



EFFECT OF MUSIC THERAPY TO REDUCE PAIN IN ORTHOPEDIC PATIENTS AT SELECTED HOSPITALS PERINTHALMANNNA

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Abstract :

The present study entitled "EFFECT OF MUSIC THERAPY TO REDUCE PAIN IN ORTHOPEDIC PATIENTS AT SELEECTED HOSPITALS PERITHALMANNA" is based on following **Objectives**: Identify the level of pain among orthopedic patients, To evaluate the effect of music therapy, Assess the impact of music therapy on the blood pressure and heart rate of orthopedic patients. . **Methodology**: research approach is adopted in the study was quantitative, by the design as Quasi experimental pre test post test design.we selected 60 orthopedic samples with patients who met the specific criteria.we conducted pretest, intervention and post test by chechiking the all variables. Considered tool as Raymaund pain scale score, heart rate and blood pressure and using technique carry out the data collection.**Analysis**: Data were analyzed by using descriptive and inferential statistics. **Results**: In age wise catagorization 25% belongs age group 60-69, in the gender wise majority were male 60%, Regarding heart rate majority of orthopedic patients shows the heart rate 70-79 beat per minute(43.3%),Regarding systolic blood pressure the majority of orthopedic patients show systolic blood pressure show in the interval 130-140 mmhg (71.6%),.In case of diastolic blood pressure majority of orthopedic patients show the diastolic blood pressure in the interval 70-80 mmhg (60%)in case of pain majority shows mild pain (85%),On the analysis the posttest value is lower than pretest values of pain, heart rate and blood pressure .By the t test H1 is accepted this implies the music therapy was effective in reducing pain in orthopedic patients.Regarding the chi square test for pain it was statistically not significant and it implies that there was no significant association between age and pain of orthopedic patients. Hence the research hypothesis H2 was rejected.regarding the chi square value for association of age with their heart ratethere was no significant association between age of orthopedic patients and their heart rate. Hence research hypothesis H2 was rejected.chi square value for systolic blood pressure in associated their age the research hypothesis H2 was acceptedRegarding the chi square value for diastolic blood pressure in associated with their agethe research hypothesis H2 was accepted.**Conclusion**: The study concluded that structured teaching program is effective in improving the knowledge of second year BSc nursing students regarding Electrocardiogram and it's interpretation.**Conclusion**: Among 60 samples, the pretest and posttest pain, vital parameters (heart rate and blood pressure) were analyzed. The calculated t values of pain (16.21), heart rate (7.88), systolic blood pressure (9.76), diastolic blood pressure (6.05) was statistically highly significant at 0.05 level implice the music therapy was effective.**Key words**: Effect, orthopedic patients,pain,heart rate,blood pressure

INTRODUCTION

“Music washes away from the soul the dust of everyday life”

(Mrs.Raji-2009)

Pain is a complex subjective experience with sensory discriminative, Emotional affective and cognitive evaluative components. Pain causes increase in the sympathetic response of the body with subsequent rises in the heart rate, cardiac work and oxygen consumption. Pain is the most common symptom of disease or injury that precipitates entry in to the health care system. ¹

Pain is categorized as nociceptive or neuropathic based on under lying pathology. Nociceptive pain caused by damage to somatic or visceral tissue. Neuropathic pain is caused by damage to peripheral nerves or central nervous system. A person pain experience is influenced by a number of factors including past experience with pain, anxiety, culture, age, gender, and expectation about pain relief. These factors may increase or decrease tolerance for pain and effect responses to pain. ²

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Perception occurs when pain is recognized, defined, and responded by individual experiencing the pain. Modulations involves the activation of descending pathways that exert inhibitory or facilitator effect on the transmission of pain.²

There are many different types of treatment available for pain such as pharmacological and non-pharmacological. There are three category of pain medication such as opioids, non-opioids and co analgesic or adjuvant drugs.³ There are number of non-pharmacological modalities available for pain relief such as meditation, programs, relaxation, music, acupuncture, guided imagery, hypnosis, and cutaneous stimulation.³

Music therapy is scientific methods of effective cures of disease through the power of music. It restores maintains, and improve emotional, psychological and physiological wellbeing. The articulation, pitch, tone, and specific management of swears in a particular raga stimulates, alleviates and cures various ailments inducing magnetic change in the body.⁵

Nurses are facing challenges to provide a better environment to patient in order to enhance patient outcomes and should be more observant of the needs. Patients and nurses can benefit from an optimal healing environment through which healing can be achieved by principles of the mind connections. The optimal healing environment includes palpable expression of sympathy and care like music energy base healing and guided by imaginary. It is projected that patient of 55to 80% from postoperative pain do not get ample relief.

