Artigo Original

Encontros Bibli

NEUROCOMMUNICATION AND SOCIAL NETWORKS

Neurocomunicación y Redes Sociales

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RESUMEN

Objetivo: Analizar los avances de la investigación sobre la Neurocomunicación en relación con las redes sociales, con el fin de identificar el impacto de la comunicación en línea en la percepción de la realidad y el comportamiento de las personas, y delimitar estrategias para minimizar los efectos negativos de su uso.
Resultado: A través de la revisión de la literatura, se encontró que la comunicación en línea en las redes sociales puede tener un impacto significativo en la percepción de la realidad y el comportamiento de las personas. Los estudios en Neurocomunicación han demostrado que la comunicación en línea activa áreas del cerebro relacionadas con la emoción, la recompensa y la toma de decisiones. Además, se identificaron varias estrategias de Neurocomunicación para minimizar los efectos negativos del uso de las redes sociales, como el uso de emociones positivas, la limitación de la exposición a noticias negativas, el uso del humor y la personalización de la comunicación.
Conclusiones: La investigación en Neurocomunicación ha demostrado que la comunicación en línea en las redes sociales puede tener un impacto significativo en la percepción de la realidad y el comportamiento de las personas. La comprensión de las estrategias de Neurocomunicación puede ser útil para minimizar los efectos negativos del uso de las redes sociales y mejorar la efectividad de la comunicación en línea.
PALABRAS-CLAVE: Redes Sociales. Impacto. Comunicación. Comportamiento. Neurocomunicación.

ABSTRACT

Objectives: Analyze the advances of research on Neurocommunication in relation to social networks, in order to identify the impact of online communication on the perception of reality and the behavior of people, and define strategies to minimize the negative effects of its use.
Results: Through the literature review, it was found that online communication in social networks can have a significant impact on people's perception of reality and behavior. Neurocommunication studies have shown that online communication activates areas of the brain related to emotion, reward, and decision making. In addition, several Neurocommunication strategies were identified to minimize the negative effects of using social networks, such as the use of positive emotions, limiting exposure to negative news, the use of humor, and personalization of communication.
Conclusions: Neurocommunication research has shown that online communication on social media can have a significant impact on people's perception of reality and behavior. The understanding of Neurocommunication strategies can be useful to minimize the negative effects of using social networks and improve the effectiveness of online communication.
KEYWORDS: Social Networks. Impact. Communication. Behavior. Neurocommunication.

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1 INTRODUCTION

In recent years, social media has become one of the main forms of communication worldwide. Every day, millions of people use these platforms to connect with each other, share information and opinions, and even for work or business purposes. However, there

may be a lack of awareness regarding the impact that social media has on the brain and the communication process (CHEN, 2022). There is also attention given to the social problems associated with it (MAYORAL *et al*., 2019; BLANCO ALFONSO *et al*., 2019).

Neurocommunication, an emerging discipline that combines neuroscience and communication, has become a key approach to understanding how social media functions in people's brains and how it influences behavior and perception of reality. This discipline focuses on studying the neural and brain processes underlying human communication, and in particular, how these processes are affected by modern media and communication channels (BAÑOS; BARAYBAR, 2022; LYU; MAÑAS-VINIEGRA, 2021).

From a neuroscientific perspective, social media activates the same neural circuits that are activated in response to food, sex, and drugs. The activation of these circuits is related to the release of dopamine, a neurotransmitter closely associated with motivation and pleasure. When a notification is received from social media, such as a "like," a comment on a post, or any other type of interaction, the brain perceives it as a reward and releases dopamine. This reward becomes a kind of addiction, creating a constant need to check and engage with social media to obtain more rewards (BARÓN PULIDO, 2021).

