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RESEARCH ARTICLE

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REPERCUSSION OF MUSIC IN THE RELIEF OF PAIN IN ONCOLOGICAL PATIENTS IN A REFERENCE HOSPITAL IN THE CITY OF RECIFE/PE

Simone Souza de Freitas*¹, Rêneis Paulo Lima Silva*¹, Ionaldo Florentino de Amorim Filho*¹, Ozório Florentino da Silva Neto*¹, Letícia Gonçalves de Souza⁵, Vanessa dos Santos Nunes⁶, Juliana Carneiro de Almeida⁷, Danielly Gomes de Lima⁸, English Pamela Ferreira de Lemos⁹, Pâmela Adelina da Silva Damasceno¹⁰, Sineide Cristiane Diniz Domingos¹¹, Jerssycca Paula dos Santos Nascimento¹², Jaedson Capitó de Santana¹³, Sheila Silva Maia¹⁴, Carla Laíz Ferreira de Souza¹⁵, Pollyanna Agostinho de Lima¹⁶, Paloma Maria de Andrade Cavalcanti Freire¹⁷, Norma de Assunção¹⁸, Jéssica de Oliveira Inácio¹⁹, Bárbara Maranhão Calábria Cavalcanti²⁰, Mayanna Danielly Lira Carlos²¹, Andressa Ohana Reis Bandeira²², Willams Pierre Moura da Silva²³, Vilma Maria de Santana²⁴, Maria Cristina Cardoso Ferreira²⁵

*¹Specialist in Public Health at FUTURA, *¹Doctoral Student of the Associate Program in Nursing at the University of Pernambuco - UPE and State University of Paraíba - UEPB, *¹Specialist in Emergency and ICU by (CEPEM) and Teaching in Nursing by (FAVENI), *¹Specialist in Cardiology and Hemodynamic Nursing by (FAVENE), ⁵Nurse from the Institute of Health Sciences (ICS) Centro Universitário Funorte, ⁶Nurse from the Higher Education Foundation of Olinda (FUNESO), ⁷Specialist in Oncology from the Residency Program at the Hospital de Câncer de Pernambuco HCP/IMIP, ⁸Specialist in Intensive Care Nursing from the Faculty of Human and Exact Sciences of the Sertão do São Francisco (FACESF), ⁹Nurse from the Maurício de Nassau University (UNINASSAU), ¹⁰Specialist in Collective Health from the Residency Program at the Instituto de Medicina Integral Professor Fernando Figueira (IMIP), ¹¹Specialist in Orthopedics and Traumatology by the Residency Program at SES/PE, ¹²Specialist in Obstetrics by the Residency Program at SES/PE, ¹³Master's Student at Faculdade Nossa Senhora das Graças (FENSG/UPE), ¹⁴Master's Student at Faculdade Nossa Senhora das Graças (FENSG/UPE), ¹⁵Nurse from the Salgado de Oliveira University (UNIVERSO), ¹⁶Specialist in Nephrology from the Nossa Senhora das Graças Nursing School of the University of Pernambuco - FESG, ¹⁷Specialist in Collective Health with Emphasis on Cardiovascular Diseases from the Federal University of Bahia, ¹⁸Master's student in Nursing at Faculdade Nossa Senhora das Graças-FENSG/UPE, ¹⁹Specialist in Pulmonology from the Uniprofessional Residency Program of Nursing in Pulmonology at Hospital Otávio de Freitas, ²⁰Specialist in Family Health by the Multiprofessional Residency Program at UFPE/Recife, ²¹Specialist in Health Systems and Services Management at Centro Aggeu Magalhães/Fundação Oswaldo Cruz, ²²Nursing Resident in Neurology and Neurosurgery at Hospital da Restauração linked to UPE, ²³Specialist in Public Health with Emphasis on PSF by IFAP, ²⁴Resident in Obstetrics at Hospital Agamenon Magalhães, ²⁵Nurse at Faculdade Venda Nova do Imigrante (FUNORTE).

