

STORYTELLING AS A TOOL FOR NEURAL STIMULATION AND EVOKING MEMORIES IN ELDERLY PEOPLE

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Abstract: Objective: This study seeks to broadly instigate the development of the elderly, in order to mitigate possible losses of the natural aging process, such as cognitive declines, through an intervention based on the group dynamics technique. Methodology: The intervention was carried out with elderly residents of a nursing home in Brusque, SC, by psychology students. The activities were divided into two days: on the first, an analysis of the location, routine and demands of the residents was carried out, while on the second, the application of practices such as mindfulness, questions and answers, storytelling and sharing experiences. During the intervention, sensory stimuli (aromas, textures and sounds) were used to evoke memories and promote relaxation. It is worth noting that the participation of the elderly was voluntary and the data was recorded digitally. Final considerations: During the course of the activities, there was evidence of the elderly recalling experiences and sharing their emotions, so the idea that a safe and comfortable environment was provided permeates. What's more, prior research was essential for diversifying activities, making it a point for future professionals/volunteers to consider. Overall, there was a beneficial impact on cognition, well-being and socialization. It is worth considering expanding the practice to new meetings, as well as varying the stimuli, in order to provide prevention and health maintenance for the elderly.

Keywords: Aging; Elderly; Group Dynamics; Cognitive Stimulation; Storytelling.

INTRODUCTION

Based on the divisions of the life cycle, we can see late adulthood, which can also be called aging (Papalia and Martorell, 2022). This period covers the age range from 65 to death and is a natural process that causes deterioration in various body systems (Camargos; Lehnen and Cortinaz, 2018; Farinatti, 2008;

Papalia and Martorell, 2022). Among these systems is a decline in cognitive ability, which is influenced in healthy elderly people by a combination of neurological, biological, environmental and psychosocial factors. As identified in the research by Argimon *et al.* (2004), factors such as the loss of brain mass, the accumulation of toxic substances throughout life, changes in neurotransmitters, and the reduction in the number of nerve cells contribute to the reduction of brain functions (Maiese, 2024).

In addition, cognitive impairment is manifested by a reduction in the speed of information processing, as well as by variables such as family, education and health care. This cognitive impairment results in functional losses that affect the quality of life of the elderly, limiting their independence and autonomy, which depend on a functional memory (Souza *et al.*, 2009; Machado *et al.*, 2011). However, these deteriorations are linked to the development of the human being, and it is necessary to understand ageing as a fundamental event. In this sense, it is important to create strategies aimed at stimulating the elderly due to these degenerations (Alves; Viana; Gomes, 2020).

In view of this, the intervention seeks cognitive stimulation in people in the late adulthood age group, and thus encompasses activities linked to the practice of mindfulness, intra-group knowledge, storytelling, sensory stimulation and sharing memories. These practical activities are based on the stages of group dynamics: non-specific warm-up, specific warm-up, experience and sharing (Osorio, 2003). In this way, the aim is to broadly instigate development in order to mitigate possible losses in the natural ageing process, such as cognitive decline, in line with the data found in the literature.

THEORETICAL BACKGROUND

AGEING

Ageing is a continuous and inevitable process that causes morphological, biological, physiological and psychological changes in individuals. These changes result in a decrease in the capacity for various aspects of development, including physical, cognitive and psychosocial (Camargos; Lehnen; Cortinaz, 2018). Thus, understanding the aspects that permeate the development of this period is fundamental to understanding the functioning of the being as a whole.

With regard to the changes and stability that occur in these age groups, it is worth highlighting physical, cognitive and psychosocial development. In this sense, physical development consists of bodily and cerebral changes, motor and sensory capacities and health; cognitive development encompasses mental changes, such as memory, attention, language, learning, reasoning, thinking and creativity; and psychosocial development encompasses changes in personality, emotions and social relationships (Papalia; Olds; Feldman, 2010; Bee; Boyd, 2011; Cortinaz *et al.*, 2022).

Physical development

In this sense, the physical changes identified can be listed first, which can be observed, such as the appearance of paler skin with less elasticity, atrophy of the muscles and wrinkling of the skin. There is also the presence of varicose veins in the lower limbs, thinning hair from gray to white and thinning body hair (Papalia; Martorell, 2022). In addition, the short stature of people in this age group is evidenced by the atrophy of the discs between the vertebrae of the spine. This increases the risk of suffering a fracture (Papalia; Martorell, 2022).

