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ROLE OF MUSIC THERAPY IN THE FIELD OF MEDICINE

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ABSTRACT

Music therapy therapy needs a variety of methods of allied fields to contribute scientific findings, including mathematics, natural sciences, behavioral and social sciences, as well as the arts. Neuroscientific research in music is giving rise to new ideas, perspectives, and methods; they seem to be promising prospects for a possible contribution to a theoretical and empirical scientific foundation for music therapy. The aim of our study is to assess the knowledge about the role of music therapy and its effects in the field of medicine. For this purpose, 100 participants were made to fill the questionnaire through an online survey link and the responses were analysed through descriptive statistics using SPSS software. The results are strongly positive and offer support for the use of music therapy in treating patients. It is also known that participation in music therapy significantly decreases post meal related anxiety and distress in comparison to standard post meal support therapy. This study provides support for the future funding of inpatient music therapy programs and contributes to the evidence base for the use of music therapy with this population.

Keywords: Music therapy; Medicine; Stress; Anxiety; Health

INTRODUCTION

Music is an art form, and cultural activity, whose medium is sound. Music is performed with a vast range of instruments and vocal techniques ranging from singing to rapping. In many cultures, music is an important part of people's way of life, as it plays a key role in religious rituals, rite of passage ceremonies (e.g., graduation and marriage), social activities (e.g., dancing) and cultural activities ranging from amateur karaoke singing to playing in an amateur funk band or singing in a community choir. Music also plays an important role in the medical field by treating patients medical problems.

Participation in music therapy can improve the quality of life, interpersonal relationships and social skills of people with mental illness **[1-3]**. Music therapy can help promote self-determination and collaboration with patients through focusing on strengths and resource-oriented practice **[4]**. The therapeutic effects of music are being recognised increasingly in the field of rehabilitation medicine. More music therapists are being employed in physical medicine and rehabilitation centres, with the goal of using music therapy services to assist in the physical recovery and health maintenance of clients **[5]**. The role of music in 90 medicine is primarily supportive and palliative. The supportive role of music has a natural field of application in palliative medicine and terminal care **[6-11]**. Music is well tolerated, inexpensive, with good compliance and few side effects **[12]**. The more recent ascendance of holistic medicine is creating a change in the attitude held by practitioners and the public to a position of greater acceptance of music therapy as a healing mode **[13]**. Use of music therapy to promote feelings of empowerment and equality are arguably expressly important in inpatient mental health settings that may otherwise provide little opportunity for self-determination **[14, 15]**. Music therapy may offer motivation for recovery from eating disorders, distraction from negative thoughts and feelings, a sense of autonomy and creative expression. Music also plays an important role in sleep and sleep patterns **[16]**.

Music therapy may offer motivation for recovery from eating disorders, distraction from negative thoughts and feelings, a sense of autonomy and creative expression. Case studies derived from patient experiences have described feelings of renewed self confidence and empowerment through participation in music therapy. In a study it is known that, Participants' anxiety decreased significantly pre-post the music therapy group compared

with standard post meal support therapy **[17]**. According to Dr. Daniel Levitin, "Singing and instrumental activities might have helped our species to refine motor skills, paving the way for the development of the exquisitely fine muscle control required for vocal or signed speech." Evidence suggests that music therapy is beneficial for all individuals, both physically and mentally. Benefits of music therapy include improved heart rate, reduced anxiety, stimulation of the brain, and improved learning.

Music therapy and music therapy research currently represent heterogeneous but growing fields. In their clinical work, music therapists experience music as an effective tool in the treatment of various illnesses. Despite this clinical observation, it is necessary in modern societies and current healthcare systems to prove the effective-ness and efficacy of psychological as well as medical treatments. The aim of our study is to assess the knowledge about the role of music therapy and its effects in the field of medicine.

MATERIALS & METHODS

A cross - sectional and a self structured questionnaire containing 15 questions was prepared and circulated to the general population through an online link. This was approved by the scientific review board. The sample size of the study is 100. The participants were within the age group of 18 - 30 years. The questionnaire included the basic demographic datas, such as age, gender, etc. The sampling method used was 'random sampling'. The statistics used to analyse the results was ANOVA using SPSS software. The results obtained from the survey assessed the knowledge of the participants about music therapy. The results of each output variable are represented through pie charts.

RESULTS & DISCUSSION

100 people participate in the survey from the age group of 18 - 30 years. Both males and females participated. From that, 35% were males and 65% were females.

