Journal of Analytical & Bioanalytical Techniques

Bashir and Goswami, J Anal Bioanal Tech 2022, 13:6

Research Article Open Access

# Effectiveness of Guided Imagery Technique on pain among terminally Ill Patients at selected Hospitals of Jaipur

**Ms. Josfeena Bashir[1]* and Dr. Yogeshwar Puri Goswami[2]**

[1]*Ph.D. Scholar*
[2]*Professor cum Principal Geetanjali Nursing College, Udaipur*

## Abstract

Terminal illness is an incurable disease that cannot be adequately treated. Pain at terminal illness is significant such as cancer, late HIV disease, and degenerative diseases. The aim of study to evaluate the effectiveness of guided imagery technique regarding pain, among terminally ill patients. A quantitative experimental research approach with Quasi-experimental, non-equivalent control group design was used with 210 terminally ill patients (105 in experimental groups and 105 in control group) to evaluate the effectiveness of guided imagery technique regarding pain. Consecutive sampling technique was used. A socio-demographic data, pain assessment scale, was developed by the researcher to evaluate pain, among terminally ill patients. Researcher used Guided imagery technique as intervention for study. The guided imagery technique was found effective to reduce pain. In pain experimental group pre-test mean ± S.D was 5.68 ± 2.53, in follow up mean ± S.D was 1.94 ±1.36, mean difference was -3.7, t= 13.34, p=<.01, Significant, whereas in control group pre-test mean ± S.D was 5.28 ± 2.85, in follow up mean ± S.D was 4.40 ±2.22, mean difference was -.8, t=2.4, p=<.05, Significant. Hence, the result revealed that guided imagery technique was more effective to reduce the pain in experimental group as compared to control group.

**Keywords:** Effectiveness; Guided Imagery Technique; Pain; Terminally ill patients

## Introduction

Terminal illness is an incurable disease that cannot be adequately treated and is reasonably expected to result in the death of the patient within a short period of time. The term terminally illness is more commonly used for progressive diseases such as cancer or advanced heart disease than for trauma. A patient has such an illness may be referred to as a terminal patient, terminally ill or simply terminal. There is no standardized life expectancy for a patient to be considered terminal, although it is generally months or less [1].

Patients are nearing the end of their lives frequently feel severe pain. Unresolved pain has been highlighted as indicative of low quality end-of-life care. The data on that judgment is founded, however, is limited. Despite the fact that half of terminally ill patients were in moderate to severe pain, just 30% desired extra pain therapy from their primary-care physician. The number of patients in agony is still far too large. However, the figure is not as huge as it appears. Furthermore, most people are ready to put up with discomfort. Furthermore, pain is a consistent feeling across most terminal illnesses [2].

In the 1970s, Dr. David Bressler and Dr. Martin Rossman began establish support for guided imagery as an effective approach for the treatment of chronic pain, cancer, and other serious illnesses. Their work led them to co-found the Academy for Guided Imagery in 1989 [3].

## Need of study

Terminal illness is a medical term popularized in the 20th century to describe an active and malignant disease that cannot be cured or adequately treated and that is reasonably expected to result in the death of the patient. Life expectancy for terminal patients is a rough estimate given by the physician based on previous data and does not always reflect true longevity [4].

Pain at terminal illness is significant such as cancer, late HIV disease, degenerative diseases; most people equate pain at the end of life with terminal illness. Surveys of adult cancer patients with advanced disease—often performed in a hospice or palliative care setting indicate that the prevalence of pain ranges from 50% to 90%.[16] It is observed that 40-50% of those with pain from cancer report it to be severe while 25-30% describe it to be very severe [5].

There are many pharmacological and non-pharmacological treatments available for treatment of terminal illness. The pharmacological treatment have many adverse effects and develops tolerance which results in pain, among terminal ill patients but non-pharmacological treatment such as guided imagery technique is cheap, easy and free from any side effects. So, health personnel should educate terminally ill respondents regarding the benefits of non-pharmacological treatment.

## The objective of the study

1. To assess the level of Pain, among terminally ill patients admitted in selected hospitals at Jaipur.

2. To evaluate the effectiveness of guided imagery technique on Pain, among terminally ill patients admitted in selected hospitals at Jaipur.

3. To find out the association of Pain, with selected demographic variables of terminally ill patients admitted in selected hospitals at Jaipur.

***Corresponding author:** Josfeena Bashir, nursing tutor, Ph.D. Scholar, Udaipur, India; E-mail: jbashir@gmail.com

**Received:** 03-Jun-2022, Manuscript No. jabt-22-67074; **Editor assigned:** 05-Jun-2022, PreQC No. jabt-22-67074 (PQ); **Reviewed:** 19-Jun-2022, QC No. jabt-22-67074; **Revised:** 23-Jun-2022, Manuscript No. jabt-22-67074 (R); **Published:** 30-Jun-2022, DOI: 10.4172/2155-9872.1000465

**Citation:** Bashir J, Goswami YP (2022) Effectiveness of Guided Imagery Technique on pain among terminally Ill Patients at selected Hospitals of Jaipur. J Anal Bioanal Tech 10: 465.