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*Corresponding author:

Simone Souza de Freitas

ABSTRACT

The disorganized and independent multiplication of cells, resulting from the mutation of genes that adjust cell development and specification, is called neoplasm. For the National Cancer Institute (INCA) (2016) the most frequent types in men will be prostate cancer (28.6%), lung (8.1%), intestine (7.8), stomach (6, 0 %) and oral cavity (5.2 %). In women, breast (28.1%), bowel (8.6%), cervix (7.9), lung (5.3%) and stomach (3.7%) cancers are among the main cancers. Pain in malignant neoplasms is capable of corresponding to primary swelling or its dissemination. The affliction of the sick is a consequence of the existence of pain related to physical ineptitude, separation from the family and the social group to which they belong, concerns related to money, change in his appearance and the fear of coming to death. Having as main point the improvement of the client's quality of life, nursing actions have as their nature, care itself, regardless of the purpose if it will be preventive, curative, rehabilitation or palliative. Among the supplementary integrative treatments with a high number of use, music therapy stands out. Which aims to improve physical, mental and social well-being in a given case when requested. The use of music is being explored as a discovery in the nursing area with the attribution of impacting the professional to make use of musical visits for care, effectively contributing to treatments with the patient, bringing as an example comfort, pain relief, facilitating the interaction between client-nurse, thus promoting a much more humanized care. The objective was to evaluate the

repercussions of music on pain relief, on the perception of patients undergoing cancer treatment, in a referral hospital in the city of Recife/PE. A descriptive, exploratory, cross-sectional study with a quantitative approach was carried out. Quantitative tabulation was performed with simple descriptive statistics and factor analysis, and results were presented in absolute numbers and percentages, using the Microsoft Excel® 2012 Electronic Spreadsheet, from which the graphs and tables will be made. The study complied with the determinations of Resolution 466/12 of the National Health Council, starting only after the project was approved by the Research Ethics Committee, under nº.88203018.0.0000.5640. The present study consisted of a sample of 8 individuals diagnosed with cancer undergoing chemotherapy, 5 (62.5%) individuals were female, 4 (50.0%) aged between 42 and 50 years, 5 (62.5%) had completed elementary school, 2 (25.0%) lived in Igarassu, Metropolitan Region of Recife/PE, all were evangelicals, 5 (62.5%) declared themselves to be of mixed race/ethnicity, 2 (25.0%) were retirees, housewives and farmers, respectively, all received between one and two minimum wages, 4 (50.0%) lived with their husband and husband+children, respectively, living in brick houses and their own (100.0%). It showed that the use of music is a valuable integral therapy, which influences neurocognitive, emotional, psychic and social aspects of patients,

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INTRODUCTION

It is called neoplasm the multiplication of cells in a disorganized and independent way, usually due to an absence or decrease in cell specification resulting from mutation of genes that adjust cell development and specification (ALDRIDGE, 1990). The benign ones have a gradual slow development, they present a false capsule, they have unusual and specific mitosis, they never affect vessels, they do not proliferate to other organs, thus not having bleeding and gangrene, whereas the malignant ones are completely the opposite (ALVES, 2017). In Brazil, the estimate for the 2016-2017 biennium shows that there will be about 600,000 new cases of cancer (ARAÚJO, 2014). For the National Cancer Institute (INCA) (2016) the most frequent types in men will be prostate cancer (28.6%), lung (8.1%), intestine (7.8), stomach (6, 0 %) and oral cavity (5.2 %). In women, breast (28.1%), bowel (8.6%), cervix (7.9), lung (5.3%) and stomach (3.7%) cancers are among the main cancers (ARAÚJO, 2013). In Pernambuco, the estimate of new cases in men was 10,240 and the gross rate was 230.23 and in Recife 2,330, with a gross rate of 312.24; in women, the estimate was 11,610 in the same state and the gross rate was 241.88, in the state capital it was 2,640 and the gross rate of 303.33 total of all malignant neoplasms (BERGOLD, 2009). Pain in malignant neoplasms is capable of corresponding to primary swelling or in its dissemination⁶. The affliction of the sick is a consequence of the existence of pain related to physical ineptitude, distance from the family and the social group to which they belong, concerns related to money, change in their appearance and the fear of dying (BRAZIL, 2012). Pain is identified as one of the signs, but constant and that cause more fear in patients with malignant neoplasm, being determined as "an unpleasant sensory and emotional experience associated with tissue damage (COSTA, 2012)".

