USE OF SOOTHING MUSIC ON PAIN ALLEVIATION DURING INTRAMUSCULAR INJECTION IN CHILDREN

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Abstracts: **Background:** - Music has been proven to be very effective as a means of distraction for paediatric patients receiving intramuscular injection. **Material and method**:-In this study 100 participants age 2 to 7 years were patients of the paediatric Clinic at GG Hospitals of Jamnagar. **Result**:-This study was conducted in the immunology room in paediatric department. Wong Baker's Face pain scale is used to note the intensity of pain perceived by child. Study shows there is a significant (<0.05) decrease in pain perception in study group as compare to control group. **Conclusion**:-Music is effective in reducing anxiety and pain in children undergoing invasive immunization

Key Words: music therapy, paediatric , children, Immunization.

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Introduction:

The International Association for the Study of Pain defines pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage." [1]. This wide spectrum of sensitivity to pain makes it very difficult to measure and develop effective pain management strategies. Chen,[2] propose that actively listening to music in a structured fashion may yield a cognitive strategy that alters the perception of pain by involving attention-distraction, emotion, imagery, catharsis, and relaxation. Their research indicates that music has attributes that are very useful for developing effective pain management skills [3]. Live music has been proven to be very effective as a means of distraction for paediatric patients receiving venopuncture intravenous starts, and heel sticks.[5] Malone conducted a study that focused specifically on studying the effects of live music on the distress of paediatric patients receiving venopunctures, intravenous starts, and heel sticks. Results of the study indicated that all age groups appear to benefit from the live music as an effective method of distraction. Research indicates that music has two attributes that are very useful for developing effective pain management skills: an attention-distraction dimension and an affect dimension [4] .It is a common belief that typical health care environments do not have the financial capabilities or time availability to allow music therapy interventions to facilitate medical procedures, and yet there is a growing need to find practical methods of pain management for paediatric acute pain.

This study is unique in that it works within the current structure of the health care environment of the GG hospital Jamnagar, Children between the ages of 0 to 10 years.

Frequently receive immunological injections whenever they visit doctor. For younger children a visit to the doctor can be associated with getting a painful shot. The purpose of this project is to determine if music can facilitate the pain management strategies that are currently being used during injections and whether the addition of music can further decrease paediatric pain perception during the procedure

Material and Methods:

After obtaining permission from IEC, study was conducted by physiology Shree M.P. Shah Government medical college during 2015-16 we have conducted this study.

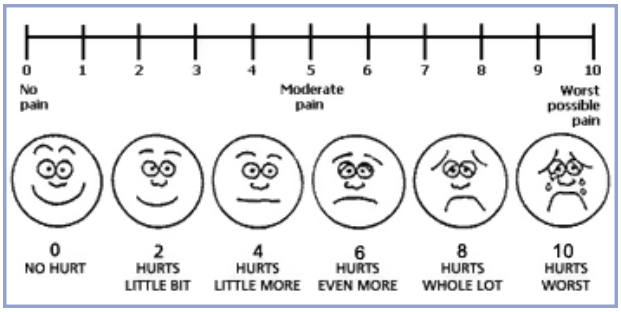
-All of the 100 participants between age 2 to 7 years were patients of the paediatric Clinic at GG Hospitals of Jamnagar. This study was conducted in the immunology room in paediatric department. In Group I & II age and sex match children will take.

- Group I - 50 children randomly selected to receive music therapy. (Experimental group)
- Group II - 50 children randomly selected to not receive music therapy (control group)

- Informed & written consent will be taken from their parents.
- Parents will be allowed to read patient information sheet prior to study & will be given opportunity to ask the questions
- Inclusion Criteria: Those children (2 to 7 years) that had physician's orders to receive immunology injection.
- Exclusion criteria: Those children who are medically ill & come to visit paediatric clinic apart from immunization.

We played tune of "jingle bells, jingle bells Jingle all the way" in the mobile phone, in front of children of experimental group in immunization room which start immediately after child arrived and then after 5 minute we start procedure. Wong Baker's Face pain scale is used to note the intensity of pain perceived by child in both the study group.
- Mean and standard deviation calculated.
- Statistical test to be used: unpaired "t-test".

Wong Baker's Face pain scale



Result:

Table 1. General characteristics of study groups

	Study group (N- 50)	Control (N- 50)
Age (years)	3.60 ± 1.484	3.72 ± 1.485
Sex ratio (Male/Female)	25/25	25/25

Table 1 show that there is no significant difference in age and sex in study group & control group

Table 2: Frequency of children in both groups in Wong Baker's Face pain scale

Face pain scale	Stud group (N=50)	Controls (N=50)
0	1	0
2	7	1
4	21	4
6	17	23
8	3	9
10	1	13

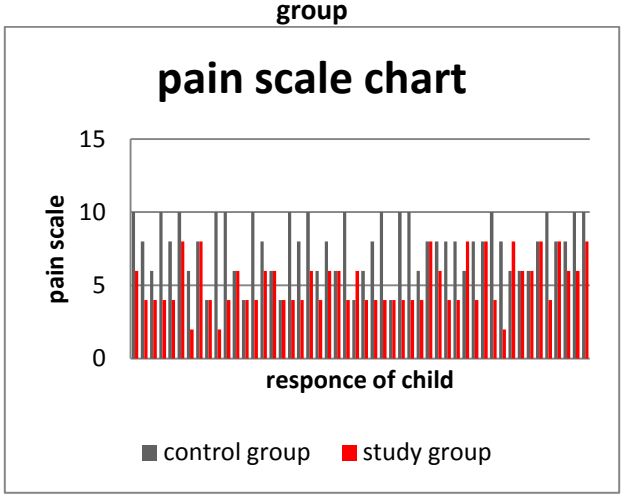
Table 3. Comparison of Wong Baker's Face pain scale in study and controls (values are mean ±SD)

	Study group (N- 50)	Control (N- 50)
Wong Baker's Face pain scale(out of 10)	5.12 ± 1.72***	7.76 ± 1.96

***P<0.005

Table 3 shows that there is a significant (<0.05) decrease in pain perception in study group as compare to control group.

Graph- 1: pain scale chart of study and control group



Discussion:

The addition of a music therapy technique that has the potential to be generalized

appears to be effective in facilitating the reduction of paediatric distress during immunology injections. Independent t test is applied in this study, value of independent t-test is 5.679 the p value is 0.0005, so the test result is highly significant, it proves that in children in the study group has a significant reduction in pain perception as compare to control group.

Similar study was conducted by Evans[7].Evans shows that intervention of music therapy is very much of supportive over intervention in paediatric patients. So Evan's study is completely match with over study.

Study was conducted by Avers[8] also supported the use of music therapy as an integral part of treating the paediatric population. So Avers' study shows similar result as compare to our study.

Similar study was conducted by Berlin[9]. Berlin shows positive impact of music therapy during invasive procedure in paediatric population. So Berlin's study is completely tune with over study.

Similar study was conducted by Dileo[10]. He shows that intervention of music therapy is effective means of supportive intervention in paediatric patients. So Dileo's study is completely tuned with over study.

Wolworth[11] present an analysis of cost effective program that specially focused on using music therapy for procedural support that is tune with over present study.

Conclusion:

Music is effective in reducing anxiety and pain in children undergoing medical and dental procedures. Music can be considered an adjunctive therapy in clinical situations that produce pain or anxiety

Limitation of study:

In over study, tolerance of pain of different child might be differing from each other that might me the limitation of this study.

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