for self-disclosure and online interaction among the deaf, and to find how far people with hearing impairment are able to understand the meaning of content they receive on social media.

METHOD

Study Design

A qualitative approach was used to analyse individual and social conditions in groups or communities of deaf people. A phenomenological research design was used to collect data from individuals who are deaf, about their everyday life experiences in their communities through social media and communication technology interactions. Qualitative data was collected through in-depth interviews between September and December 2020.

Study Participants

The key informants in this study were five Indonesian people with hearing impairment, who are coordinators of deaf online communities throughout the country. The key informants (Agu, male, 65 years; Sat, male, 60 years; Adi, male, 58 years; Bro, male, 60 years; and Set, male, 45 years) represent about 98 coordinators in various cities and provinces. Key informants and community members also use social media - WhatsApp and Facebook - to interact and move their community. As coordinators of the deaf community, key informants answered the same questions in the in-depth interviews directly with researchers and through WhatsApp calls and WhatsApp video calls.

In addition to key informants, twelve members of the deaf community were interviewed (Lau, female, 45 years old; Jun, female, 50 years; Bam, male, 31 years; Asi, female, 37 years; Her, male, 41 years; Rio, male, 31 years; Ram, female, 28 years; Muh, male, 29 years; Gal, female, 47 years; Eka, female, 27 years; Ali, male, 22 years; and Nel, female, 20 years). The twelve participants were active on WhatsApp Groups and Facebook. The selection of participants was based on how active they were on social media, either in providing comments or responding to issues discussed by the community.

Ethical Considerations

As informants for this study, the personal identities of all participants are

protected. Due to ethical considerations, abbreviation is only given with a three-letter pseudonym to maintain privacy, and this decision is with the consent of all participants.

Data Collection

Data was collected through in-depth semi-structured interviews with all participants, analysis of social media and news documents, and field observations. Semi-structured interviews were used to ensure general consistency throughout the interview process (Kvale, 1994; Doody & Noonan, 2013). Face-to-face interviews were conducted and took place through WhatsApp calls and WhatsApp video calls. The interviews lasted between 30 - 45 minutes, and were recorded for transcription purposes. Issues were raised pertaining to the use of social media in interacting and searching for information and forming interpersonal relationships with fellow members who were deaf or with ordinary people. Both key informants and informants were asked six main questions related to relationships. Probing questions were used to gain insight into the role of social media in communicating personal feelings and building romantic relationships. The questions were almost the same as those used in interviewing the coordinators but were more specific to the individuals' experience and ability to interpret messages from various emoticons representing their feelings and inner mood.

In-depth interviews covered their daily life experiences. The questions asked in the in-depth interviews included: "what social media was used", "how was it used", and "how the application helped in receiving or understanding information". Researchers also asked: "how social media helped in interpreting conversations and structuring subsequent conversations", "how emoticons were selected and used", and "how the emoticons helped in representing thoughts and feelings". Some questions were asked about private life, such as "how one interacts with each other online" and "how one conveys feelings of love, worry, discomfort, hate, or being truly in love with someone".

In addition, the analysis of documents resulting from community conversations on WhatsApp and Facebook were used to triangulate findings. For several months, intensive observations of the deaf community were conducted to obtain facts about the use of online media in relation to real life. Other secondary data was obtained from audio archives, video recordings, written documentation, and supporting literature.

Data Analysis

This phenomenological approach was carried out to avoid researcher subjectivity, bracketing, or epoché process, because phenomenology seeks to enter the world of participants' lives, reveal individual experiences, and identify the inherent and unchanging meaning of an item or idea under scrutiny. According to Moustakas (1994) and Marsilio (2017), researchers must eliminate prejudices about the phenomenon to truly understand the participants' experiences of using social media, in this case by people who are deaf. The researcher writes down his experience of the phenomenon to identify possible prejudices. This preconception reflects how researchers positively experience using social media to interact and share meaning in the deaf community.

The primary data in this study are conversations on social media platforms -WhatsApp and Facebook. Additional data came from interview transcriptions of five key informants and twelve other participants. The phenomenological data analysis procedure was carried out based on the guidelines presented by Colaizzi (1978): first, analysing social media content; second, reading and rereading the transcript. This process ensures the researcher has an overall understanding of the essence of both. The next step is to extract essential documents and statements from each transcript related to the phenomenological experience. Social media data and significant statements describe the essence of individual experiences in the community from participant interview responses. The meaning of the conversations and the crucial statements were categorised into themes or dimensions of analysis.