NEED AND SIGNIFICANCE

The prevention and the treatment of postoperative pain, and the promotion of comfort are the challenges facing practitioners working in recovery room setting. Surgical pain produces autonomic, psychological, immunological, and behavioral responses that can delay or inhibit normal healing. Cognitive strategy to modify pain perception has been effective in numerous research studies. Attention is directed away from the pain sensation or negative emotional arousal associated with the pain episodes. Intervention may be administered by a multitude of modalities that require the client to engage in highly focused interesting mental exercises. Typical techniques utilized in hospital setting include video tapes of favorite music and interacting with others.³

According to the incidence rate of fracture in Kerala in 2021, there were 33,296 road traffic accidents and 40,204 injuries were reported. In that 2147 accidents and 2675 injuries were reported in Malappuram district Kerala. More than 95% of people had fracture and underwent management.⁹

Music is a low cost intervention that often reduces surgical, procedural, acute and chronic pain. Music is also improves the quality of life for patients receiving palliative care, enhancing a sense of comfort and relaxation. When there is injury of tissue and fractures, there will be pain. The pain management significant at this level as it affects people mental and physical wellbeing. So that the significant of the study is to reduce pain and prevent the side effect of pain medication.³

POPULATION: In the study the target population is all orthopaedic patients who are not on analgesics

SAMPLE: orthopedic patients in KIMS Alshifa Hospital, Moulana hospital who are willing to do the study at the time of data collection.

SAMPLE SIZE: 60

SAMPLING TECHNIQUES convenient sampling technique

SETTING OF THE STUDY : The study was conducted in KIMS ALSHIFA hospital and Moulana hospital Perinthalmanna.

THEORETICAL FRAMEWORK : The investigator adopted the Weidenbach's helping art of clinical nursing theory 1964. Ernestin Weidenbach's proposes in helping art of clinical theory that nursing which describes a desired situation and late to attain it. It directs action towards the explicit goals.¹¹

CRITERIA FOR SAMPLE SELECTION:

These are the certain criteria, which is used for selecting the samples suitable for conducting the study. It includes inclusion criteria & exclusion criteria.

Sampling criteria is the test of characteristics essential for inclusion and exclusion for target population.

➤ INCLUSION CRITERIA

Orthopaedic patients

1. Who are willing to participate in the study
2. Who are admitted with mild to moderate pain

➤ EXCLUSION CRITERIA

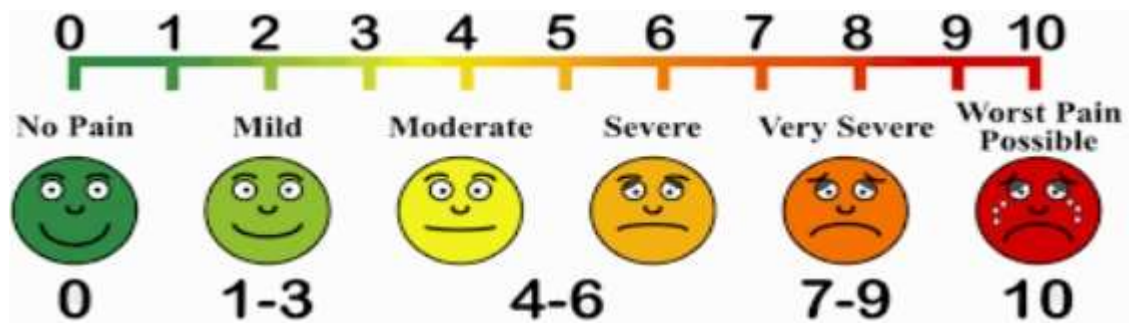
Orthopaedic patients

1. Who are on pain medication
2. Who having severe pain

TOOLS

Tool used for the study was:

In study investigators has used Raymond pain scale score to asses pain of orthopaedic patients and to assess the vital parameters such as heart rate, blood pressure by using sphygmomanometer and stethoscope.



TECHNIQUE

Using appropriately sized cuff placing over upper and lower limb, checking blood pressure manually in the pre-test as well as the post test.

DESCRIPTIVE STATISTICS

The investigator adopted

- Description based on socio demographic variables, research variables and samples
- Assess the effect of music therapy on heart rate, pain and blood pressure of orthopaedic patients.

INFERNENTIAL STATISTICS

The investigator adopted Chi square test, to determine the association between pre test and post test parameters and selected demographic data

THE RESULTS ARE PRESENTED IN

The results are presented in 3 sections

- section A: Description based on socio demographic variables, research Variables and samples
- Section B: Assess the effect of music therapy on heart rate pain and blood pressure of orthopedic patients.
- Section C: Association between pretest and posttest parameters and selected demographic data.

