Sensory Memory Workshop: An account of experience

Marinara de Alcantara, Emanuela Bezerra Torres Mattos, Marcia Maria Pires Camargo Novelli

* Universidade Federal de São Paulo – UNIFESP, Santos, SP, Brasil.

Researcher: Emanuela Bezerra Torres Mattos, Núcleo Interprofissional de Pesquisa e Atendimento no Envelhecimento, Departamento de Saúde Educação e Sociedade, Universidade Federal de São Paulo – UNIFESP, Santos, SP, Brasil.

Abstract: Introduction: Across the world, population aging can lead to the emergence of chronic degenerative diseases, among them, the major neurocognitive disorder (TNM) known as dementia. It’s a syndrome characterized by cognitive, perceptual and sensory losses that affect directly the individual’s occupational performance in their everyday activities. Objective: Offer group treatment with cognitive and sensory stimulus for elderly with dementia in mild and moderate phase. Method: There were realized 7 meetings every fortnight between the months of March and July 2014. Five elderly participated. The meetings were organized with activities that involved a central sensory function to be stimulated in addition to cognition and perception. At the end of each meeting, questions were asked to the seniors about the performed activities in order to understand their problems, needs and perceptions. All of their lines were noted to be qualitatively analyzed according to the Bardin content analysis. Results: From the analysis of the reports emerged three thematic categories: 1. The sharing of memories; 2. The exploration of new environments; and 3. The perception of the elderly and their caregivers on the participation in group for the cognitive and sensorial stimulation. Conclusion: We observed that the Sensory Memory Workshop is a possibility of intervention with dementia in elderly patients with mild/ moderate stage, as it allows gains in individual and social aspects.

Keywords: Dementia, Sensory Stimulation, Elderly.
1 Introduction

In the twentieth century, longevity came from the fast reduction of mortality in developed and developing countries, along with the high birth rate in the two decades after the World War II. Meanwhile, in the present day, we are faced with a scenario in which the number of people who die each year is less than the number of people who are born. With fertility rates rapidly dropping, the number of older adults will increase. While at the end of 2011, the world population had surpassed seven billion people, the forecast for 2100 is to increase to 10.9 billion. This demographic transition is in part because of the transformation in the profile of diseases that are the main causes of disability and mortality, but also to the technological and scientific advances providing advances in medicine and in the better living conditions of the older adults (CENTRO..., 2015).

In developing countries such as Brazil, people aged 60 or over are considered to be elderly people, according to the United Nations (ORGANIZAÇÃO..., 1982), corroborated by Law No 8842 of January 4, 1994 in its 2nd article of the National Policy of the Elderly Person that adopts this same age group (BRASIL, 1999), affirmed by the Statute of the Elderly Person (BRASIL, 2003) and more recently by the National Policy on the Health of the Elderly Person (BRASIL, 2006).

The aging process is a phenomenon that affects all human beings. It is characterized as a dynamic, progressive and irreversible process, linked to biological, psychic and social factors that vary from one individual to another (FECHINE; TROMPIERI, 2012). It is also characterized as multidirectional since gains (growth) and losses (declines) are recorded, so those who maximize gains and have minimized losses are candidates for active aging (GUIMARÃES, 2006). When damages and losses occur at a greater intensity leading to impairment of functional performance due to alterations in the noble functions of the Central Nervous System, such as, for example, cortical atrophies, vascular alterations, the pathological aging occurs. Neurodegenerative chronic diseases are among the main causes of this type of aging, with a higher prevalence of mild cognitive impairments (MCI) and dementias, currently classified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), respectively, as Light Neurocognitive Disorder and Major Neurocognitive Disorder (MND), especially the subtype Alzheimer’s disease (AD) (AMERICAN..., 2014). Studies in several parts of the world show that the prevalence of MND can vary from 0.3 to 1% in people between 60 and 64 years old increasing from 42 to 68% in individuals aged 95 years old or older. In Brazil, the prevalence of these disorders almost doubles every five years, after the individual exceeds 65 years old (NASRI, 2008). The prevalence is approximately 1.89% among people aged 65 and 69, increasing to 23.13% in the elderly people aged 80 or more (BURLÁ et al., 2013).

