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The Influence of Music with Children at Risk in a Hospital Context: Music Therapy Program at the Hospital La Paz from Madrid (Spain)

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Abstract

Aim: the rate of postdural puncture headache (PDPH) was compared after caesarean section with spinal anesthesia using the 25 gauge spinal needle with the 27 gauge.

Methods: present study is a randomized clinical trial and 220 full term women entered for caesarean section. We entered full term women randomly for spinal anesthesia with the 25 gauge (group A) and 27 gauge (group B) Quincke spinal needles. In 3 postoperative days, we fallowed and compared Participants in 2 groups for the rate and severity of PDPH. PDPH was defined occipital or frontal headache that made hard the position on sitting or standing.

Results: Data of 220 patients were analyzed. The rate of PDPH was significantly higher in women in group A compared to group B at first (P=0.015), second (P=0.037) and third (P=0.005) follow up days. The severity of the PDPH was not significantly different between 2 groups in three follow up days. The rate of success in spinal anesthesia achievement was not significantly different between 2 groups.

Conclusion: The results of present study recommended that the size of spinal needle can effect on the rate of PDPH after caesarean section.

Since May 2002, a Music Therapy Programme has been going on at the Children's Hospital La Paz in Madrid. The idea of including music therapy in hospitals is nothing new. There are different programmes of music therapy in hospitals in several European countries such as Germany, UK, Denmark, France, etc., as well as in the United States, supported by university degree programmes where specific training in music therapy is provided.

In Spain there has been a fast development in this area helped by a number of training programmes in Music Therapy, like the Master in Advanced Music Therapy offered at Autonoma University in Madrid, as well as those offered by other colleges and universities catering to professionals in the fields of health, music, psychology, and education, among others. The reception of this Music Therapy Programme by the hospital community at the Children's Hospital La Paz has been fantastic from the very first day. The host of the music therapy program at Children's hospital was fantastic from day one.

The therapeutic use of music as an influence on the physical, psychological and/or emotional states of patients before, during or after medical treatment [1-3], as well as the non-verbal nature of music makes it a universal means of communication.

Within a hospital context, the need for communication is exceedingly important, since there are a number of potential difficulties added to the disease itself, such as loss of autonomy, physical pain, not being able to verbalize feelings, strong emotions and many other physical or psychic causes. And it is here where the music therapist acts as a carrier of information about the patient's condition from another, different perspective.

The Music Therapy Programme, framed in the broader Humanization Plan at the hospital, aims to either stimulate or relax the admitted patients to facilitate their needs for communication, learning, mobility and expression while at the same time tries to streamline their full period at the hospital.

Through different techniques, the music therapist makes his/her intervention (with musical instruments and voice) by taking into account the general condition of the patient and the specific treatment previously established by the medical and nursing teams. Sometimes the goal is to help the child relax before or during a cure (to mitigate pain) or alternatively, to stimulate the child (by being the active focus of attention or distraction). At other times the objective may be to mask "unpleasant" sounds coming out of the Pediatric Intensive Care Units or the Neonatal Intensive Care Units.

Music therapy also helps to obtain information about the patient's physical and emotional state, especially when it comes to patients who have difficulty verbalizing how they find themselves. The music therapy sessions begin with the musical intervention with the patient, their relatives or sometimes with other professionals concerning treatments that may be being carried out at that particular moment (cures, chemotherapy, etc.), by using musical instruments such as: Keyboard, guitar, transverse flute and the voice, in addition to those that are offered to be played by the patients themselves, such as small percussion instruments which sometimes are used in their musical improvisations.

The most enriching aspect of these sessions is the musical interaction that takes place between the music therapist and the patient, or group of patients when it comes to group sessions. Music is a great facilitator of emotional expression; in addition, music becomes an active agent capable of drastically changing the environment of the different units where the music therapy sessions take place. And this has direct consequences in biology. For according to Wallon: "Biology is socially oriented". Different studies carried out in Spanish hospitals clearly show the benefits of this therapy [4,5].

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Currently the units where Music Therapy sessions are held at "La Paz University Hospital", in Madrid, are the following: Children's Hospital "La Paz": Pediatric Intensive Care Unit; Unit of neonatology; Surgery 1; Pediatrics 1; Maternity; Pediatric Oncology; Pediatric transplants; Adult Hospital "La Paz" Pain unit; Palliative care unit.

This type of therapy, being complementary to the care that the patient receives in the hospital at large, requires its own methodology and an interdisciplinary monitoring and evaluation of the therapeutic process that is being carried out with the patient.

It should be noted that it is precisely this form of multidisciplinary action that has allowed us music therapists and health professionals to work together for more than a decade and that this work has the recognition of all the professionals involved as effective and adequate, as shown by my research [4,5] and other research programmes that are under way, such as the two doctoral theses listed below:

Early communication patterns between the adult caregiver and her (late premature) baby, in a situation mediated by sound objects"; "The influence of live music on neurobiochemical processes of early development". Or other research projects worth being highlighted such as: "Evaluation of the effect of music therapy on mood in hospitalized children aged 3 to 6 years" currently being conducted at the Pediatric Intensive Care and the Pediatrics 1 units of La Paz Hospital.

Description of the Intervention in Pediatrics

In music therapy sessions patients are by the medical and nursing team of each unit involved. A registration form is presented to the staff with questions about the desirable objectives of music therapy. The medical and nursing professionals point out what those goals should be. For example: Relaxation; Activation; Distraction to a cure; Mitigation of pain; Information about the patient's emotional state, etc.