Figure 1 represents that 47% of the participants listen to music for less than 2 hours in a day. 38% of the people listen for about 2-3 hours and 15% of the people listen to music for more than 3 hours a day. **Figure 2** represents that, for 90% of the people, music helps in stress reduction and for 10% of the people music rarely helps in stress reduction. **Figure 3** represents that, for 90% of the people, music helps in changing their mood and for 10% of the participants, music does not help them to change their mood. **Figure 4** represents that, for 82% of the people responded that, undergoing music

therapy reduces patients pain and 18% of the participants disagree that undergoing music therapy does not reduce patients pain. **Figure 5** represents that 43% of the people said that music therapy improves respiration, lowers blood pressure, improves cardiac output, reduces heart rate and relaxes muscle tension. **Figure 6** shows that 88% of the people think that music therapy has an effect in treating patients medical problems and 12% of the participants think that music therapy does not have an effect in treating patients medical problems. **Figure 7** represents that 71% of the people think that music therapy is well established in India and 29% of the participants think that music therapy is not well established in India. **Figure 8** shows that 51% of the participants responded that they listen to music when they have any problem. 49% of the participants responded that they sometimes or rarely listen to music when they have any medical problems. **Figure 9** shows that, 84% participants said that Male listen to more music than female and 16% participants responded vice versa. **Figure 10** shows that 75% participants responded that undergoing music therapy is safe and 25% participants responded that undergoing music therapy is not safe. **Figure 11** shows that, 75% of the participants said that they would refer the patients to undergo music therapy and 25% of the participants would not refer the patients to undergo music therapy. **Figure 12** shows that, 78% of the participants said that music therapy improves anxiety and 22% of the participants said that undergoing music therapy will not improve anxiety.

The results are strongly positive and they offer support for using music therapy for treating patients. Music therapy is also used in treating many severe cases and medical issues **[18-21]**. In few studies, it is noted that music therapy decreases anxiety **[18-19]**. Whereas in our study, it shows that music therapy increases the anxiety level among the patients. It is well known that music is one of an engaging activity for young people and it is a motivating factor formation, participating in therapy **[20]**, which is similar to that of our study. It is likely that participants considered music therapy as a non threatening and familiar activity in confronting medical settings **[14, 15]**. Previous music therapy research has focused on participants' experiences of music therapy sessions during their recovery **[21, 22]**. Music therapy also plays an important role in physical and mental health **[23-24]**.

The current study has positive implications for the use of music therapy in reducing patients' medical problems. However, the

findings may be limited due to a number of factors. The research design was quasi - experimental and did not randomize participants to each condition. Participants were recruited from one site which may affect the generalizability of the results. The limitation of this study is that the sample size is less. A large number of participants, randomization to control and intervention conditions and recruitment from different hospital sites would benefit future research in this area.

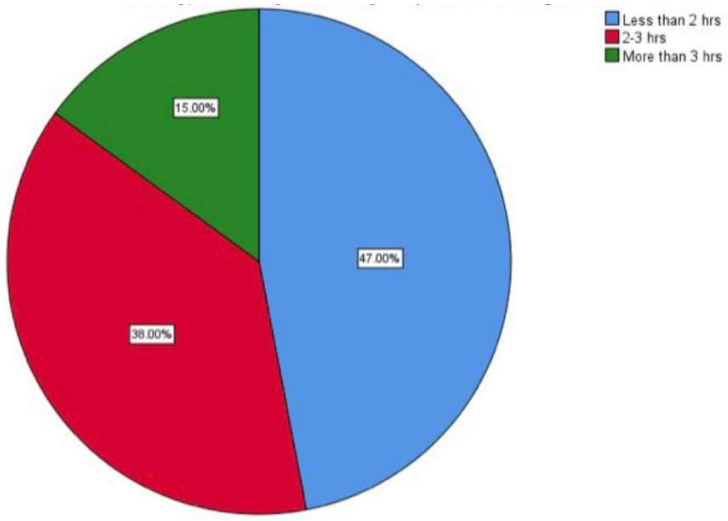

Figure 1: Pie chart representing the time spent by the participants in listening to music in a day. Majority 47% (blue) listens to music for less than two hours, 38% (red) listens for music between 2-3 hours and minority 15% (green) listens to music for more than 3 hours