Furthermore, social media is also related to the activation of neural circuits associated with empathy, social cognition, and decision-making. When interacting with others on these social networks, the brain processes information about others' emotions and thoughts, allowing us to better understand their perspective and feelings. However, it is also important to highlight that these networks can distort the perception of reality, and the ability to process information and foster various insecurities, desires, and behavioral patterns that are not always functional. An example of this is that social networks can create an effect known as an "echo chamber," where one only sees and hears from people they agree with, limiting the ability to understand different perspectives or develop critical thinking about various positions. Additionally, fake news and misinformation are common problems in these spaces, and they can be particularly dangerous if one is unable to critically evaluate the information they receive (BARRIENTOS-BÁEZ, 2022; GILL; SINGH, 2020).

However, it is important to highlight that, although social media can have negative effects on communication and perception of reality (CERDÁN MARTÍNEZ *et al*., 2022), they are also a valuable tool for communication, activity management, promoting dialogue, and social interactions. They are an effective way to connect with people from around the world and share information and resources. They can also promote empathy and mutual

understanding, especially when used to interact with people from different cultures, backgrounds, and conditions.

It is crucial to emphasize that Neurocommunication not only enables understanding of the effects that social media has on the human brain. From this disciplinary perspective, it is possible to develop various strategies and foster multiple behaviors to improve communication in these online spaces. Thus, Neurocommunication provides fundamental tools both for effective communication and for avoiding the negative effects that such platforms can have on communication and perception of reality. Some of these strategies may include promoting greater awareness, critical evaluation of information, and effective understanding, among others. Therefore, it can be said that Neurocommunication is a key discipline for understanding the impact of social media on the human brain and for designing strategies that enable not only better communication but also the reduction of its negative effects (ÁLVAREZ, 2007).

By understanding the neuroscientific aspect of online communication, it becomes possible to develop actions that maximize the benefits of social media while minimizing the negative effects on the perception of reality and behavior. That is why this article conducts an in-depth exploration of Neurocommunication in close connection with social media and the implications these spaces have for life in general. The following points will specify the objectives to be fulfilled, the methodology to be followed, the results obtained from the literature review, and the discussion of the information. Finally, the conclusions are presented, and the achievement of the proposed objectives is analyzed.

2 OBJECTIVES

2.1 General objective

To analyze the advancements in research on Neuro communication in relation to social media, in order to identify the impact of online communication on people's perception of reality and behavior, and to delineate strategies for minimizing the negative effects of its use.

2.2 Specific objectives

- To conduct a review of the available scientific literature on Neuro communication and its relationship with social media, in order to identify the main theoretical models used for the study of online communication.

- To analyze the findings of research on Neuro communication in the context of social media to understand the impact of online communication on people's perception of reality and behavior.
- To identify and propose effective strategies for minimizing the negative effects of social media use, based on the advancements in Neurocommunication research.

3 METHODOLOGY

A literature review is a research methodology that involves the critical and comprehensive analysis of a wide variety of sources, such as articles, theses, technical reports, and other documents available primarily in databases and digital repositories. This research methodology is highly useful for obtaining a deep understanding of a specific topic and for identifying the main trends, currents, and debates in the field of study. One of the main characteristics of this methodology is that it allows for gathering data from diverse sources, which provides a broad and complete view of the research topic. It also enables access to up-to-date information, thus incorporating the latest advancements in the field of study (HERNÁNDEZ SAMPIERI, 2014). For this purpose, the review will mainly focus on the last three years, with the possibility of referring to texts from the past decade to provide context.

Therefore, it has been decided to conduct a literature review of this nature to analyze the advancements in research on Neurocommunication in relation to social media. This review aims to identify the impact of online communication on people's perception of reality and behavior and to detect strategies for minimizing the negative effects of its use. Consequently, this review has both exploratory and descriptive scope since, on the one hand, it focuses on "examining a little-studied research topic" or a "novel phenomenon" (HERNÁNDEZ SAMPIERI, 2014, p. 91), and on the other hand, it is descriptive because it "seeks to specify the properties, characteristics, and profiles of people, groups, communities, processes, objects, or any other phenomenon subjected to analysis" (HERNÁNDEZ SAMPIERI, 2014, p. 92). Thus, this work can serve as a starting point for the development of research aiming for greater depth. It is, therefore, a qualitative approach as it seeks to "grasp the core of interest and key elements of the studied reality, thus facilitating the understanding of meanings, developmental contexts, and processes" (TONON, 2011, p. 2).

