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RESEARCH ARTICLE

EFFECTIVENESS OF NON-PHARMACOLOGICAL MANAGEMENT OF ANXIETY FOR PATIENTS GOING FOR GENERAL ANESTHESIA

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ABSTRACT

Background: Anesthesia is defined as a health practice that makes the patient unaware of their surroundings during a surgical procedure. The thought of undergoing general anesthesia frightens many people worldwide. There are some different types of therapies used for reducing the effect of anxiety before administration of the general anesthesia. Music is a non-pharmacological, inexpensive, and safe technique to reduce the anxiety before general anesthesia. **Objectives:** 1) To assess the effectiveness of non-pharmacological management of anxiety for patients going for general anaesthesia. 2) To determine the association between anxiety level and demographic variables of selected patients going for general anaesthesia. **Methods:** A quantitative research approach, pre-experimental research design was used to assess the effectiveness of non-pharmacological management of anxiety on 76 patients who were undergoing general anesthesia at selected hospitals of center part of Gujarat with non-probability convenient sampling technique using Pre Intrusive Thoughts Inventory (“The PITI”) scale. **Results:** In pre- test majority of the participants 38 (50%) were having moderate anxiety, 37(48.68%) were having mild anxiety and 1(1.32%) was having severe anxiety. The mean anxiety level of patients going for general anesthesia is 30.27 with mean percentage 37.37%, median 27, mode 21, range 42 and standard deviation was 11. In post-test majority of the participants 41 (53.9%) were having mild anxiety, 35(46.1%) were having moderate anxiety and no one was having severe anxiety. The mean anxiety level of patients going for general anesthesia is 28.47 with mean percentage 35.14%, median 24, mode 21, range 37 and standard deviation was 9.50. The mean anxiety score in post test (28.47) was lesser than the mean anxiety score in pre-test (30.27) with the mean difference of (1.8). And paired t calculated value is 4.547 *p<0.05 is significant at 0.05% level. **Conclusion:** It can be concluded that the non-pharmacological management is effective in reducing anxiety for patients going for general anesthesia.

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INTRODUCTION

“Man is not worried by real problems so much as by his imagined anxieties about real problems”

Epictetus (Ruhaiyem, 2017)

Anaesthesia is defined as a health practice that makes the patient unaware of their surroundings during a surgical procedure. Anaesthesia aims to relieve the patient's intolerable pain during the surgical procedures (Yi, 2012).

The thought of undergoing general anaesthesia frightens many people worldwide (Yi, 2012). To some, the thought of going under general anaesthesia strikes terror in their hearts more than the thought of the actual surgical experience. Some anxious patients might even choose to cancel their operations just because of the fears that they have of undergoing general anaesthesia (Yi, 2012). Varying levels of anxiety may generate due to factors like, cultural diversity, type of surgery, previous anaesthesia experience, and preoperative information (Maheshwari, 2015). There are some different types of therapies used for reducing the effect of anxiety before administration of the general anaesthesia. Aroma therapy, music, relaxation, guided imagery, meditation and massage has been used by nurses as part of a holistic approach to minimize preoperative anxiety (Cheng Hua Ni, 2013).

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Objectives of the study

- To assess the effectiveness of non-pharmacological management of anxiety for patients going for general anesthesia.
- To determine the association between anxiety level and demographic variables of selected patients going for general anesthesia.

Hypothesis

H₀ –There will no significant relationship between non-pharmacological management and anxiety level score at level of significance of 0.05.

MATERIALS AND METHODS

A quantitative research approach, pre-experimental, one group pre test-post test research design was used to evaluate the outcome of Music Therapy on the anxiety for patients going for general anesthesia. The present study was conducted at selected hospitals of Centre part of Gujarat. The samples are patients going for general anesthesia and are who fulfill inclusion criteria admitted at the selected hospitals of Centre part of Gujarat. The sample size of the present study consists of 76 patients going for general anesthesia selected by purposive sampling technique and is calculated by power analysis. The researcher has taken special music therapy training to design more impressive study and also have certificate for it. By following the trainer's guidance the researcher has prepared music which includes the different natural and instrumental music and it is constant throughout the whole research study. The tool used for assessing the anxiety is Pre Intrusive Thoughts Inventory (PITI) and the reliability measure through Cronbach's alpha method and the value is 0.96. After an extensive review of literature and discussion with experts the Pre Intrusive Thoughts Inventory (PITI) scale was used to assess the anxiety level and validated by experts.