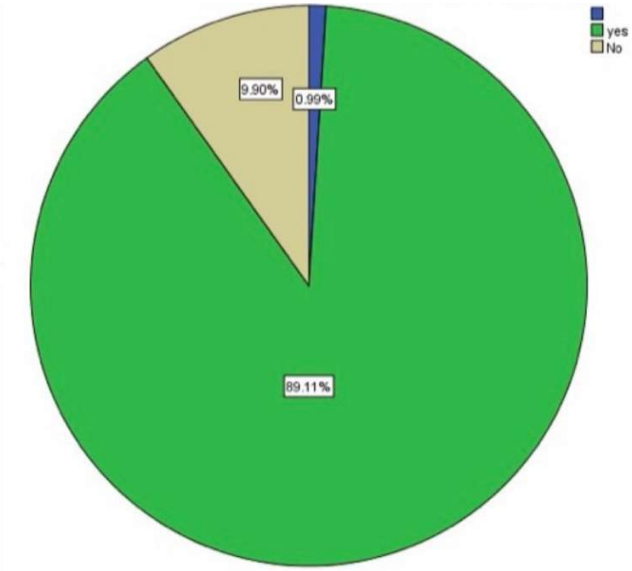

Figure 2: Pie chart representing participant's opinion on the role of music in stress reduction. Majority 90% (green) participant's agrees that listening to music helps in stress reduction and minority 10% (yellow) participant's disagrees that listening to music helps in stress reduction

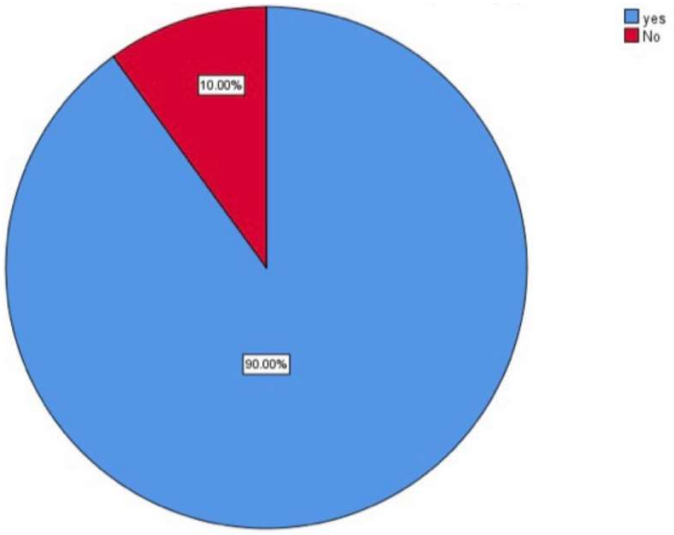

Figure 3: Pie chart representing participant's opinion in using music to change their mood. Majority 90% (blue) agrees that listening to music change their mood and minority 10% (red) disagrees that listening to music does not change their mood

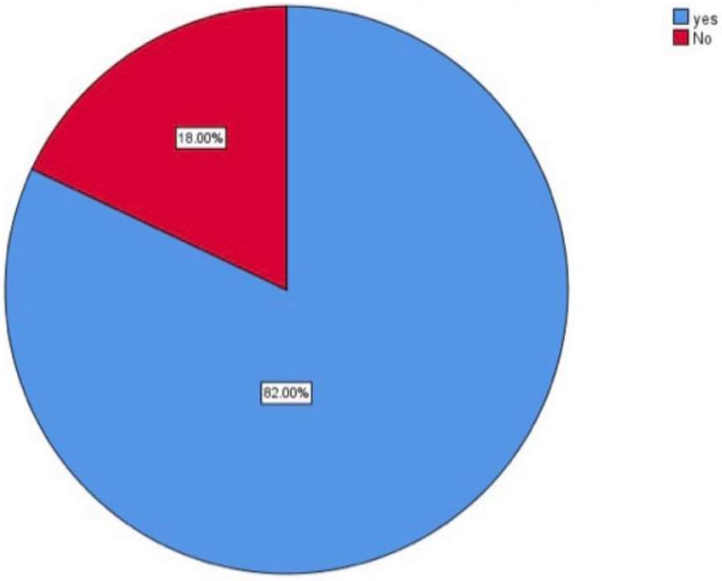

Figure 4: Pie chart representing participant's opinion on music therapy which reduces patients pain. Majority 82% (blue) agrees that music therapy reduces pain and minority 18% (red) disagrees that music therapy reduces patients pain