RESULTS

Demographics

The participants, both key informants and informants, consisted of 6 females and 9 males. Their education levels were junior high school, senior high school, vocational, and undergraduate, while the community leader had a Master's degree. The age range of participants was from 18 to 65 years. All of them were Indonesians of various ethnicities. Some were from the community of coordinators in various cities in Indonesia with around 110 local leaders, and the local deaf community in Greater Jakarta with 74 members. The observations took place in various cities or provinces like Jakarta, Banten, Bandung, Yogyakarta, Solo, Semarang, and Bali. Due to time constraints, it was not possible to obtain

information from participants across all provenances.

The Shared Experience

This study analyses conversations on WhatsApp and Facebook that were considered very important for people who are deaf to express themselves. These conversations give insight into formal and informal conversations and add to our knowledge and understanding of the use of these social media platforms. WhatsApp and Facebook, and communication technology in general, have helped people who are deaf to search, find information, interact, and share knowledge and experiences with fellow people with disability and others. Social media also cements friendships and networks of family or friends who have been separated, by enabling them to find out about those whom they have not seen for a long time. Valentine and Skelton (2008) state that social media is a source for sharing (new) knowledge, making friends, discussing, and interacting with one another.

The uniqueness of the individual physical state and the deaf community associated with communication technology is significant in their lives. Social media consumer experience was analysed by dimensions of "what" and "how" as phenomenological textual and structural components (Yuksel & Yildirim, 2015). The "what" dimension relates to the textual aspects such as the object of the action or what has been done, while the "how" dimension relates to the structural action of experience.

Two of the community coordinators stated:

> "*Social media, especially Facebook and WhatsApp, provide a lot of access for us as people with hearing impairments. We can communicate like people with perfect bodies. We can talk, even if only with text and visuals. We can feel each other's feelings through video calls, just pictures without sound, and get a sense of any news by reading text. We are used to shared experiences in the consumption of news, information, and entertainment. We get to know more about organisations' announcements to the deaf community or the communities in other areas at domestic and overseas levels. Individually, and as a community, we learn a lot from each other, especially with the use of sign language*" (Agu, male, 65 years, private interview).

> "*WhatsApp and Facebook gave me much information quickly that I usually do not get right away. I like learning content such as religious issues, information on political news at home and abroad. All these shared experiences support my*

work as a Sign Language teacher at school" (Adi, male, 58 years, private interview).

The deaf community welcomes and enjoys the accessibility of social media as an alternative because they have been excluded from easy access to conventional media for a long time. Their delightful individual experiences are shared with the community. People who are deaf celebrate each other and make social media a home for conversation and friendship. Individual or group experiences are packaged as messages and passed on through channels to other people who are deaf, and to the broader community.

Understanding and Responding to Social Media Messages

For media users, a problem with one of the five senses, namely hearing, certainly interferes with the process of receiving and understanding the content of messages. After receiving the message, the decoding process continues to the encoding process of replying to the message's contents. Deaf users mobilise symbols to convey the meaning of letters, words, and sentences, and symbols enable them to understand visuals or audio-visuals. Hence, various social media features are beneficial in both processes.

People with hearing impairment need to understand the use of all kinds of features and content in order to maximise the use of social media. The ability to use features and message content from the content they get on social media is the key to their success in using social media to reach other people with hearing impairment. When there is a message of any content on social media, it encourages people with hearing impairment to respond to such messages. With the differences they experience, people who are deaf influence each other to understand existing content better.

Every person with hearing impairment has his/her own way of understanding content that is considered difficult to follow, such as questioning the meaning of messages received from other people. They usually ask their friends who are deaf or their families to verify their interpretation. Another way to understand the meaning of a message or content is with the help of technology, such as the Google search engine. The independence of deaf individuals was reflected in their ability to understand social media messages by searching for the meaning on Google. They can quickly type in keywords they do not understand, and instantly search for the meaning of messages or terms unfamiliar to them. Often

people who are deaf have difficulty identifying each word or language, and understanding its contents.