The tool consists of two sections

Section – A: This section includes assessing Socio-demographic variables age, gender, family income, no. of family members, type of surgery, and days of hospital stay.

Section– B: This section includes the Pre Intrusive Thoughts Inventory (PITI) scale was used to assess the anxiety level containing 27 questions related to the anxiety. Prior to administration of tool consent was taken from the patients. Than pre-test was conducted and after the administration of the music therapy with using the head sets the post-test was conducted. Ethical clearance will be obtained from the institution and formal administrative permission will be obtained from concerned hospital authorities. The data was analyzed by statistical package for social sciences (SPSS). Appropriate descriptive and inferential statistics were used to analyze data as per purpose of the study.

RESULTS

Table-1 gives a description of classification of respondent's by age, gender, education, number of family members, monthly income, previous experience of surgery, name of surgery and number of days of hospitality.

Table-2 Illustrates that the mean anxiety score in post test (28.47) was lesser than the mean anxiety score in pre-test (30.27) with the mean difference of (1.8). The paired t value computed to determine effectiveness of non pharmacological management of anxiety for patients going for general anesthesia in selected hospitals. So, the research hypothesis was tested. Paired t calculated value is 4.547 * $p < 0.05$ is significant at 0.05% level. Hence null hypothesis H₀ was rejected. This indicates that the non-pharmacological management is effective in reducing anxiety for patients going for general anesthesia.

DISCUSSION

In pre- test majority of the participants 38 (50%) were having moderate anxiety, 37(48.68%) were having mild anxiety and 1(1.32%) was having severe anxiety, the mean anxiety level of patients going for general anesthesia is 30.27 with mean percentage 37.37%, median 27, mode 21, range 42 and standard deviation was 11. In post-test majority of the participants 41 (53.9%) were having mild anxiety, 35(46.1%) were having moderate anxiety and no one was having severe anxiety, the mean anxiety level of patients going for general anesthesia is 28.47 with mean percentage 35.14%, median 24, mode 21, range 37 and standard deviation was 9.50. So, comparing between the pre test and post test mean score mean difference is 1.8. Paired t-value is 4.457, which is less than the tabulated p-value. This score prove that the anxiety is reduced in post test. So, the music therapy as non-pharmacological management is effective.

The similar study conducted by Mary Kay Williams (2000) including 48 patients. The results of the pretest anxiety scores of the experimental group ranged from 23 to 69 with a mean of 38.7 and standard deviation (SD) of 10.3. Post-test anxiety scores ranged from 20 to 51 with a mean of 35.2 and SD of 8.6. The range of scores for the control group on the pretest anxiety was from 20 to 51 with a mean of 33.3, SD of 8.7. Post-test anxiety scores ranged from 20 to 44 with a mean of 31.1, SD 7.1. The results indicated that there was not a statistical difference in their levels of anxiety. There were no significant relationships found between the variables of the experimental and control groups. The study results indicate that music therapy may be beneficial in reducing patients' preoperative anxiety (Williams, 2000). To determine the association between anxiety level and demographic variables of selected patients going for general anesthesia. In this study the calculated chi square value was more than the chi square tabulated value at 0.05% level of significance. For demographic variables like age, gender and family monthly income which indicates the presence of significant association. Whereas it was found to have no significant association with demographic variables like number of family members, previous experience of surgery, name of the surgery and number of days of hospital stay as the chi square calculated value was less than the tabulated value. In the similar study Joan E. Tranmer shows the difference in the distribution of demographic characteristics between the 2 groups was not statistically significant. The control and music groups had the same mean age: 50.6 (SD 7.1) years versus 50.6 (SD 5.8) years. There was no significant difference in the sex distribution (15 men and 22 women in the control group and 22 men and 15 women in the music group) (<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.659.3446&rep=rep1&type=p>).