Moving on to brain changes, there is a decrease in blood flow and loss of volume in the brain, which results in slower motor and cognitive responses (Camargos; Lehnen; Cortinaz, 2018). In this sense, according to Bromley (1988 apud Stuart-Hamilton, 2002), the reduction in brain weight comprises around 10% to 15% as part of the characterization of normal ageing.

Thus, the possible causes of this brain loss are: a) the low level of blood in the brain, causing neurons to die due to lack of oxygen; b) many people who are aging have small heart attacks or strokes. Thus, a small part of the brain atrophies as a result of the loss of blood supply to a certain area; c) when the blood supply operates effectively, it filters out some toxins present in the blood before they reach the brain; if ageing impairs this, the brain may be exposed to these toxins, which can cause damage (Stuart-Hamilton 2002).

There are also sensory stimuli, and it's important to mention perception. This is configured as a complexity of receptive and analytical activities. For this reason, human perceptions are polysensory, i.e. they comprise an integration of various sensory messages. The five sensory modalities are: sight, hearing, taste, smell and touch (Fontaine, 2010).

In terms of vision, it is clear that the effects of age appear from the age of 40 in the case of optics and from the age of 60 in the case of the retina. The optical structure corresponds to the sharp and focused production of the world on the retina. Changes to the retina can lead to loss of fine detail vision (Fontaine, 2010). Hearing is severely affected due to sensitivity, with difficulty in perceiving high-pitched sounds and understanding speech, including one's own (Camargos; Lehnen; Cortinaz, 2018; Fontaine, 2010). The issue of taste, on the other hand, presents contradictory results, due to the scarcity of research. However, taking into account the sensitivity to flavors,

there is an increase in perceptual thresholds, showing that the same sensation is instigated in the elderly by a considerable concentration of this flavor (Fontaine, 2010).

In the olfactory modality, from the age of 60 there is a weak decline, but it can be very variable, depending on the individual and the smell. However, it is possible to consider that this modality is sensitive to this age group (Fontaine, 2010). In this context, it is worth emphasizing touch, which comprises the receptors under the skin that enable perception. In the effects of age, there is a decrease in sensitivity in the palm of the hand, while in the rest of the body, sensitivity remains unchanged. With regard to temperature, according to Clark and Mehl (1971 apud Fontaine, 2010), there is a significant increase in the absolute and differential thresholds for the sensation of heat. The perception of cold is also characterized as a minimal increase in thresholds (Hensel, 1981 apud Fontaine, 2010).

At the same time, there is a relationship between psychological state and the ability to absorb stimuli. For example, if someone is alarmed, afraid or after an adrenaline rush, they tend to perceive stimuli in the environment better, especially those that are related to the stimulus that preceded the subject's psychological state (Myers, 2015). Therefore, psychological well-being is essential for the possibility of improving cognitive capacities related to perception and sensation, or even for preventing a decline in these capacities. It is therefore possible, by controlling behavioral contingencies, to shape the antecedents that infer an altered state in the limbic system and thus facilitate the evocation of memories, sensitivity to stimuli and the ability to perceive them (Myers, 2015; Skinner, 2006).

Cognitive development

Cognitive development includes changes in mental abilities such as memory, attention, language, learning, reasoning, thinking and creativity. Thus, memory is affected by age, leading to a significant deterioration in mnemonic capacities - mnemonic is a term used to describe processes related to the ability to store information, and there are great differences on an individual level. The most affected is episodic memory, which is a long-term memory responsible for retaining and retrieving information about specific events (Lemaire; Bherer, 2012).

Focusing on attention, all its dimensions seem to be affected, but no function disappears definitively, only becomes less effective. When it comes to language, it's important to consider that declining vision and hearing have an impact on linguistic abilities. Deteriorating physical health also limits mobility and therefore access to places, which can lead to a reduction in social interactions and cultural exchanges, among other things. In general, considering specific skills, such as recognition, syntactic processing and story recall, a decline associated with age is evident. In addition, a study by Hale and Myerson (1995 apud Stuart-Hamilton, 2002) found that older readers tend to be slower than younger readers.

A study by Argimon *et al.* (2004) was carried out with 121 elderly people. It revealed that around 33.9% of the participants pointed out that their greatest concern revolved around their health, with their perception of health varying from "bad" to "good". These results show that mental health can be affected by this concern and can influence cognitive impairment. Furthermore, this reduction in cognitive capacity is related to the neurological sphere, and can include the accumulation of toxic substances, loss of brain mass, a decrease in nerve cells and changes in neurotransmitters (Maiese, 2024).