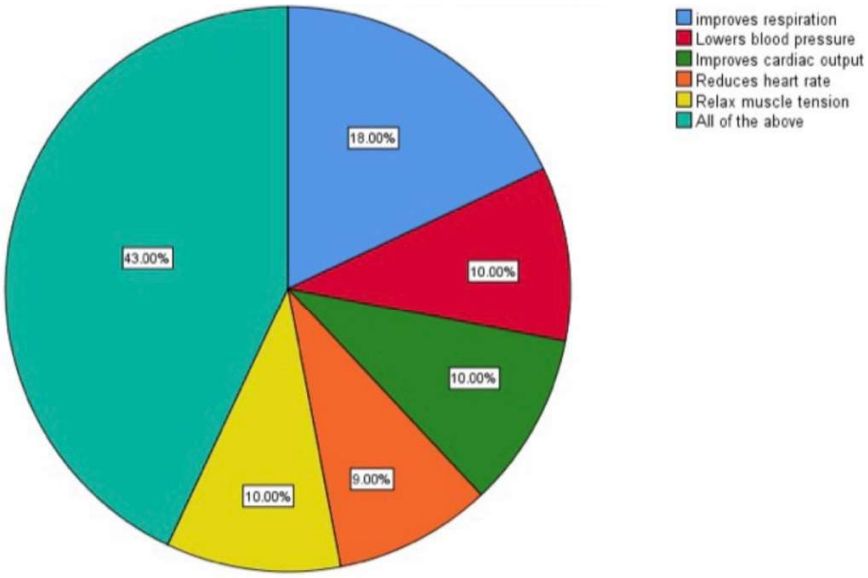

Figure 5: Pie chart representing participant's opinion on effects of music therapy. Majority 43% (bluish green) agrees that, undergoing music therapy improves respiration, lowers blood pressure, improves cardiac output, reduces heart rate and relaxes muscle tension

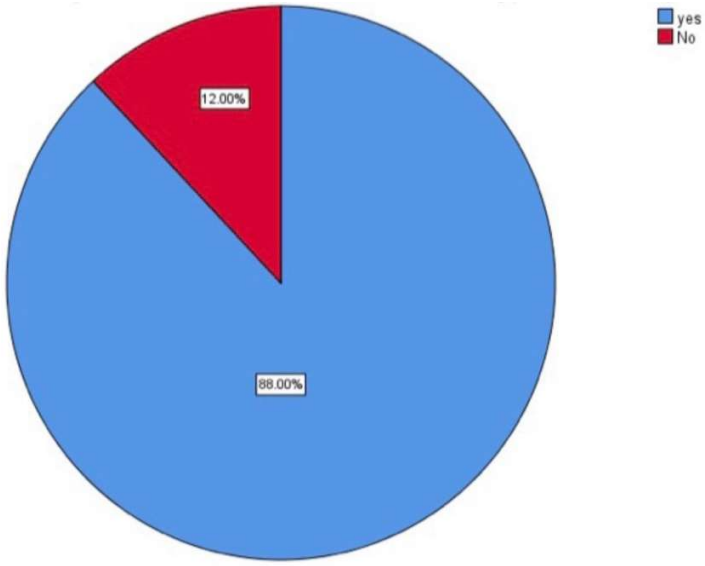

Figure 6: Pie chart representing participant's opinion about music therapy in treating patients medical problems. Majority 88% (blue) agrees and minority 12% (red) disagrees that music therapy reduces patients medical problems

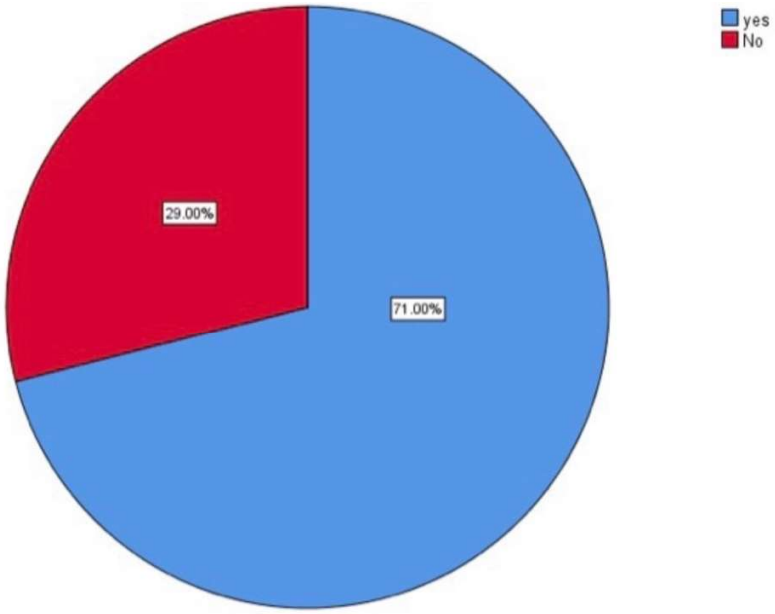

Figure 7: Pie chart representing participant's opinion about establishment of music therapy in India. Majority 71% (blue) says that music therapy is more established in India and minority 29% (red) says that music therapy is not well established in India

