



DESAFÍOS Y PERSPECTIVAS ACTUALES DE LA PSICOLOGÍA EN EL MUNDO ADULTO Y ENVEJECIMIENTO

**QUALITY OF LIFE IN INSTITUTIONALIZED ELDERLY PEOPLE WITH MODERATE-SEVERE DEMENTIA. CONTRIBUTIONS FROM MUSIC THERAPY**

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**ABSTRACT**

Different studies show the benefits of music therapy on the Quality of Life of people with dementia, especially on the maintenance of preserved skills, expression, and socialization. The objectives of this presentation are: (1) To present empirical data on the effects of music therapy programs on the quality of life of elderly people with moderate-severe dementia, who live in nursing homes; and (2) To identify and analyze the changes in affect that may take place during music therapy sessions. The design used was quasi-experimental pretest/posttest. The sample included 10 people with moderate-severe dementia. The scale GENCAT on quality of life (Verdugo, 2008) was administered at two different times: At sessions 1 and 12; and sessions 1, 6, and 12 were recorded for "post-hoc" analysis. Data were analyzed with Windows software (version 17) and SCRIBE 4.1, depending on the objectives. Results show no changes in the overall quality of life, but positive changes in the emotional well-being and personal development subscales. Also video observations show positive changes in affect after the music therapy program.

**KEY WORDS:** Quality of life, dementia, older people, music therapy, psychogerontology



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### INTRODUCTION

The aging of society has led to the fact that dementias are one of the main diseases affecting public health. The most common one is Alzheimer's disease, which has become one of the main economic and health problems of today's society. In Spain, there are 100,000 new cases every year. If we take into consideration the progressive aging of the population, and the increase in number of people older than 80, it is not difficult to guess that the number of diagnosed people will double in 2020, and treble in 2050 (Fundación Alzheimer España, 2009).

Alzheimer's disease is a neurodegenerative illness that shows through cognitive deterioration and behavioral problems. It is characterized by a progressive memory loss along with impairment in other mental skills such as language. Although in recent years more aspects of the disease have been known, still its causes and efficient treatment remain uncertain. However, the different studies show that being able to recognize its manifestations and beginning a treatment as soon as possible permits to slow down the symptoms and to guarantee a better quality of life to the patient.

Medication is important to treat Alzheimer's disease in particular, and dementias in general, but it is not enough. It is also important to count on intervention programs with the objective to preserve the patient's cognitive functioning and self-esteem (Fundación Alzheimer España, 2009).

In this project, we are going to study the contributions of music therapy programs to the quality of life of elderly people with moderate-severe dementia. This approach is inspired by the results of a previous study on the contribution of music to the quality of life of healthy older adults (Solé, Mercadal, Gallego & Riera, 2010), which indicate that music provides improvements clearly perceived by the own participants.

We take into consideration studies that show the benefits of music therapy for the quality of life of people with dementia, especially in the maintenance of preserved skills, expression, and socialization (Mercadal-Brotons & Martí, 2008); in the improvement of quality of life (Davis, 2000; Brotons, 2000); and in the improvement of symptoms of anxiety, depression, irritability, and social isolation (O'Connor, Ames Gardner, & King, 2009).

Music therapy programs, through activities such as singing, playing musical instruments, dance/movement, listening to music, composition/improvisation, musical games, etc., intend to stimulate the different functional areas: Physical, cognitive, social, and emotional.

At the physical level, music therapy has shown positive results to stimulate movement and gait of patients in advanced phases of dementia (Cevasco & Grant, 2003; Clair & O'Kanaki, 2006).

At the cognitive level, music and music therapy have been successfully used to work on cognitive functions such as language (Brotons & Koger, 2000), short-term memory (Prickett & Moore, 1991), long-term memory (Massimi, Berry, Browne, Smyth, Watson, & Baecker, 2008), and attention (Gregory, 2002).

At the social level, music and music therapy have been observed to help to promote higher social interactions, at the nonverbal and verbal levels, during and after the intervention (Olderog-Millard & Smith, 1989; Pollack & Namazi, 1992; Sambandham & Schirm, 1995) and to encourage participation and communication initiatives.