It is known that the decline in cognitive capacity during the course of ageing is a stigma embedded in culture, especially when it comes to “forgetfulness”, an event that the vast majority of the elderly population says they experience. This stigma, together with ontogenetic factors, leads to negative thinking about the process of growing old, which is one of the possible causes of this individual’s compromised development, weakened by the idea of losing their cognitive functions (Souza *et al.*, 2009).

Briefly, the decrease in cognitive capacity in a healthy person is verified and occurs under the influence of the factors raised in the research by Argimon *et al.* (2004), in line with several variables linked to the neurological aspect such as the loss of brain mass that can lead to reduced brain functions, accumulation of toxic substances that accumulate throughout life, changes in neurotransmitters and a decrease in the number of nerve cells (Maiese, 2024).

Psychosocial development

According to Papalia, Olds and Feldman (2010), Bee and Boyd (2011) and Cortinaz *et al.* (2022), psychosocial development encompasses the alterations and changes that occur in personality, emotions and social relationships. In short, it involves the interaction of psychological and social aspects. In this sense, according to current psychologists, personality consists of relatively stable and lasting patterns of perception, thought, feeling and behavior, which give the individual a distinct identity. Personality is a comprehensive construct that encompasses thoughts, motivations, emotions, interests, attitudes, abilities and other elements (Davidoff, 2001).

It is worth mentioning Erik Erikson’s theory of psychosocial development, which is made up of eight stages. This theory is part of psychodynamics, in other words, it focuses on the importance of motives, emotions and other forces from within. Furthermore, it pro-

poses that development takes place according to the resolution of psychological conflicts, usually during childhood (Davidoff, 2001). In this sense, it focuses on Erikson’s last two psychosocial phases, generativity versus stagnation and ego integrity versus hopelessness, which address the development of the individual, respectively, when they are close to and in late adulthood (Papalia; Martorell, 2022).

In this vein, generativity versus stagnation permeates the emphasis on generativity, as it consists of the ability of adults to provide care and assistance to the next generation. However, this doesn’t just refer to parenthood, but also includes making an active contribution to society, i.e. ways of generating positive impacts. On the other hand, stagnation occurs in the absence of generativity. This leads to a feeling of purposelessness, resulting in an incessant search for something more, which can then result in physical and emotional problems (Erikson, 1976).

As for ego integrity versus hopelessness, according to Erikson (1976), it is possible to point out that ego integrity corresponds to an internal sense of security, such as a love for oneself and acceptance of one’s life cycle. Thus, it includes a loyalty to those ancient values responsible for shaping their life. The person who displays integrity has the ability to defend their individual lifestyle; the loss of this integrity leads to despair or the fear of death, permeating an income that time is running out to try new alternatives. Achieving integrity requires the development of ego qualities, with the help of cultural institutions that exude confidence.

In short, psychosocial development, as emphasized by the aforementioned authors, corresponds to changes in personality, emotions and social relationships. These changes in late adulthood are perceptible in the psychosocial stages listed by Erik Erikson, whose theory presents a broad view of human development, focusing on the individual’s psychosocial development.

MINDFULNESS

According to Silva (2019), Mindfulness is the awareness of present experiences with acceptance and non-judgment. It is a tool that provides immersion in the here-and-now moment, helping to overcome limits and experience the present. It therefore aims to integrate meditation and psychological science, since human beings are constantly disturbed by thoughts of the past and the future.

In this sense, at the end of the 19th century, William James, one of the pioneers of modern psychology, highlighted the importance of the ability to maintain voluntary attention as the foundation of judgment, character and willpower. In this way, neuroplasticity is emphasized, which encompasses the brain's ability to adapt and change in response to stimuli. This plasticity allows for the modification of neuronal connections and constitutes the neural basis of learning. These changes can be observed using modern techniques, although the interruption of training can lead to a rapid regression to the previous state. As a result, the brain is constantly changing throughout life, continually adapting to the stimuli it processes (Cosenza, 2021).

Furthermore, attention can be sustained relatively easily for a period, but inevitably there will be a distraction or interruption which will lead the individual into a state of rambling. Eventually, the person becomes aware that they are rambling and voluntarily returns to their original focus. This cycle of wandering and returning to attentional focus is repeated continuously during the practice of meditation. Thus, there is no complete emptying of the stream of consciousness; instead, there is an alternation between periods of voluntary attention and rambling, interspersed with moments of awareness of one's own rambling and the voluntary change of focus (Cosenza, 2021).