Certainly because it has an abstract characteristic, making it difficult to define it exactly, pain was understood and expressed by history as something supernatural (CUNHA, 2008). Pain and suffering were seen by society as punishments arising from the wrath of God, thus being necessary for the remission of sins aiming at the salvation of the soul (FERREIRA, 2006). Having as main point the improvement of the client's quality of life, nursing actions have as their nature, care itself, regardless of the purpose if it will be preventive, curative, rehabilitation or palliative (LEÃO, 2002). Nursing is the art of caring for the sick, in a serious way, with commitment having a technical-scientific opinion, which is necessary for every living being at some point in life (RANGEL, 2012). During the early years of the 20th century, music gained strength in hospitals with the return of veterans from the I and II world wars (BERGOLD, 2009).

During this period, the role of nursing was very important for music therapy and its emphasis as a profession (ARAÚJO, 2014). Isa Maud Ilsen, musician and nurse, was responsible for creating the national music association in hospitals (BERGOLD, 2009). Ilsen believed in music as a way to relieve pain in surgical patients and those with physical illness, encompassing physical, psychological, social and spiritual dimensions. Knowing that Music Therapy reaches different areas of human dimensions. Even so, some of these paths are still unknown to us¹. One of the main issues surrounding well-being in general is pain⁴. The treatment aimed at reducing this condition is governed by several professionals, taking measures without the use of drugs as a significant format in nursing interventions, using music as something positive and effective in reducing painful conditions¹². In order to provide physical, mental and social well-being, a multidisciplinary approach is essential, aiming at a precaution, treating and restoring the individual's well-being (FERREIRA, 2006). In the health area, complementary services are understood as simultaneous precautions having attribution in the already standardized methodological services¹³. Among the supplementary integrative treatments with a high number of use, music therapy stands out. Which aims to improve physical, mental and social well-being in a given case when requested⁵. Using music as something positive and effective in reducing painful conditions (FERREIRA et al., 2006; LEÃO, 2002). In order to provide physical, mental and social well-being, a multidisciplinary approach is essential, aiming at a precaution, treating and restoring the individual's well-being. In the health area, complementary services are understood as simultaneous precautions having attribution in the already standardized methodological services (SOUZA, 2012).

Among the supplementary integrative treatments with a high number of use, music therapy stands out. Which aims to improve physical, mental and social well-being in a given case when requested (LEÃO, 2002; RANGEL, 2012). Using music as something positive and effective in reducing painful conditions. In order to provide physical, mental and social well-being, a multidisciplinary approach is essential, aiming at a precaution, treating and restoring the individual's well-being. In the health area, complementary services are understood as simultaneous precautions having attribution in the already standardized methodological services^{1,2,3}. Among the supplementary integrative treatments with a high number of use, music therapy stands out. Which aims to improve physical, mental and social well-being in a given case when requested (RANGEL, 2012; SOUZA, 2012). Treating and restoring the well-being of the individual⁷. In the health area, complementary services are understood as simultaneous precautions having attribution in the already standardized methodological services (BERGOLD, 2009);

BERGOLD, 2006; BRAZIL, 2012). Among the supplementary integrative treatments with a high number of use, music therapy stands out. Which aims to improve physical, mental and social well-being in a given case when requested. Treating and restoring the well-being of the individual. In the health area, complementary services are understood as simultaneous precautions having attribution in the already standardized methodological services. Among the supplementary integrative treatments with a high number of use, music therapy stands out¹. Which aims to improve physical, mental and social well-being in a given case when requested. The use of music is being explored as a discovery in the nursing area with the attribution of impacting the professional to make use of musical visits for care, as well as for the instruction of clients who may be experiencing different occurrences in the sphere of the hospital environment (SOUZA, 2012). Along with the musical experience, nursing can have faces that are associated with an integral view of the patient by providing comprehensive care, attending to physical, mental and social well-being (LEÃO, 2002; RANGEL, 2012). Use of music as a resource that contributes effectively to treatments with the patient, bringing as an example comfort, pain relief, facilitating the interaction between client-nurse, thus promoting a much more humanized care.

Goals: General Purpose: To evaluate the repercussions of music on pain relief, on the perception of patients undergoing cancer treatment, in a referral hospital in the city of Recife/PE.