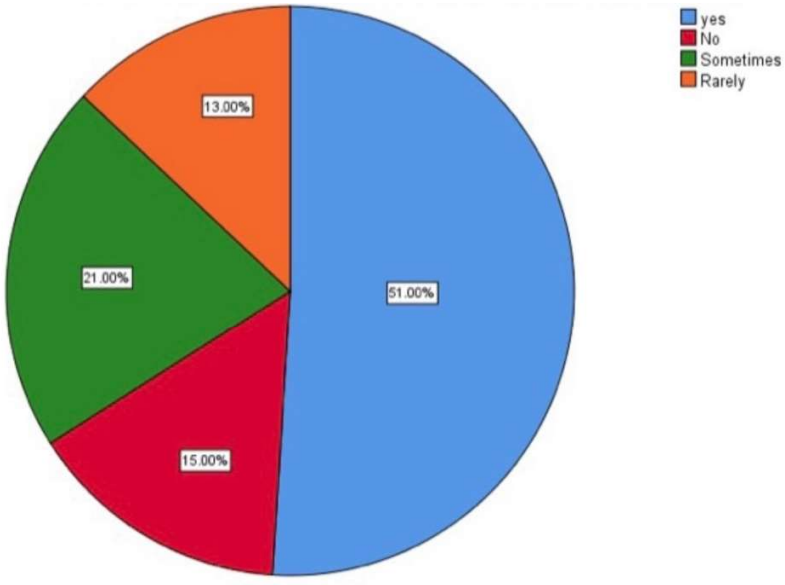

Figure 8: Pie chart representing participant's who listen to music when they have medical problems. Majority 51% (blue) says 'yes', 15% says (red) 'No', 21% (green) says 'sometimes', minority 13% (orange) says 'rarely'

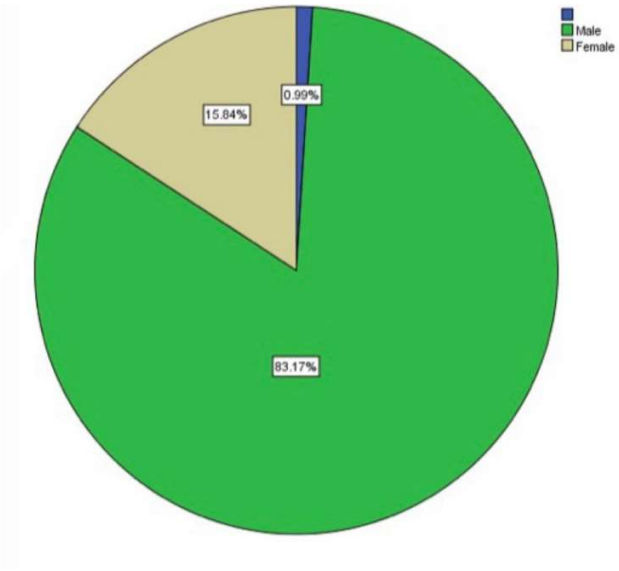

Figure 9: Pie chart representing participant's opinion on who will listen to more music. Majority 84% (green) says male listens to music and minority 17% (yellow) says female listens to more music

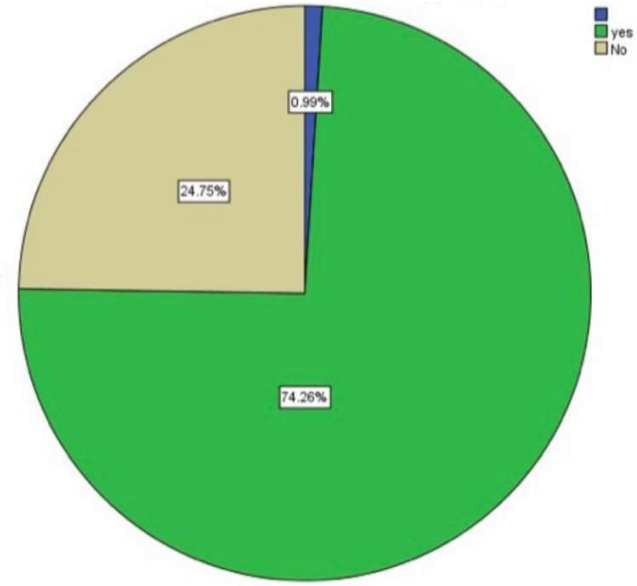

Figure 10: Pie chart representing participant's opinion whether music therapy is safe. Majority 75% (green) says that undergoing music therapy is safe and minority 25% (yellow) says that undergoing music therapy is not safe