## Aim of the study

To evaluate the effectiveness of guided imagery technique regarding pain, among terminally ill patients.

## Hypothesis

- **$H_0$1-** There is no statically significant relationship between the obtained score of pain, among terminally ill patients admitted at selected hospitals in Jaipur.
- **$H_0$2-** There is no statically significant relationship between effect of guided imagery technique and score obtained on level of pain, among terminally ill patients admitted at selected hospitals in Jaipur.
- **$H_0$3-** There is no statically significant relationship between pre-test score obtained on level of pain, with socio demographic variables among terminally ill patients admitted at selected hospital in Jaipur.

## Review of Literature

### The review of literature in this study is divided in following sections:

Section-A: Prevalence of terminal illness

Section-B: Pain in terminal illness

Section-C: Guided Imagery Technique on terminally illness

## Material and methods

A quantitative experimental research approach with Quasi-experimental, non-equivalent control group design was used which help the researcher to evaluate the effectiveness of guided imagery technique regarding pain. 216 terminally ill patients were selected with Consecutive sampling technique. The researcher consider three type of variable under study -Dependent Variable, Independent Variable, Attributed variable .the study was carried out at 3 selected hospitals of Jaipur. A socio-demographic data, pain assessment scale, was developed by the researcher to evaluate pain, among terminally ill patients. Socio-Demographic Performa consist of 14 items which include information of respondents about Age, Gender, Religion, Marital status, Habitat, Education qualification, Occupation, Family type, Monthly family income, Source of major income in family, Area of hospitalization, Duration of taking treatment, Types of disease and Level of dependency. Researcher was use standardized Numerical universal pain assessment scale. The scale was created by Mc Gill University's Dr. Ronald Melzack and Dr. Warren Torgerson [6].

Researcher used Guided imagery technique as intervention for study. Tool and Guided Imagery Technique was validated with 14 different subject expert Numerical pain assessment scale is a standard tool and reliability already established and tested by the valedictory authority. Physiopedia a nonprofit organization and worldwide physiotherapist community established reliability of numerical pain assessment scale with test – retest method r=.95. 97.

A formal permission was obtained from the concern authority. The data were collected from Dec. 2020 to July 2021. The researcher collected the data from 210 terminally ill patients. A total of 210 (105 in experimental group and 105 in control group) respondents were selected for the study. Researcher obtained informed written consent from each respondent. Ethical approval was obtained from the institutional ethical committee to conduct the study. Direct face to face interview was conducted and confidentiality of study was assured. The data was analyzed in the term of objectives of the study using descriptive and inferential statistic. A master sheet was prepared by the researcher as response is given by respondent. The effectiveness of Guided Imagery Technique was analyzed by using t-test for experimental and control group. The association between pre-test score of numerical pain assessment, with selected socio demographic variables was analyzed by chi square test for experimental and control group. Experimental and control group data were presented in table, graph and diagram.

## Result

**Section–1:** Distribution of the socio-demographic variables.

**Section–2:** Pre-test assessment of pain among terminally ill patient.

**Section–3:** Effectiveness of guided imagery technique on pain.

**Section–4:** Association between pre-test score of pain, with selected socio-demographic variables.

**SECTION–1: Distribution of the socio-demographic variables.** (Table 1)

**Table 1:** Distribution of the socio-demographic variables.

| Sl. No. | Socio-Demographic Variable | EXPERIMENTAL GROUP | | CONTROL FROUP | |
|---|---|---|---|---|---|
| | | Frequency (f) | Percentage (%) | Frequency (f) | Percentage (%) |
| 1 | **Age in Years** | | | | |
| | 21-30 Years | 25 | 23.8 | 26 | 24.8 |
| | 31-40 Years | 23 | 21.9 | 22 | 21.0 |
| | 41-50 Years | 23 | 21.9 | 19 | 18.1 |
| | 51-60 Years | 25 | 23.8 | 26 | 24.8 |
| | Above 60 Years | 09 | 8.60 | 12 | 11.4 |
| 2 | **Gender** | | | | |
| | Male | 55 | 52.4 | 58 | 55.2 |
| | Female | 50 | 47.6 | 47 | 44.8 |
| | Trans-Gender | 0 | 0 | 0 | 0 |
| 3 | **Religion** | | | | |
| | Hindu | 42 | 40.0 | 54 | 51.4 |
| | Muslim | 35 | 33.3 | 22 | 21.0 |
| | Christian | 03 | 2.9 | 05 | 4.8 |
| | Any Other | 25 | 23.8 | 24 | 22.9 |
| 4 | **Marital Status** | | | | |
| | Married | 94 | 89.5 | 96 | 91.4 |
| | Unmarried | 04 | 3.8 | 05 | 4.8 |
| | Separated | 06 | 5.7 | 03 | 2.9 |
| | Divorced | 01 | 1.0 | 01 | 1.0 |
| 5 | **Habitat** | | | | |
| | Urban | 39 | 37.1 | 36 | 34.3 |
| | Semi-Urban | 24 | 22.9 | 25 | 23.8 |
| | Rural | 42 | 40 | 44 | 41.9 |
| 6 | **Educational Qualification** | | | | |
| | Non-Formal Education | 02 | 1.9 | 03 | 2.9 |
| | Primary Education | 06 | 5.7 | 15 | 14.3 |
| | Secondary Education | 20 | 19.0 | 24 | 22.9 |
| | Senior Secondary | 32 | 30.5 | 36 | 34.3 |
| | Graduate And Above | 45 | 42.9 | 27 | 25.7 |

