

“Effectiveness of Music Therapy on anxiety among patients undergoing Upper Gastro Intestinal Endoscopy”

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ABSTRACT

The goal of the current study was to ascertain how well music therapy reduced anxiety in patients undergoing upper gastrointestinal (GI) endoscopies at specific Kanpur, Uttar Pradesh, hospitals. In a quasi-experimental pre-test and post-test design with a control group, there were 60 patients in total—30 in the experimental group and 30 in the control group. Data were collected using a socio-demographic questionnaire and the State-Trait Anxiety Inventory. The findings revealed that the majority of participants in both groups were females aged 30–40 years, with varying educational backgrounds and 1–3 months duration of GI symptoms. In the experimental group, pre-test assessment indicated moderate to severe anxiety (mean = 54.6), which significantly decreased to mild anxiety levels post-intervention (mean = 35.2, mean difference = 19.4, SD = 9.2, $t = 12.8$, $p < 0.001$). In contrast, the control group showed minimal change in anxiety levels (pre-test mean = 52.9, post-test mean = 50.1, $t = 1.5$, $p > 0.05$). Post-test comparison between the groups demonstrated a significant difference ($t = 7.2$, $p < 0.001$), confirming the effectiveness of music therapy. Further Pre-test anxiety ratings did not significantly correlate with demographic factors including age, gender, education level, or length of GI symptoms. The study concludes that music therapy is a safe, non-invasive, and cost-effective intervention that significantly reduces pre-procedural anxiety, improves patient comfort, and can be implemented as a complementary nursing strategy for patients undergoing upper GI endoscopy.

Key words: GI endoscopy, quasi-experimental study, control group, music therapy, anxiety.

INTRODUCTION

In 2004, a study was carried out in a local community-based hospital to determine the impact of music on the anxiety levels of Hong Chinese patients undergoing day procedures. A total of 113 patients who met the requirements were placed in either the intervention (music listening) or control

groups. The control groups consisted of 28 females and 27 males, whereas the music-listening group had 27 females and 31 males. The findings show that listening to music of one's own choosing can help lower physiological and psychological markers.

A frequent diagnostic and therapeutic procedure used to assess diseases of the

stomach, duodenum, and esophagus is upper gastrointestinal endoscopy. Even though the process is minimally invasive, many patients suffer from severe anxiety and psychological discomfort both before and during it. This can have an impact on compliance, the procedure's success, and the patient's overall pleasure. In this situation, anxiety may show up as higher blood pressure, heart rate, restlessness, and discomfort, all of which may have detrimental consequences on the body and mind.

Non-pharmacological therapies, like music therapy, have drawn interest recently as secure, affordable, and simple methods of lowering anxiety. Rhythmic, harmonic, and calming sounds are used in music therapy to encourage relaxation, lower stress levels, and favorably affect physiological and emotional reactions. According to studies, listening to relaxing music during medical operations might improve the patient's overall experience, reduce anxiety levels, and lessen sympathetic nervous system activity.

NEED FOR THE STUDY

Upper gastrointestinal endoscopy-related anxiety is a major worry for both patients and medical professionals. Excessive pre-

procedural anxiety can make it harder for patients to cooperate, lengthen the treatment, and increase the usage of sedatives, which may have negative side effects. Despite their widespread usage, pharmaceutical therapies may increase healthcare costs and are not always appropriate for all patients.

In a variety of therapeutic settings, such as surgery, critical care, and diagnostic procedures, music therapy has demonstrated promise as a low-cost, non-invasive technique to reduce anxiety. However, there is still a dearth of studies that particularly address its efficacy for patients having upper gastrointestinal endoscopies. Research in this field can offer evidence-based recommendations for incorporating music therapy into standard endoscopic care, enhancing patient comfort, lowering anxiety, and possibly improving procedural results. Therefore, it is crucial to investigate how well music therapy works as a supplemental strategy to lower procedural anxiety, encourage relaxation, and improve patient-centered treatment in gastrointestinal settings.

An estimated 60 to 70 million Americans suffer from gastrointestinal disorders each year. An estimated 4.6 million hospital admissions, 72 million ambulatory care

visits, and 236,000 GI disease-related deaths occurred in 2020.

STATEMENT OF THE PROBLEM

Effectiveness of Music Therapy on anxiety among patients undergoing Upper Gastro Intestinal Endoscopy at selected hospitals, Kanpur, UP.