The individual with dementia may have progressive disturbance of multiple cognitive functions such as memory, attention, and learning, thought, orientation, comprehension, calculation, language and judgment (CORRÊA; SILVA, 2009). This may be related to the fact that these individuals have sensory deficits that can generate difficulties in the way the stimuli received from the environment are processed, while difficulties in sensory functioning limit the functioning of higher functions and decrease the capacity to respond cognitively (REYES; ROBAYO, 2009).

Sensory deficits and cognitive functions impairment are commonly followed and occasionally preceded by deterioration of emotional control, social behavior, or motivation. They also lead to the alteration of the individual’s occupational performance (CORRÊA; SILVA, 2009).

In addition to cognitive damage, there may also be a progressive loss of sensory processing in dementias (REYES; ROBAYO, 2009). Thus, the detection and early diagnosis of dementia is fundamental so, the individual can benefit from the pharmacological treatment associated to the non-pharmacological approach, aiming to delay the progression of symptoms that as the disease progresses can lead to a greater degree of dependence in their daily activities.

As dementia progresses, the need for care increases, largely provided by family members who assume additional responsibilities and who need guidance and support for each stage of dementia’s evolution, minimizing the overload and stress of such care. The focus of most intervention studies on occupational therapy is aimed at family caregivers of elderly people with dementia, with the aim of teaching the ways of compensating their relative’s cognitive decline, alleviation of overload, supervision related to difficulties in basic or instrumental activities of daily life, and management of behavioral changes (DONOVAN; CORCORAN, 2010; ARBESMAN; LIEBERMAN, 2011). Although there is a significant body of research evidence to support the practice of occupational therapy in dementia care, the vast majority focus on intervention with caregivers.
A study in the United Kingdom conducted focus groups with people with dementia and their caregivers aiming to explore new occupational therapy interventions. According to the research, people with dementia stated that groups were a good form of support, healthy activity and socialization, and enjoyed meeting people in similar circumstances (Hynes et al., 2016).

Thus, thinking about actions aimed at this people is extremely important, and occupational therapy in this process is a profession capable of favoring intervention programs that offer support not only to caregivers and/or family members, but also people with dementia.

According to Brunello (2002), the work with groups has been increasingly used in health services, and it is presented as a possible therapeutic intervention among elderly people with dementia. Moreover, Perez and Almeida (2010) point out that the group with the elderly public can contribute to the relief of loneliness, of the recognition as a singular individual, the sense of accomplishment and opportunity for expression. In the dynamics of “doing together” in the groups, it is up to the therapist to analyze the complex process that is created and to consider the dynamics that are installed in the mode of interaction between the participants of the group and the accomplishment of an activity (Brunello, 2002).

The group proposed by the Memory Workshop has the cognitive stimulation and sensorial memory as its central objective. For Yassuda (2006), this type of memory originates in the sense organs and corresponds to the initial record of the great information captured by our senses. This information can be visual, auditory, tactile, gustatory, olfactory and proprioceptive.

Therefore, including sensory stimuli in group cognitive interventions may be beneficial to these individuals, since the sensory organs are directly related to the way the individual is and is placed in the world. Thus, deficits in the sensory organs during the aging process can directly affect the quality of life of the elderly person (Papalia, 2006). Thus, the occupational therapist can use different types of sensory activities in the group approach, from the most varied resources that can stimulate the sensory organs and, consequently, the cognition.

Thus, a group occupational therapy intervention with elderly people suffering from major neurocognitive disorder is not restricted to a single objective, but a correlation of multiple factors that are mainly associated by cognition. Thus, this article aims to describe the experience of cognitive and sensory stimulation in a group of elderly people with cognitive impairment.

2 Method

The study is an experience report. According to Figueiredo (2004), it can uncover the subjective aspects of what the researcher is interested in studying.

The Workshop on Sensory Memory was held at the Federal University of São Paulo (UNIFESP) - Campus Baixada Santista, in the city of Santos, SP, Brazil. This work was approved in the Ethics Committee in Research with Human Beings of UNIFESP, with opinion nº 691427.