Specific Objectives

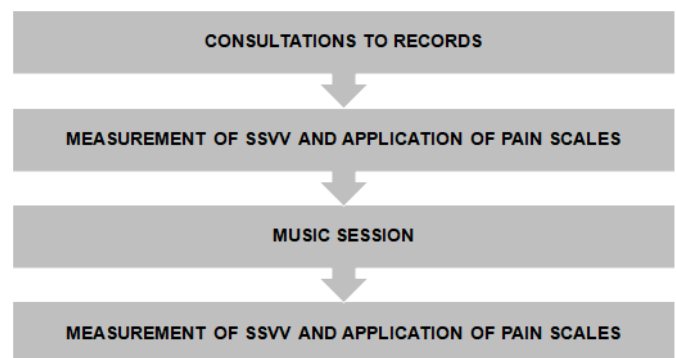
- To characterize the sociodemographic profile of the study samples.
- List the main changes in vital signs after a music session, in individuals hospitalized in the oncology sector of the hospital chosen for the research.
- To identify the improvement in pain, in terms of intensity, in the study sample, according to the analogue scales, after music sessions in the selected sector.

METHODOLOGY

This is a descriptive-exploratory, cross-sectional study with a quantitative approach. Exploratory research aims at greater intimacy with the difficulty that will be investigated, with the final idea of providing more data, making it clearer, thus facilitating its delimitation, orientation and the formulation of hypotheses or even discovering new approaches. This type of research involves a bibliographic survey; interviewing people who have had practical experiences with the problem; the analysis of examples that stimulate their understanding¹. Cross-sectional research is characterized by following a systematized and predefined line, with a predetermined time and established deadlines regarding the frequency and time of data collection². In the development of research of a quantitative nature, it is considered that everything can be quantified, hypotheses can be formulated and the relationship between variables can be classified to certify the accuracy of the results, avoiding contradictions in the analysis and interpretation process. Revealing in numbers opinions this information using the techniques and statistical resources of percentage, average among others^{4,5,6}. The quantitative research report contains formal generalizations that, with specific products, present important and collaborative aspects¹⁰. The descriptive study aims to observe, describe and document aspects of a situation, but it can also be elaborated with the purpose of raising opinions and determining the nature of certain relationships regarding the theme and ended up serving as a new vision of the problem¹¹. The present research was carried out at the Oncohematology Center (CEONH), at the Oswaldo Cruz University Hospital – HUOC, at the University of Pernambuco – UPE, located in the city of Recife/PE. Founded in 1884, with the name of Hospital de Santa Águeda, intended for the care of infectious and contagious diseases, at the time responsible for the high mortality rate. In 1925, after extensive renovation, it was renamed Oswaldo Cruz Hospital, serving clinical

and surgical cases of tuberculosis, in addition to general and thoracic surgery. In 1964, it joined the organizational structure of the Pernambuco Higher Education Foundation – FESP under the name Hospital das Clínicas Oswaldo Cruz, together with the Faculties of Medical Sciences – FCM and Nossa Senhora das Graças – FENSG. In 1991, FESP became the University of Pernambuco-UPE and in 1994 the hospital was renamed Hospital Universitário Oswaldo Cruz-HUOC. As a teaching hospital profile, it became a field for the formation and development of knowledge, the study population consisted of all patients from the adult Oncohematology sector – CEONH, of the hospital chosen for the study, with an intentional, non-probabilistic and convenience sample of 8 (eight) patients.

The inclusion criteria used were patients admitted to the CEON, undergoing cancer treatment, of both sexes, over 18 years of age, with no expected clinical discharge, and those who agreed to participate in the research, signing the Free and Informed Consent Form. (ICF). The exclusion criteria were patients with aplasia, those undergoing treatment at the day hospital or day bed, those with elective hospitalization (less than five days) and those who were not found during data collection. As for data collection, there were initially, contact was made with the Board of the Hospital chosen for the study, to present the project via a Letter of Consent Request. After proper authorization, the Letter of Consent was presented to the Medical and Nursing Coordination of CEONH, so that individual appointments could begin, with the purpose of presenting the work to patients and then applying the research instruments. All subjects received information and clarifications regarding the research, and then signed the informed consent, agreeing to participate in the study. The steps for data collection followed the following flowchart:



- **Data from the medical records:** the medical records of the patients involved in the study were consulted only to collect the following quantitative variables: age, sex, religion, street, level of education, family income, pathology or diagnostic hypothesis, type of anticancer therapy, Vital Signs, frequency and intensity of pain, type of medication in use (adjuvants) for pain relief and frequency of use.
- **Pain quantification:** one of the following scales was used: Visual Analog Scale - VAS (Figure 1 in Annex I), Visual/Verbal Numerical Pain Scale (Figure 2 in Annex I), or Pain Faces Scale (Figure 3 in Annex I), before and after the conducted music session, so that the client quantifies the pain.
- **Music session:** It took place on three different and consecutive days, lasting 15 (fifteen) minutes, where patients listened to a song of their choice, played by the main students involved in the research, inside the ward (individually/reservedly) at the bedside. Before the session began, two other students involved in the study, measured the Vital Signs of the patients, and recorded them in the collection instrument.
- **Closing of the music session:** After the time established for the music session to take place, the SSVV were (re)measured and one of the Pain Scales (re)applied, and they were recorded in the Data Collection instrument. In order to avoid dissonance regarding the moment of music and data

collection, this step was performed by other components of the research, different from those who started the music.

As a guiding question for the interview, which took place before and after the music session, the following question was used: How are you feeling at this moment? At this stage, the answers were stored in a voice recorder/cell phone/MP3, for later categorization and subcategorization, in the analysis of the subject's speech. For the identification of each individual analyzed, pseudonyms were assigned such as: Flores for women and Colors for men, to the original names. Data collection consisted of a structured questionnaire, dealing with the research objectives (Appendix A), prepared by the researchers, comprising two stages: 1 – Sociodemographic and Clinical Data of the individuals selected for the research; 2 – Data related to Music for Pain Relief (procedures and techniques). In the data analysis, quantitative tabulation was performed with simple descriptive statistics and factor analysis, and the results were presented in absolute numbers and percentages, using the Microsoft Excel® 2012 Electronic Spreadsheet, from which the graphs and tables were made, which are make necessary. The t-Student Test or t Test was used, which is a method used to assess the differences between the means between two groups, and express the confidence level associated with the meaning of comparison, checking whether the sample mean is different from a reference value or the population mean¹. The Research was carried out in May and June 2018, after approval by the ethics and research committee of the HUOC/UPE, respecting the ethical concepts recommended by Resolution No. 466/12, where it began only after its approval, with CAAE No. 88203018.0.0000.5640 and Opinion No. 2,679,688.

RESULTS AND DISCUSSION

The data presented in this chapter refer to data collection, carried out in May and June 2018, at the Adult Oncohematology Center (CEONH), of the Oswaldo Cruz University Hospital – HUOC, of the University of Pernambuco – UPE, with a sample of 8 individuals diagnosed with neoplasia, undergoing chemotherapy. The variables will be presented in the form of tables and tables below, using statistical techniques. According to the results presented in table 1, 5 (62.5%) individuals were female, 4 (50.0%) were aged between 42 and 50 years, 5 (62.5%) had completed Elementary School, 2 (25.0%) lived in Igarassu, Metropolitan Region of Recife/PE, all were evangelical, 5 (62.5%) declared themselves to be of mixed race/ethnicity, 2 (25.0%) were retired, owners of home and farmers, respectively. According to Felix et al. (2012) the increase in cancer mortality in developed countries has shown an increasing trend, the survival rate of the female population is related to the prevalence of risk factors, socioeconomic status, and prognostic factors. For Ferrer, et al. (2017) “the aging process nowadays has several factors, whether of genetic or environmental origin, cellular activities are gradually reduced with increasing age, producing changes in cellular structure and functions, thus showing that the Aging is totally linked with disease”. It is quite possible that the level of education directly interferes in the development of the disease, resulting in a greater probability of not having an understanding of the health-disease process, resulting in a late search for the diagnosis and treatment of the disease, reducing the chances of an advanced therapies.

The support of the partner is very important for the patient who has a disease that can lead to death, showing that the adaptation to the disease and the stress caused by it is much easier when there is social support¹. The process of becoming ill due to a neoplasm challenges anyone, thus seeking ways to face this difficult situation. Religion is considered a highly valuable tactic in our culture to deal with the process of illness and treatment⁹. Inequality in healthcare also reflects the social inequality that exists. In the case of cancer, these differences can be observed in several epidemiological aspects. The lower the social level, the greater the risk of a late diagnosis, the difficulty in obtaining concrete exams and diagnoses, resulting in a lower survival rate¹¹. The family and children contribute to better care for patients with aplasia, highlighting the way they take care of

hygiene, food, medication, in the demonstration of love, affection, attachment and protection. Family support helps significantly for the patient's complete well-being³. Regarding Vital Signs and Pain, before and after the music sessions, the data will be presented in tables 1 to 5, which were placed in different diagramming for better visualization of the results.