| | | | | | |
|---|---|---|---|---|---|
| 7 | **Occupation** | | | | |
| | Unemployed | 06 | 5.7 | 09 | 8.6 |
| | Unskilled Labor | 20 | 1.9 | 06 | 5.7 |
| | Govt. Employee | 20 | 19.0 | 14 | 13.3 |
| | Private Employee | 24 | 22.9 | 28 | 26.7 |
| | Self Employed | 53 | 50.5 | 48 | 45.7 |
| 8 | **Family Type** | | | | |
| | Nuclear | 11 | 10.5 | 12 | 11.4 |
| | Joint | 59 | 56.2 | 50 | 47.6 |
| | Extended | 35 | 33.3 | 43 | 41.0 |
| 9 | **Monthly Income** | | | | |
| | Less Than 5000 Inr | 06 | 5.7 | 02 | 1.9 |
| | 5001-10000 Inr | 06 | 5.7 | 15 | 14.3 |
| | 10001-15000 Inr | 37 | 35.2 | 18 | 17.1 |
| | 15001-20000Inr | 29 | 27.6 | 29 | 27.6 |
| | More Than 20000Inr | 27 | 25.7 | 41 | 39.0 |
| 10 | **Source of Major Income** | | | | |
| | Patient Self | 65 | 61.9 | 68 | 64.8 |
| | Parents | 13 | 12.4 | 07 | 6.7 |
| | Sibling | 11 | 10.5 | 07 | 6.7 |
| | Child | 09 | 8.6 | 13 | 12.4 |
| | Any Other | 07 | 6.7 | 10 | 9.5 |
| 11 | **Area of Hospitalization** | | | | |
| | Palliative Unit | 97 | 92.4 | 96 | 91.4 |
| | Art Centre | 08 | 7.6 | 09 | 8.6 |
| 12 | **Duration of Taking Treatment** | | | | |
| | Less Than 1 Yr | 62 | 59.0 | 56 | 53.3 |
| | 1 To 2 Yrs | 32 | 30.5 | 28 | 26.7 |
| | More Than 2 Years | 11 | 10.5 | 21 | 20.0 |
| 13 | **Level of Dependency** | | | | |
| | Independent | 22 | 21.0 | 12 | 11.4 |
| | Partially Dependent | 76 | 72.4 | 71 | 67.6 |
| | Completely Dependent | 07 | 6.7 | 22 | 21.0 |

Table 1 showed the distribution of respondent according to age. In experimental group 23.8% belonged to 21-30yrs and 51-60 yrs., 23.% belonged to 31-40 yrs. and 41-50yrs and only 8.6% respondent belonged to above 60yrs of age whereas in control group most of respondent 24.8% belonged to age group of 21-30yrs and 51-60 yrs. 21% belonged to 31-40yrs, 18.1% belonged to 41-50 yrs. and only 11.4% respondent belonged to above 60 years age. In experimental group majority of respondent were males 52.4%, females 47.6%, whereas in control group majority of respondent were also males 55.2%, females 44.8% and transgender 0.0% were in both experimental and control group. majority of sample in experimental group were Hindus 40%, Muslim 33.3%, any other 23.8%, Christian 3% whereas in control group majority of respondent were Hindu 51.4%, any other 22.9%, Muslim 21%, Christian 4.8%.

In experimental group majority of respondents were married 89.5%, separated 5.7%, unmarried 3.8% and divorced 1% whereas in control group majority of respondents were married 91.4%, unmarried 4.8%, separated 2.9% and divorced 1%. In experimental group most of respondents belonged to rural area 40.0%, urban area 37.1%, semi-urban 24.0% area whereas in control group most of respondent belonged to rural area 41.9%, urban area 34.3% and semi-urban area 23.8%. In experimental group most of respondent were Graduate and above 42.9%, followed by senior secondary 30.5%, secondary education 19%, primary education 5.7%, and 1.9% respondent had non-formal education whereas in control group most of respondent were senior secondary 34.3% followed by graduate and above 25.7%, secondary education 22.9%, primary education 14.3% and only 2.9% respondent had non-formal education.

