IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 11, Issue 1 Ser. II (Jan. – Feb. 2022), PP 37-42
www.iosrjournals.org

A Study to assess the effectiveness of music therapy on the level of pain among post-operative patients at selected hospitals of Himachal pradesh.

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ABSTRACT
Music intervention has been defined as a controlled method for listening to music, making use of its physiological, psychological, and emotional impact on the individual during treatment for an illness or trauma. Music intervention is now used in a wide variety of medical setting. Post-operative pain is not just annoying or unpleasant. If it's not treated correctly, it can sometimes become chronic pain that lasts longer than three months and become more challenging to manage. The aim of the present study was reduce the pain among post-operative patients with the help of music therapy. ***Method*** *:This quasi experimental study was conducted on 60 post-operative patients selected by Non-probability purposive sampling technique. .The numeric rating scale was used to assess the effectiveness of music therapy on the level of pain among post-operative patients.* ***Result:*** *The finding of the study revealed that the pre-test and post-test pain score in experimental group was significance. The study revealed that there was significant reduction in pain after the administration of music therapy. In pre-test mean pain score in experimental group was 70.33% and post-test mean pain score in experimental group was 33%. There was reduction in pain score from 70.33% to 33%. The mean difference of pre-test and post-test in experimental group was 37.33%. Pre-test mean pain score in control group was 74% and post-test mean pain score in control group was 71.67%. There was reduction in pain score from 74% to 71.67% and the mean difference of pre-test and post-test in control group was 2.33%.*

KEYWORDS, music therapy, pain, post-operative patients

Date of Submission: 08-01-2022 Date of Acceptance: 22-01-2022

I. Background

Music intervention has been defined as a controlled method for listening to music, making use of its physiological, psychological, and emotional impact on the individual during treatment for an illness or trauma. Music intervention is now used in a wide variety of medical setting. Post-operative pain is not just annoying or unpleasant. If it's not treated correctly, it can sometimes become chronic pain that lasts longer than three months and become more challenging to manage. The title of the study was A study to assess the effectiveness of music therapy on the level of pain among post-operative patients at selected hospitals of Himachal Pradesh.

The aim of the present study was reduce the pain among post-operative patients with the help of music therapy. The objectives of the study was to assess the level of pain score among post-operative patients in experimental and control group ,to assess the effectiveness of Music Therapy on the level of pain among post-operative patients in experimental group and control group and to find out association between pain score and selected socio demographical and clinical variables.

The study was based on the concept that effectiveness of music therapy on level of post-operative pain. The investigator adopted the Modified Imogene King's Goal Attainment Theory (1981) as a base for developing the conceptual frame work. The study was conducted in selected wards of C.H.C Arki. The sample size was 60 patients. Non-probability purposive sampling technique was used. The numeric rating scale was used to assess the effectiveness of music therapy on the level of pain among post-operative patients. The data collected were tabulated and analyzed by descriptive and inferential statistics. The finding of the study revealed that the pre-test and post-test pain score in experimental group was significance. The study revealed that there was significant reduction in pain after the administration of music therapy. In pre-test mean pain score in experimental group was 70.33% and post-test mean pain score in experimental group was 33%. There was reduction in pain score from 70.33% to 33%. The mean difference of pre-test and post-test in experimental group was 37.33%. Pre-test mean pain score in control group was 74% and post-test mean pain score in control group was 71.67%. There was reduction in pain score from 74% to 71.67% and the mean difference of pre-test and post-test in control group was 2.33%. The researcher found that the music therapy was effective in post-operative pain but it need more nursing practice and supervision to improve the quality of care. The data collection was validated by

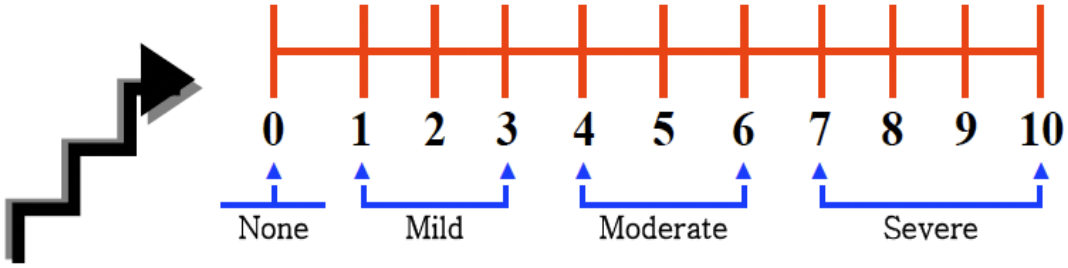
experts and was found to be valid. The paired t test was significant for experimental group. Discussion on findings were arranged, based on the objectives of the study.