In this way, the repetition of this process over time - the alternation between states of attention and wandering, each dependent on specific structures and circuits - promotes the activation of neural plasticity. This results in a gradual improvement in the ability to maintain voluntary attention for longer periods, while periods of wandering tend to decrease. Therefore, practicing meditation requires a learning process that demands discipline and effort. In addition, the "default mode brain circuit", which is active during wandering, also changes with meditation practice (Cosenza, 2021).

Although attention is widely recognized for its role in perceiving the environment, its crucial role in regulating behavior is often overlooked. Attention is also responsible for monitoring ongoing activities, allowing distracting stimuli to be inhibited and discarded. Therefore, it prevents automatic behaviors from diverting the individual from behaviors that are considered important (Cosenza, 2021). Therefore, the practice of mindfulness integrated into daily life not only contributes to attention, but also provides transformations in the regulation of behavior and emotional well-being.

Therapeutic Storytelling

Therapeutic storytelling is used with the aim of engaging individuals with some kind of social, behavioral or emotional difficulty through metaphorical tales to help process difficult feelings and can also be considered a practice for reducing tension and anxiety by sharing narratives of affective memories (Silva, 2018; Waters, 2010). This is an ancient practice, present in the lives of all human beings, through which individuals are stimulated imaginatively, revealing a magical or totally concrete world that makes it possible to get in touch with one's emotions (Calheiros *et al.*, 2017).

The meaning of stories is closely linked to the search for meaning for the individual, which is not carried out through rationalization, but rather through the creation of daydreams, rearrangements and fantasies about elements of the story in response to elements of the unconscious (Bettelheim, 1997). It is a moment of social exchange that is both collective and individual, done consciously or unconsciously, resulting in a playful experience of being human and of compassion. As Buscaratto says (p.101, 2020): “it is an exercise in otherness: taking the place of the other, in a transformation of the state of mind of exchanging informal learning experiences in the lives of the listeners as well as the storyteller.”

This encourages the development of playfulness, an essential feature of human behavior, characterized by pleasure and spontaneity (Buscaratto, 2020). In this sense, stories deeply involve the individual, creating a climate of enthusiasm and access to emotional and cognitive dimensions, promoting self-knowledge, empathy and the reframing of experiences. Therapeutic storytelling, therefore, is a powerful tool for stimulating personal and collective transformations, reconnecting the individual with their emotions and memories in a light and creative way. As well as helping to tackle internal challenges, it strengthens social bonds and contributes to holistic well-being.

AROMATHERAPY

The field of Integrative and Complementary Practices (ICPs) covers a wide range of complex medical systems and therapeutic resources, including approaches that are not part of conventional medicine, such as homeopathy, acupuncture and herbal medicine. These practices are recognized by the World Health Organization (WHO) as components of traditional and complementary/alternative medicine. In Brazil, aromatherapy has gained prominence as an important integrative prac-

tice, being officially recognized and incorporated into the National Policy for Integrative and Complementary Practices (PNPIC) in 2018. This policy aims to include various integrative practices in the Unified Health System (SUS), promoting the safe and effective use of these therapies to improve the quality of life and well-being of the population. The implementation of aromatherapy in the SUS reflects the growing appreciation of ICPs in the country, recognizing the importance of holistic and complementary approaches in health care (Sousa *et al.*, 2021).

Aromatherapy is a therapeutic practice that uses essential oils extracted from plants to promote physical and emotional well-being. Aromatherapy works by inhaling or applying essential oils topically, which interact with the central nervous system, promoting therapeutic effects (Gnatta; Dornellas; Silva, 2011). This ancient technique is considered a complementary therapy and can be used integratively with conventional treatments or as a preventative method (Sousa *et al.*, 2021).

In this sense, several studies indicate the effectiveness of aromatherapy in relieving anxiety, stress and other conditions, proving to be a viable option due to its low cost and holistic approach to patient care. Furthermore, the therapeutic effects of essential oils vary according to the plant of origin. Thus, the growing interest in this practice reflects a search for more natural and holistic alternatives in health care (Gnatta; Dornellas; Silva, 2011).

In addition, the effects of aromatherapy on the health of older people, with a focus on its application for the relief of common symptoms in this age group, are highlighted in the 2021 study “Aromatherapy: Benefits for the health of older people”. Lavender and bergamot essential oils are emphasized for their calming and analgesic effects, and are widely used to reduce anxiety, improve sleep quality and relieve pain. Aromatherapy is therefore considered a viable

complementary intervention for treating problems such as dementia and insomnia in older people. The review of the studies analyzed suggests that, although the benefits are promising, there is a need for more research to establish standardized protocols and better understand the mechanisms of action of the essential oils used (Sousa *et al.*, 2021).