In experimental group most of respondent were self-employed 50.5%, private employee 22.9%, Govt. employee 19%, unemployed 5.7%, unskilled labor 1.9% were whereas in control group most of respondents were self employed 45.7%, private employee 26.7%, Govt. employee 13.3%, unemployed 8.6% and unskilled labor 5.7%. In experimental group majority of respondents belonged to joint family 56.2%, extended family 33.3%, and nuclear family 10.5% whereas in control group majority of respondents belonged to joint family 47.6%, extended family 41%, and nuclear family 11.4%. In experimental group majority of respondents i.e.; 35.2% had 10001-15000 Inr monthly income, 27.6% had 15001-20000 Inr monthly income, 25.7% had more than 20000 Inr monthly income and only 5.7% respondent had 5001-10000 Inr and 8.8% respondents had less than 5000 Inr monthly income whereas in control group majority of respondent i.e.; 39% had more than 20000 Inr monthly income, 27.6% had 15001-20000, 17.1% had 10001-15000 Inr monthly income, 14.3% had 5001-10000 inr monthly income and 1.9% respondent had less than 5000 INR monthly income.

In experimental group majority of respondent 61.9% were patient self, 12.4% were parents, 10.5% were siblings, 8.6% were child and 6.7% respondent were any other whereas in control group most of respondent 64.8% were patient self, 12.4% were child, 9.5% were any other and 6.7% respondent were parents and siblings. In experimental group majority of respondent were from Palliative unit 92.4%, ART Centre 7.6% whereas in control group majority of respondent were from Palliative unit 91.4%, ART Centre 8.6%. in experimental group most of respondent 59% were taking treatment less than 1 Yr., 30.5% were taking treatment from 1 to 2 Yrs. and 10.5% respondent were taking treatment more than 2 Yrs. whereas in control group most of respondent 53.3% were taking treatment less than 1Yr, 26.7% were taking treatment from 1 to 2 Yrs., and only 20% respondent were taking treatment more than 2 Years. in experiment group most of respondents i.e.; 31.4% had renal failure followed by 23.8% had liver cirrhosis,7.6% had cancer and road accident, 6.7% had dementia and HIV, 5.7% had stroke, 4.8% had Parkinson's disease, 3.8% had paralysis, and 1.9% had brain tumor whereas in control group most of respondents i.e.; 30.5% had renal failure, 21.9% had liver cirrhosis, 11.4% had stroke, 7.6% had HIV, 6.7% had road accident, 5.7% had paralysis, 4.8% had dementia and Parkinson's disease,3.8% had cancer and 2.9% had brain tumor. In experimental group majority of respondent were partially dependent 72.4%, independent 21%, completely dependent 6.7% whereas in control group majority of respondent were partially dependent 67.6%, completely dependent 21%, independent 11.4%.

**SECTION–2: Pre-test assessment of pain among terminally ill patient.** (Table 2 and Figure 1)

Table-2 and figure-1 described the level of pain before application of Guided imagery technique in experimental group most of respondents i.e.: 41% had severe pain, 40% had moderate pain, 16.2% had mild pain and only 2.9% had no pain whereas in control group most of respondents i.e.: 38.1% had severe pain, 35.2% had moderate pain, 23.8% had mild pain and only 2.9% had no pain. It showed that

**Table 2:** Pre-test assessment of pain among terminally ill patient.

| LEVEL OF PAIN | PAIN SCORE | EXPERIMENTAL GROUP | | CONTROL GROUP | |
|---|---|---|---|---|---|
| | | Frequency (f) | Percentage (%) | Frequency (f) | Percentage (%) |
| NO PAIN | 0 | 03 | 2.9 | 03 | 2.9 |
| MILD PAIN | 1-2 | 17 | 16.2 | 25 | 23.8 |
| MODERATE PAIN | 3-6 | 42 | 40.0 | 37 | 35.2 |
| SEVER PAIN | 7-10 | 43 | 41.0 | 40 | 38.1 |
| TOTAL | | 105 | 100.0 | 105 | 100.0 |