The group had five male participants, from 58 to 85 years old. Elderly patients were selected from the Extension Program called “Dementia Care Service” (SADe) from UNIFESP. To participate in the Workshop on Sensory Memory, participants should have the following inclusion criteria: have LND or MND (light/moderate) diagnosis; be in favorable cognitive, physical, motor and psychological conditions to be assisted outside the home environment; have not severe deficits in communication and understanding, and have signed the Free and Informed Consent Form, in the presence of an accompanying person.

The Workshop on Sensory Memory was developed from March to July 2014. The activities were planned by the extension agents every two weeks, taking turns with the meetings, on Mondays lasting 90 minutes. At the end of a semester, seven meetings were held.

As the proposal aimed to provide a Workshop on Sensory Memory, the activities planned for each meeting were based on the sensory organs: touch, smell, taste, and hearing, as well as cognitive stimulation. All proposed activities were elaborated by the extension workers with the supervision of an occupational therapist as the project coordinator.

At the end of each meeting, the elderly people had a listening space on the activities developed, from simple and objective questions to identify difficulties, needs, and perceptions. All meetings were recorded through reports and field diaries. In these diaries, the researcher made a complete description of the activity, recalling moments, rescuing the speeches, behaviors, and attitudes of the elderly person in each meeting. A qualitative analysis was carried out using the Bardin Content Analysis technique from the material collected, defined as a set of communication analysis techniques that aims to obtain, the content of messages through...
systematic procedures and objectives of describing, indicators that allow the inference of knowledge regarding the conditions of production/reception of these messages (BARDIN, 1977). Content analysis is used to go beyond the meanings and the simple reading of the real.

This analysis was carried out in three moments, which are:

I. Pre-analysis: first contact with the documents; organization of the material to be analyzed; floating content reading; formulation of hypotheses or guiding questions.

II. Exploitation of material: where raw data is transformed, classified and aggregated into categories.

III. Treatment of results: moment of relating the data obtained with the theoretical basis.

Three thematic categories emerged, and they are described in detail in the results:

1. The sharing of memories; 2. The exploration of new environments; and 3. The perception of the elderly person and their caregivers on the participation in a group of cognitive and sensorial stimulation.

The study was an experience report. According to Figueiredo (2004), it can uncover the subjective aspects of what the researcher is interested in studying. Consequently, this work enabled to discuss participants’ performance based on the information provided by them and to observe the relationships established in the group. To preserve the identity of the elderly participants and their caregivers, the initial E (elderly person) were assigned, followed by the order of the speech from 1 to 5 and the initial C (caregiver) followed by the numerical order from 1 to 3. Two caregivers chose not to collaborate.

3 Developed Activities

In all the meetings, a main activity was carried out followed by some open questions to the elderly person (“Did you like the activity today?”, “Why?”, “Did you feel any difficulty?”, “Which one?”, “What did you find most interesting?”).

3.2 Second meeting

The elderly people were invited to sit at a table for the proposed activity. Each of them received a handmade name tag with large and colorful letters that should be filled with personal information such as name, age, favorite color, favorite food among other information. When finishing the name tag, the presentation was proposed. This presentation was based on information previously completed as a facilitator’s verbal encouragement to add new information such as their choices, preferences, desires, and memories.

3.3 Third meeting

This meeting was started with activities of sensorial stimulation. The smell was the first organ to be stimulated. The proposed activity involved nine (9) types of food with strong and striking aromas, such as lemon, oregano, grated parmesan, orange, banana, vinegar, mint, fennel, and popcorn. All food was placed in disposable cups, with sulfite sheet lid and drilled so the aroma of the food could leave, without the elderly person recognizing them through the help of their vision.

Each elderly person had 5 minutes with each cup with food to recognize it, through smell, food, and name. Then, nine large, colored images of the types of food were organized so each participant could associate the smell with the image of the food recognized and named in the previous step.

3.4 Fourth meeting

This meeting stimulated the following sensory organs: touch, taste, and smell. A fruit salad activity was proposed. The activity had two stages: 1º - Remembrance of fruits commonly used in fruit salads and their recognition by using only touch and smell without the help of their vision. And 2º - The preparation of the fruit salad, which involved the choice of preferred fruits; washing, peeling and cutting fruit; put the salad in the glass, select the cutlery (fork or spoon), choose the supplement.