OBJECTIVES

- To evaluate the anxiety levels of patients having upper GI endoscopy in the experimental and control groups before and after the test.
- To assess the impact of music therapy on anxiety in patients having upper gastrointestinal endoscopy.
- To determine the correlation between patients' anxiety levels and their pretest scores having an upper gastrointestinal endoscopy with the chosen demographic variable.

HYPOTHESIS

H1: Following music therapy, patients undergoing upper GI endoscopy in the experimental group will have significantly less anxiety than those in the control group.

H2: Patients undergoing GI endoscopy will have a substantial correlation between their

chosen demographic characteristics and their pretest score on anxiety.

RESEARCH METHODOLOGY

Research Methods: The current study employed a quantitative method.

Research Design: The current study employed a quasi-experimental pretest-posttest design with a control group.

Variable

Demographic Variables: The variables used for the present study are following; age, gender, education, duration of onset of GI symptoms.

Independent Variable – The independent variable in this investigation was music therapy.

Dependent Variable- In this study anxiety was the dependent variable

Setting: Setting of the present study was Rama Hospital and research center.

Population: population for the present study was Patients undergoing upper GI endoscopy.

Inclusion Criteria:

Patients undergoing upper GI endoscopy;

- In the age group 20-70 yrs.
- Both gender.
- Upper gastrointestinal endoscopy for the first time.
- Patients who are open to taking part in this research. .

Exclusion Criteria

- Patients in critical condition.
- Hearing impairment.

Sample: The sample for the present study was Patients undergoing upper GI endoscopy at Rama Hospital.

Sample Size: The sample size for the present study was 60.

Sampling Technique: Convenient sampling technique was adopted for the present study.

Tools

Section A- self structured Socio-demographic questionnaire

Section B- modified State Trait Anxiety Inventory

RESULTS & FINDINGS

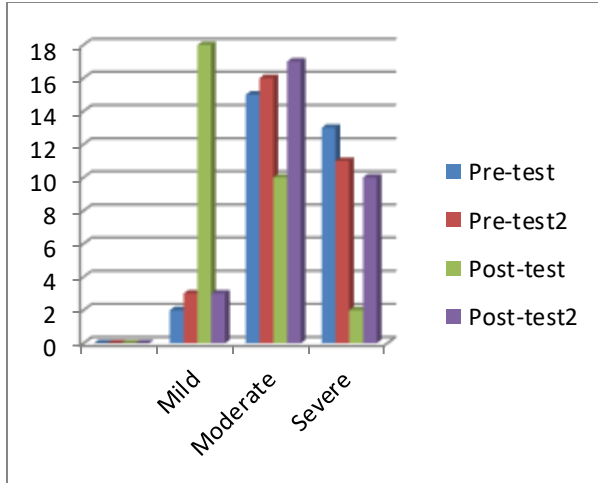
Section A:

The main conclusions of this investigation are;

- Most members of the experimental group (10) and control group (11) were between the ages of 30 and 40.
- In both the experimental (16) and control (17) groups, women made up the majority.
- Most samples have primary education in the control group (9) and secondary education (10) in the experimental group.
- The majority of the samples in experimental group (10) have 1-3 months duration of onset of GI symptoms and control group (11) have 1-3 months.

Section B

The impact of music therapy on patients' anxiety during upper gastrointestinal endoscopy.



According to the current study, individuals having upper gastrointestinal endoscopy found that music therapy significantly reduced their anxiety. The majority of patients in the experimental group exhibited moderate to severe anxiety, according to pre-test results; however, post-test results showed a significant decrease, with most patients indicating mild anxiety. Conversely, the control group's anxiety levels did not significantly change between the pre-test and the post-test. Anxiety was significantly ($p < 0.001$) lower in the experimental group than in the control group, according to statistical analysis utilizing paired and independent t-tests. These results imply that music therapy is a safe, non-invasive, and economical intervention that can greatly reduce pre-procedural anxiety, enhance patient comfort, and possibly improve cooperation during upper GI endoscopic operations. Hence the research Hypothesis

H1 was accepted and Null Hypothesis H01 was rejected.