The model of Quality of Life adopted for this study is the one developed by Verdugo, Arias, Gómez, Shalock (2008). It is a multidimensional concept that includes the same dimensions for all people, and it is influenced by environmental and personal factors, and their interaction. It is improved through self-determination, resources, inclusion, and objectives in life. The GENCAT scale is formed by 8 dimensions, which together make up the concept of quality of life and represent the person's well-being (Verdugo, Arias, Gómez, Shalock, 2008). The dimensions studied are: (a) Emotional well-being, which includes feeling relaxed, secure, not feeling anxious; (b) Interpersonal relations, that is, to relate to different people; (c) Material well-being, which includes having enough



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money, a home and decent work; (d) Personal development, which includes acquiring new knowledge and self-fulfillment; (e) Physical well-being, which has to do with having good health; (f) Self-determination, which has to do with having the opportunity to make decisions and choose those things that one wants; (g) Social inclusion, which involves feeling a member of society, feeling integrated and feeling support from other people; and (h) Rights, which includes being considered equal to other people, being treated similarly, and feeling respected in terms of one's opinions, desires, intimacy, and rights. The scale includes a total of 69 items scored in a 4-point Likert scale. The range of the quality of life index in this scale is 52-138. The professional caregiver in closest contact with the patient was the one to answer the questionnaire on the patient's quality of life. The professional caregivers that filled out the scale received a training session by the psychologist of the institution to ensure that the forms were properly answered.

### METHOD

*The objectives* of this study were the following:

To evaluate the effect of music therapy on the quality of life of elderly people with moderate-severe dementia, living in a nursing home.

To identify and analyze the changes in affect that may take place during music therapy sessions.

#### *Subjects*

The sample included a total of 10 people, 9 women and 1 man. Their age range was 76-91 years ( $M = 86.5$ ,  $SD = 6$ ). They were institutionalized, and had been in the nursing home for an average of 36.9 months (approximately 3 years). Seven of the participants had primary studies, 2 secondary studies, and 1 university-level studies. Nine of the subjects had a high level of emotional support (defined as regular and continued visits by family members), and one had low support.

Subjects' diagnosis were as follows: 5 with moderate-severe cognitive deterioration, but without a specific medical diagnosis, 2 with Alzheimer-type dementia, 1 with Multi-infarct dementia, 1 with mixed dementia, and 1 with Normal Pressure Hydrocephalus. The level of cognitive deterioration was assessed with the Pfeiffer scale (Pfeiffer, 1975) and MEC (*Mini Examen Cognoscitivo*, Lobo et al., 1978), with the range of scores for this sample being 6-10 ( $M = 7.9$ ,  $SD = 1.3$ ) and 6-18 ( $M = 14.3$ ,  $SD = 3.49$ ) respectively, which corresponds to the moderate-severe phase of dementia.

#### *Procedure*

A repeated measure design was used in this study, using the subjects as their own control. The subjects were not randomly selected since the groups were predetermined by the organization of the institution, thus being distributed according to their degree of cognitive level.

#### *Data Collection*

In order to collect data, the following measurement instruments were used:

Standardized scale GENCAT for Quality of Life (2008): This is the most recent scale validated by the *Institut Català d'Assistència i Serveis Socials, Generalitat de Catalunya*, with different populations, including elderly people. It was administered twice: At the beginning (session 1) and at the end of the music therapy program (session 12).

Video recordings (sessions 1, 6, and 12) for "post-hoc" analysis of the level of participation and the participants' affect during music therapy sessions. The software SCRIBE 4.1 was used to analyze data. This software is a data analysis program based on the categorization of observations. The following observation areas were defined:

1. Verbalizations
2. Physical contact
3. Visual contact (looks)
4. Active participation in music activities



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### 5. Emotions/facial and body expressions

To analyze affect, the frequency (number of times) and duration (in minutes and seconds) of each category were obtained for each session (1, 6, and 12).

#### *Music therapy sessions*

Subjects participated in a total of 12 music therapy sessions.

The participants in this study were members of three different groups, which also included patients with mild or unspecified cognitive impairment. The groups included 5-9 people, and the duration of the sessions ranged from 45-60 minutes. Sessions took place weekly and always in the morning.

The general objectives of the music therapy program were aimed at stimulating cognitive functions such as attention, memory, language, and executive functions. The objectives also addressed the social-interactive area and some motor skills by playing musical instruments. Music activities included singing, listening to music, playing musical instruments, composition/improvisation, and movement to music. Each session followed the same structure: Opening activity, main activity, and closing activity.