In the first stage, each older adult told the group about the fruits of their choice for the fruit salad, as well as possible supplements they would like to add, such as condensed milk, sugar, and honey. After recalling and naming the fruits and complements exposed, each one spoke about their preferences. All older adults were encouraged to recall characteristics of each fruit, such as sweet, sour, citrus and acid.
In the second stage, a moment of discussion was proposed about the stages of this activity for later preparation of the fruit salad.

3.5 Fifth meeting

The main sensory organ stimulated was the hearing, from videos containing sounds of varied themes, such as the Brazilian national team, orchestra, festive dates, songs of times and sounds of animals. These themes were chosen from the preferences identified in the first meeting.

In the first phase of the activity, everyone listened to the audios one by one for three minutes. Recognized sounds could be noted on a previously distributed paper sheet. Then, besides the audios, the video media was available as a way to stimulate recall from one more sensory input that, in this case, was the vision.

3.6 Sixth meeting

In this penultimate meeting, the elderly and their caregivers participated with the purpose of enabling a conversation circle about the experience in the Workshop on Sensory Memory. Some questions were addressed to caregivers and others to the older adult to identify the perception about the experience, the contribution of the activities proposed to maintain independence and autonomy in daily activities.

3.7 Seventh meeting

The Workshop of Memory ended with a thematic party of the month of June called “Festa Junina”, for fraternization and closing of the cycle. At that moment, the older adults and their caregivers/family members participated, as well as members of the Extension Service for Dementia Care (SADe).

4 Results and Discussion

The population of this study was 5 people between 58 and 85 years old (mean age 73 years old), male (100%), two with technical education, one with secondary education, one with higher education and one literate. The fact that the group had different levels of education did not interfere in the participation of the workshop since the proposed activities did not consider this aspect so it did not interfere in an expressway way the participation.

From the content analysis, three thematic categories emerged: 1. The sharing of memories; 2. The exploration of new environments; and 3. The perception of the elderly person and their caregivers on the participation in a group of cognitive and sensorial stimulation.

4.1 The sharing of memories

The meetings allowed the older adults to share their experiences, the rescue of their life stories, their tastes, customs, and promote the listening of the other. They also enabled the creation of links, improvement of the resolution capacity and coping with the problems coming from the aging process (ARAÚJO et al., 2005).

An exchange among the elderly people was observed since the first meeting. The first meeting enabled the recollection of significant memories, demands, preferences, needs and personal aptitudes.

E1, 78 years old, when filling up the name tag he mentioned not remembering a favorite food, reporting that this type of forgetfulness was frequent in his daily life. E2, 75, referred to his favorite color as “blonde” bringing up a preference for blond women, emphasizing that his wife was blonde. E3, 58 years old, did not remember his age, and he needed to verify his identification document. E4, 85 years old, made the gesture of a movement of the wheel of a car as his favorite leisure, even if he does not drive anymore by intervention of the family. E5, 74, sang the refrain of Santos’ anthem and remembered when he went to Vila Belmiro stadium to cheer for his loved team.

This rapprochement among the participants through the sharing throughout the workshop generated a movement of awareness and interest for the other. With each story, facial expressions of curiosity and reflection were observed. Questions were asked between them and the listening space was created. An example was when E1 when listening to the National Anthem in one of the activities of auditory stimulation, began to sing it and for a few moments, his gaze seemed far away as if he were remembering some remarkable facts. He explained the fact by referring to all his dedication to the military career and that the song was a song that was routinely present throughout his life.

In the same way, E3 reported ease with some aromas in olfactory stimulation activity, recalling the time when he lived in Ceará and worked in bars and restaurants, making several associations with the smells. He said:
Lemon is to make caipirinha (E3).
Grated cheese is very good in pasta (E3).

These shares triggered conversations between the group strengthening the dialogue between them.