> *"I am often confused and do not understand many terms or words that appear in written conversations. The solution is, I always look for information from the dictionary provided on Google. This method is more efficient than asking other people, which may take more time"* (Nel, female, 20 years, private interview).

> *"... The difficulties that I often experience, for example, I find many local languages spoken by my friends on WhatsApp and Facebook. Many idioms are new to me, and I feel foreign in the conversation. Then I ask my family and friends, but they also don't know the meaning"*(Ali, male, 22 years, private interview).

Based on the two statements above, it can be said that for people who are deaf it is necessary and essential to understand the exact meaning of each word and language – which is considered difficult – that they receive on their social media. Another obstacle in identifying content is the meaning of images and videos on social media. People who are deaf will focus on writing or texting images and videos to determine the meaning of the message content in identifying an image and video. Deaf people – as much as anyone else - will see signs and cues implied in the content of images and videos.

> *"[...] if the picture or video is difficult to understand, for example, a video with sound, then I ask people like my family to explain the situation or meaning"* (Her, male, 41 years, private interview).

People who are deaf will not understand statements, pictures, and videos that are not supported by text explanations or sign language but, for instance, explain issues with voiceovers. They will consequently become less interested.

Furthermore, people who are deaf will better understand the content received from other people who are deaf and respond to it based on their perspectives, which can often be the same. Based on observations on the WhatsApp social media group of people who are deaf, it is clear that they prefer to respond to image and video content on social media. Exciting and easy-to-understand image and video content will be responded to or commented on by others in the same WhatsApp social media group or shared with different deaf groups. It is known that people who are deaf will be more familiar with social media content that is easy to understand and supported by text or sign language. The meaning of

explicit and implicit messages received from content that meets the above criteria will be well understood. When deaf persons see an image or video content on social media, they will question whether it has socially essential value or is just entertaining. Various responses on video content were found among deaf people, including responding with emoticons, with opinions, and with questions related to the content they received. During the in-depth interviews deaf people indicated that they could appreciate excellent video content.

The Use of Emoticons

When interacting, the effect of voice and tone, sound or paralanguage, is significant in deepening the meaning of words in conversation. People who are deaf miss these crucial aspects of communication. The world they experience is quiet and still. Unless there is a representation that reflects the atmosphere in which the conversation took place, the use of emoticons by people with deafness is significant to give soul to every expression of thoughts and feelings between individuals in the community. They want to share happiness, sympathy and empathy with people who face the same problems in everyday life.

In using social media everyone has a purpose, such as sending messages, reminders, and expressing their feelings to others. Likewise, people who are deaf build communication with other people who are deaf in order to exchange messages, information, share news, and share happiness, with entertainment content as a form of interaction and self-disclosure. The Schlosser (2020) study concluded that a person's impression of an online persona does not preclude revealing facts about themselves. A person can share facts about himself/herself if those facts reflect his/her situation in a positive way. The interviews and observations show that people who are deaf interact and self-disclose on social media more than through face-to-face interaction. Visual aids were used in several ways, such as uploading photographs and videos of personal activity content, citing, sharing news links, and responding to or commenting on their social media content, WhatsApp and Facebook. Self-disclosure with the help of emoticons on social media by people who are deaf is one way for them to share feelings and information in close relationships.

> *"The pictures I upload will tell a lot more than if I write long words. My expressive photos are for my friends to see. That is why I often post photos or videos of personal activities to WhatsApp or Facebook groups for friends to share. I can see, comment, and get attention. I need responses from people around me*

through social media" (Ram, female, 28 years, private interview).

This shows that self-disclosure on social media can occur by presenting or sharing information about themselves with other people who are deaf, as they want to get feedback or recognition. This phenomenon shows that the higher the frequency and depth of personal activities shared on social media, the better the self-presentation and recognition from the environment (Seidman, 2013).

> *"I can understand and interpret the messages shared by my fellow deaf friends on social media. Besides, I like sharing photos and I also reply to friends who post on WhatsApp. Visual content and comments are usually to laugh about or make fun for hilarious discussions. There are lots of comments there, and we love the visuals and emotions that come with it"* (Asi, female, 37 years, private interview).