Table 1. Frequency and Percentage distribution of patients going for general anesthesia according to socio-demographic variables

Demographic variables	N=76	
	Frequency	Percentage
1.Age in years		
a.30 to 36 years	14	18.4%
b.37 to 43 years	29	38.2%
c.44 to 50 years	33	43.4%
2.Gender		
a.Male	35	46.1%
b.Female	41	53.9%
3.Education		
a.No formal education	10	13.2%
b.Primary education	27	35.5%
c.Secondary	23	30.3%
d.Higher secondary	12	15.8%
e.Graduate and above	4	5.3%
4.Number of family members		
a.1-3	12	15.8%
b.4-6	42	55.3%
c.7-9	15	19.7%
d.More than 9	7	9.2%
5.Monthly income		
a.< 10000	2	2.6%
b.10000– 20000	29	38.2%
c.20001 – 30000	28	36.8%
d.>30000	17	22.4%
6.Previous experience of surgery		
a.Yes	30	39.5%
b.No	46	60.5%
7.Name of surgery		
a.Elated	30	39.5%
b.Cardiac related	1	1.3%
c.Gynecological	27	35.5%
d.Ortho related	5	6.6%
e.Other	13	17.1%
8.Number of days of hospital stay		
a.<15 days	67	88.2%
b.15 - 30 days	9	11.8%
c.> 30 days	0	0%

Table 2 Effectiveness of non pharmacological management of anxiety for patients going for general anesthesia

	Mean	Mean difference	SD	df	Paired 't' value	p value
Pre-test	30.27	1.8	11	73	4.547	<0.05
Post-test	28.47		9.50			

Hypothesis

H₀– There will no significant relationship between non-pharmacological management and anxiety level score at level of significance of 0.05. The mean anxiety score in post test (28.47) was lesser than the mean anxiety score in pre-test (30.27) with the mean difference of (1.8). The paired t value computed to determine effectiveness of non pharmacological management of anxiety for patients going for general anesthesia in selected hospitals. Paired t calculated value is 4.547 *p<0.05 is significant at 0.05% level. Hence null hypothesis H₀ was rejected.

Conclusion

After the detailed analysis, this study leads to following conclusions: The clients going for general anesthesia have higher level anxiety and effective non-pharmacological management like music therapy require to reduce anxiety. The t test shows that mean anxiety score in post test (28.47) was lesser than the mean anxiety score in pre-test (30.27) with the mean difference of (1.8). This indicates that the non-pharmacological management is effective in reducing anxiety for patients going for general anesthesia.

Nursing implications: The investigators has drawn the following implications from the studies which are of vital concern to the field of nursing practice, nursing education, nursing administration and nursing research.

- Nurses can guide patients and provide counseling regarding not to get anxious while general anesthesia or surgeries as it can only the process to reduce the discomfort.
- In routine nursing practice, the nurses can offer easy and safe music therapy as a non-pharmacological management to the patients going for general anesthesia can able to reduce the anxiety level of the patients.
- Nurses also can implement the therapy while different surgeries and procedures.
- Nurse shares knowledge about using non-pharmacological management instead of pharmacological management which can also cause adverse effect on health and recovery.
- Various seminars, skill training workshops can be conducted on reducing level of anxiety and different non-pharmacological management.
- Researching on the combination of two or more non-pharmacological technique which can be use as a

combination to reduce the anxiety can be more effective in reduction of anxiety.

Delimitations

- This study is limited to patients who are going for general anesthesia.
- This study is limited to Centre part of Gujarat.

Recommendations

Following are some suggested recommendations on the basis of the study:

- Having large sample size will strengthen the internal & external validity of research which can be further helpful for generalization of findings.
- A similar study can be replicated with comparative group. E.g., two different therapies or control and experimental group.
- A similar study can also be suggested to done with two different methods of non-pharmacological management.

Conflict of interest statement: None

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