Transmitting a memory and making it live, an identity does not consist in just bequeathing something, but a way of being in the world. The transmission of knowledge and the act of sharing memories are constituents of the identity of the individual (CANDAU, 2011, p. 59).

During the process of the workshop, especially in the act of sharing, some older adults expressed their perceptions regarding the process they were experiencing.

It is good to talk about these things, we see that it’s not just us who have forgotten (E5, 74 years old).

I had never participated in anything like this, good to be able to learn new things with everyone here (E4, 85 years old).

The reports reinforce the importance of creating and strengthening social networks. Throughout the aging process, especially in pathological aging, the older adult tend to have a significant reduction in social participation, as they experience some losses that lead them to a decrease in the quality of active links and have less energy to invest in the creation and maintenance of links (PÉREZ; ALMEIDA, 2010). Carneiro and Falcone (2004) conclude that the elderly population has difficulties in social contact due to diminished sensorial capacities and reduced readiness for answers.

The possibility to be part of a group can redeem the importance of being with the other, sharing the experiences and sharing the difficulties. They can add the sense of being productive by simply being accepted, talking about similar problems, developing similar capacities, looking at each other, as human beings who have desires and memories that need to be stimulated (MATTOS et al., 2012).

In this way, the workshop became the scenario where these aspects were intertwined, having the elderly people as actors and the sharing of memory as the guide of this process.

4.2 The exploration of new spaces

The Workshop on Sensory Memory allowed the older adults to know a new physical and social space. During the months of the workshop, the university became a space in which the elderly person felt as belonging of a place felt as part of their daily life.

This is what this older man expresses in this speech:

Coming here on Monday is very good, I feel good, it’s good for me (E2, 75 years old).

Getting out of the home environment and going to an unknown place is a complex process for the elderly person with cognitive impairment. This may involve the help of caregivers and/or family members with availability and understanding of this activity as significant for greater autonomy of this elderly person. All workshop participants relied on a caregiver to take them because of the cognitive disorder that affected the performance of their daily activities.

In the light to moderate phase of the disease, the older adult have a significant decrease in the performance of instrumental activities of daily living such as the abilities to manage the environment in which they live, including preparing meals, doing household chores, washing clothes, handling money, among others (BOTTINO et al., 2002).

Moving to another space and participating in the proposed meetings to allow the experience of this stimulation process is extremely important since cognitive and sensorial stimulation in the light phase of the disease can delay its symptoms (SMITH, 1999).

The movement and exploration in another environment could be observed from the time of the arrival of the elderly person to the institution until leaving it. Saying good afternoon for security at the gate, arriving early to talk to the janitor, reading the announcements and texts on the bulletin board of the University, talking to students in the hall, and belonging to the group formed in the workshop were part of this exploration process.

In the assumption that human beings are generators of meanings and their world is constituted by the interchange with people through language, it is understood how the discourse arising from dialogical exchanges emerge in the common space among people (GRANDESSO, 2000).

Thus, the workshop went through this feeling of bond and attachment. Perhaps this is because the elderly people were placed in an active role throughout the process, in a place where they could expose their ideas, opinions, and perceptions to what they were living. In all meetings and activities, the older adults participated from the time of the organization of the workshop space such as arranging...
the chairs, table, and whiteboard when necessary, until participation in the activity.

As the following report:

Participating in these things that you do with us is very good. I spend a lot of time in my house doing nothing, my wife does everything. Before I go out a lot, I went to the gym, but now I do not go out a lot. Coming here to the college is very good (E1, 78 years old).

In this perspective, the group shows as a means to promote the feeling of belonging and possibility of bonding, since many of the older adults do not carry out any economic or social activity, and the participation and exploration in other environments outside their home is significant in this process (MATTOS et al., 2012).

4.3 The perception of the elderly and their caregivers on the participation in group for the cognitive and sensorial stimulation

During the meetings, the perception of the elderly people and their caregivers about the proposed activities was observed, as well as their importance in the process they were going through.