II. Methods

The present study was quasi experimental study conducted on 60 post-operative patients selected by non-probability purposive sampling technique. Based on the pilot study sample size was calculated by using karls Pearson correlation coefficient formula,.study was conducted among 8 subjects and period was 1 week. Pilot study revealed the feasibility for the main study. The ethical approval for the study was obtained from the institutional ethical committee. Formal administrative approval was obtained from the principal ,MLM College of nursing Solan. A consent was taken from the post-operative patients regarding their willingness to participate in the research project. the purpose for carrying out research project were explained to the post-operative patients and assurance of confidentiality was given.

Data were collecting using standardize tool. Selected sample Demographic and clinical data sheet:- This section was comprise of demographic and clinical variables which includes Age, Gender, Diagnose, Type of surgery, Type of analgesic, frequency of analgesic.

A standard numerical pain rating scale was used to assess the pain among post-operative patients. 0-10 Numeric rating scale.



Scoring procedure:-
The pain scores are interpreted as:

- 0 = no pain
- 1–3 = mild pain
- 4–6 = moderate pain
- 7–10 = severe pain

No pain	Below 25%
Mild pain	26%-50%
Moderate pain	51%-75%
Severe pain	Above 75%

The intervention includes music therapy in which Indian Instrumental music was provided with the help of earphone to the experimental group for 40-50 min after taking the informed consent from the patients**.** Post-test was done immediately after giving music therapy. The pain level was recorded before and after giving the music therapy. However, in the control group, only routine care was provided to the control group. The intervention includes music therapy in which Indian Instrumental music was provided with the help of earphone to the experimental group for 40-50 min after taking the informed consent from the patients**.** Post-test was done immediately after giving music therapy. The pain level was recorded before and after giving the music therapy. However, in the control group, only routine care was provided to the control group.

Statistics

Data were analyzed using SPSS version 20. Data analysis was done by using descriptive and inferential statistics that is by calculating percentages, mean, median, SD and chi-square.

Results

[1]. A total of 60 post-operative patients completed the study. The data was collected from the 60 samples (30 in control group and 30 in experimental group).

[2]. Majority of post-operative patients were in age group age wise distribution majority of subjects 15(50.0%) were in 35 and above of age, in experimental group. In control group majority of subjects 10(33.3%) were in 35 and above of age.

[3]. In gender wise distribution 17(56.7%) were males and 13(43.3%) were female in experimental group. Inn control group 16(53.3%) were males, and 14(46.7%) were females. In type of surgery wise distribution most of the subjects, 15(50.0%) had cholecystectomy in experimental group. In control group most of subjects, 18(60.0%) had cholecystectomy in control group.

[4]. In type of analgesic wise distribution most of the subjects 15(50.0%) had taken opioids in experimental group. In control group most of the subjects 14(46.7%) had taken NSAIDS in control group.

[5]. In frequency wise distribution most of the subjects 20(66.7%) had taken frequency of analgesic once a day in experimental group. In control group most of the subjects 21(70.0%) had taken frequency of analgesic once a day.[table 1]

Frequency and percentage distribution of level of subject according to demographic and clinical variables

Demographic Option and clinical variables		Experimental Group (%)	Experimental group (F)	Control group (%)	Control group (F)
Age	19-25 years	13.3%	4	10.0%	3
	26-30 years	6.7%	2	26.7%	8
	31-35 years	30.0%	9	30.0%	9
	35 and above	50.0%	15	33.3%	10
Gender	Male	56.7%	17	53.3%	16
	Female	43.3%	13	46.7%	14
Type of surgery	Cholecystectomy	33.3%	10	20.0%	6
	Cholecystectomy	50.0%	15	60.0%	18
	Hysterectomy	16.7%	5	20.0%	6
	Others	0.0%	0	0.0%	0
Type of analgesic	NSAIDS	26.7%	8	46.7%	14
	Opioids	50.0%	15	10.0%	3
	Narcotics	23.3%	7	43.3%	13
Frequency of analgesic	Once a day	66.7%	20	70.0%	21
	Twice a day	33.3%	10	10	9
	Thrice a day	0.0%	0	0	0

In experimental group 19(63.3%) subjects had majority of severe level of pain in pretest. In control group 24(80%) subjects had majority of severe pain in pretest. After the administration of music therapy there was reduction in pain In post-test experimental group had no severe pain and control group 20(66.7%) had severe pain. [table 2]

frequency and percentage wise distribution of subject according to their level of pain score before the administration of music therapy in experimental and control group.