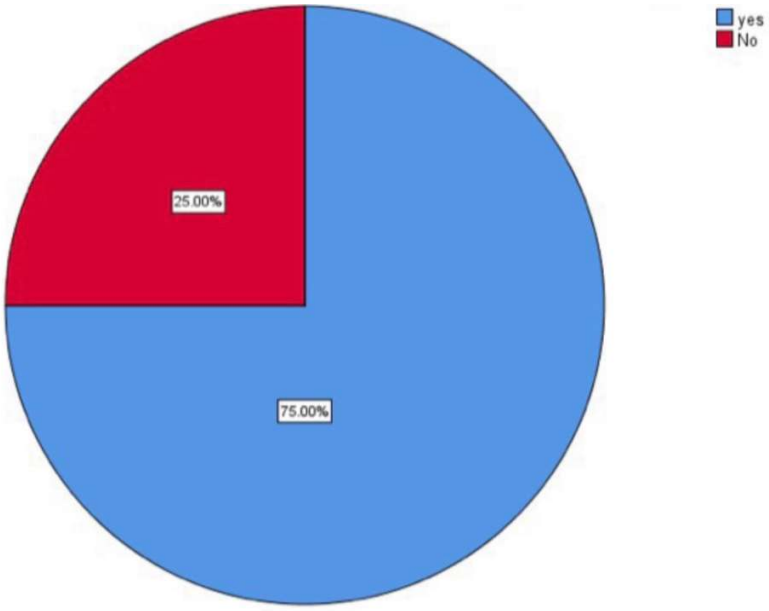

Figure 11: Pie chart representing participant's opinion whether they refer the patients to undergo music therapy. Majority 75% (blue) says that participants refer patients to undergo music therapy and minority 25% (red) says that they would not refer patients to undergo music therapy

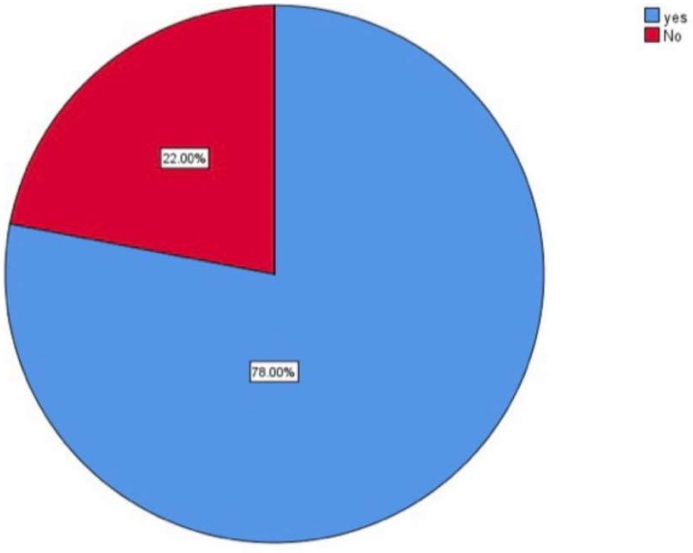

Figure 12: Pie chart representing participant's opinion about improving anxiety by undergoing music therapy. Majority 78% (blue) says that music therapy improves anxiety and minority 22% (red) says that music therapy does not improves anxiety

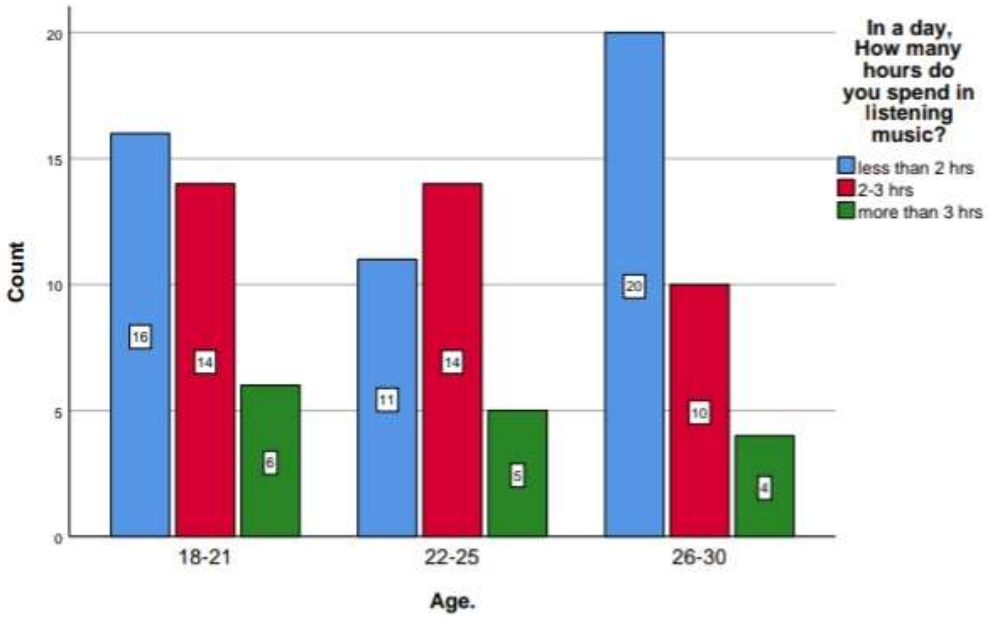

Figure 13: Bar graph representing association between age and time spent in listening to music. X-axis represents age and Y-axis represents the no of participants in the time spent in listening to music. Pearson's Chi square value - 3.363, p value - 0.499 (p>0.005) hence not significant