People who are deaf also communicate directly in their communities through various features of each social media application, such as chat, WhatsApp calls, and video calls or live streaming to share the factual situation experienced in real-time. They interact directly with other people who are deaf.

> *"I always interact with my friends, and a group of community friends follows me to watch the situation without sound through live streaming chat and video call features. However, if I do not know the person, then I do not answer in sign language. This silent video is easy to understand in our community"* (Bam, male, 31 years, private interview).

Based on interviews and observations in the field, it becomes clear that social media is an essential medium for interaction between deaf people. Chat is profound in meaning if accompanied by emoticons and is easier to understand and get other people to empathise. This feature encourages deaf social media users to communicate their feelings more expressively and creates emotional bonds in interpersonal communication.

Figure1: Online Interaction Concept on Social Media and Emoticon Use
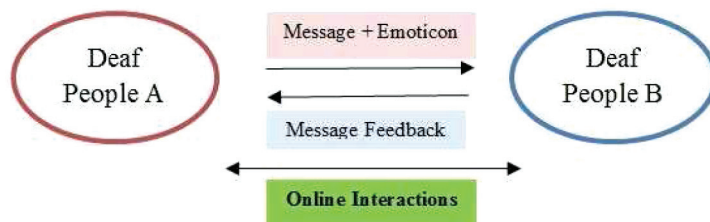
As illustrated in Figure 1, communication requires an encoding and decoding process to take place. In encoding, the originator of the message conveys verbal and visual messages, choosing the right words and emoticons to reinforce meaning. The selection of emoticons in social media requires accuracy on the part of the sender because there are many variations. Meanwhile, in the decoding process, the recipient of the message also does the same thing. Emoticons are very meaningful for people who are deaf to strengthen meaning as a substitute for paralanguage, human voices, or sounds they cannot hear. Inserting symbols that represent the person's emotions during the exchange of messages evokes other interpretations among people who are deaf. During the interviews, two deaf informants mentioned some of the emoticons they used most often in social media, such as chatting or interaction (Provine & Emmorey, 2006; Provine et al, 2007).

Table 1: Responses to Emoticons Used in Online Interactions among People who are Deaf

Question Theme A-5	Deaf Informant 1 Statement	Deaf Informant 2 Statement
Would you please explain the emoticons you most often used as online interactions on social media use?	*"The emoticons that I often use in the social media interaction are likely:* 🤣👍😃😄😆🧑✅😎💤😛 "	*"…emoticons that I often use in social media interaction:* 🤣😭😂🤭😆🥴👍🙇🧑 "

Emoticons are inserted to represent feelings of pleasure, pain, sadness, disappointment, anger, or happiness. However, emoticons are also used to strengthen the expression of the text messages conveyed on social media. Due to their limitations, people who are deaf have difficulty displaying chat expressions in a text on social media. Emoticons are a valuable feature for them to show how they feel and be appreciated.
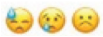
> *"… Frequently, I receive messages that disappoint or irritate me in my heart, but usually I just read and do not comment much and do not show an angry emoticon to show that I do not like it. Maybe it is because I am old, unlike young people who are more expressive. However, there are three emoticons that I often use to show disappointment…"* (Sat, male, 60 years, private interview, showing the chat, presented in Table 2).

"I show myself happy and laughing at my friends and relatives through funny videos from YouTube or videos from me. They make funny comments and laugh, reply with laughing emoticons, big smiles, and "hahaha so funny". Some of the emotions that are often used when I show a sense of humour and laughter…" (Jun, female, 50 years, private interview, showing the chat on her Smartphone, presented in Table 2).

"I showed my affection and happiness, especially to my wife and children when I lived abroad for six years, through private conversations and photos of my activities in Hong Kong on WhatsApp and Facebook. I replied to my family with emoticons of love, hugs, longing, warmth, and crying to show that I miss them…" (Agu, male, 65 years, private interview, showing his chat and Facebook with some emoticons that are often used to show nostalgia and love, presented in Table 2).