In this research, it has been decided to conduct a literature review using the PRISMA protocol for systematic reviews, adapted to the specific needs of this study. The main

objective of the research is to analyze the impact of social media in the field of Neurocommunication, so specific search criteria have been established, limited to the terms "Social Media," "impact," "communication," "behavior," and "Neurocommunication." These terms have been combined in different ways using Boolean operators such as "OR" and "AND" in the selected databases for the search. Mainly secondary sources of scientific dissemination hosted in freely accessible databases related to social sciences, communication, and neuroscience, such as Dialnet, Elsevier, PubMed, Redalyc, Scielo, or Google Scholar, have been considered. Inclusion and exclusion criteria have also been established, limiting the search to articles published during the present 21st century in English or Spanish and excluding any other type of publication that did not meet these criteria.

The choice of the PRISMA protocol is due to its rigorous and systematic process of identifying, selecting, and analyzing articles, ensuring the quality of the results obtained in this literature review. In summary, comprehensive searches were conducted in the main freely accessible databases to obtain relevant and up-to-date information on the impact of social media on Neurocommunication, using rigorous inclusion and exclusion criteria.

The titles, abstracts, and keywords of the obtained articles were examined to determine their relevance to the present review. Thus, studies directly addressing the topics of Neurocommunication and Social Media were included, as well as those analyzing the impact of online communication on people's perception of reality and behavior. On the other hand, studies that did not directly address these issues or focused on other aspects of Social Media were excluded. After identifying the relevant studies, a critical reading and analysis of them was carried out. Relevant information was collected to fulfill the specific objectives of the research, with special focus on the advancements of Neurocommunication in the context of social media, the impact of online communication on people's perception of reality and behavior, and strategies to minimize the negative effects of social media use in online communication.

The obtained information was organized into different categories and thematic subcategories, which allowed structuring the literature review into three coherent sections with a clear connection between them, as presented in the results section. Finally, the gathered information was synthesized to develop conclusions and recommendations for future research in Neurocommunication and social media. It is important to note that the final selection of relevant information was based on a qualitative assessment of the contents of the collected works. The following sections present the results obtained, focusing on

Neurocommunication, its connection with social media, the impact of social media use on individuals, and Neurocommunication strategies for social media use. Finally, the conclusions related to the fulfillment of the proposed objectives are presented.

4 RESULTS OF THE REVIEW

4.1 Neurocommunication and Social Media

Neurocommunication is an interdisciplinary field that focuses on studying the neurobiological processes involved in human communication and how communication, in turn, impacts the brain. Due to the complexity of the neurological and psychological processes involved in communication, this area of study involves experts from a wide range of disciplines, including neuroscience, psychology, linguistics, anthropology, sociology, and others (HERNANDEZ-CRUZ, 2021; BARAYBAR FERNÁNDEZ *ET AL*., 2023). Broadly speaking, it aims to understand how brain structures and processes interact with perception, attention, memory, emotions, and other neuropsychological factors to give rise to human communication. While communication is a universal phenomenon present in all animal species (albeit with different characteristics), Neurocommunication specifically focuses on human communication due to the complex interactions between neurological and psychological processes involved.

Currently, Neurocommunication has become an increasingly important field of research, especially in the context of new communication technologies such as social media and online communication. This is because technological advancements are changing the way people communicate, presenting new challenges and opportunities for research in this area.

Within Neurocommunication, there are several research topics that are particularly important. One of them is the study of perception since perceptual processes are crucial for human communication. They allow individuals to perceive and process the information they receive from their environment. In addition to perception, attention has been studied as an essential process for communication, as it enables individuals to focus on relevant information and filter out irrelevant information. Research in this area has shown how attention can be influenced by various factors such as motivation, interest, and emotions (ÁLVAREZ, 2007).