Section A: Description based on socio demographic variables, research variables and samples

The characteristics of population are,

- The total number sample for the study was 60.
- The age wise categorization of orthopedic patients who belong to the age group 20-79 years from the 60 samples selected for the study. From this table it is evident that 7(11.66%) of samples are of 20-29 years, 10(16.6%) are of 30-39 years, 4(6.66%) are of 40-49 years, 12(20%) are of 50-59 years, 15(25%) are of 60-69 years and 10 (16.6%) are belong to 70-79 years.
- Majority of sample were male 60% and only 40% of sample were female. On other hand none of the samples belongs to transsexual and transgender.
- Majority (75%) of samples was having lower extremity fracture and others (25%) belong to upper extremity fracture.
- Majority of orthopedic patients shows the heart rate 70-79 beat per minute (43.3%). Lowest heart rate shows in 60-69 beat per minute (6.66%).
- Majority of orthopedic patients show systolic blood pressure show in the interval 130-140mmhg (71.6%), in the interval of 110-120mmhg (18.33%) the interval of 150-160mmhg (10%) the lowest value shown in the interval of 90-100mmhg (0%)
- Majority of orthopedic patients show the diastolic blood pressure in the interval 70-80mmhg (60%), in the interval of 90-100mmhg (40%) none of the patients shows blood pressure in between 50-60mmhg and 110-120mmhg.
- Majority of orthopedic patients show mild pain (85%) and moderate pain (15%)

Section B: Effect of music therapy on pain, heart rate and blood pressure of orthopedic patients

Pain

- The mean pre-test value with mean pain is 0.27 with a pretest standard deviation of 0.072 and the mean post-test value of pain is 0.19 with a post-test standard deviation of 0.071. The calculated 't' value of pain is 16.21. Which is statistically significant at 0.05 levels.

Heart rate

- The mean pre-test value with means heart rate is 78.96 with a pre-test standard deviation 7.69 and the mean post-test value of heart rate is 77.83 with a post-test standard deviation 6.83. The calculated 't' value of heart rate is 7.88. which is statistically significant at 0.05 levels.
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Blood pressure

- The mean pre-test value of systolic blood pressure is 132.5 with a standard deviation 9.32 and mean post-test value of systolic blood pressure is 126.6 with a standard deviation of 8.36. The calculated 't' value of systolic pressure is 9.76. The mean pre-test value of diastolic blood pressure is 82 with a pre-test standard deviation 7.98 and mean post-test value of diastolic pressure is 77.83 with a standard deviation of 7.38. The calculated 't' value of diastolic pressure is 6.05.

Section C : Association between pretest and posttest parameters and selected demographic data.

- The chi square value of pain in associated with age was 27.92 with a table value of 11.07. Hence it was statistically not significant and it implies that there was no significant association between age and pain of orthopedic patients. Hence the research hypothesis H2 was rejected.
- The association of age between heart rate was 28.68 and the table value was 24.99. Hence it was statistically not significant and it implies that there was no significant association between age of orthopedic patients and their heart rate. Hence research hypothesis H2 was rejected
- The systolic blood pressure in association with age was 10.33 and calculated value was 18.30. Hence it was statistically is significant and it implies there was association between the systolic blood pressure and their age. Hence the research hypothesis H2 was accepted

The chi square value for diastolic blood pressure in association with age was 8.48 and the table value was 11.07. Hence it was statistically significant and it implies that there was significant association between diastolic blood pressure and their age. Hence the research hypothesis H2 was accepted.

DISCUSSION

Description based on demographic variables, research variables and samples

- The age wise categorization of orthopedic patients who belong to the age group 20-79 years from the 60 samples selected for the study. From this table it is evident that 7(11.66%) of samples are of 20-29 years, 10(16.6%) are of 30-39 years, 4(6.66%) are of 40-49 years, 12(20%) are of 50-59 years, 15(25%) are of 60-69 years and 10 (16.6%) are belong to 70-79 years.
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Section B: Effect of music therapy on pain, heart rate and blood pressure of orthopedic patients

- The mean pre-test value with mean pain is 0.27 with a pretest standard deviation of 0.072 and the mean post-test value of pain is 0.19 with a post-test standard deviation of 0.071. The calculated 't' value of pain is 16.21. Which is statistically significant at 0.05 levels.
- The mean pre-test value with means heart rate is 78.96 with a pre-test standard deviation 7.69 and the mean post-test value of heart rate is 77.83 with a post-test standard deviation 6.83. The calculated 't' value of heart rate is 7.88. which is statistically significant at 0.05 levels.
- The mean pre-test value of systolic blood pressure is 132.5 with a standard deviation 9.32 and mean post-test value of systolic blood pressure is 126.6 with a standard deviation of 8.36. The calculated 't' value of systolic pressure is 9.76. The mean pre-test value of diastolic blood pressure is 82 with a pre-test standard deviation 7.98 and mean post-test value of diastolic pressure is 77.83 with a standard deviation of 7.38. The calculated 't' value of diastolic pressure

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