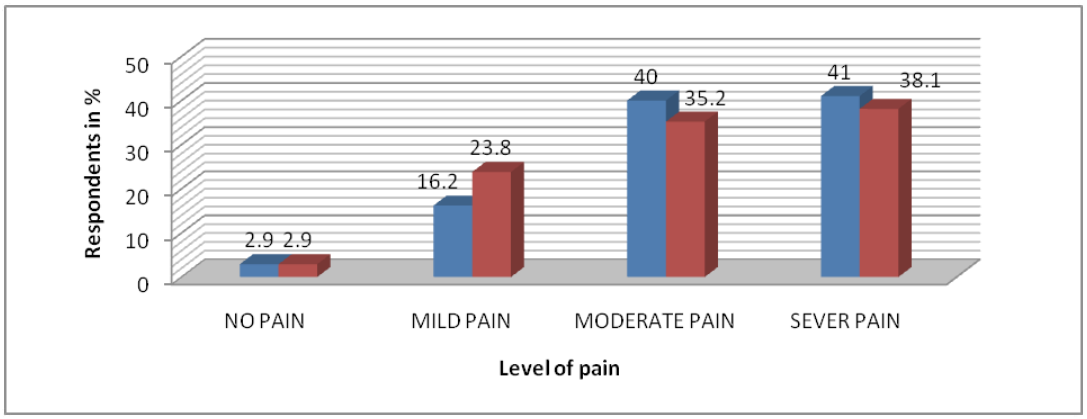


**Figure 1:** Pre-Test Level of Pain among Terminally Ill Patients.

**Table 3:** Level of Pain among Terminally Ill Patients.

| LEVEL OF PAIN | PAIN SCORE | Experimental Group | | | | | | Control group | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-test | | Post-test | | Follow up | | Pre-test | | Post-test | | Follow up | |
| | | Frequency (f) | Percentage (%) | Frequency (f) | Percentage (%) | Frequency (f) | Percentage (%) | Frequency (f) | Percentage (%) | Frequency (f) | Percentage (%) | Frequency (f) | Percentage (%) |
| NO PAIN | 0 | 03 | 2.9 | 07 | 6.7 | 18 | 17.2 | 03 | 2.9 | 05 | 4.8 | 05 | 4.8 |
| MILD PAIN | 1-2 | 17 | 16.2 | 33 | 31.4 | 54 | 51.4 | 25 | 23.8 | 28 | 26.7 | 35 | 33.3 |
| MODERATE PAIN | 3-6 | 42 | 40 | 62 | 59 | 33 | 31.4 | 37 | 35.2 | 57 | 54.3 | 61 | 58.1 |
| SEVERE PAIN | 7-10 | 43 | 41 | 03 | 2.9 | 0 | 0 | 40 | 38.1 | 15 | 14.3 | 04 | 3.8 |
| TOTAL | | 105 | 100.0 | 105 | 100.0 | 105 | 105 | 105 | 100.0 | 105 | 100.0 | 105 | 100 |

there was a significant relationship between pain score with terminally ill patients at selected hospitals, Jaipur. Hence, null hypothesis $H_0$1 was rejected.

**SECTION–3: Effectiveness of guided imagery technique on pain.** (Table 3 and Figure 2)

Table-3 and figure-2 described the level of pain among terminally ill patients. In experimental group pre-test 41% respondent had severe pain, followed by 40% respondent had moderate pain, 16.2% respondent had mild pain and 2.9% had no pain whereas in post- test 59% respondent had moderate pain, 31.4% respondent had mild pain, 6.7% respondent had no pain and 2.9% respondent had severe pain, in follow-up 51.4% respondent had mild pain, 31.4% respondent had moderate pain and 17.2% respondent had no pain,. In control group pre-test 38.1% respondent had severe pain, 35.2% respondent had moderate pain, 23.8% respondent had mild pain and 2.9% had no pain whereas in post-test 54.3% respondent had moderate pain, 26.7% respondent had mild pain 14.3% respondent had severe pain and 4.8% had no pain, and in follow-up 58.1% respondent had moderate pain, 33.3% respondent had mild pain, 4.8% respondent had no pain, and 3.8% had severe pain. It showed significant relationship between effect of guided imagery technique and score obtained on level of pain. Hence, null hypothesis $H_0$2 was rejected.

**Table-4: Effectiveness of Level of Pain among Terminally Ill Patients.** (Table 4 and Figure 3)

Table-4 and figure-3 revealed that the mean value of pre-test, post-test, follow-up test level of pain among terminally ill patients in experimental group and control group. Pre-test mean score in experimental group was 5.68, whereas in control group mean score was 5.25, t= -1.16, p=0.24.Post-test mean score in experimental group was 2.98, whereas in control group mean score was 4.93, t=6.8, p=<.01, Significant. Follow-up in experimental group mean score was 1.94, whereas in control group mean score was 4.4, t=9.7, p=<.01, Significant.