The growing popularity of social media in the last decade has given rise to a new field of study: Neurocommunication in social media. Platforms such as Facebook, Instagram, and Twitter are online platforms that allow users to share information, interact, and connect with

others (CONDE DEL RIO, 2021; ZABALA-CÍA; LORENZO-SOLA, 2022; GUTIÉRREZ; LARROSA, 2020; ROCHA; ARAÚJO, 2021). These platforms have become an integral part of daily life for many people worldwide. The widespread use of social media has generated interest in how people interact and communicate online and how these communication patterns affect brain activity and behavior. However, the relationship between Neurocommunication and Social Media is not limited to their effect on individuals' brains and their healthy use. This discipline, as previously mentioned, combines knowledge from neuroscience, psychology, and communication to investigate how the brain processes and responds to information received through the senses, as well as how it can be influenced. It focuses on understanding how communication impacts people's perception, behavior, and emotions and how this information can be used to improve communication effectiveness. In this way, it can provide insights into potential communication strategies to optimally influence target groups for companies, organizations, brands, or institutions. As BAÑOS and BARAYBAR (2022) explain:

> From a historical-cultural perspective of science, each generation receives a model for understanding reality and, in turn, tries to contribute, expand, or transform that model. The field of Communication is immersed in an evident transformation; new values, new behaviors, and technologies that incorporate new tools. Neurocommunication seeks a better understanding of how the mind works and proposes new ways to evaluate the emotional stimuli we receive and our unconscious behaviors. It continues the path initiated centuries ago in the quest for a better understanding of how messages can generate, confirm, or modify our thoughts and behaviors (BAÑOS; BARAYBAR, 2022, p. 14).

From this perspective, Neurocommunication and social media have a bidirectional relationship. On one hand, Neurocommunication can help understand how users process and respond to information in these spaces. On the other hand, social media can serve as a means to study Neurocommunication in real time and in a natural context. Thus, Neurocommunication in social media is an interdisciplinary field of study that combines neuroscience, psychology, and communication to investigate how users process and respond to information. It has been discovered that social media activates brain areas related to reward and emotion, suggesting that interaction in these platforms can be a rewarding and emotionally intense experience.

Furthermore, social media provides a platform for users to express their opinions, beliefs, and values. These online interactions can be particularly influential in shaping public opinion, attitude formation, and decision-making. Neurocommunication is useful in understanding how these interactions affect users' brain activity and behavior at a social

level. Additionally, studying social media is relevant to mental health and well-being, as excessive use of social media has been associated with mental health problems such as anxiety and depression. Neurocommunication, therefore, is useful in identifying factors contributing to these issues and developing strategies to minimize their negative effects (ABJAUDE, 2020).

Thus, it can be observed that Neurocommunication and social media are interconnected areas of study that provide a window into how social media users process and respond to online information. Research in this field provides valuable insights into how people interact online and how these interactions can impact brain activity and behavior. Additionally, Neuro communication in social media can be relevant to the mental health and well-being of users, as will be discussed in the following sections.

4.2 The impact of Social Networks on people

As mentioned, social media has revolutionized the way people communicate and interact in this digital era. These platforms have transformed the way information is disseminated and consumed, and have given rise to new forms of social interaction. As social media becomes more omnipresent, its impact on human psychology and behavior becomes an increasingly relevant topic today. It is important to analyze the impact of social media on individuals from the perspective of Neurocommunication in order to understand how their use affects the brain, communication, and social relationships (BARRIENTOS-BÁEZ & CALDEVILLA-DOMÍNGUEZ, 2021; GILL & SINGH, 2020; GUTIÉRREZ & LARROSA, 2022).

What happens is that the use of social media triggers a series of processes in the human brain that directly impact human behavior. Firstly, it activates the brain's reward system, leading to a constant search for validation and approval from others. When a notification is received, the brain releases dopamine, which creates a sense of pleasure and reinforces the behavior associated with using social media. This reward can be addictive and involve the development of online obsessive-compulsive behavior (ÁLVAREZ, 2007; BAÑOS; BARAYBAR, 2022; BARÓN PULIDO, 2021; GILL; SINGH, 2020).