Aromas

The Harvard Medicine Magazine article “The Connections Between Smell, Memory, and Health” discusses the intrinsic relationship between smell, memory and health. It highlights the potential of smells to evoke intense and emotional memories, often more vivid than those triggered by other senses. This connection is due to the proximity between the olfactory bulb and the areas of the brain associated with memory and emotion, such as the hippocampus and the amygdala. Loss of smell, known as anosmia, is linked to an increased risk of depression, anxiety and can be an early indicator of neurodegenerative diseases such as Alzheimer’s and Parkinson’s (McDonough, 2023).

Walsh (2020) explores the interconnection between smell, emotion and memory, highlighting how smells can evoke intense memories and emotional reactions due to the proximity of the olfactory system to the limbic system in the brain, which regulates memory and emotion. Studies indicate that this connection is unique, as other sensory modalities do not have direct access to the same brain areas, which makes smell a powerful trigger for memories and feelings.

In this sense, this interconnection is exploited in marketing and advertising. Companies use scents to create positive associations with their products, influencing consumer behavior and improving the customer experience. Thus, aromatherapy and other olfactory interventions have been investigated as a

means of accessing traumatic memories and helping patients to process these experiences in a controlled manner, providing emotional relief. This demonstrates the therapeutic potential of smells in the treatment of psychological disorders (Walsh, 2020).

In addition, McDonough (2023) discusses an approach based on the ability of smells to trigger deep emotional memories. Controlled exposure to certain smells could theoretically help to reconfigure negative emotional responses linked to traumatic memories. This suggests that smell is not just a peripheral sense, but a crucial element in emotional and cognitive health, with promising therapeutic implications for psychological disorders.

From this, it is clear that smells can be used to improve cognitive performance. Certain scents have been associated with better focus and memory, and are used in work or study environments to boost productivity. It therefore illustrates how smell can be a powerful tool not only for evoking memories, but also for influencing behavior in practical and positive ways. Ongoing research may reveal new ways to improve quality of life through the conscious use of scents (Walsh, 2020).

Smells have a unique ability to evoke intense emotions due to the process of associative learning, where initially neutral smells acquire emotional meanings when linked to significant events (Bartoshuk, 1991 apud Gottfried, 2011; Engen, 1991 apud Gottfried, 2011; Herz, 2001 apud Gottfried, 2011). Studies show that the sense of smell can reactivate deep emotional memories, triggering cognitive, behavioral and physiological responses (Herz; Beland; Hellerstein, 2004 apud Gottfried, 2011). In addition, exposure to odorous molecules during pregnancy influences olfactory preferences in childhood and adulthood (Mennella; Beauchamp, 1991, 1993 apud Gottfried, 2011; Mennella; Garcia, 2000 apud Gottfried, 2011).

The perception of odors is also culturally

varied (Moncrieff, 1966 apud Gottfried, 2011; Cain; Johnson, 1978 apud Gottfried, 2011), highlighting how lived experiences shape emotional responses to odors. In this vein, laboratory studies confirm that odors can be perceived as pleasant or unpleasant based on learned emotional associations (Herz; Beland; Hellerstein, 2004 apud Gottfried, 2011). This demonstrates the complexity of the olfactory system and its connection to memory and emotion, explaining the significant impact that smells have on human behavior.

In addition, chronic stress is a risk factor for various mental disorders, and controlling stress levels is desirable. Thus, a partner's body odor can reduce discomfort in stressful situations, suggesting that odors associated with attachment figures have calming effects. Aromas of teas and essential oils, such as lavender, rose and bergamot, have also been studied for their effects on stress reduction, demonstrating an impact on psychophysiological and hormonal activity, such as a reduction in cortisol and an increase in the activity of immune cells (Masuo *et al.*, 2021).

Although the effect of scents on the stress response in the brain has not yet been widely documented, recent research has focused on the ability of certain scents to suppress stress. Traditionally, it has been recognized empirically that certain smells have calming effects, but scientific proof of these effects is still limited. To address this gap, studies have been carried out on experimental animals, using behavioral analyses and measurements of biochemical parameters, recently identified as potential stress markers in the brain and blood. The results of these studies seek to provide concrete evidence on the effectiveness of aromas in reducing brain stress, based on measurable data and observed behaviors (Granqvist *et al.*, 2020 apud Masuo *et al.*, 2021; Kigar *et al.*, 2014 apud Masuo *et al.*, 2021).