	PRE-TEST			
Score level	**Experimental group (f)**	**Experimental group (%)**	**Control group (f)**	**Control group (%)**
Severe(7-19)	19	63.3%	24	80%
Moderate(4-6)	12	40%	6	20%
Mild(1-3)	0	0%	0	0%
No pain(0)	0	0%	0	0%

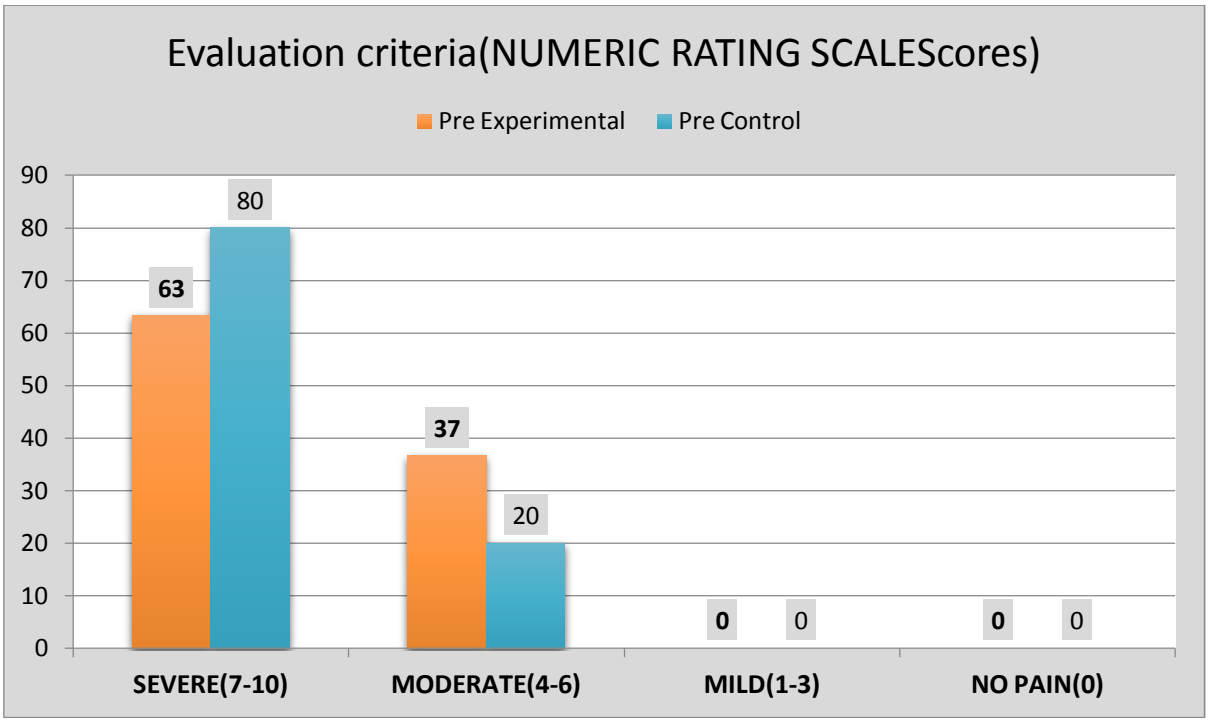


figure 2: Bar diagram showing pre-score level of pain

frequency and percentage wise distribution of subject according to their level of pain score after the administration of music therapy in experimental and control group.

Score level	Post-test			
	Experimental group	Experimental group	Control group	Control group
	(f)	(%)	(f)	(%)
Severe(7-19)	0	0%	20	66.7%
Moderate(4-6)	10	33.30%	10	33.3%
Mild(1-3)	0	0%	0	0%
No pain(0)	0	0%	0	0%