**SECTION–4: Association between pre-test score of pain, with selected socio-demographic variables.** (Table 5)

Table-5 revealed that the calculated chi square value of Age $\chi2$= 25.89, marital status $\chi2$=21.4, area of hospitalization $\chi2$=7.6, duration of taking treatment $\chi2$=12.84, level of dependency $\chi2$=15.08 was found significant at level of 0.05 and 0.01. So, there was significant association between experimental group level of pain. Hence, null hypothesis $H_0$3 was rejected for above socio-demographic variable. (Table 6)

Table-6 described that the calculated chi square value for, marital status=26.14, educational qualification $\chi2$=27.91 family type $\chi2$=21.63,

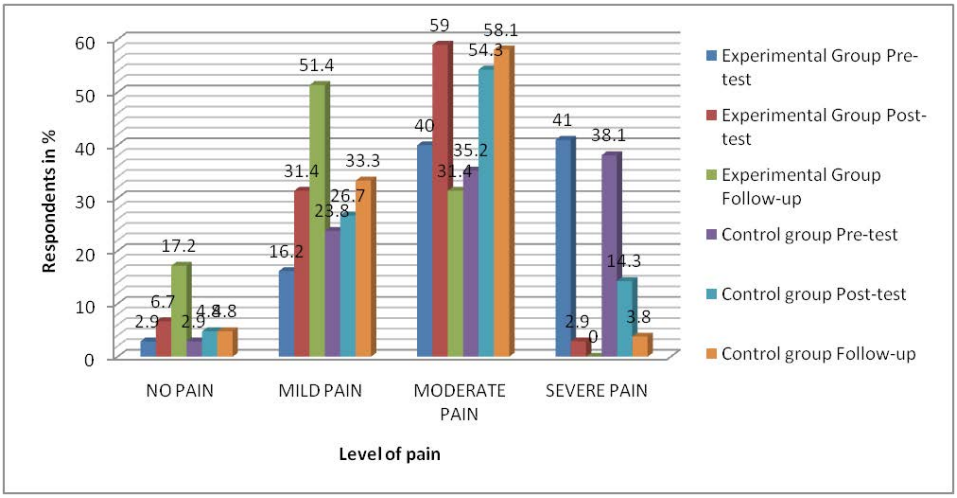


**Figure 2:** Level of Pain among Terminally Ill Patients.

**Table 4:** Effectiveness of Level of Pain among Terminally Ill Patients.

| Test | Group | Mean | Standard Deviation | Mean Difference | Standard Error | t -Value | P Value |
|---|---|---|---|---|---|---|---|
| Pre-Test | Experimental Group | 5.68 | 2.53 | 0.43 | 0.37 | 1.16 | 0.24 |
| | Control Group | 5.25 | 2.85 | | | | |
| Post-Test | Experimental Group | 2.98 | 1.68 | 1.95 | 0.28 | 6.8 | <.01 |
| | Control Group | 4.93 | 2.39 | | | | |
| Follow-Up | Experimental Group | 1.94 | 1.36 | 2.46 | 0.25 | 9.7 | <.01 |
| | Control Group | 4.4 | 2.22 | | | | |

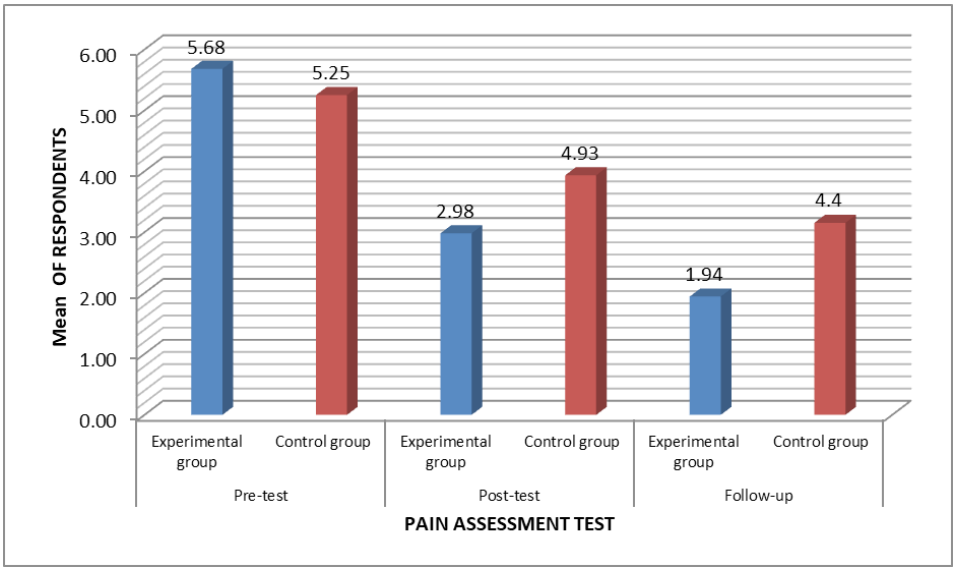


**Figure 3:** Effectiveness of Level of Pain among Terminally Ill Patients.

area of hospitalization $\chi 2=14.41$, duration of taking $\chi 2=14.02$ level of dependency $\chi 2 =15.09$. So, there was significant association between control group levels of pain. Hence, the null hypothesis H03 was rejected for above socio-demographic variable.

