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Effectiveness of Benson's Relaxation Technique on Pain Reduction Among Post-Operative Patient Admitted in Mgm & Lsk Hospital Kishanganj, Bihar

Chinna Devi M[1], Ms. Sushma Kumari[2], Ms. Isharat Praveen[3], Ms. Shalini Kumari[4], Ms. Sweety Kumari[5]

[1]Dean, Mata Gujri College of Nursing, Mata Gujri University, Kishanganj, Bihar
[2,3,4,5]Staff Nurse, MGM Medical College & LSK Hospital, Kishanganj, Bihar

ABSTRACT

Introduction: Surgery is a foundational component of health care systems. (Estimated need for surgery worldwide based on prevalence of diseases: implications for public health planning of surgical services,(John Rose, 2015) Pain is a complicated phenomenon that has been described differently by physicians, researchers, and individuals. The pain was known as an unpleasant emotional sensation or experience related to potential or actual tissue harm, as per the international correlation for the study of pain. Patients can suffer from physical and psychological effects as a result of poorly controlled pain (Shaimaa Hassan Mohamady, 2022).

THE OBJECTIVES OF THE STUDY WERE: 1. To evaluate the level of pain among post-operative patients. 2. To determine the effectiveness of Benson's relaxation technique on level of pain among post operative patients. 3. To determine the association between post-test levels of pain among post operative patients with their selected demographic variables.

RESEARCH METHODOLOGY: A quantitative approach with quasi experimental non-equivalent control group pre-test post-test design was adopted to evaluate the effectiveness of Benson's relaxation technique on level of pain among post-operative patients admitted at MGM & LSK hospital in Kishanganj. The total number of samples selected was 30 by purposive sampling technique following inclusion, exclusion criteria. The tool selected for the study consists of two parts which includes demographic variables, Modified comfort behavioural scale. Tool was validated by experts**.**

FINDINGS: The data collected were analyzed by descriptive and inferential statistics .Findings revealed that pre-test mean score was 6.4± 1.1017 and the post-test mean score was 2.4 ±0.7239 The mean pain reduction level was 4.0 and the calculated test value is 21.738, which is higher than the table value at $p<0.0001$. CONCLUSION The investigator concluded that Benson's relaxation technique was much effective in reducing the level of pain among the post operative patients.

KEYWORDS: Benson's relaxation technique-Pain-Post operative patients

Introduction

Postoperative pain is one of the most significant concerns for patients when undergoing surgery and is a strong predictor of whether patients are satisfied with their preoperative care. Unfortunately, approximately 88% of patients report moderate-to severe acute pain after surgery. