



Reconstructing Meaning After Stroke: A Case Study of Narrative Processes in a Hybrid Digital Support Community

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Abstract

Surviving a stroke is a painful process, so externalizing negative feelings and thoughts allows for finding alternative narratives for one's life story. The use of narrative therapy enables distancing oneself from the problem and finding alternative meanings. Online social support groups (hybrid care communities) promote encounters with others who have gone through or are going through the same experience.

Aims: *To increase knowledge about the impact of narrative therapy on a population of stroke survivors using social networks, specifically WhatsApp. To present an innovative view on how online communities for stroke survivors can facilitate contact with individuals in similar situations, promoting belonging, support, and greater overall emotional well-being.*

Methodology: *Nine months of messages sent to a WhatsApp group composed of 14 members will be analyzed. The analysis will be carried out using two narrative assessment instruments: the Narrative Content and Multiplicity Assessment Manual and the Narrative Process and Complexity Assessment Manual. A comparison will also be made between the narratives and the daily results of the Google form "Queijinho".*

Results: *The presence of multiplicity and overall satisfactory narrative content was evidenced. Regarding the results of the Google form "Queijinho", most elements are in emotional state 4 or 5.*

Conclusions: *The WhatsApp group made it possible to develop a dynamic community with better emotional adaptation. Constant sharing fostered feelings of belonging, acceptance, and encouragement, higher levels of insight, and reinterpretation of common traumatic events. In short, the results demonstrate some effectiveness of using narrative therapy in promoting higher levels of physical and psychological well-being.*

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Importance of Narrative Therapy in Online Support Groups (Hybrid Care Communities)

Narrative Therapy

"We have found that helping trauma victims find the words to describe what happened to them helps them in a significant way (...)" [1, p. 30]. By reliving and finding the words to describe a traumatic moment, the individual allows themselves to share feelings and internal experiences of strong impact, breaking the isolation of trauma and building a sense of freedom [1]. The goal of narrative therapy is precisely to focus on the relationship between the stories told by individuals and the experiences lived. Through distancing from the problematic situation and the formulation of externalizing questions, the individual is given the opportunity to break free from problematic patterns and find alternatives that allow the re-authoring of this story in an adaptive way [2- 4].

This encounter can help reduce suffering, guilt, shame, and frustration [5-7]. Therefore, narrative therapy, by not opting for a pathology-centered approach, can be described as a set of collaborative linguistic systems and narrative deconstruction. These systems, influenced by postmodernism, emphasize the social construction of knowledge and the power of language to construct multiple realities [5,8].

This approach argues that individuals understand their problems through cultural discourse, that is, through discourse that affirms how they should live and that reflects unilateral values. When life stories are not validated by cultural discourse, feelings of inadequacy develop. Narrative therapy can help in the process of distancing oneself from cultural discourse and discovering stories with which individuals feel comfortable [3].

This therapeutic approach emerged in the 1970s and 1980s, through the pioneering and collaborative work of Michael White and David Epston, and has been increasingly studied [9]. In recent years, in addition to the United States of America, three main countries

that produce research in narrative therapy have been identified: Portugal, England and South Africa [10]. In Portugal, some of the main authors who contributed to this approach were Óscar Gonçalves, Margarida Henriques, Miguel Gonçalves, João Batista, Luísa Soares, João Oliveira, Divo Faustino, Cátia Braga and Madalena Alarcão, allowing the advancement of its use in different contexts [9, 11].

In 1980, the pioneers of the narrative approach, Michael White and David Epston, defended the existence of three dynamic phases of the therapeutic process: deconstruction, reconstruction and consolidation. Deconstruction focuses on the process of questioning beliefs that underpin the problematic narrative, deconstructing ideas, beliefs and cultural practices that maintain it. Reconstruction involves the development of new coping strategies with the aim of creating a new "self" that is more dominant than the problem. Consolidation is the phase where the person solidifies the narrative of change. Although these three phases are described in a specific order, it is important to note that they do not occur linearly, and there may be advances and setbacks throughout the process [2, 8, 12].

These advances and setbacks occur because the narrative clinical perspective allows the individual to be seen as the protagonist in the unfolding of their own life stories, assuming skills, abilities, beliefs, and values that will help them over time [12, 13].

Narrative therapy affirms the existence of four central constructs. Realities are socially constructed, meaning that all the knowledge the client presents is created within the community through discourse. This discourse allows for the construction of the client's self-image and vision in relation to others through the particular context of their relationships, often using maladaptive beliefs and perceptions. Thus, some ideas, perceptions, and beliefs sustain the constructed problems, so the goal of narrative therapy is to interpret the meanings of life history events. Language constructs realities; that is, the narrative approach focuses on deconstructing

problematic meanings, allowing the emergence of new stories [8]. Realities are organized and maintained through narratives; from birth, cultural and contextual stories are acquired as personal stories. With the creation of new narratives, it can be important for the individual to share them within their community in order to broaden and strengthen potential successes. Stories are not neutral; rather, they are influenced by various factors such as: sex, family, socioeconomic level, cultural values, and religion [8].

Narrative therapy's main strategy is externalizing language, allowing dominant experiences saturated with problems to have diverse possibilities for identity reconstruction [12]. This space is obtained through discursive practice, in which meaning is given to often-forgotten events that characterize the expression of these people's values and skills in the face of the challenges they face [7, 13]. It argues that people, through language, information, thoughts, experiences, and past actions, give meaning to their narratives [4, 10]. It allows for self-knowledge and the re-authoring of life stories through internal reflection, meaning, and the strengthening of the individual's identity. This allows the psychologist to promote, through insight and understanding of oneself and the situation in which one finds oneself, the client's self-efficacy and self-determination [2, 14]. The focus is on the continuous collaborative conversational process of learning about the client's stories. A safe environment should encourage the client to feel comfortable having an open conversation, enabling them to reflect, rather than restricting themselves and closing themselves off from the problem during the therapy process [5, 6, 8].

Therapy is not done for the client, but with the client [6, 8]. The psychologist who adopts a narrative approach shows an attitude of curiosity towards what the other believes to be the problem, ideas to improve or worsen the situation, and possible previous attempts at resolving it [8]. This form of questioning allows breaking down barriers, sometimes created by silence, favoring authenticity and understanding between psychologist, client, and family [14]. Some examples of questions to be asked are "What is the concern that brought you here?", "How does this affect you and other people?", "What has been helpful in this situation?", "What has not been helpful?", "How long have you been a concern?", "How do you think your difficulties began?" and "How do you expect

the situation to change?" [8, p. 379]. These questions, posed by the psychologist individually or to a group of individuals in similar situations, allow for the definition and exploration of the effects that the problem presents at the present moment. They promote moments of greater reflection and sharing about beliefs, skills, and purposes, providing conversations of externalization and distancing from the problematic narrative [2]. They also allow the psychologist to help the client structure how certain narratives shape their life and to understand moments when they were able to refuse to live narratives saturated with problems [8]. When asked in support groups, these questions can also be a means by which the psychologist promotes an active, welcoming environment of greater sharing and insight, intensifying cohesion among all, moderating the themes, and allowing the expression of a wide diversity of opinions [2, 15, 16]. Finally, these questions are also a useful source of information for the psychologist in understanding the client's physical, emotional, and social needs [17].

Narrative therapy presents some other basic techniques, such as: re-authoring, which allows the development of more complex narratives, with new thoughts, feelings, and behaviors contrary to those of the problematic narrative; remembering, which organizes narratives by inserting new characters, moments, beliefs, and values into the client's alternative story and identity; therapeutic letters, which enable the understanding of changes that have occurred in therapy and in the client's life, from the modification of meanings to the creation of alternative narratives and their consolidation; and, finally, the externalization of the problem and the appearance of unique results [9, 10, 11].

Unique results, also called moments of innovation (MIs) or reconceptualization, include the set of exceptions or neglected, yet significant and noteworthy, stories that allow the stimulation and triggering of new meanings, and the creation of one or more alternative stories to the dominant one [5, 10, 18]. When these emerge, the path to meaning transformation is opened, with five different types of MIs: action, reflection, protest, reconceptualization, and change performance [19]. These appear throughout a cyclical process, in which the MIs of action, reflection, and protest are an initial phase for the evolution to the MIs of reconceptualization, which seem to be the most necessary for therapeutic change. This importance of the MIs of reconceptualization is

due to the fact that they are proactive and creative in building “bridges of meaning,” allowing insight and assimilation of problematic experiences. Therefore, they enable the client to distance themselves and see their own transformation between the previous self-narrative and the emerging self-narrative [18, 20].

Narratives are stories created by individuals, and the methodology of narrative therapy facilitates communication and the creation of an alliance between the psychologist and the client, favoring authenticity and understanding on both sides. This allows a set of information, thoughts, experiences, and actions, previously silenced, to be externalized orally or in writing.

Therapeutic Writing

Interventions focused on the writing process have a long tradition in the field of psychology, being one of the lowest-cost interventions that allows for the improvement of the physical and psychological health of diverse populations [21]. Therapeutic writing allows the individual to distance themselves from situations and access deeper layers of emotional experience (often internally blocked), promote insight and self-reflection, as well as revisit and organize events. Through this process, the expression of emotions is permitted in a safe and reflective space where the most intimate and complex feelings are explored, stress and suffering levels are reduced, and cognitive changes that contribute to well-being are provoked [6, 14]. In expressive writing-focused interventions, the client can reduce their avoidance strategies and obtain greater satisfaction, facing challenges in a more positive way [14]. Being one of the main facilitators of insight and self-reflection in narrative therapy, expressive writing becomes an efficient, economical, and easy-to-apply tool for expressing emotions and thoughts associated with stressful and traumatic situations [14, 22]. Another approach is positive writing (PW), which has strengthened the notion of writing as a useful element in the process of focusing on intensely positive experiences and strengths/abilities, demonstrating a significant impact on the well-being of the person writing [21]. In general, writing, although it can be used by anyone, seems to be more effective in those who have gone through traumatic experiences that are difficult for them to talk about. Thus, the way it is written and the words that are chosen or used allow for significantly more personal and emotional writing

than writing about common topics, providing a great deal of information about themselves and the situations they have lived or are living in the present [22].

In this way, it is understood that the use of therapeutic writing and also poetry can promote increased awareness and deeper internal understanding in relation to distressing experiences lived, and greater emotional expression. It could also contribute to the reconstruction of more beneficial alternatives to problematic narratives and greater physical and psychological well-being in clinical and non-clinical populations [11, 14, 23]. In other words, writing offers benefits at the level of cognitive processing, with changes in the evaluation of traumatic events, facilitating the creation of a coherent narrative that integrates the disturbing experience into one's own schema [21]. In short, the writing process will allow the individual to change their perspectives, step back, reassess life situations, and develop a better understanding of the problem. It will enable greater coherence in terms of thoughts and emotions, as well as greater self-regulation and a sense of control over the challenges experienced. In addition, it may address internal conflicts and reduce associated symptoms, such as rumination and distress [21].

Therapeutic Writing in Groups

Therapeutic writing can also be implemented within support groups, and significant benefits have been obtained, such as greater self-acceptance of one's own life story and lower rates of illness [3, 23]. Detailed writing of one's life story allows each group member to express their suffering and frustrations, which can lead to a short-term increase in levels of suffering and physical symptoms [23, 24]. However, in the long term, it demonstrates improvements in physical health (better functioning of the immune system with fewer complaints of pain and faster physical recovery from injuries, and less use of health services) and emotional health (improved mood/affect and lower levels of depressive symptomatology, intrusion, and post-traumatic avoidance) [16, 23, 25, 26]. In terms of physical improvements, these are sometimes influenced not only by therapeutic writing but also by social observation of other group members [25]. On an emotional level, group writing allows for the creation of a safe haven where experiences, fears, and suffering can be shared, which will be received with empathy, exchange of advice, and rehabilitation strategies [2, 27-29]. Reciprocal exchanges have a positive impact on

emotional well-being, as group members become more involved in each other's well-being, offering words of encouragement and genuine feedback. They also serve as reminders that members are not alone throughout the process, which reduces their distress regarding their past and increases levels of self-acceptance [3, 24, 27]. In the long term, group writing, in addition to creating a sense of community, emotional support, information sharing, and identity reconstruction, also allows for possibilities of reintegration into society [23, 30, 31].

Another extremely important aspect relates to the fact that when individuals write about emotional topics, they allow themselves to interact differently with other members, resulting in a behavioral, social, and linguistic impact on them [23]. In other words, when in groups, relationships can become more meaningful and a great source of support for change, which can lead to the emergence of friendships and a reduction in isolation [17, 22]. According to Crossley [31], the creation of support groups for people suffering from trauma due to illness will be extremely important in the construction of new narratives. The process by which the different elements of the group share their life stories may allow others to understand that they are not the only ones going through the situation. This, in turn, will make it possible to obtain greater distance from the presented problem and to more easily create new meanings and connections in relation to the illness and to life itself [32]. Therefore, the main objective is the reduction of symptoms and the promotion of personal empowerment, in which members develop a greater sense of competence, confidence and control in reshaping their life narratives [16, 30].

Technology and Support Groups

Currently, it is known that the use of narrative therapy in face-to-face groups allows for the achievement of several benefits, but it can be extremely challenging to keep these groups active for a prolonged period [22]. New technologies can be one of the main pillars for obtaining these positive results, allowing for increased involvement among the different elements through supportive phone calls or text messages. These alternative modes of communication enable greater group cohesion and effectiveness, as well as better dissemination of relevant information [22, 33].

Popular social networks, such as Facebook, Instagram,

and WhatsApp, allow users to maintain their online presence, enabling them to communicate and interact with other people. However, it is important that the use of group chats and message forums, while beneficial and flexible, are not a solution in themselves. They should be a means by which relevant information is transmitted in the management of common problems, as well as practical advice from other group members who have gone through similar experiences [25, 34, 35]. These simple messaging systems can be used to build trust and a sense of belonging among different members, reducing isolation. For this to be possible, confidentiality, respect, and a supportive environment that allows them to stay connected and responsive to community members, even asynchronously, are important. Asynchronous interaction is highly relevant because it reduces many of the geographical and temporal restrictions that are obstacles to face-to-face social support groups, enabling fluid communication with a wide variety of people and, sometimes, 24/7 access [36-38]. Furthermore, in the process of creating these groups, attention should be paid to their size, possible anonymity, and the nature of the interactions, since the degree of involvement of the members, as well as the degree to which they feel comfortable, will be extremely important factors. That is, group members who participate more actively, sending messages or responding to others, tend to obtain greater benefits than those who simply read the messages [34, 35, 39]. The way experiences are communicated within these groups can facilitate the construction of emotions and expectations for a future of recovery. Through the safety felt in private online groups, the various members allow themselves to reflect, discuss, and share issues that tend to be difficult to address personally, or even considered "taboo" outside the group [30, 40, 41]. The way these more complex sharings are made and the consequent attitudes can lead to very different results. Groups that present excessively pessimistic or hostile attitudes will have detrimental effects, while those that provide emotional validation show benefits for well-being [25].

Narrative Analysis in Online Social Support Groups

Narrative analysis in online social support groups provides a means for deconstructing illness narratives, reconstructing and rewriting them with feelings of hope [2, 12]. Faced with the onset of serious illnesses, there is a tendency towards self-blame and the creation of restrictive narratives, as well as disorder and incoherence in routines. Through the narrative clinical lens, we can

understand how the strategy of externalizing negative feelings allows for the acquisition of a new perspective, free from guilt, judgment, or negative self-identity [10, 12, 32]. By speaking or writing about experiences of chronic illnesses, whether physical or psychological, new, more adaptive perspectives can be found [32]. When used in groups with individuals experiencing the same health situations/conditions, it will allow for a common discourse base and the reception of support, which is very effective in the process of recovering the meaning of life, especially among older adults [12]. Currently, there is considerable evidence of the benefits of writing about life experiences within online social support groups for different health conditions. The main benefit lies in the fact that these groups create a safe space where members honestly share their life stories with others they perceive as similar to themselves, reducing stress levels [24, 42]. Due to similarities and identification with specific life situations, these groups offer high levels of informational support in terms of medication, healthcare professionals and institutions, as well as emotional support in terms of understanding situations and demonstrating support [38, 43]. By forming a large network, they promote feelings of companionship and gratitude for support, hope, and trust [38]. Some studies indicate that groups of individuals experiencing grief, diagnosed with schizophrenia, or suicidal ideation tend to seek greater emotional than informational support, as they aim, through anonymity, to share their fears and other highly complex emotional issues in a supportive, welcoming, and permissive environment [24, 28, 30]. On the other hand, groups of individuals experiencing infertility, pregnancy loss, or suffering from eating disorders or bipolar disorder have a greater need for informational support [17, 40, 41]. Although emotional support is of great importance in these groups, during times of greater uncertainty and grief, the need to seek information and receive support that allows for new problem-solving strategies is the central aspect [17, 40]. In both situations, online support groups promote the individual empowerment of the various members, increasing decision-making abilities, critical thinking, sense of competence, self-determination, and access to new resources [16]. Finally, regardless of the health condition or central difficulty, the anonymity of these groups allows for the protection of physical appearance, verbal articulation skills, and immediate communicative reciprocity. This allows for increased participation from the various members, who do not

feel influenced by the appearance and abilities of others, reducing levels of evaluation anxiety and feelings of guilt [44].

Social Support and Online Communities for Stroke Survivors

Focusing on stroke survivors, a highly relevant aspect for a good recovery is related to the support they receive from family and close friends. A stroke occurs when there is an interruption of blood flow to the brain, causing the death of brain cells in various areas [27, 45]. This situation leads to long-term deficits in motor, perceptual, emotional and/or cognitive functioning, affecting the well-being, social interactions and quality of life of millions of people every year [27, 46, 47]. For these reasons, after a stroke there is a great impact on the survivor, with a reduction in the quality of family and interpersonal relationships and a great need to readjust family dynamics and relational patterns [31, 48]. This generates great frustration in the survivor, who becomes unable to fulfill many of their previously valued roles, such as difficulty communicating and maintaining social activities with friends [28, 49]. Thus, there is a progressive social isolation of these individuals, who do not want to be seen as disabled, when in reality they need a high level of social support [31, 48].

Social support refers to the support that the individual receives post-stroke from others or from society in general. This can include emotional, practical, and informational support, receiving feedback, building confidence, guidance, feelings of belonging, socialization, and companionship [31, 48, 50]. Social support is a protective factor against negative psychosocial outcomes, such as depressed mood. The presence of high levels of social support is associated with a faster and more extensive recovery of the functional status of stroke survivors, better adherence to rehabilitation treatments, and, on the other hand, a decrease in social isolation, susceptibility to illness, and mortality levels [48, 49, 51]. This form of support is essential to increase the coping capacity and resilience of the individual and their family after a negative event, such as a stroke, allowing the various elements to feel capable of seeking help from each other. However, despite the fact that face-to-face social support from family, caregivers, and friends is very beneficial, after a stroke there is a high probability of feeling uncomfortable and ashamed of their current situation. Often, these individuals do not want to burden family

and close friends, and end up feeling that no one will truly understand what they are going through [45, 52]. The creation of online support groups could be a strategy to reduce various obstacles, such as leaving home or having to communicate verbally, as it allows connection with other people who have gone through or are going through similar experiences [45].

Currently, more and more online peer support communities have emerged, created with the aim of supporting the psychosocial needs of stroke survivors. These groups allow for the provision of emotional, social, and practical support, promoting feelings of belonging and shared understanding [27, 53]. As they are groups specifically for stroke survivors, everyone can share their experiences, receive empathy, and exchange practical advice, as well as strategies to facilitate the rehabilitation process. In this way, the values of integration, acceptance, and encouragement are emphasized, since everyone is "in the same boat" and, for this reason, the possibility of normalizing their experience is given, building a more positive post-stroke identity [27, 31]. Within these asynchronous, text-based online communities, such as WhatsApp, Telegram, and Messenger, stroke survivors can share their personal stories, experiences of illness, learn to accept their new condition, find strategies that facilitate adjustment to the new characteristics, and, most importantly, allow themselves to make new friends with similar experiences, whom they can turn to for fun and conversation [27, 31, 53]. The process of writing messages in these communities could benefit everyone in the group, with dynamic interaction that promotes improved emotional well-being, greater ease of communication, creation of strong social connections, and increased self-reflection [27].

Based on a study conducted by Silva et al. [27], through the creation of a WhatsApp group for the emotional sharing of stroke survivors, it was possible to understand that the various elements developed, over time, a feeling of community and belonging with deep relationships among themselves. Through the daily completion of the Google form "Queijinho", inspired by the assessment of emotional state and color-coding of the Self-Assessment Manikin (SAM) and Traffic Light Scale (TLS), respectively, the authors were able to obtain objective data regarding the improvement in levels of emotional well-being related to the daily interaction carried out in this group. The

main conclusions suggest the importance of promoting emotional support, empathy, feedback, and transparency within groups that allow for regular interaction and the reception of continuous and dynamic support through digital support [27].

Methodology

This study aims to develop knowledge in this area and, through the analysis of messages sent within this same group, increase knowledge regarding the impact of using narrative strategies in this target population. More specifically, it analyzes, with a narrative lens, nine months of messages sent via WhatsApp, which is the world's most popular messaging application due to its ability to provide better reach and effectiveness of engagement among individuals [54]. The study will employ a quantitative methodology. It focuses on presenting an innovative narrative perspective on the importance of online social support communities for stroke survivors. It seeks to understand how the use of new technologies can make contact with others who are or have been through similar health situations more accessible, allowing for the development of feelings of belonging, support, and greater overall emotional well-being. Four research questions were created:

- Are the frequency and depth of narrative writing in group interactions associated with higher levels of psychological well-being and quality of life? This question emerges from evidence supporting the role of narrative writing in emotional processing and the promotion of psychological well-being, particularly in contexts of adversity. However, research on the effectiveness of this approach in digital contexts, and especially in populations of stroke survivors, remains limited. In this sense, it becomes pertinent to analyze whether narrative writing, in informal environments such as WhatsApp groups, can function as a facilitating mechanism for psychological adaptation and improved quality of life. It is expected that interactions within the WhatsApp group will reveal elements of narrative writing associated with the promotion of well-being and quality of life.
- Do stroke survivors, in their interactions within the WhatsApp group, show processes of re-signification of the traumatic event, associated with greater acceptance of their health condition and lower levels of psychological distress? This

question is based on evidence that the process of re-narration and written expression facilitates emotional processing and the reconstruction of meaning after traumatic experiences, contributing to reduced avoidance and more positive psychological adaptation. In this context, it becomes pertinent to analyze whether these processes also emerge in spontaneous interactions within digital social support groups. It is expected that interactions within the WhatsApp group will reveal processes of reinterpretation of the traumatic event, reflecting psychological adaptation to the new health condition.

- Is the immediate sharing of negative experiences on social media associated with greater coping capacity and the construction of more positive meanings? According to the narrative perspective of human action affirmed by Crossley [32], this type of sharing facilitates meaning-making processes and promotes coping capacity. It is expected that sharing, when done at the moment the negative situation occurs, allows for coping and finding new perspectives and positive meanings.
- Over time and with increased support, is there

an improvement in perceived well-being? The frequency of sharing experiences within the group is associated with an increase in perceived social support, which, in turn, is related to higher levels of subjective well-being. It is expected that group members will feel understood and supported in their daily sharing, enabling improvements in terms of mental health, resilience, and subjective well-being.

Study Participants and Design

The study will focus on analyzing messages sent over nine months to a WhatsApp group. This group consists of 14 members who regularly participated in meetings for stroke survivors. The inclusion criteria established for participation in this group were: belonging to the local support group, maintaining a link with the group, and regularly participating in the community. On the other hand, the exclusion criteria were: not having any type of link with the group and only occasionally attending the monthly meetings. Of these 14 members, 10 were female and four were male. More specifically, this group is composed of 11 stroke survivors, one healthcare professional, one caregiver, and one relative of a stroke survivor, aged between 29 and 66 years (Table 1) [27].

Table 1: Sample Characteristics, according to Age, Sex, and Role in the Group.

Member ID	Age	Sex	Role
M1	55	F	Health Professional (Physiotherapist)
M2	40	F	Stroke Survivor
M3	29	F	Stroke Survivor
M4	62	F	Caregiver (Wife)
M5	48	F	Stroke Survivor
M6	62	M	Stroke Survivor
M7	53	M	Stroke Survivor
M8	56	F	Stroke Survivor
M9	42	F	Family Member (Daughter)
M10	64	M	Stroke Survivor
M11	66	M	Stroke Survivor
M12	64	F	Stroke Survivor
M13	55	F	Stroke Survivor
M14	50	F	Stroke Survivor

This group was created as a space for sharing experiences, emotional support, recovery, and combating social isolation. The analysis of the messages will be carried out using two manuals that are part of the Narrative Therapy Model [55, 56] and also through a comparative analysis of the results obtained in the Google form "Queijinho". The present study aims to analyze how processes of resignification of the post-stroke experience relate to emotional adaptation, psychological well-being, and the construction of meaning from the traumatic experience.

Instruments

The analysis of the messages will be guided by the following instruments: the Content and Narrative Multiplicity Assessment Manual and the Narrative Process and Complexity Assessment Manual. Both present a quantitative scoring system composed of several steps: first, a complete reading is carried out to understand the discourse so that, during the second reading, it is possible to understand the existence or not of a narrative. If confirmed, it is passed to the next stage, in which, through several readings, the scoring process is initiated for each of the components of each manual. For scoring the presence of the various components, a five-point Likert-type scale is used in both manuals (1 = very little, 2 = little, 3 = moderate, 4 = high and 5 = very high) [55, 56].

The Content and Narrative Multiplicity Assessment Manual focuses on studying the degree of multiplicity and diversity existing in the narrative content present in the individual's oral or written discourse. This manual consists of four indices: the multiplicity of characters (P, for each real or imaginary character involved in the action); multiplicity of settings (C, for each setting in which the action unfolds); multiplicity of events (A, for each event that makes up a sequence with narrative autonomy); and multiplicity of themes (T, for each general theme in which the narrative develops). A narrative with a wide variety of these elements and temporal unity will be a rich, diverse, and flexible narrative [5, 56].

The Narrative Process and Complexity Assessment Manual allows the study of the degree of diversity and richness of each individual's narrative process. This manual is composed of four central narrative processes: objectification, emotional subjectification,

cognitive subjectification, and metaphorization. The four processes will be coded by different colors and will serve as a way to understand the diversity of lived sensory experiences, the complexity of each individual's subjective emotional and cognitive states, as well as the multiplicity of meanings that can be given to experiences. Objectification, identified by the color green, will focus on exploring the multiplicity of sensory elements (sight, hearing, smell, taste, and physical sensations/touch) that characterize each individual's experience of the world. As for emotional subjectification, demonstrated through the color red, its objective will be to analyze the description of the experience (own or not) of emotional states related to the event. Cognitive subjectification, in blue, will focus on exploring the multiplicity of cognitive aspects explicit in the narrative of internal discourse, that is, ideas, plans, or thoughts experienced throughout the event in question. Finally, in brown, the use of metaphorization will be identified, that is, the individual's reflective attitude in the process of constructing new meanings for the experiences lived [5, 55].

According to Gonçalves [56], it is possible to significantly differentiate narratives in terms of content and process, so that they will be useful instruments in the process of discriminating the different characteristics of narrative production [57].

Finally, another instrument used to complement the results obtained by the two manuals will be the analysis of the Google form "Queijinho", inspired by the Self-Assessment Manikin (SAM) and Traffic Light Scale (TLS), which allow understanding the daily emotional state of each group member. In order to facilitate expression, each emotional state is coded by a color (1 = red, 2 = orange, 3 = yellow, 4 = light green and 5 = dark green) [27]. The daily graphs show the degree of emotional well-being and the objective is to compare them with the analysis of the narratives presented by the individuals. More specifically, to understand if the narrative of the different elements matches the well-being results of the Google form "Queijinho" and how the social support provided by the various group members, after viewing the graph, can help in creating a new perspective and improving their overall well-being.

Data Analysis

The data analysis process was carried out by two evaluators/judges, both with a background in

Psychology. In an initial phase, they read the nine months of messages in order to identify the presence of narratives. After concluding that narratives existed, training was conducted on how to score the messages, administered by a supervisor with knowledge and practical experience in the clinical analysis of narratives. After this training, the individual scoring process began for each of the judges.

Both judges performed a qualitative and quantitative analysis of the messages. Independently, each judge performed a qualitative analysis of the nine months of messages, identifying the presence of narratives and, consequently, the various components of the two manuals, according to the interpretation and understanding of the data. Based on the presence of each of the narrative processes and the quality and variety with which they appear in the messages, a more quantitative analysis was carried out focusing on the frequency analysis of each parameter. The presence of patterns was observed, and an attempt was made to understand which narrative processes were most frequent throughout the messages. After this stage was completed, a meeting was held where each of the evaluators presented the scores assigned, with their respective justifications. Throughout this meeting, the various results were discussed, and consensus was reached in most categories, since the inter-evaluator differences were, in most cases, only one value. However, given the presence of doubts regarding three categories, the intervention of a third judge was considered necessary. The presence of this third element was fundamental, as it promoted joint reflection and thus allowed the three judges to reach a consensus.

Regarding the impact of daily completion of the Google form "Queijinho", a comparative analysis was carried out between the daily results of the graph and the shares in the group. The objective was to analyze how the emotional states of the group members evolved, taking into account the externalization of their problems and the subsequent support, encouragement, and words of friendship they received. The first evaluator analyzed the various events experienced by each member and the respective emotional state recorded in the Google form "Queijinho," subsequently verifying the messages of support received. Through these messages, it was analyzed how the emotional state was maintained or improved the following day, as well as the evolution

of the quality of this individual's interventions in the group. Finally, a quantitative analysis was also carried out on how the mental health of the group members evolved over the nine months, through the calculation of the average monthly emotional states.

Result Analysis

The results obtained show the presence of narratives enriched in terms of content and multiplicity, and, mainly, in terms of process and narrative complexity. In the dimension of content and multiplicity, assessed using the Narrative Content and Multiplicity Assessment Manual, results indicated little diversity in the narratives (Table 2). Regarding the characters, their presence was moderate (3 points). Although several narratives centered only on the first person were found, allowing reflection on the internal mental state, several participants were also able to mention other elements whose importance and emotional impact were central [58, 59] (Appendix A). As for the settings, their presence was weak (2 points). Little variety of settings was observed throughout the messages and, in most cases, did not allow for sufficiently rich and diverse descriptions. However, healthy recollection and the creation of a sense of place identity seem to have provided a feeling of mental journey and the construction of greater self-esteem [60-62] (Appendix B). The presence and limited description of events and themes was also observed (2 points), a result that is due to the fact that most narratives present a description focused on the present, more specifically on the sharing of everyday events. These sharings are done as outpourings, allowing them to document their own identity, develop insight, and obtain adaptive ways of dealing with stress and anxiety [63, 64] (Appendix C). In general, although extremely diverse results were not obtained in terms of narrative content, it is important to mention the presence of a sometimes more introspective view, focusing on the everyday events experienced by the group members.

Table 2: Main Results Obtained through the Assessment Using the Narrative Content and Multiplicity Assessment Manual

	1st Judge	2nd Judge	Consensus
			(3rd Judge)
Characters	2	3	3
Scenarios	2	2	2
Events	1	2	2
Themes	2	2	2

Regarding the dimension of the process and complexity, assessed using the Narrative Process and Complexity Assessment Manual, significantly diverse results were obtained (Table 3). Objectification was the lowest dimension (2 points), as in most cases the sensory multiplicity of the descriptions did not show great multiplicity. However, it is important to emphasize that multiple sensory stimuli (visual, auditory, gustatory, and olfactory) were identified during the activities. The sharing of these experiences, involving different senses, favored the evocation of autobiographical memories with a strong emotional charge. This process can be understood in light of the Theory of Mind, which describes the ability to understand and infer the mental states of others [65]. When listening to the narrative of sensory experiences, the other group members tended to adopt the narrator's perspective, promoting empathy and emotional involvement [62, 63-67] (Appendix D). As for emotional and cognitive subjectification, a moderate presence was found (3 points). At the level of emotional subjectivation, several narrative passages focused on emotions were identified, promoting the revisiting, reinterpretation, organization, and externalization of events that might have been internally blocked [68, 69]. This may have provided better coping skills and a protective effect against negative psychosocial outcomes, decreasing rumination and the presence of negative emotions [47, 70, 71]. The daily sharing of the emotional coloring of the participants in this group, a situation facilitated by the use of the Google form "Queijinho", opened space for the exposure of moments of greater fragility, for the acceptance of pain and its relief, as well as for increasing reflection and psychological resilience [70, 72, 73] (Appendix E). Regarding cognitive subjectivation, stroke survivors shared

various thoughts, cognitions, and plans, but the quality presented did not allow the evaluators to assign a very high score. Given that humans are storytellers and there is a constant need for subjective reinterpretation of experience, the members of this group also developed thoughts closely linked to their new life condition [61, 62]. Sharing, along with the support received, allowed for coping with the stressful event, cognitive integration, organization and understanding of it, and also increased motivation and a sense of hope for post-stroke recovery [74, 75]. Writing about positive thoughts and future plans is also extremely beneficial, creating a greater quantity and quality of life goals [76] (Appendix F). Finally, there was a high presence of metaphorization (4 points). Metaphorization was assessed based on the variety of metaphors used by stroke survivors, as well as the frequent and high-quality reflections throughout the nine months of sharing. The dynamic interaction allowed by the WhatsApp group seems to have facilitated the feeling of "family," of "belonging," a safe space, of understanding and belonging, creating purpose and meaning in life [77, 78]. Furthermore, metaphors were identified that focused on the dichotomy between positive and negative moments, providing a greater state of mindfulness, in which the focus of attention is on the present [58, 78]. Also, the sharing of success stories and constant support increased connection, emotional validation, and inspiration for a more positive emotional adjustment and recovery process [47, 77, 79, 80] (Appendix G). It was possible not only to demonstrate the presence of a good capacity for reflection and expression of the emotions experienced by the group members, but also to find metaphors and moments of reinterpretation of lived experiences.

Table 3: Main Results Obtained through the Assessment Using the Narrative Process and Complexity Assessment Manual

	1st Judge	2nd Judge	Consensus
			(3rd Judge)
Objectification	2	1	2
Emotional Subjectivation	3	3	3
Cognitive Subjectivation	2	3	3
Metaphorization	3	2	4

The results obtained from the Google form "Queijinho", which aimed to assess the emotional state of group members daily, showed progressive improvement. However, they did not present a linear trajectory throughout the recovery process, with improvements and regressions directly influenced by triggering events. Through the analysis of the daily results, it was possible to understand that, from the first month, a large part of the group was in emotional state 4 or 5, only decreasing to emotional states 1, 2, and 3 when negative events occurred in their lives. These events were mostly related to difficulties arising from the stroke suffered, such as falls, worries, or everyday events that caused a more negative emotional state. By sharing these moments of greater difficulty and viewing the "Queijinho", and by meticulously analyzing the messages, it was possible to understand the presence of emotional communication and mutual support, in which the various group members came together to support those who were in a negative emotional state. Thus, in the vast majority of cases, the following day, this union and "virtual hug" offered by the group allowed that individual to return to a more positive emotional state. Finally, through the calculation of the average over several months, some stability in terms of emotional state was evidenced, with an average of 4 (Table 4).