Next the musical decisions about how to intervene with the various instruments and voice are taken: rhythm; accent, tonality, harmony, etc., and how to involve the patient with the music. Annually, the Music Therapy Programme taking place at La Paz Hospital in Madrid treats a total of 970 pediatric patients between the morning and the afternoon shifts, with 6 music therapists who are volunteers from the Music Therapy and Health Foundation (Table 1).

The main objectives in pediatrics that the Music Therapy and Health Foundation is trying to develop at "La Paz" Hospital in Madrid are:

- To examine the sounds produced in the pediatric unit and its possible stress-producing consequences on each patient, the family and the medical and nursing team. Recommendations to improve the sound environment.
- To use music as a means of communication and emotional expression of hospitalized children.

MUSIC THERAPY	
YEAR: 2016	**Total**
PATIENTS/FAMILY DATA	
PATIENTS VISITED/TAKEN IN MORNING SHIFT	**760**
PATIENTS VISITED/TAKEN IN AFTERNOON SHIFT	**210**
TOTAL PATIENTS VISITED/TAKEN	**970**
VOLUNTEERING	
VOLUNTEERS MORNING SHIFT	**6**
VOLUNTEERS AFTERNOON SHIFT 1 TOTAL VOLUNTEERS	**1**
TOTAL VOLUNTEERS	**7**

Table 1: Pediatric patients receiving music therapy in one year.

- To establish the working methodology taking into account what kind of music is more appropriate, focusing on the different musical elements: rhythm, harmony, musical style, etc.

We always work with live music, with different musical instruments and the voice.

The data obtained by the studies carried out during these Programme years show that the application of music therapy to children hospitalized in the different units where these sessions are carried out has a beneficial effect on the physiological parameters taken in 3 moments, before, during and after the application of music therapy: the evolution of these three parameters shows a significant improvement of the physiological constants (Heart Rate (HR); Respiratory Rate (RR) and Oxygen Saturation (Sat O_2) [4] in this type of patients during their hospital stay, as well as an improvement in their general well-being expressed through the data of the Comfort Behaviour Scale Test [5].

Description of the Intervention in Adults: Unit of Pain and Palliative Care

MT has been implemented in the hospital setting with adults and more specifically in the "Units of pain" for several decades.

Many music therapists from various countries have already reported interesting results that support the practice of this discipline in the hospital setting and patients with this profile. Alonso-Cardaño et al. [6], related to decreased pain, Brown [7], in terms of increased communication, Nakayama et al. [8], in terms of stress reduction Lorenzo cited in Mercadall et al. [9] about the importance of emotional expression.

The main objectives in this area are

- Create a well-being environment
- Encourage connection with oneself and the family
- Provide emotional expression
- Make contact with your emotions and learn to express them
- Facilitate the process of taking responsibility in the healing process
- Develop acceptance, flexibility, creativity and sense of humor
- Increase your self-esteem

The intervention is made with live music with different musical instruments and voice. This allows patients to explore different sonorities, and learn to handle different instruments, which can be tailored to their levels of functionality due to the location of pain, and expand their breathing capacity and use of lungs when working with simple woodwinds (flutes, Kazoos, etc.)

Although there is a high percentage of patients who prefer to start with quiet music, we were surprised that there are at least 25 or 30% of people who react very strongly on arrival and become activated immediately asking for quite cheerful and forceful music.

During this part of the intervention in the adult units, the results at first sight are very satisfactory. Typically these are patients with a lot of communicative difficulties, with a tendency to negative thinking, and with relationships problems and leaving their homes. Although an exhaustive study, and the process to find more rigorous ways that show the value of the approach is not available as yet, changes observed point out to a new factual reality at the hospital.

MUSIC THERAPY	
YEAR: 2016	**Total**
PATIENTS/FAMILY DATA	
PATIENTS VISITED/TAKEN IN MORNING SHIFT	**250**
TOTAL PATIENTS VISITED/TAKEN	**250**
VOLUNTEERING	
VOLUNTEERS MORNING SHIFT	**6**
TOTAL VOLUNTEERS	**6**

Table 2: Adults patients receiving music therapy in one year.

The Music Therapy Programme being carried out at La Paz Hospital in Madrid provides annual attention to 250 adult patients in the morning shift, counting on 6 Music therapy professionals' volunteers from the Music Therapy and Health Foundation (Table 2).

The Music Therapy and Health Foundation (http://www.fundacionmusicoterapiaysalud.org) is helping this Music Therapy Programme to consolidate itself day by day in the hospital, providing the Music Therapy professionals who carry out both the direct care and the attached research. Chief among the general aims of the Foundation are: to develop direct care in Music Therapy in the health, education and social fields, as well as to promote research in these fields, both nationally and internationally.

It is incontrovertible that having foundations and companies that support Music Therapy programmes in both direct care and research is key to the development of this profession, shown to be indispensable in a hospital context where not only physical but also emotional and psychological needs are met. It has been convincingly proven that they will have a direct repercussion in the well-being of the patient both inside and outside the hospital.

Music potential is immense and we all respond to it, beyond the music and sounds of our culture. So it is our main tool of therapy. The Music Therapy and Health Foundation offers music therapy professionals to assist those people who need to "retune" some aspect of their lives. Music Therapy is a "sound process" which can help us connect with our emotions, give us relaxation, increase our attention and sense of wellbeing, enhance creativity, develop motor and cognitive skills, build self-confidence, raise the vital tone, among its many useful contributions.

Providing direct attention in Music Therapy in the health, education and social fields, as well as promoting research in these fields, both nationally and internationally, is our greatest motivation to continue every day taking music therapy wherever is needed.

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