It is therefore clear that smell plays a central role in emotional and cognitive regulation, with significant implications for both mental health and general well-being. The ability of smells to evoke intense memories and influence emotional states suggests that aromatherapy and other olfactory interventions can be valuable tools for treating psychological disorders and improving quality of life. As science continues to explore the complex interactions between smell, memory and health, new therapeutic opportunities arise, enhancing the use of aromas as an effective resource for promoting well-being and mitigating the effects of stress and other emotional conditions.

METHODOLOGY

The intervention is characterized as qualitative and bibliographical because it includes a review of the theoretical foundations related to ageing - mainly cognitive - and highlights the proportions of a group dynamic focused on instigating neural stimuli and evoking memories. In this sense, the practice takes place in a home for the elderly located in the municipality of Brusque, in the state of Santa Catarina, which contains 24 institutionalized people. The practice is mediated by five students from the Centro Universitário de Brusque, from the Psychology course, under the guidance of the teacher in charge.

The activities carried out in the environment take place over two days: the first day focuses on getting to know the place - covering information such as the number of residents, the division of beds, the home's routine and the greatest demands for practical activities - and also on socializing with institutionalized elderly people. Materials for digital/written records of this data are needed. It is also worth mentioning that evidence of the greatest demand for activities was an essential item for choosing the practices to be carried out.

In this way, the methodology developed is closely related to the information collected on the first visit: the capacity is 38 beds, but only 24 of them are filled, 8 men and 16 women. Of these rooms, an elderly person's file is displayed in front of the door, which contains basic information about the person, such as intolerances, allergies and preferences. The data of 22 people is collected through these forms. This reveals sociodemographic data, such as age, length of institutionalization, origin, religion, marital status and number of children, which is reflected in the choice of stimuli. In addition, based on each institutional form, some of the hobbies, communication tendencies and other observations were tabulated.

Group dynamics, introduced by Kurt Lewin, studies the forces that shape the formation, development and decline of groups, as well as how interactions between members affect the authenticity and functionality of individuals. Groups, essential since ancient times, are structured on the basis of meaningful interactions, shared goals, defined roles and interdependence. Group norms and leadership styles, such as the democratic, autocratic and laissez-faire types, directly influence cohesion and performance, while the analysis of internal and external forces allows for the development of strategies to achieve collective goals. For a group to exist, there needs to be a meaningful relationship between two or more people, established through linked actions. In addition, for there to be norms in a group, interaction and information sharing must first be promoted (Ramalho, 2010).

A group dynamic is made up of three main stages: warm-up, experience and sharing, and can include a fourth stage, processing, depending on the aim of the intervention. The warm-up prepares the participants for the experience by introducing or aligning the theme, while the sharing brings meaning to what has been experienced. These stages are interde-

pendent and fundamental to achieving the overall objective of the dynamic, promoting reflection and connections between the members (Osorio, 2003).

The second day was divided into four parts: mindfulness (non-specific warm-up), questions and answers (specific warm-up), storytelling with stimuli (experience) and an exchange of comments prompted by the story (sharing). The following are used: chairs from the environment itself, objects to complement and stimuli linked to the story, such as roses, sand, leaves, stones, grass, sounds, musical instruments, umbrellas, shoe plugs and a fictitious tree. Written and digital media are used for recording, which is done by one of the mediators themselves.

The warm-up, divided into non-specific and specific, can be physical, mental or emotional. While the non-specific warm-up focuses on general preparation, the specific warm-up is directly aligned with the objective of the dynamic. This stage aims to align the body, thoughts and emotions with the present moment, creating an environment conducive to the experience. The experience, in turn, is the central moment of the dynamic, where participants experience the proposed theme or concept. Experiences can be real, symbolic or imaginary, allowing for practical, representative or hypothetical approaches, depending on the audience and objectives (Osorio, 2003).

In this sense, the mindfulness practice aims to direct the residents' attention to the present moment so that they can relax and be attentive to the experience to come. The practice will begin with three deep breaths together to relax. In the second warm-up, the aim is to retrieve participants' memories and experiences, based on simple questions from other participants. In order to organize the application, the members will be arranged in a circle in which the applicators will also participate. In this circle, one of the applicators will

start by asking a question - for example “what is your favorite color and why?”, the person to their left answers the question and asks another one to the next person. And so on until everyone has shared. It should be noted that if someone is reluctant to participate and prefers not to answer, they can just observe.

The proper guidance will be given with the aim of elucidating that it should be a simple question with a short answer, but one that is in line with each person’s reality. Initially, it will be agreed that each person will speak in turn and will not interfere with their colleagues’ answers. All sharing must be respected and welcomed, without judgment, as provided by Osorio (2003).