Table 4: Mean and Standard Deviation (SD) of Emotional States over the Nine Months of WhatsApp Messages

	1st Month	2nd Month	3rd Month	4th Month	5th Month	6th Month	7th Month	8th Month	9th Month
Mean	4.48	4.35	4.51	4.4	4.71	4.66	4.56	4.54	4.59
SD	0.772	0.837	0.71	0.818	0.605	0.563	0.701	0.7	0.667

Through further detailed analysis, it was concluded that, over time, the number of records corresponding to emotional states 1, 2, and 3 decreased significantly, with emotional state 1 being nonexistent in the 6th, 8th, and 9th months. Emotional states 2 and 3 appeared, on average, three and six times, respectively. Meanwhile, in the last two months, emotional states 4 and 5 recorded frequencies equal to or greater than 50 times and greater than 100 times, respectively (Table 5). Daily self-monitoring of emotional state allowed for reflection, maintenance of positive levels, and improvement to higher levels. In addition, emotional communication promoted feelings of belonging and increased perceived levels of well-being [72, 81] (Appendix H).

Table 5: Comparison of the Frequency of Emotional States (ES) Over the Months of Exchanged Messages.

	1st Month	2nd Month	3rd Month	4th Month	5th Month	6th Month	7th Month	8th Month	9th Month
ES. 1	2	2	1	3	4	0	1	0	0
ES. 2	4	8	4	6	2	1	2	6	4
ES. 3	15	17	17	17	2	5	6	7	6
ES. 4	68	81	87	86	55	46	44	64	50
ES. 5	138	117	158	136	191	123	96	132	120

Over the months, some group members forgot to fill out the form daily, resulting in a slight decrease in the number of daily submissions. This situation may have some influence on the results obtained.

Discussion and Main Conclusions

The main objective of this study was to contribute to a deeper understanding of the impact of narrative therapy strategies on stroke survivors, in the context of the use of social networks, specifically in hybrid care communities. In this sense, we sought to explore an innovative approach centered on the potential of online communities as spaces for social support, facilitating sharing and accessible contact between individuals who experience similar experiences. The creation of the WhatsApp group allowed the development of an active community over nine months, in which participants shared messages with diverse content. These interactions highlighted moments of resignification of the lived experience, contributing to the reduction of suffering associated with stroke and the reconstruction of post-event identity. This process was associated with better emotional adaptation and higher levels of psychological well-being.

WhatsApp constitutes a relevant digital communication tool for social support, allowing continuous interaction between group members and the sharing of experiences in real time [25, 29, 57]. This dynamic allows access to immediate emotional support during moments of greater vulnerability, promoting feelings of security and reinforcing social connection [25, 29]. Additionally, writing messages, particularly those related to the stroke experience, seems to facilitate reflection processes on emotions and thoughts, promoting greater awareness of adapting to their new condition [5, 77]. In this context, strategies associated with narrative therapy can play a central role, allowing the construction of alternative stories about adverse experiences, favoring the externalization of problems and the development of greater insight and sense of control [5, 12, 82, 83].

Thus, the writing process in digital support contexts proves to be a relevant mechanism for emotional expression and meaning making, facilitating psychological adjustment in the face of the difficulties experienced [83].

Discussion

This study offers relevant contributions to understanding the role of narrative processes in digital support communities aimed at stroke survivors, highlighting the potential of hybrid care contexts in promoting psychological adaptation after traumatic health events. The results, aligned with the first research question, suggest that participation in a WhatsApp group can facilitate the reconstruction of meaning, emotional adaptation, and increased psychological well-being.

One of the main contributions of this study is the identification of narrative processes emerging in everyday digital interactions. The messages shared by the participants evidenced moments of resignification of the stroke experience, reflecting a continuous process of identity reconstruction and meaning making. This result, which seems to address the second research question, is aligned with narrative approaches, which emphasize the importance of constructing stories focused on reorganizing traumatic experiences and integrating them into a coherent self-concept [5, 12, 82, 83]. The process of recalling provides a mental journey through autobiographical memories in order to enable self-reflection, organization, and reinterpretation of events in a more positive light, strengthening the belief that it is possible to cope with difficulties [60, 63, 66, 68, 69]. These processes did not occur in a formal therapeutic context, but arose spontaneously in peer interactions, suggesting that therapeutic mechanisms can be activated in informal and digitally mediated contexts. This spontaneity present in the group seems to be due to the "belonging/family" dynamic presented by the various members, fostering the way in which this was a safe, connected, and purposeful space for emotional sharing and overcoming challenges [77-79].

In addition, the results reinforce the role of continuous and immediate social support in mitigating emotional suffering, answering the third and fourth research questions. The synchronous nature of communication via WhatsApp seems to facilitate real-time emotional expression and the obtaining of immediate feedback, promoting a feeling of belonging and perceived support [25]. These data are consistent with the literature that identifies social support as a protective factor against negative psychosocial outcomes, central to adaptation to traumatic events and the promotion of well-being [47, 57]. In this sense, sharing suffering online allows for the relief of fears and internal struggles, acceptance

of pain and the new condition, as well as reflection on physical and mental improvements [68, 69, 73].

The results obtained allowed us to answer the research questions. The creation of a safe and accepting space, through the WhatsApp group, could have facilitated continuous sharing, especially the outsourcing of negative events. The support offered among the various elements seems to have opened space for new perspectives, greater coping capacity, and the construction of adaptive meanings. Through the analysis of nine months of messages, the changes found in the narratives demonstrate possible improvements in the quality and purpose of life, and in the subjective and psychological well-being of the participants.