At the third meeting, E2, 75 years old, needed a facilitator mediation to identify the smells. For the recognition of the popcorn, while he smelled the aroma, the mediators were provided such as: “This food is consumed by many people when they are watching movies/Some people prefer sweet, others prefer salty.” This strategy benefited him in the activity and aroused some speeches in the other elderly:

I always forget a lot of things and when someone in my family gives me tips, it gets easier. I saw that you did it to him, and it helped too (E5, 74 years old).

It happens to me too, I want to remember something and it does not come on time, but if someone gives a helping hand, I remember it. These things that you do with us help very, very much (E1, 78 years old).

For Lindolpho, Sá and Cruz (2010), cognitive stimulation in the elderly people with dementia in the light phase is an important contribution to the maintenance of cognitive and sensorial functions for a longer time. These authors report that the older adult with LND and MND who participated in the workshops of the study maintained their initial pictures stabilized, that is, they preserved their capacity to perform daily activities without declining or worsening and maintained their functionality, ratifying the importance of stimulation with this population.

The path that the Workshop on Sensory Memory went through, bringing meaningful activities that permeated the everyday life of the older adults enabled the participants to be sensitive to reflect on the process they lived through, making an interface between what happened in the workshop with the life that would continue with the end of the meetings.

The good thing is that I will always remember from here when I eat fruit salad, and I’ll be stirring my memory. I’ll start paying more attention to the colors, the flavors. You never know when you lose your memory and how you do not lose it. Here we learn a little of these things and how to handle them when it happens... It makes us put the brain to work (E4, 85 years old).

Thus, there is diversity of meanings from the dimension of health, and this can be perceived as the capacity to perform some activity, that makes them independent and autonomous, despite limitations (MATTOS et al., 2012).

The meaning of the speeches brought by the elderly people during the meetings was similar to the report that their caregivers brought in the penultimate meeting of the group, confirming how intense and important it was for both of them to participate in the workshop.

He arrived talking, telling me everything. After he had an activity that you made a fruit salad, every time we go to eat, he reminds it (C1, wife).

With your programming here, he certainly has improved, I have no doubt about that. Now he goes to the supermarket, he is more organized, more attentive to things, his doctor even confirmed that this type of activity helps him a lot (C2, wife).

During the penultimate meeting “conversation circle”, another very significant aspect was the concern that the caregivers felt about the end of the workshop, since, according to them, the city of Santos does not offer activities with this proposal for this population.

This aspect is relevant since the population aged 60 years old or more in the Baixada Santista grew 44.84% in the last ten years, with only approximately 80,353 older adults in the city of Santos (INSTITUTO..., 2010).
In this way, in addition to the intervention through the activities, the group allowed the older adults, their caregivers and the facilitator to reflect on the equipment that offer some kind of stimulation for this population and this aspect should be further investigated since with the aging population, MND pictures tend to increase together.

5 Final Considerations

The Workshop on Sensory Memory is a possibility for intervention in the older adults with LND and MND (light/moderate) since it allows gains in the individual and social aspects important in their daily life.

It is a form of intervention that had a significant power in the individuals involved, emerging memories that constitute the identity of the participant, being able to share with others their memories and enable the exchange of experience in the group. It favored the exploration of a new environment in which the elderly people could know a new space and new individuals, which brought a sense of belonging and autonomy.

It was a rich space of cognitive and sensorial stimulation that transcended the walls of the university, monitoring the older adults in their activities outside, reflecting on their daily activities and their biological, psychological and social dimensions.

Thus, this experience report shows that many older people in the dialogues, in the rapprochement with each other by sharing common difficulties, in the possibilities of overcoming and in learning something new, become active individuals in this health process and disease they are passing through.

It is necessary to intensify studies regarding the possibilities of intervention in this perspective since there are few findings in the literature about the group intervention with the proposal of cognitive and sensorial stimulation.

References


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Author’s Contributions
Marinara de Alcantara – Responsible for design, collecting and analyzing data and writing of the paper. Emanuela Bezerra Torres Mattos – Responsible for coordinating the study, collecting and analyzing the data, writing of the paper. Marcia Maria Pires Camargo Novelli – Responsible for data collection and analysis, writing of the paper. All authors approved the final version of the text.

Notes
1 The partial results of this work were presented: - in poster format, at the VIII Brazilian Congress of Alzheimer’s.