For the experience, we opted for a narrative based on the following criteria: a) a wealth of sensory descriptions, especially related to smells; b) stories that refer to past times or familiar places, according to reports and the forms collected by the trainees; c) narratives made up of everyday scenes, preferably happy ones. There may also be adjustments to the narratives found so that there is a unique composition for the target group.

The next step is to identify points in the narrative where stimuli can be added, such as scents, textures, objects mentioned, role-plays, music, etc. A sensory association was identified for each key point in the narrative. It is worth noting that during the visit to get to know the place, the information that elderly people do not have known allergies is highlighted, to ensure that the fragrances are pleasant and do not cause discomfort. The aim is to integrate a sensory approach to storytelling, enhancing the therapeutic benefits of the activity. The choice of scents and sensitivity to feedback from participants are crucial to the success of the intervention. Thus, in line with Osorio’s (2003) statements on group dynamics. Following the aforementioned steps, the narrative used is based on the short story “The

Shoe Tree” by Couto (2012 apud, Tossini, 2019), adapted by the authors to stimulate the evocation of memories and the use of sensory stimuli. The story involves the journey of a group of friends to the “Garden of the Senses”, a magical place where each participant chooses a representative shoe before starting the journey. During the journey, sensory elements such as aromas, sounds and textures will be introduced, creating an immersive environment that awakens personal memories and promotes the participants’ emotional connection with the narrative.

At the end of the journey, the group finds the “Shoe Tree”, where they discover the local tradition of sharing stories as a form of symbolic payment for the use of hanging shoes. Inspired by this practice, the participants leave their symbolic shoes on the tree and reflect on the importance of memories and shared stories for building bonds and human connections. The experience ends with a gathering in the center of the (symbolic) garden, where the exchange of experiences strengthens the bonds between the participants, stimulating the re-signification of their own stories.

Sharing, on the other hand, is essential to consolidate learning and reflections. At this stage, participants express their emotions, interpretations and insights, promoting uniqueness and security in the group. When necessary, the facilitator can stimulate interaction through targeted questions. Thus, each stage plays a specific and interconnected role, contributing to constructive and meaningful group experiences (Osorio, 2003). As a result, the comments made by the participants in the sharing will be transcribed in digital format, since the evaluation of the results of the practices will be confirmed by the participants’ statements, i.e. qualitative data. In this way, the information was verified in order to relate it to the objectives and thus verify the achievements.

DISCUSSION AND RESULTS

It is worth highlighting the importance of the activities developed, due to the beneficial nature of both the activities applied and the group dynamics. According to Mariano *et al.* (2020), stimulating cognitive and psychosocial aspects is extremely important in late adulthood. Thus, we opted for sensory stimulation, mindfulness practice, cognitive activities such as question and answer development and, from a social perspective, sharing. All of which are based on group dynamics techniques, given that their purpose is to create a safe and understanding space in which individuals can act by being themselves, thus working together effectively (Pasqualini; Martins; Euzébios Filho, 2021).

In this sense, the participation rate of institutionalized people was 12, i.e. 50% of the people who frequent the place. This number was influenced by their usual schedules and chores, or simply their desire not to take part, as some were sleeping, watching, visiting family or other favorite chores. However, the mediators, as well as the staff who were on site, invited them, always respecting their subjective interest.

With regard to the physical condition of the institutionalized residents, the age range varies between 60 and 99 years. They include independent, partially dependent and totally dependent individuals, who are organized into wards according to their degree of dependency. There are residents who are bedridden, some who use wheelchairs or walking sticks to get around and others who are able to move around unaided. It is estimated that two use wheelchairs, approximately four are bedridden and the rest have a greater degree of independence. In terms of pathologies, Alzheimer's, Parkinson's and dementia are the most prevalent in the institution, with around 89% of the residents having Alzheimer's, while approximately 20.83% have Parkinson's, 40%

of which is classified as severe. These characteristics influence the number of participants in the activities, since the physical limitations of some residents are taken into account, even though the practices are planned to include people with Alzheimer's and Parkinson's (Carmargos; Lehnen; Cortinaz, 2018).

Regarding the application, the initial warm-up fulfilled the objective of bringing the participants together, promoting interaction and creating affinities, such as liking the same songs. Despite the distractions of the environment and the anxiety of the participants, the activity generated a welcoming atmosphere, with personal questions that stimulated engagement (Osorio, 2003). Difficulties related to listening and understanding were overcome with repetition and support, allowing everyone to be included in the group, since in the field of health it is essential to emphasize the affective-expressive dimension, in other words, to ensure a relationship with care, understanding and listening (Prochet *et al.*, 2012). In this way, the group is characterized by being very interactive and enjoys sharing stories and experiences. Therefore, even before the space set aside for sharing at the end of all the experiences, some already provide feedback and even complement the dynamics.