This is one of the most notable effects, as when using social media, the brain is stimulated similarly to how it responds to eating delicious food or engaging in pleasurable activities. This is partly due to the release of dopamine, a neurotransmitter involved in pleasure and reward regulation. While dopamine is an important chemical in the brain that helps increase happiness and motivation, excessive use of social media can lead to

overstimulation of the brain's reward system. This results in increased dependence on social media and a decrease in concentration and attention span. In fact, studies have found that excessive use of social media can have a negative impact on working memory, attention, and decision-making ability.

Another important effect of social media on the brain is its ability to influence mood and emotions. In particular, the use of social media has been linked to a higher risk of depression, anxiety, and other emotional disorders. This is because these platforms can foster social comparison and competition, leading to decreased self-esteem, self-confidence, and increased feelings of inadequacy, inadequacy, and isolation. In other words, people may feel that they don't measure up to the seemingly perfect lives of their friends on social media. This can result in heightened feelings associated with anxiety and depressive symptoms, as well as increased social pressure to have a perfect life and only show the best of oneself. Consequently, this leads to a lack of authenticity and a significant decrease in self-worth.

Furthermore, the content found on social media is often designed to be emotionally appealing and can be used to manipulate users. Posts with positive emotional connotations, such as adorable pet pictures or inspiring stories, often elicit positive emotional responses in users (CHÁVEZ-SANTANA *et al*., 2021). Similarly, posts that evoke negative emotions like outrage or fear can lead to negative emotional responses. In this way, the use of social media can negatively affect mood and emotional well-being, and excessive use is correlated with a higher incidence of depressive or anxious states.

These points raised are directly related to another effect of social media on the brain, which is its impact on self-image. Social media often encourages the presentation of an idealized version of life, which frequently makes individuals feel inadequate when making comparisons. People may feel that their own lives are not as interesting or successful as what they see online, thereby increasing feelings of anxiety and depression. That's why social media fosters obsession with body image and hegemonic beauty standards, leading to the emergence of eating disorders and other mental health issues (ABJAUDE, 2020).

A third relevant effect is the ability of social media to impact social relationships (MUNÉVAR MARIÑO, 2023). While these platforms can provide a way to connect with friends and family, they can also foster social disconnection and isolation. Individuals who spend a lot of time on social media may feel connected to others, but often that connection is superficial and does not provide the same emotional satisfaction as a real-life, in-person connection. In relation to this point, it is important to mention that these platforms have

transformed the ways in which people communicate, both online and offline. Since their expansion in the early 2000s, they have given rise to a new form of visual communication based on images and videos. Platforms like Instagram and TikTok have popularized visual content as a form of communication, which has led to an increased emphasis on aesthetic aspects in online communication.

Moreover, they have brought about a change in the way people communicate verbally, becoming more informal, rapid, and immediate, leading to increased use of acronyms, emojis, and abbreviations. This directly impacts the ability to communicate effectively offline, especially in formal situations such as job interviews or business meetings. On the other hand, social media has also altered the way people relate to each other, as online connections can be less personal and more superficial, which can lead to a sense of isolation and disconnection. The possibility of anonymity, in turn, can lead to more aggressive and unfriendly behavior online, negatively affecting social relationships and mental health (ABJAUDE, 2020; ÁLVAREZ, 2007; BAÑOS; BARAYBAR, 2022; BARÓN PULIDO, 2021; GILL; SINGH, 2020).

In addition, they have changed the way we establish relationships with others. Instead of having in-person conversations or engaging in phone dialogues, many people prefer to communicate online or through chat, reducing face-to-face interaction and fostering a greater dependence on technology for communication (BARÓN PULIDO, 2021).

Another important effect of social media on the brain is its impact on attention and concentration. Social media platforms are designed to be highly engaging and promote increased interactions, often presenting information in a fragmented and disorganized manner. This can make it difficult for individuals to concentrate on important tasks and maintain focus on a single thing for extended periods of time. Furthermore, constant notifications and the need to check social media can distract individuals from their everyday activities, impairing their performance at work or school.

Thus, the impact of social media on attention and concentration has become a topic of great relevance in the field of neuroscience and psychology. Certain studies indicate that when people are interrupted by social media notifications while performing a task, they take longer to complete it and make more errors. This is because notifications disrupt the flow of the task, requiring individuals to rebuild their attention and concentration each time to refocus on the task at hand. Additionally, the fact that social media often presents information in a fragmented and superficial manner makes it difficult to develop the ability to retain important information and the skill to relate it to other things being learned.

To avoid these negative effects, it is important for individuals to establish clear boundaries in the use of social media and realize that constant notifications and the need for constant checking can distract them from activities that are truly important. Experts also suggest that people use applications and tools that limit their time on these platforms and allow them to focus without interruptions (BAÑOS; BARAYBAR, 2022).

However, social media has also enabled greater connection and communication among people from different parts of the world, including friendships, family, and people with similar interests worldwide. In this sense, it has facilitated greater connection among people who share tastes or interests, promoting the creation of groups and communities on social networks, which, at the same time, fosters a greater sense of belonging and social connection.

Furthermore, these platforms can be an effective way to stay in touch with distant friends and family, helping to maintain meaningful long-distance relationships. These possibilities have expanded into the professional and academic realms, opening up possibilities for remote work, online conferences, and more accessible distance education (GARCÍA-MARTÍN *et al*., 2021). In the workplace, platforms like LinkedIn can be an effective way to establish professional contacts and seek employment. Many companies also use social media to promote their products or services and connect with their audience. In the academic field, social media can be an effective way to connect with other students and professors, especially in the case of distance education, collaborative work, and organizational management (GANGA-CONTRERAS *et al*., 2020; ACOSTA-SILVA *et al*., 2021). Platforms like Zoom, Microsoft Teams, and Google Meet have been instrumental in online education and remote work.

In conclusion, social media has many effects on the human brain, some positive and some negative. It is important to understand these effects in order to use social media in a healthy way and avoid potential risks to mental and emotional health. The positive effects of social media include social connection, improved self-expression and creativity, and access to important information and resources. However, the negative effects include dependence and addiction, impact on self-image and self-esteem, increased anxiety and depression, social disconnection and isolation, and impaired attention and concentration. To use social media in a healthy manner, it is important to establish clear boundaries and implement strategies from a neurocommunication perspective (ABJAUDE, 2020; BARRIENTOS-BÁEZ, 2022).

4.3 Neurocommunication Strategies for the Use of Social Networks

Social media, as highly integrated digital platforms in people's daily lives, provide a quick and easy way to connect with friends and family, share information and entertainment, and engage in online conversations. However, excessive use of social media can also have a significant impact on the human brain, so it is necessary to develop a series of strategies to reduce negative effects and promote positive ones from a neurocommunication perspective (BAÑOS; BARAYBAR, 2022).

The use of social media has become increasingly prevalent in modern society (DEMUNER FLORES, 2021), which has led to growing concern about its effects on mental health and well-being. As neuroscience advances, so do the techniques of neurocommunication, allowing communication experts to design strategies that can help people use social media in a healthy way. Some of these strategies include (ABJAUDE, 2020; BARÓN PULIDO, 2021; BARRIENTOS-BÁEZ, 2022; PACHI, 2022):

1. Create emotionally positive content: Emotions are key to connecting with people on social media. Focusing on producing positive content that inspires, motivates, or brings laughter can not only be more enjoyable to read but also help combat depression and anxiety, which is especially important during times of elevated stress.
2. Promote empathy: Empathy, the ability to understand and share the feelings of others, can be fostered on social media to encourage connection and understanding. This can be done by sharing personal stories or creating content that focuses on the needs of others. Brands can also promote empathy through campaigns that highlight social or environmental causes. Promoting empathy on social media can be an effective strategy for encouraging healthy use of these platforms.
3. Encourage positive feedback: Positive feedback can be a powerful tool for improving self-esteem and well-being. Content creators can incentivize positive feedback by sharing posts that evoke positive emotional reactions. Similarly, businesses can encourage positive feedback by asking customers to share their experiences on social media. This not only helps people feel valued and appreciated but can also foster customer loyalty. Additionally, promoting a positive attitude towards feedback can encourage respectful engagement even when expressing opposing viewpoints.