Table 1. Sociodemographic data, from the study sample, at the Oncohematology Center (CEONH) of the HUOC/UPE, Recife/PE, 2018

Variables	No	%
Age		
31 - 40	1	12.5
42 - 50	4	50.0
51 - 60	1	12.5
≥ 60	2	25.0
Gender		
Male	3	37.5
Female	5	62.5
Degree of Instruction		
Illiterate	2	25.0
Elementary School	5	62.5
High school	1	12.5
Marital status		
Married	8	100.0
Place of Residence		
Recife PE	3	37.5
Alliance – PE	1	12.5
Igarassu - PE	2	25.0
Paulista - PE	1	12.5
Santa Cruz do Capibaribe - PE	1	12.5
Religion		
Evangelical	8	100.0
race/ethnicity		
black	3	37.5
Brown	5	62.5
Occupation		
retired	2	25.0
Housewife	2	25.0
Bricklayer	1	12.5
farmer	2	25.0
Merchant	1	12.5
Monthly income		
1 to 2 minimum wages	8	100.0
Who do you live with?		
spouse	4	50.0
Spouse and Children	4	50.0
Housing Type		
own	8	100.0
Masonry	8	100.0
TOTAL	8	100

The technique for verifying and evaluating blood pressure measurements followed the protocol recommended by the Brazilian Society of Cardiology in the Brazilian Guidelines on Hypertension. As for the measurement of pulse (P) and respiratory rate (RR), in turn, they were measured using the radial artery palpation techniques, counted in one minute, measured in beats per minute (bpm), and inspection of the number of respiratory incursions per minute (irpm), respectively. In Chart 1, it can be seen that there was a reduction in BP levels in patients 3, 4 and 8 (38%) after the music session. In Chart 2, there was no reduction in HR levels in patients 2 and 4, who represent (25.5%) of the sample, since in the 2nd session of music, the values remained unchanged. It is possible to verify in Chart 3 that there was no reduction in RR levels, in the 2nd music session, in patient 6, who represents (12.5%) of the sample in the study. In Chart 4 it is noted that in patient 3, who represents (12, 5%) of the study sample, there was no change in P levels after the 2nd music session. Table 5 shows that in all cases there was a gradual decrease in pain scores after the music sessions. However, in patients 1, 3, 5 and 6, who represent (50.0%) of the study sample, when evaluated by the pain scales (from moderate to severe) before the application of music, they obtained a significant reduction in this condition throughout the subsequent sessions, even claiming that his pain had gone to zero.

Table 1. Population distribution of cancer patients with pain in terms of blood pressure (BP) levels before and after music sessions, HUOC/UPE, Recife/PE, 2018

patients	PA before 1st music session	PA after 1st music session	PA before 2nd music session	PA after 2nd music session	PA before 3rd music session	PA after 3rd music session
1	150 x 70	150 x 80	150 x 90	140 x 80	150 x 90	120 x 80
2	130 x 80	130x80	120 x 70	130 x 70	130 x 80	111 x 80
3	120 x 100	120 x 80	111 x 70	100 x 60	130 x 90	120 x 80
4	130 x 70	120 x 90	120 x 70	111 x 60	130 x 100	120 x 80
5	90 x 50	90 x 50	90 x 50	111x 60	130 x 80	120 80
6	140 x 80	130 x 80	140 x 60	120 x 80	130 x 90	120 x 80
7	140 x 60	130 x 60	130 x 80	130 x 80	111 x 80	111 x 60
8	140 x 60	130 x 70	130 x 80	120 x 70	120 x 90	111 x 80

Table 2. Population distribution of cancer patients with pain regarding heart rate (HR) levels before and after music sessions, HUOC/UPE, Recife/PE, 2018

patients	FC before 1st music session	FC after 1st music session	FC before 2nd music session	FC after 2nd music session	FC before 3rd music session	FC after 3rd music session
1	97	90	100	90	109	80
2	100	90	100	100	110	100
3	115	100	110	90	88	99
4	105	90	100	100	118	80
5	90	70	96	80	88	80
6	90	80	90	80	94	80
7	88	100	99	80	98	80
8	99	80	99	90	100	68