## Discussion

The aim of study to evaluate the effectiveness of guided imagery technique regarding pain, among terminally ill patients. In pre-test in experimental group most of respondents i.e.: 41% had severe pain,40% had moderate pain, 16.2% had mild pain and only 2.9% had no pain whereas in control group most of respondents i.e.: 38.1% had severe pain, 35.2% had moderate pain, 23.8% had mild pain and only 2.9% had no pain. It showed there was a significant relationship between pain score with terminally ill patients at selected hospitals, Jaipur, hence null hypothesis H01 was rejected. A similar study was conducted on "Prevalence of Pain in terminally Ill Cancer Patients: A Prospective Nonrandomized Observational Study" at Shri Mahant Indiresh Hospital, Dehradun, Uttarakhand, India. 126 patients incorporated in the study. The study revealed that majority of respondents had moderate pain 75.40% followed by severe pain 62.70%, chronic pain

**Table 5:** Distribution of Experimental Group Respondents by Pre-Test Level of Pain and Socio-Demographic Variable.

| SL NO | DEMOGRAFIC CHARACTERSTICS | CHI-SQUIRE | d.f | CALCULATED "P" VALUE | INFERANCE |
|---|---|---|---|---|---|
| 1 | AGE | 25.89 | 12 | .01 | Significant |
| 2 | GENDER | 1.3 | 6 | .97 | Not significant |
| 3 | RELIGION | 13.60 | 9 | .13 | Not significant |
| 4 | MARITAL STATUS | 21.4 | 9 | .01 | Significant |
| 5 | HABITAT | 11.84 | 6 | .06 | Not significant |
| 6 | EDUCATION QUALIFICATION | 18.71 | 12 | .09 | Not significant |
| 7 | OCCUPATION | 20.2 | 12 | .07 | Not significant |
| 8 | FAMILY TYPE | 10.82 | 6 | .09 | Not Significant |
| 9 | MONTHLY FAMILY INCOME | 15.25 | 12 | .22 | Not Significant |
| 10 | SOURCE OF MAJOR INCOME | 19.2 | 12 | .08 | Not Significant |
| 11 | AREA OF HOSPITALIZATION | 7.6 | 3 | .05 | Significant |
| 12 | DURATION OF TAKING TREATMENT | 12.84 | 6 | .04 | Significant |
| 13 | LEVEL OF DEPENDENCY | 15.08 | 6 | .01 | Significant |

**Table 6:** Distribution of Control Group Respondents by Pre-Test Level of Pain and Socio-Demographic Variable.

| SL NO | DEMOGRAFIC CHARACTERSTICS | CHI-SQUIRE | d.f | CALCULATED "P" VALUE | INFERANCE |
|---|---|---|---|---|---|
| 1 | AGE | 7.6 | 12 | .80 | Non- Significant |
| 2 | GENDER | 2.89 | 6 | .82 | Non- Significant |
| 3 | RELIGION | 16 | 9 | .06 | Non- Significant |
| 4 | MARITAL STATUS | 26.14 | 9 | < .01 | Significant |
| 5 | HABITAT | 10.55 | 6 | .11 | Non- Significant |
| 6 | EDUCATION QUALIFICATION | 27.91 | 12 | < .01 | Significant |
| 7 | OCCUPATION | 17.2 | 12 | .14 | Non- Significant |
| 8 | FAMILY TYPE | 21.63 | 6 | < .01 | Significant |
| 9 | MONTHLY FAMILY INCOME | 14.5 | 12 | .26 | Non- Significant |
| 10 | SOURCE OF MAJOR INCOME | 10.36 | 12 | .58 | Non- Significant |
| 11 | AREA OF HOSPITALIZATION | 14.41 | 3 | < .01 | Significant |
| 12 | DURATION OF TAKING TREATMENT | 14.02 | 6 | .02 | Significant |
| 13 | LEVEL OF DEPENDENCY | 15.09 | 6 | .01 | Significant |

26.98%, neuropathic pain 13.49%. The average duration of pain was 171.16 ± 716.50 days. Totally 46.03% and 42.01% patients had at least one and more than equal to 2 neuropathic pain symptoms, respectively [7].

In experimental group pre-test 41% had severe pain, 40% had moderate pain, 16.2% had mild pain and 2.9% had no pain whereas in posttest only 2.9% had severe pain, 59% had moderate pain, 31.4% had mild pain and 6.7% had no pain. In control group pre-test 38.1% had severe pain, 35.2% had moderate pain, 23.8% had mild pain and only 2.9% had no pain whereas in post-test 14.3% had severe pain, 54.3% had moderate pain, 26.7% had mild pain, and only 4.8% had no pain. It showed significant relationship between effect of guided imagery technique and score obtained on level of pain, hence, null hypothesis H02 was rejected. In experimental group pre-test, follow-up mean difference was -3.7 and t= 13.34, p=<.01, Significant, whereas in control group pre-test- follow-up mean difference was -.85 and t=2.4, p=<.05, Significant. Pre-test mean score in experimental group was 5.68, whereas in control group mean score was 5.25, t= 1.16 p=0.24 non-significant .Post-test mean score in experimental group was 2.98, whereas in control group mean score was 4.93, t=6.8 p=<.01, Significant. Follow-up in experimental group mean score was 1.94, whereas in control group mean score was 4.4, t=9.7, p=<.01, Significant. Hence, the result revealed that guided imagery technique was more effective to reduce the pain in experimental group as compared to control group.