Anxiety assessment	Mean	Mean difference	Standard deviation	Paired 't' value	'p' value
Pre-test anxiety (experimental)	54.6	19.4	9.2	29	<0.001S*
Post-test anxiety (experimental)	35.2		6.8		
Pre-test anxiety (Control Group)	52.9	2.8	8.7	29	>0.05NS
Post-test anxiety (Contr	50.1		8.5		

ol Group)						
Post-Test Comparison				58	7.2	<0.001S*

As per the present study, patients having upper gastrointestinal endoscopy found that music therapy significantly reduced their anxiety. With a mean difference of 19.4 (SD = 9.2, t = 12.8, p < 0.001), the experimental group's pre-test mean anxiety score of 54.6, which indicated moderate to severe anxiety, considerably dropped to 35.2 in the post-test. This shows that anxiety significantly decreased after the music therapy intervention. With a pre-test mean of 52.9 and a post-test mean of 50.1, a non-significant difference of 2.8 (SD = 8.7, t = 1.5, p > 0.05), the control group, on the other hand, showed minimal change, indicating that anxiety remained mostly unchanged in the absence of intervention.

Additionally, there was a significant difference (t = 7.2, p < 0.001) in the post-test comparison between the experimental and control groups. suggesting that music therapy was effective in lowering anxiety levels. All things considered, the results show that music therapy is a safe, non-pharmacological, and patient-friendly

intervention that greatly lowers pre-procedural anxiety, improves patient comfort, and can be suggested as an additional tactic in nursing practice for patients having upper GI endoscopies.

Section C

Association between certain demographic factors and the pre-test knowledge score.

Sl. No	Demographic variables	Chi-square value	Degree of Freedom	Tabulated value	Level of significance
1	Age	4.12	6	12.592	NS
2	Gender	0.87	2	5.991	NS
3	Education	3.65	6	12.592	NS
4	Duration of GI symptoms	2.98	3	7.815	NS

Note: - S* - Significant

NS – Not Significant

The results showed that, at the 0.05% level of significance, the chi-square value was not significant. As a result, study hypothesis H2 was rejected. It showed that some demographic characteristics and the pre-test knowledge score were unrelated.

NURSING IMPLICATIONS

Nursing Education

The results of this study highlight how crucial it is to incorporate non-pharmacological therapies, such as music therapy, into nursing education. It is important to teach nursing students how to use efficient, research-based relaxation strategies and how to gauge patients' anxiety levels throughout diagnostic procedures. Students can learn how to improve patient comfort, lessen procedural anxiety, and advance holistic treatment by integrating music therapy into the curriculum. Future nurses are better equipped to deliver patient-centered interventions that enhance psychological and physiological outcomes thanks to this kind of training.

Nursing Research

The need for additional nursing research on complementary therapies for anxiety management is highlighted by this study. Researchers can investigate how music therapy affects other patient populations, its use in other hospital settings, and its long-term consequences. Future research can produce evidence for incorporating music therapy into normal clinical practice, validate evaluation instruments, and aid in the development of standardized protocols.

The body of knowledge regarding holistic nursing interventions is expanded by such studies.

Nursing Administration

The results can be used by nurse administrators to create guidelines and procedures for integrating music therapy into procedural care. Endoscopy units can minimize patient anxiety and increase satisfaction by implementing structured programming, such as music sessions prior to procedures. In order to improve the standard of care and advance patient-centered services, administrators can also make sure that resources like playlists and audio devices are available and that staff members are educated to use these interventions.

Nursing Practice

Assessing patients' anxiety and using music therapy as a successful, non-invasive intervention are important tasks for nurses in clinical practice. Nurses can improve patient participation, lessen stress reactions, and improve overall experience by offering customized music sessions prior to and during treatments. Frequent use of music therapy can enhance conventional treatment,

lessen the need for pharmaceutical anxiolytics, and promote comprehensive care that attends to patients' psychological and physical requirements.

Recommendations:

- A comparative study between government and private hospitals can be conducted
- A study with a large sample size can be used to generalize the results.
- A study can be carried out to evaluate staff nurses' attitudes and knowledge about music therapy.
- Other methodologies, such as self-instructional modules (SIM), booklets, and VAT, can be used to perform a similar study.

CONCLUSION:

According to the study's findings, individuals having upper gastrointestinal endoscopy can effectively, safely, and non-invasively reduce their anxiety by using music therapy. The majority of patients had moderate to severe anxiety prior to the surgery, according to pre-test results, whereas patients in the experimental group who got music therapy had much lower anxiety levels after the treatment. The control group, on the other hand, had very little change, suggesting that the intervention

was particularly responsible for the observed decrease. Regardless of demographic factors including age, gender, education level, or length of GI symptoms, statistical analysis verified that music therapy significantly reduced anxiety scores. These results emphasize the value of using music therapy as an adjunctive strategy in nursing practice, enabling nurses to deliver comprehensive, patient-centered care that improves patient comfort, cooperation, and overall procedural experience.

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