Table 3. Population distribution of cancer patients with pain in terms of respiratory rate (RR) levels before and after music sessions, HUOC/UPE, Recife/PE, 2018

patients	FR before 1st music session	FR after 1st music session	FR before 2nd music session	FR after 2nd music session	FR before 3rd music session	FR after 3rd music session
1	21	18	22	19	24	20
2	22	20	19	17	18	17
3	16	15	19	16	24	18
4	24	20	23	20	22	19
5	21	18	23	20	19	18
6	21	18	16	16	23	20
7	19	16	20	18	24	20
8	18	15	20	19	24	20

Table 4. Population distribution of cancer patients with pain in terms of Pulse (P) levels before and after music sessions, HUOC/UPE, Recife/PE, 2018

patients	P before the 1st music session	P after 1st music session	P before the 2nd music session	P after 2nd music session	P before the 3rd music session	P after 3rd music session
1	97	100	108	80	110	80
2	100	95	112	100	108	100
3	107	100	100	100	90	80
4	107	90	110	100	108	80
5	77	80	85	80	90	80
6	78	60	87	80	92	80
7	79	80	78	80	100	80
8	89	60	70	60	100	80

Table 5. Pain score of cancer patients according to the Analog Pain Scale, HUOC/UPE, Recife/PE, 2018

patients	Pain score before the 1st music session	Pain score after the 1st music session	Pain score before the 2nd music session	Pain score after the 2nd music session	Pain score before the 3rd music session	Pain score after the 3rd music session
1	4	0	4	0	6	0
2	10	6	10	6	9	0
3	6	0	10	0	10	0
4	6	3	3	0	2	0
5	3	0	4	0	4	0
6	7	0	7	0	8	0
7	6	0	9	5	9	5
8	5	3	8	0	8	0

From the quantification of the data, taking into account the statistics of equality of variances, the Student's Test or Paired t Test was performed for two dependent samples (one before and one after the music). The results are shown in tables 2, 3, 4 and 5. Table 2 shows the results obtained in terms of HR before and after the music sessions in patients undergoing cancer treatment at CEONH. It can be concluded that in all tests the value of (p) was less than 0.05 (or

5%) through Student Test or Test t, with a significant decrease in the mean HR after the music sessions. The autonomic nervous system (ANS) plays an essential role in the extrinsic control of heart rate (HR). The HR alternates with each beat as a result of the constant adaptations promoted by the ANS to maintain the balance of the cardiovascular system (ROSÁRIO, 2018). The influence of music on the cardiovascular system has proven to improve heart rate variability

in cancer patients by the release of dopamine in the striatal system motivated by pleasurable music involved in cardiac autonomic regulation (OLIVEIRA et al., 2014). As for the results obtained regarding FR before and after the music sessions. It is concluded that in all tests the value of (p) was less than 0.05 (or 5%), there was a significant decrease in the mean RR after the music sessions (Table 3). The physiological effects of music include sensory, hormonal and physiomotor reactions, such as changes in metabolism, release of adrenaline, regulation of respiratory rate. In addition, it is an excellent therapeutic tool, easy to use, accessible, without side effects and that can be used in various contexts and for different diseases (MELO et al., 2018). Table 4 shows the results obtained in terms of PF before and after the music sessions. It is observed that in 90% of the tests the value of (p) was less than 0.05 (or 5%) with an increase in the average in the 1st session and decrease in the 2nd and 3rd sessions.

in pulse rate, whereas the stimulant is entirely the reverse. Table 5 shows that in all tests the p value was less than 0.05 (or 5%), that is, there was a significant decrease in pain intensity after the music sessions. The use of music in hospitals has become common nowadays and, due to the results of this application, music has been accepted in this environment by several professionals, including doctors. According to surveys carried out by the author, there are several applications of music in the hospital environment, among these, helping victims of stroke to recover their speech; patients injured by burns to bear the pain resulting from the healing of their injuries and cancer patients in the relief of chronic pain¹¹. According to Alves Lima and Bellini (2017), music provides the potential to influence individuals, both physically and emotionally, affecting the levels of endorphins released by the pituitary gland, which is considered a natural analgesic, regulates emotion, helps to relax,

Table 2. Correlation between heart rate (HR) before and after music sessions, at HUOC/UPE, Recife/PE, 2018