A similar study was conducted on "Effect of Guided Imagery Technique on Pain Intensity in Post Sectio Caesarea Patients" at Permata Bunda Hospital. The study showed before guided imagery techniques data were obtained by 71.4% respondents on the medium pain scale and after intervention 71.4% were on the light pain scale. In the control group, the first measurement obtained pain intensity in 85.8% respondents were on the moderate pain scale and the 2nd measurement of pain intensity were 71.4% increased on the severe pain scale. There was a difference in the intensity of pain in the decreased intervention group reaching 2 scales and the control group experienced a mean 1 increase in scale. After t test dependent test obtained p = 0.001significant.. Researcher concluded thar guided imagery techniques had a significant effect on the pain levels of post-operative patients of sectio Caesarea [8].

In the present study experimental group was significant association between level of pain score and selected socio-demographic variable such as age $\chi 2$= 25.89, marital status $\chi 2$=21.4, area of hospitalization $\chi 2$= 7.6, duration of taking treatment $\chi 2$= 12.84 and level of dependency $\chi 2$= 15.08. In control group was significant association between level of pain score and selected socio-demographic variables such as marital status $\chi 2$=26.14, educational qualification $\chi 2$= 27.91, family type $\chi 2$= 21.63, area of hospitalization $\chi 2$= 14.41, duration of taking treatment $\chi 2$= 14.02 and level of dependency $\chi 2$= 15.09. Hence, null hypothesis H03 rejected.

A study was carried out on "Pain level associated to socio-demographic and clinical variables in people living with human immunodeficiency virus and acquired immunodeficiency Syndrome" at Brazil. The data revealed significant relationship between pain and age p=0.02, the age groups between 21 and 30 years p<0.046, 41 and 50 years p<0.023 and 51 and 60 years p<0.030 were protection factors for

the presence of moderate pain [9].

## Conclusion

The study concluded that the guided imagery technique was found effective to reduce pain. In pain experimental group pre-test mean ± S.D was 5.68 ± 2.53, in follow up mean ± S.D was 1.94 ±1.36, mean difference was -3.7, t= 13.34, p=<.01, Significant, whereas in control group pre-test mean ± S.D was 5.28 ± 2.85, in follow up mean ± S.D was 4.40 ±2.22, mean difference was -.8, t=2.4, p=<.05, Significant. Hence, the result revealed that guided imagery technique was more effective to reduce the pain in experimental group as compared to control group.

## Financial support and sponsorship

Nil

## Conflicts of interest

There are no conflicts of interest

### References

1. Hui D, Nooruddin Z, Didwaniya N, Dev R, La Cruz MD, et al. (2014) Concepts and Definitions for “Actively Dying,” “End of Life,” “Terminally Ill,” “Terminal Care,” and “Transition of Care”: A Systematic Review. J Pain Symptom Manage 47: 77-89.
2. Magalhaes SB, Franco ALS (2012) Experiência de profissionais e familiares de pacientes em cuidados paliativos. Arq Bras Psicol 64: 94-109.
3. https://www.goodtherapy.org/learn-about-therapy/types/guided-therapeutic-imagery
4. Baijayant P (2016) Republic of India: The Medical Treatment of Terminally-Ill Patients (protection of patients and medical practitioners) Bill 2016.
5. Jacox A, Carr DB, Payne R (1994) new clinical-practice guidelines for the management of pain in patients with cancer. N Engl J Med 330:651-655.
6. Mannix LK, Chandurkar RS, Rybicki LA, Tusek DL, Solomon GD (1999) Effect of Guided Imagery on Quality of Life for Patients with Chronic Tension-Type Headache. Headache 39: 326-334.
7. Gupta M, Sahi MS, Bhargava AK, Talwar V (2015) The Prevalence and Characteristics of Pain in Critically Ill Cancer Patients: A Prospective Nonrandomized Observational Study. Indian J Palliat Care 21: 262-267.
8. Muchsin R, Hati Y, Pase M (2020) Effect of Guided Imagery Technique on Decreased Pain Intensity in Post Sectio Caesarea Patients at Permata Bunda Hospital. Int J health sci 5: 463-467.
9. Silva JGD, Morgan DADR, Alchieri JC, Medeiros HJD, Knackfuss MI (2017) Pain level associated to socio-demographic and clinical variables in people living with human immunodeficiency virus and acquired immunodeficiency syndrome. Rev Dor 18: 51-58.