4. Foster social connection: Social media platforms, as their name suggests, can be powerful tools for connecting people and creating online communities. Fostering social connection can be an effective strategy for promoting healthy use of social media by generating content that encourages discussion and the exchange of ideas and opinions.
5. Question the expression of negative news: While it may not always be possible to limit exposure to negative news, it is important to question the way in which such news is expressed. When addressing negative topics, it is essential to approach them with respect and empathy, acknowledging their impact without causing unnecessary distress.
6. Set time limits: Excessive use of social media can be detrimental to mental health and well-being. To avoid this, individuals can set time limits for their social media usage. They can establish their own daily limits and schedule specific moments of the day to check their accounts.
7. Prioritize real-life relationships: Despite the connection and communication that social media can offer, it is important to prioritize relationships in real life. Promoting healthy social media use involves ensuring that online time does not interfere with daily relationships. This can include scheduling specific moments to check social media and making sure to spend quality time with friends and family in person.

In summary, Neurocommunication is a powerful tool for promoting healthy use of social media. The Neurocommunication strategies mentioned above can help users maximize the benefits of social media while minimizing the risks associated with excessive use (ÁLVAREZ, 2007; MOLINA *et al*., 2021).

Similarly, Neurocommunication can be used to develop strategies for the optimal use of social media that can be applied by institutions, organizations, companies, or individuals, considering that social media platforms are fundamental communication tools in today's world and highly relevant for connecting with their audience. However, due to the abundance of information shared on these platforms, messages can easily become diluted and lose effectiveness. For this reason, it is important to use Neurocommunication strategies to increase the effectiveness of communication and enhance emotional connection with the target audience. In this regard, it is recognized that the brain responds differently to verbal and visual messages, and emotions play a crucial role in shaping opinions and attitudes. Therefore, Neurocommunication also focuses on understanding how the brain responds to

different stimuli, which is valuable for creating more effective messages. In practical terms, Neurocommunication and social media converge to optimize the reach of messages (GILL; SINGH, 2020; VARÓN SANDOVAL; ZAPATA CASTILLO, 2021).

Here are some Neurocommunication strategies that can be used on social media to enhance emotional connection with the audience (GILL; SINGH, 2020, among others):

1. Use images and videos: Images and videos are powerful tools for emotionally connecting with the audience. The human brain processes visual information faster than text, and visuals can effectively convey emotions. Using images and videos in social media posts can attract the audience's attention and deliver messages more effectively.
2. Use emotive language: Emotive language is a tool for emotionally connecting with the audience. Words activate areas of the brain associated with emotions and information processing.
3. Use repetition: Repetition is an effective technique for improving information retention. By repeating a message multiple times, the likelihood of the audience remembering it increases, enhancing message effectiveness and internalization.
4. Use personalization: Personalization is useful for emotionally connecting with the audience. By personalizing the message, you can make the audience feel more involved and engaged with the content.
5. Use humor: Humor is highly relevant for connecting with the target audience. Humor can activate areas of the brain associated with pleasure and reward, making the audience feel more positive and receptive to the message. Companies, organizations, and institutions can use humor in their social media posts to promote a positive brand image and increase interaction with followers. For example, they can create memes or funny posts related to their industry or current events. It's important to ensure that humor is appropriate and not offensive.
6. Use storytelling: Storytelling is one of the best ways to convey a memorable message. Stories can activate areas of the brain associated with empathy and compassion, making the audience feel more connected to the message. They can be used to create social media posts that convey the message in a more emotional way. For example, sharing stories of satisfied customers or stories about the positive impact your company is making in the community.