Variable	No	Average	Standard deviation	p value
FC* before 1st music session	8	98.00	9.04	2.92
FC after 1st music session	8	87.50	10.35	2.36
Difference		10.50	-1.31	0.02
FC* before 2nd music session	8	99.25	5.52	3.85
FC* after 2nd music session	8	88.75	8.35	2.36
Difference		10.50	-2.83	0.01
FC* before 3rd music session	8	100.63	10.89	3.10
FC* after 3rd music session	8	83.38	10.78	2.36
Difference		17.25	0.11	0.02

Table 3. Correlation between respiratory rate (RR) before and after music sessions, at HUOC/UPE, Recife/PE, 2018

Variable	No	Average	Standard deviation	p value
FR* before 1st music session	8	20.25	2.49	8.77
FR* after 1st music session	8	17.50	2.00	2.36
Difference		2.75	0.49	0.00
FR* before 2nd music session	8	20.25	2.38	5.34
FR* after 2nd music session	8	18.13	1.64	2.36
Difference		2.12	0.74	0.00
FR* before 3rd music session	8	22.25	2.43	5.51
FR* after 3rd music session	8	19.00	1.20	2.36
Difference		3.25	1.23	0.00

Table 4. Correlation between pulse rate (PF) before and after music sessions, at HUOC/UPE, Recife/PE, 2018

Variable	No	Average	Standard deviation	p value
P* before 1st music session	8	91.75	12.75	2.09
P* after 1st music session	8	83.13	16.24	2.36
Difference		8.62	-3.49	0.07
P* before 2nd music session	8	93.75	15.92	2.69
P* after 2nd music session	8	85.00	14.14	2.36
Difference		8.75	1.78	0.03
P* before 3rd music session	8	99.75	8.38	5.71
P* after 3rd music session	8	82.50	7.07	2.36
Difference		17.25	1.31	0.00

Table 5. Correlation between pain intensity before and after music sessions, at HUOC/UPE, Recife/PE, 2018

Variable	No	Average	Standard deviation	p (Student's t)
Pain intensity before the first music session	8	5.88	2.10	7.00
Pain intensity after the first music session	8	1.50	2.27	2.36
Difference		4.38	0.17	0.00
Pain intensity before the second music session	8	6.88	2.85	6.20
Pain intensity after the second music session	8	1.38	2.56	2.36
Difference		5.50	0.29	0.00
Pain intensity before the third music session	8	7.00	2.78	6.38
Pain intensity after the third music session	8	0.63	1.77	2.36
Difference		6.38	0.99	0.00

There was a significant decrease in the mean PF after the music sessions. The importance of music in human behavior especially categorizes two styles of music, sedative and stimulant. One of its particularities is the fact that it can make a physical activity smooth or increase the contemplative capacity of the human being, motivating a relaxing effect, with a reduction in heart rate, respiratory rate and also

provoking a feeling of well-being and pleasure, thus reducing stress, anxiety and pain, being determined as a non-pharmacological attack. When an individual is confronted with two stimuli, such as pain and music, the second can control or act on the pain control mechanism, by focusing his interest on music, and reducing his interest in pain. This purpose is achieved because music is a leisure activity, which

helps the patient to direct their attention, which was previously focused on pain, on a more pleasurable thing¹⁰. The second can control or act on the pain control mechanism, by focusing his interest on music, and reducing his interest in pain. This purpose is achieved because music is a leisure activity, which helps the patient to direct their attention, which was previously focused on pain, on a more pleasurable thing. The second can control or act on the pain control mechanism, by focusing his interest on music, and reducing his interest in pain. This purpose is achieved because music is a leisure activity, which helps the patient to direct their attention, which was previously focused on pain, on a more pleasurable thing¹.

FINAL CONSIDERATION

Patients, after the music sessions, reported having obtained pain relief in addition to relaxation and forgetting of problems. Changes in vital parameters and pain intensity were identified before and after music sessions, with a statistically significant difference according to Student's t test. According to the data presented, it shows that the use of music is a valuable integral therapy, which influences neurocognitive, emotional, psychological and social aspects of patients, playing an important role in maintaining and improving the quality of life, in addition to providing greater interaction with the social and family environment. It is essential to discuss that not all nursing professionals have musical skills, and that this skill is not part of professional training. Despite that, even without playing a musical instrument, it is possible to sing or even use sound equipment to cause positive changes in the hospital environment. However, when analyzing that music offers numerous therapeutic possibilities, it should also be considered that its use requires new research aimed at developing technologies that can expand the humanization of health care in nursing care.

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