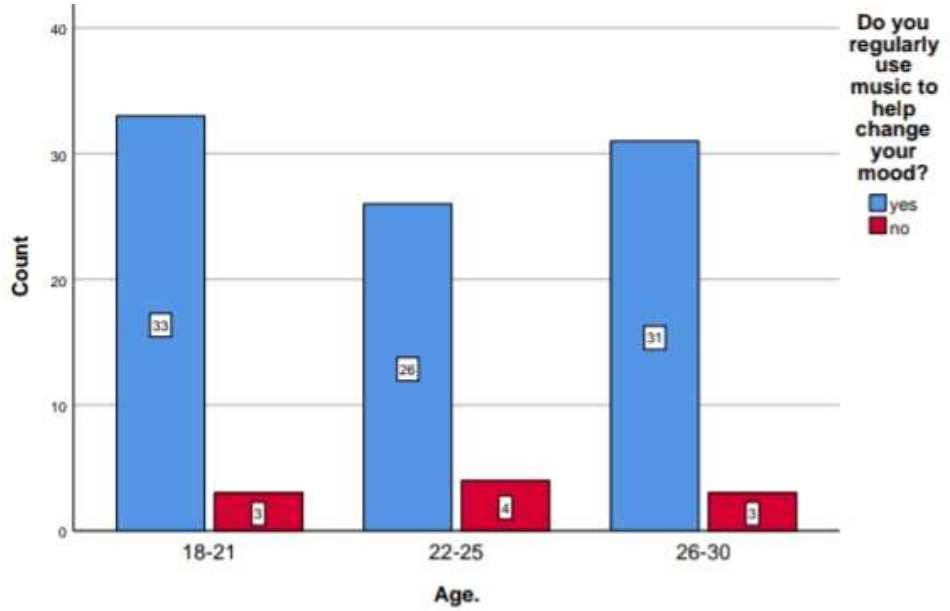

Figure 14: Bar graph representing association between age and role of music in mood change. X-axis represents age and Y-axis represents the population opinion on the role of music in mood change. Pearson's Chi square value - 0.534, p value - 0.766 (p>0.05) Though a majority of the participants use music to change their mood, it is not statistically significant.

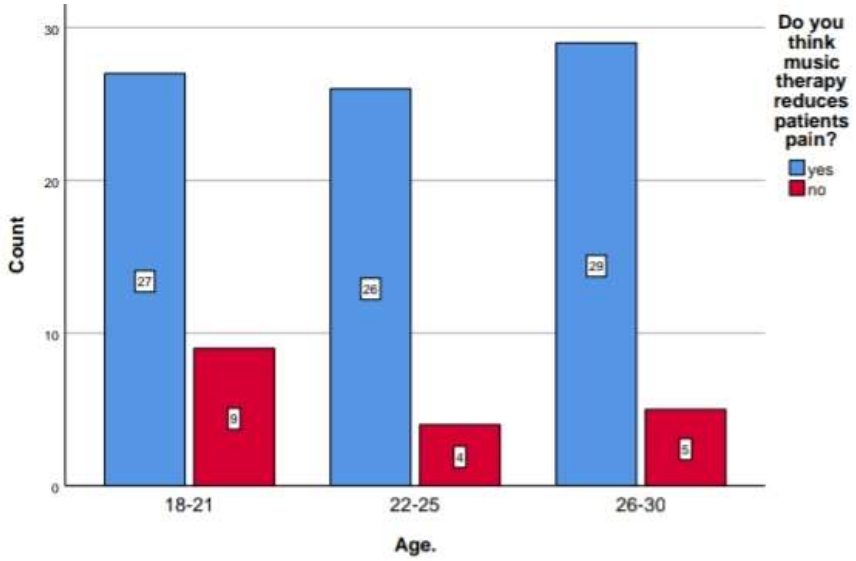

Figure 15: Bar graph representing association between age and role of music in reduction of pain. X-axis represents age and Y-axis represents population opinion on the role of music in reduction of pain. Pearson's Chi square value - 1.888, p value - 0.389 (p>0.05).Though a majority of the participants feel reduces patient's pain, it is not statistically significant.