Table 2: Responses to the three most used Emoticons by People who are Deaf

Participant	Function reinforces Meaning	Choice of Emoticons
ISatri, male, 60 years	To show disappointment	😖🧑😔
ISatri, male, 60 years	To show sadness	😢😥😦
JunSe, female, 50 years	To show sense of humour	😊😄🤣
AgSu, male, 65 years	To show nostalgia and love	😊😍❤️

The use of emoticons should be based on the emotions felt at the time. Therefore, if used appropriately, there will be no misperceptions by other people who are deaf.

Barriers to the Use of Social Media for People who are Deaf

Based on observations and interviews conducted among people who are deaf, several obstacles were found in their use of social media to interact with other people like them. One barrier was poor language skills in their mother tongue and in foreign languages which other people may know. The development of language skills is not the same for deaf people as for people with hearing, causing possible gaps in communication.

"…. but I still have a problem because of weakness in vocabulary. I found using WhatsApp and Facebook very helpful. However, the regular people use high language with new words which I do not know the meaning of, so it is difficult

for me to understand" (Gal, female, 47 years, private interview).

"... As a deaf person, I also face problems with other people who are deaf who like to reply or respond to chats on WhatsApp for a long time. Another problem on Facebook is that I often encounter a lot of gossip or hoaxes about all kinds of information continuously in a short time, so it makes me confused, and I have difficulty understanding what is happening in the outside world"(Ali, male, 22 years, private interview).

Based on the experiences of deaf people, this study found three obstacles: 1) inadequate language vocabulary; 2) problems in understanding the meaning of the message; and 3) disturbance due to the flood of information and hoax content on social media. Fake news has become a social issue mainly due to the increased use of social media (Tuteja et al, 2020). The speed with which it spreads without being verified is incredible. This type of information, communicated regularly on social media, makes it difficult for people who are deaf to interpret words considered unusual, including (new and unfamiliar) foreign words.

"I solved the problem by increasing my knowledge of vocabulary and difficult terms that I did not know by searching in a dictionary App or Google and asking questions to my family. Finally, I learned a lot about language and civilisation through social media" (Set, male, 45 years, private interview).

"When I find a problem with social media content, I try to solve the problem by making a video call to the person who uploaded the content. If there is a hoax, I do not know if it is fake news or not. However, I do a news search with the same or similar keywords to reply and provide facts in the comments section or post it for knowledge sharing" (Ram, female, 28 years, private interview).

Deaf individuals and communities show that they can adapt and learn to use communication technology, especially social media, to cover their shortcomings. Like people with hearing, people who are deaf use Google search engines or online dictionaries as libraries for learning. Every minute is a learning moment for them. People who are deaf will trust the information obtained by confirming its truth with a trusted and reliable source or person. As stated earlier, language and signs which people who are deaf do not commonly use are challenging to understand. Therefore, they need to clarify their uncertainty about the meaning of text and signs to ensure their understanding is correct.

DISCUSSION

This study indicates that communication technology, especially social media, has helped people who are deaf to better access information, enjoy new forms of entertainment, and develop and maintain networks among other people with hearing impairment. Online communities are formed faster and more cohesively with an intensive communication process between deaf and ordinary people. Social media such as WhatsApp and Facebook are essential communication channels for people who are deaf to express themselves. The results of this study are in line with the findings of Sweet et al (2020) where persons with disabilities use social media features to build online communities and obtain information. Thus, the richer the social media features with various emoticons and visual elements, the more opportunities for people who are deaf to achieve mindfulness when interacting within and outside their community.

The lessons of this study, which focuses on the importance of communication technology in the daily life of people who are deaf, were also stated by McAleer (2006) who highlights the importance of effective communication with people who are deaf. People who are deaf need sign language to get along with other people like them and with ordinary people. The deaf community has people who can overcome obstacles in communicating and interacting. They are mentally and physically healthy except for hearing impairments. Communities need capacity building, including the use of communication technology such as social media applications. This implication aligns with Nikolaraizi and Makri's (2004) findings, which mention the importance of empowering people who are deaf by promoting social awareness of their existence. The limited ability to communicate with people who are deaf and provide feedback requires a solution with social media (Hornakova & Hudáková, 2013). This finding is a solution in the hospital environment, especially in daily life and life at home. People who are deaf should express their needs, wants, feelings, and opinions in communication with healthcare professionals. The same findings, but specifically in the context of client care, were also presented by O'Halloran et al (2008) that people with communication disabilities are at risk of not communicating effectively with healthcare providers. Therefore, it must be done with a narrative approach. Moreover, the findings of the current research propose social media as a channel for writing narrative messages that are easy to understand in hospitals, residential homes, and peer group or community relationships.