The main experience, on the other hand, used sensory stimuli integrated into the narrative, awakening memories and remarkable personal stories, in line with Myers' (2015) and Skinner's (2006) statements. When he touched the sand, an elderly man remembered trips to the beach, while a lady associated the flowers with the beauty of her old garden. In addition, narrative objects, such as shoes, led participants to share significant stories from their lives, reinforcing their interest in the storyline and the dynamics of the activity. At the moment of sharing, the participants connected their choices in the experience to their life stories. Some preferred to share in a

more intimate tone with the facilitators, while others openly related their memories to the group (Osorio, 2003). The interaction was enriched with music and dance, providing greater integration, including family members present, and raising collective enthusiasm.

Considering the goal of social interaction, an initially more withdrawn participant was stimulated by physical and sensory interactions, which gradually led her to express herself and share personal stories, emphasizing the importance of following the stages of group dynamics listed by Osorio (2003). In addition, moments of closeness favored greater engagement, demonstrating the importance of strategies adapted to individual limitations, since individual conditions have an impact on the promotion of care (Prochet *et al.*, 2012).

The closing coincided with afternoon coffee and the reorganization of the space. The participants expressed their gratitude and invited the facilitators to return, showing the positive impact of the practice on the group. Furthermore, the group dynamics technique used provided a safe space for sharing, as explained by Pasqualini, Martins and Euzébio Filho (2021).

From this, it can be seen that the dynamics were permeated by exchanges and interactions between participants and mediators, thus resulting in positive aspects through all the statements of the members of the practice. It should be noted that all the instruments and objects used were essential and helped to stimulate the elderly, especially in the cognitive sphere, since attention and memory evocation were noticeable through aromatherapy, musical sounds and sensory stimuli.

FINAL CONSIDERATIONS

In view of the activities developed, the general objective can be taken up again: the promotion of emotional and cognitive well-being for elderly people through storytelling, permeated by stimuli and actions aimed at evoking past experiences and positive feelings. Thus, according to all the results shown and discussed on the basis of the literature, it is clear that this objective was achieved, since, as listed, during the activities and at the end, memories were evoked, as well as sharing and related feelings.

It's worth noting that during the course of the intervention, the experience was different from the usual. This led to the formulation that this type of interaction in retirement homes usually takes place in similar ways, involving games from their youth, such as bingo and dancing. Although it is valid for stimulating the elderly and a comfortable area for developing experiences, there is no opening up of opportunities for other types of differentiated activities. Thus, in-depth research was needed for the interventionists to arrive at the final result. This highlights the need for the same processes on the part of other professionals or volunteers who are interested in carrying out interventions with the elderly, the initiation through a creative and innovative perspective.

The difficulties encountered, such as voluntary participation, are also highlighted, as this can be influenced by various factors (schedules, chores, interests), limiting all residents from benefiting equally from the intervention. In addition, the various physical and cognitive conditions present required constant adaptations to ensure that all participants felt included and understood. This includes individualized attention, as some need more support than others. There are also environmental factors, since distractions can hinder engagement and concentration. Although the study showed positive results, these effects may not occur in the long term if only

one group dynamic is used. In addition to this perception, the limitations are related to the restriction of the sample, since the results do not include the perspective of all the residents. There is also the difficulty of measuring subjective aspects and the impossibility of analyzing long-term effects.

In this way, we can see the possibility of expanding the practice to new encounters with this same audience, given that the positive impact - socialization, well-being and the revival of memories - occurred throughout the practice. In this sense, new stories can be developed with the same aim, and the neurocognitive stimuli presented can be varied. From a long-term perspective, stimulation as a whole tends to improve cognitive performance, working as a form of prevention and health maintenance, but also as a form of

rehabilitation in terms of both physiological and psychological aspects. This information is exemplified by the possibility of strengthening communication between the group, working on sensitivity and aspects such as memory and motor coordination.

In this sense, it should be noted that this measure can be integrated into the routine of elderly people as a way of working on various aspects of their lives in an integral way, and that these practices can reflect not only on them but also on their interaction with their families during the visitation period, for example. This statement further expands the impact of the practices mentioned and highlights the importance of taking a holistic view of human beings and their history, since each being is unique and endowed with particularities that deserve to be heard, respected and shared.

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