## RESULTS

### *Quality of Life*

Despite the small sample, a descriptive analysis and a *Paired-Samples T-test* were conducted to assess quality of life at two different times (Beginning-T1 / End-T2). According to the results, the index of quality of life is higher in T1 (M = 91.2; SD = 8.47) than in T2 (M = 86.6; SD = 5.16), although, when means are compared, the difference is not statistically significant ( $t = 1.78$ ;  $p = 0.109$ ).

It is important to state that the GENCAT scale includes dimensions that are not directly addressed in music therapy (material well-being, self-determination, social inclusion, rights, and physical well-being). However, there are others that are directly related to the therapeutic objectives: Emotional well-being, interpersonal relations, and personal development. Thus, these last three dimensions have been analyzed in more detail, and the results are as follows: Six of the 10 patients increase scores, from session 1 to 12, in the emotional well-being subscale. There are no changes for 2 of the subjects, and for one, scores decrease.

With regard to the interpersonal relations subscales, no changes in scores are observed in 3 subjects from session 1 to 12. In the other 7 subjects, there is a decrease in scores.

An explanation can be that, as the dementia progresses, spontaneity and interactions with other people decrease, and there is a tendency to respond more to direct prompts.

In the scores of the subscale on personal development, there is an increase in scores from session 1 to 12 in 5 of the 10 subjects. There is no variation in 4 subjects, and there is a decrease in scores in 1 subject.

It is important to remember that the GENCAT scale is filled out by the professional caregivers, who have indicated, for 5 of the 10 subjects, their good disposition and enthusiasm about participating in the music therapy sessions.

#### *Participation and affect*

This section includes the results of the music therapy observations. With regard to the observed categories, the following results are observed:

#### *Verbalizations*

There is an increase in the area of verbalizations, specifically in 4 categories: Negative (expressing displeasure) spontaneous verbalizations towards the music therapist; negative spontaneous verbalizations towards the other participants; positive response to the music therapist's questions and



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requirements; and positive response to the other participants' questions and requirements

Although there is a slight increase in negative spontaneous verbalizations towards the music therapist and peers, the increase is more substantial in the categories of positive answers to the therapist and peers.

### *Physical Contact*

No instance of spontaneous physical contact with the music therapist or their peers has been observed.

### *Visual Contact*

A progressive increase, over time, has been observed in the visual contact towards the music therapist and peers, the looks towards the music therapist being more significant.

### *Emotions*

A slight increase has been observed in the category of relaxation, from 0 in session 1, to 1 in session 6, and to 3 in session 12. However, throughout the music therapy intervention, there is a clear increase in agitation, although it is not progressive.

## DISCUSSION

There is scarce research on the applications of music therapy with people with moderate-severe dementia, and even less on the effects of this intervention on their quality of life. Continuous work with people with these characteristics is not always easy since, as the disease progresses, there are usually other medical problems added to the dementia and this results in an irregular attendance to therapy.

The results of this study show that the Quality of Life index is maintained throughout the intervention period. It is interesting that the scale includes three parameters that are very directly addressed from music therapy: Emotional well-being, interpersonal relations, and personal development, which will be commented on below.

From the results, it can be observed that in the emotional well-being and personal development subscales there are positive changes. However, this is not the case for the interpersonal relations subscale, although the dimension is also addressed in music therapy. An explanation can be that in the moderate-severe phases of dementia, people are characterized by a decrease in spontaneous interactions and an increase in passivity. They tend to respond when they are prompted (through questions or specific demands) by other people, either professionals or peers. This is a variable to consider in future studies, especially with people in less advanced phases of the disease.

With regard to the category of emotions, an increase in relaxation throughout the intervention was observed, although the typical agitation of the more advanced phases seems to predominate. It would be interesting to be able to study if and how music therapy can contribute to the maintenance of relaxation.

For future studies in the area of dementias and quality of life, it is essential to have more sensitive instruments for this population, since the construct that we have based this study on (Schalok & Verdugo, 2002/2003) does not adjust to the reality of these patients. In fact, after analyzing all the results and talking to the different professionals who have been involved in the different aspects of this project, the following question has arisen: What is quality of life for these patients?

Finally, it is important to emphasize that this study has been conducted with a very small sample, and therefore these results have to be interpreted with caution. But they provide a starting point for other future studies with this population.

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