7. Apply and promote empathy: Empathy is a key skill in effective communication and can be particularly important on social media, where the audience can be diverse and have different needs and concerns. Content creators can use empathy by putting themselves in the audience's shoes and understanding their needs and concerns. For example, responding to comments or questions from followers and offering solutions to their problems. Empathy can also be effective in addressing larger issues such as social injustices and environmental problems, showing the audience that you care about their well-being and are committed to making a positive difference in the world.

Neurocommunication strategies for the use of social media are based on understanding how the brain works and how people perceive and process information. The application of these strategies can improve the effectiveness of online communication while minimizing the negative effects that excessive use of social media can have on mental health and well-being. It is important to remember that as social media users, individuals have the responsibility to use them consciously and responsibly in order to reap all their benefits without harming their own health and well-being, as well as that of others (BARRIENTOS-BÁEZ; CALDEVILLA-DOMÍNGUEZ, 2021; BARRIENTOS-BÁEZ, 2022; BRANDAO PESSOA; FERREIRA DE SOUSA, 2022; DINIZ; MEDEIROS DE ARAÚJO, 2022).

5 CONCLUSIONS

The COVID-19 pandemic has further highlighted the high level of technologization in society, which has brought both benefits and challenges. On one hand, digitization and the use of social media have allowed for communication and social contact during times of lockdown and social distancing. However, it has also revealed the ease with which fake news and post-truth spread. It seems that the availability of information has not educated the masses in decision-making, but rather has allowed people to reinforce their prejudices and pre-existing beliefs, deliberately ignoring opposing arguments and favoring those that support their own ideas. In this context, it is necessary to review the way social media is used in order to promote a gradual change in people's attitudes and behaviors towards a more responsible and critical use of these platforms. It is important to develop a healthy and ongoing skepticism towards the information received on social media and the internet in general.

Neurocommunication, in this regard, emerges as a key tool in this effort as it allows us to understand the motivations behind public behavior and structure communication and education plans that can eventually lead to significant change. The advanced capabilities of this discipline should be used for the development of critical attitudes. Therefore, it is crucial to be aware that all individuals are susceptible to being studied and manipulated, and thus, it is necessary to consider a series of guidelines for dealing with the use of social media in the current context. This includes educating people about skepticism and critical thinking, as well as promoting the verification of information before sharing or making decisions based on it.

In summary, the technologization of society has generated a series of problems related to the dissemination of diverse information on social media, which influences people's behavior both positively and negatively. It is necessary to promote education, critical thinking, and an attitude of questioning the content circulating on social media towards more responsible use of these platforms, and Neurocommunication emerges as a key tool to achieve this. Being aware of one's own manipulability is also crucial in this process (TINOCO-EGAS *et al*., 2020). The relative novelty of the subject, which despite being relevant even before the widespread use of the internet, has recently begun to demonstrate the social and cross-cutting importance it has for coexistence and social harmony, represents one of the limitations of this study. Much of the scientific literature on the topic is tangential, incomplete, non-exclusive, and ultimately shallow in terms of finding solutions to the problems presented. Another potential limitation is the possibility that authors' language and convenience biases may have excluded relevant contributions, as ideal means of search and understanding outside the sphere of Western academia in the Latin alphabet were not available. This represents a (minor) gap in the increasingly important criteria of inclusivity and academic excellence. Qui faciunt quod possunt, plus facere non possunt.

In conclusion, research on Neurocommunication in relation to social media has allowed us to identify the impact of online communication on people's perception of reality and behavior. While the use of social media offers multiple benefits in terms of connectivity and social interaction, it is also true that its abuse can have negative effects on users' mental and physical health. However, Neurocommunication strategies can be an effective tool to minimize these effects and improve the quality of online communication, which can also be of great value to institutions, organizations, companies, and creators in general to enhance emotional connection with their audience.

By implementing science-based strategies, content creators can improve the quality of their communication and achieve better results in terms of reach, engagement, and conversion. However, it has been evident that the existing literature on this subject is still limited. It is important, therefore, to continue researching in this area to further advance knowledge and the implementation of effective strategies for a healthy and conscious use of social media, highlighting that Neurocommunication is a valuable tool for achieving more effective and empathetic communication on social platforms.

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