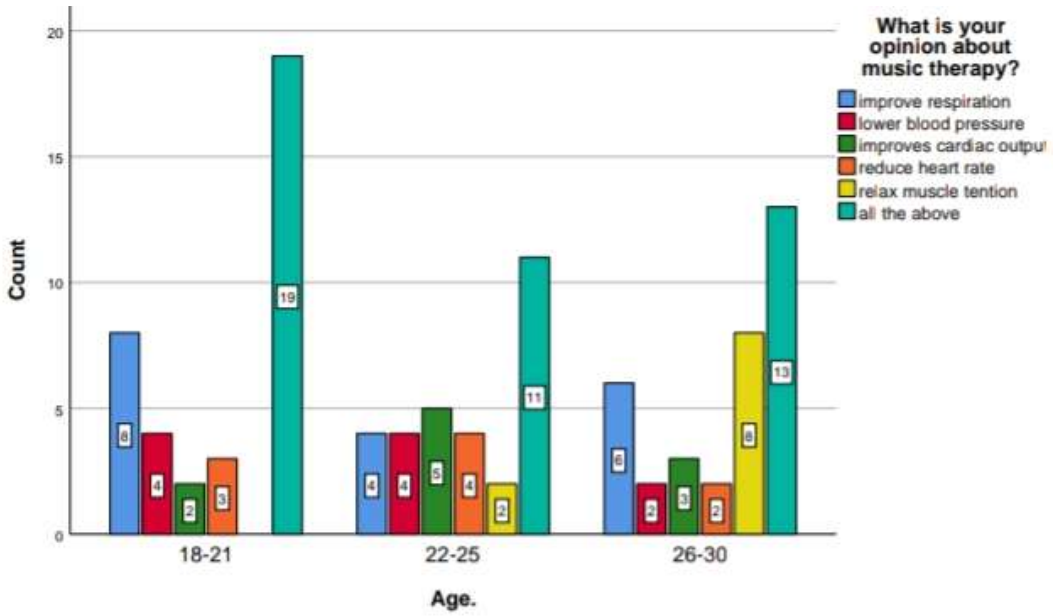

Figure 16: Bar graph representing association between age and population opinion about music therapy. X-axis represents age and Y-axis represents population opinion about music therapy. Pearson's Chi square value - 16.195, p value - 0.094 (p>0.05) hence not significant

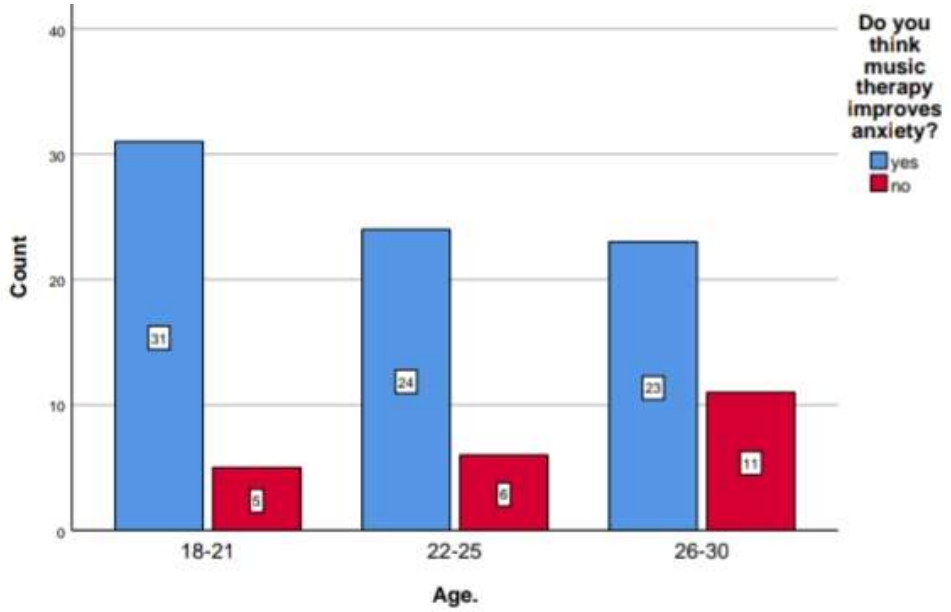

Figure 17: Bar graph representing association between age and role of music in anxiety level. X-axis represents age and Y-axis represents the population opinion on the role of music in anxiety level. Pearson's Chi square value - 3.574, p value - 0.167 (p>0.05) Though a majority of the participants think music to reduce anxiety, it is not statistically significant.

CONCLUSION

Music therapy can be used for facilitating movement and overall physical rehabilitation and motivating patients to cope up with the treatment. It can provide emotional support for clients and their families, and provide an outlet for expression of feelings. Music therapy has more positive results in treating and curing patients who have medical problems which includes both physical and mental health issues. Music therapy also has an impact in sleep patterns. It also offers an important role in the management of meal related anxiety for patients. In clinical observation the therapeutic use of music often seems adequate and beneficial, but the empirical knowledge in our field is rare and limited, but growing. This study provides support for the future funding of inpatient music therapy programs and contributes to the evidence base for the use of music therapy with this population.

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