According to a recent study (Guimarães & Fernandes, 2018) social media

is significant for the needs of the deaf to find information in their daily lives. Information deemed necessary by people who are deaf includes original messages from their friends and conveyed by their community, delivered in a language they can understand together. Such communication is called Sign Language. However, sign language communication is very expressive, and facial expressions can be misinterpreted (Hasanbegovic & Kovacevic, 2018).

The findings of this study indicate that people who are deaf have limitations in understanding the meaning of messages, especially from unfamiliar words, due to a lack of vocabulary. However, they quickly learn to find solutions through the Google search engine which provides dictionaries of various languages. The research results reinforce Okuyama's (2013) findings, which show that deaf adolescents adopt various characteristics of English-textism. The unique characteristics of short messages among deaf adolescents were used to extend the structural transfer of sign language in which they interact and communicate. Therefore, solid reading and writing skills are essential if deaf or hard-of-hearing adults wish to take advantage of today's communication technologies. (Toofaninejad et al, 2017). This study also strengthens the findings of Maiorana-Basas and Pagliaro (2014) which state that the use of technology among deaf children, youngsters and adults is essential. Likewise, previous research by Dresner and Herring (2010) considers an analysis based on broader questions about language, body behaviour, and text. Physical sign language needs to be expanded in visuals on social media to confirm meaning sent by communicators to receivers (Young et al, 2019). Vocabularies of people who are deaf were continuously enriched by relying on the internet or explanations through online and offline peer groups. According to Lucas and Valli (1989), the lack of language contact is a significant sociolinguistic problem in the deaf community and should be reduced through shared experiences in the online social media communities.

CONCLUSION

People with hearing impairment who use social media to interact and find information are unique from a communication perspective. They become involved in various forms of entertainment, and build a network of friends by forming a community. Through the various features of social media, such as text messaging, image sharing, video calls, and live streaming, social media is an essential channel of communication in the daily lives of people who are deaf.

Social media has given people who are deaf a lot of confidence because they can

see, follow, and monitor the outside world through access to online platforms. Social media has added to improved cohesion in the community of people who are deaf and people with disabilities.

People who are deaf apply signs, words, and symbols to express their feelings by using various emoticons. With the advanced use of social media, the meaning of a sentence or the interaction between individuals and groups becomes more robust and precise. Social media with opportunities to use emoticons, in particular, has become a medium for self-disclosure.

People who are deaf may not be able to identify a message in every word, sentence and language. It may be difficult for them to understand some content posted on social media. They also have difficulty in sorting and understanding the meaning of untrue or hoax messages in social media content and contrasting perceptions may lead to confusion and miscommunication among them. A solution to this problem is to ask family members or close people to translate and share the true meaning. Another solution is to look for the meaning of the language in online dictionaries. Therefore, it is necessary to educate people who are deaf to receive messages in the language with which they are familiar.

Due to their limited experience and knowledge of language used by people with hearing, deaf individuals and communities use the internet and communication technology in general, to learn and to improve their abilities, especially to build their vocabulary.

People who are deaf must also have intrinsic motivation to improve their ability to understand words and language in communication. They use sign language and emoticons when displaying self-expression and self-disclosure on social media.

It can be assumed that in the study sample, people who are deaf were more confident in expressing emotions in their messages because of the interview questions. Emoticons have an essential meaning for them, and the selection of emoticons that match the content of the message must correspond to the feelings and emotions at the time. If this is ignored, there would easily be a misinterpretation of messages by the person who is deaf.

Limitations

The limitation of this research is that the number of communities observed was

limited to Jakarta, the capital city of Indonesia. However, given the context of an archipelagic state, communities, cultures and habits – among others - can vary widely across islands or regions. Participants were also limitedly recruited by selecting coordinators who are primarily deaf senior individuals and Indonesian deaf activists. In the future, research needs to involve more people who are deaf and have experience in different forms of social media and other communication technology, using a more multidisciplinary approach and methodology.

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