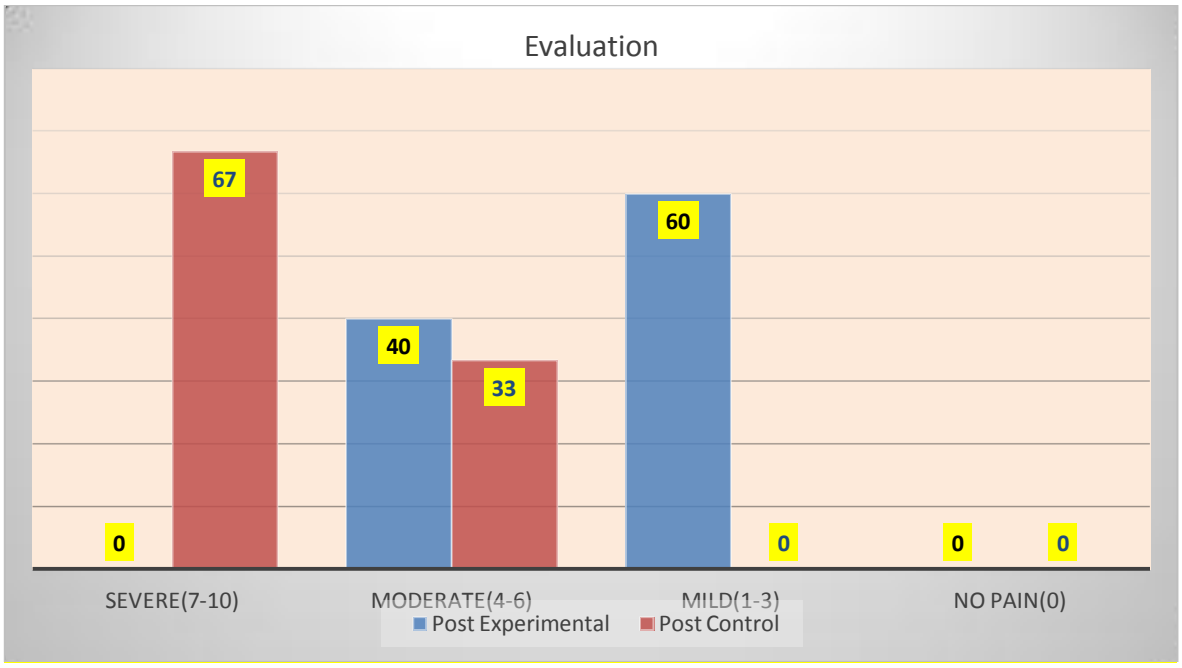


figure 2: Bar diagram showing post score level of pain

effectiveness of music therapy on the level of pain among post- operative patients in experimental group and control group.

		NUMERIC RATING SCALE SCORE						
		Pre-test			Post-test			
GROUP	**N**	**Mean**	**SD**	**Mean**	**Mean**	**SD**	**Mean**	**Difference %**
				%			**%**	
Experimental Group	30	7.03	0.928	70.33	3.30	0.015	33.00	37.33%
Control Group	30	7.40	0.968	74.00	7.17	1.117	71.67	2.33%

INTERPRETATION

Table 4.4 depicts that that pretest pain score in experimental group the mean value is 7.03 and mean % 70.33%. There was reduction in pain score from 70.33% to 33.00% and the mean difference of pre-test and post-test in experimental group is 37.33%. And pretest pain score in control group the mean value is 7.40 and mean % is 74.00%. There was reduction in pain score from 74.00% to 71.67% and the mean difference of pre-test and post-test in control group is 2.33%. Group 20(66.7%) had severe pain, 10(33.3%) subjects had moderate pain.

DISCUSSION

Findings revealed that that frequency and percentage wise distribution of level of pain score before the administration of music therapy in experimental group 19(63.3%) subjects had severe pain, 11(36.7%) had moderate pain. In control group 24(80%) had severe pain, 6(20%) subjects had moderate pain. These findings were supported by a study done by **John livingston. M (2015)**[52] conducted a study effectiveness of mozart music therapy on post-operative pain among children undergone surgery at selected hospital, Chennai. Results of the study shows that frequency and percentage wise distribution of level of pain score before the administration of music therapy and of pre-test level of pain in experimental group, 30(100%) were in moderate pain level & none of them were in no pain level, mild pain level & severe pain level. In control group, 30(100%) were in moderate pain level.

findings concluded that among 30 subjects pretest mean pain score in experimental group was 70.33% and post-test mean pain score in experimental group was 33%. There was reduction in pain score from 70.33% to 33% and the mean difference of pre-test and post-test in experimental group is 37.33%. In pretest mean pain score in control group was 74.00% and post-test mean pain score in control group was 71.67%. There was reduction in pain score from 74.00% to 71.67% and the mean difference of pre-test and post-test in experimental group is 2.33%. These findings were supported by a study done by **Gallagher LM, Gardner V, et al (2018)**[53] impact of music therapy on hospitalized patients post-elective orthopedic surgery shows the comparisons of raw survey score changes pre- to post across all days. those in the control group saw on average a 0.25 point improvement in their pain score, while those in the experimental group had their pain improve on average by more than 1.25 points (mean difference 1.03, $p < .001$).

LIMITATION

The sample size was limited to 60 patients who were equally divided into two group.This study was conducted among the participants from Civil hospital Arki.

CONCLUSION

The intervention was effective on the level of pain among post-operative patients, but it need more nursing practice and supervision to improve the quality of care.

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