From a clinical point of view, the results highlight the relevance of integrating digital tools into psychological interventions aimed at stroke survivors. Messaging platforms can function as an extension of traditional therapeutic contexts, allowing for continuous and more accessible follow-up, especially for individuals with mobility limitations or geographical barriers. Additionally, writing about personal experiences seems to constitute a facilitating mechanism for emotional processing, promoting greater self-awareness and more adaptive coping strategies [5, 77].

Nevertheless, these results should be interpreted with caution. The informal nature of digital interactions raises questions regarding the consistency and depth of therapeutic processes, as well as the absence of structured clinical guidance. The group demonstrated a high level of daily sharing, with a single narrative commonly being divided into several messages and interrupted by other individuals who aimed to share their own experiences and/or offer support. This situation may influence and hinder the in-depth exploration and subsequent reflection on more sensitive topics. Furthermore, it should be added that not all individuals benefit from the same form of narrative expression, and some may require more targeted and individualized interventions. Future research should explore the conditions under which these practices are most effective, as well as moderating variables such as symptom severity and individual coping styles. In addition, considering the wide variety of personalities present in the group, it should be explored how the use of emojis facilitates the externalization of emotions in those who have greater difficulty with written

emotional expression.

Despite these limitations, this study contributes to the growing body of evidence supporting the integration of narrative and digital approaches in mental health, reinforcing the importance of creating accessible spaces for sharing, reflection, and meaning making after traumatic experiences.

Clinical Implications

The results of this study suggest several implications relevant to clinical practice:

- Digital platforms, such as WhatsApp, can be used as complementary tools to traditional psychological interventions and function as an accessible and continuous means of support between face-to-face sessions. They allow for the reinforcement of therapeutic content, promote adherence to interventions, and facilitate the monitoring of participants' well-being in real time. In addition, they enable the sharing of psychoeducational materials, reminders of coping strategies, and the maintenance of a closer communication channel between professionals and users.
- **M2:** The definition of the "Queijinhos" has helped me realize that my situation could be much worse. And this WhatsApp group has eased the burden that my illness is on me.
- Narrative expression in a group context can facilitate emotional processing and the reconstruction of meaning. By narrating personal experiences, participants not only externalize emotions but also cognitively reconstruct events, attributing new meanings to them and integrating them into their life story.
- **M7:** With you (and with the new friends I've made here) I've learned that a stroke, despite being the end of life as we know it, has to be the beginning of a new life where we adapt and are happy.
- The permanence of sharing over time can be an additional therapeutic strategy, allowing for the revisiting, reinterpretation, and consolidation of adaptive narratives. Temporal distancing and progressive reflection on sharing facilitates cognitive and emotional reorganization.
- **M5:** Today I'm feeling very green!! And thinking that life takes many turns, but I feel very grateful. Exactly 1 year ago, X was hospitalized in X,

skin and bones, vomiting for 1 month....and 12 years ago I was admitted to X, in a wheelchair, barely able to sit, 1 month after Cerebral Venous Thrombosis.

- Digital peer communities can reinforce perceived social support and reduce isolation. The group context adds an essential relational dimension to this process, since feedback, validation, and identification with others' experiences promote feelings of recognition and belonging. This environment favors the normalization of emotions and can reduce psychological isolation, while stimulating reflection and reinterpretation of lived experiences. The shared narrative becomes a central mechanism in emotional regulation and meaning-making, contributing to psychological well-being.
- **M7:** The WhatsApp group created by X is useful for keeping in touch, exchanging experiences, and, above all, making friends with people who share the same problem: stroke sequelae. Sharing our emotional state with the group has proven to be quite positive. It not only allows us to introspect to define our emotions on that day but also to discover that others might need support or just a kind word.
- Interventions should be tailored to individual characteristics, considering differences in levels of involvement and coping strategies. The heterogeneity of psychological profiles implies that individuals respond differently to the same therapeutic approaches, making it essential to adapt the pace and techniques used. Personalizing interventions could be a powerful and effective path to follow. Here we observe two examples that allow us to understand the heterogeneity of profiles within the group: some who prefer not to expose themselves so much and others who really enjoyed the experience.
- **M5:** The WhatsApp group has helped us get closer, but I don't always have the emotional availability to share my state of mind...the reactions, especially my discouragement or sadness, that impact others, don't make me comfortable with myself.

- **M8:** For me, the experience was very good. It's my first experience, I've never done it before, but I really enjoyed it, it was very cool and fun.

Final Conclusion

This study proposed an innovative approach by focusing on the narrative perspective of a WhatsApp group aimed at stroke survivors. Unlike most existing studies, which tend to analyze individual and punctual narrative productions, this work allowed us to understand the continuous and interactive dynamics of a digital support community (hybrid care communities), characterized by daily exchanges of support, motivation, and encouragement. This context proved particularly relevant as a space for reframing shared traumatic experiences, promoting higher levels of psychological well-being and quality of life.

The narrative-sharing-centered approach demonstrated potential to deconstruct dominant, problem-saturated narratives and facilitate the construction of more adaptive alternative narratives [12]. In parallel, the results highlight the central role of peer social support in the process of adapting to the new life condition after stroke. Considering the limitations frequently associated with this population, namely mobility difficulties and increased risk of social isolation, the use of digital technologies proved to be an effective strategy to promote interpersonal connection and emotional support. In this context, the WhatsApp group constitutes an accessible and functional support network, allowing participants to express and transform emotions, thoughts, and experiences through shared messages.

This dynamic favored not only the feeling of belonging, acceptance, and encouragement, but also the development of greater insight and the re-signification of common traumatic experiences [23, 81, 84,85,86,87].

Overall, the results reinforce the potential of narrative analysis in digital and shared contexts as a tool to promote psychological adaptation, contributing to the improvement of well-being and quality of life in stroke survivors.

Ethical Approval and Consent to Participate

The study was accepted by the Ethics Committee of the Instituto Superior Técnico de Lisboa, under reference no. 2/2024 (CE-IST).

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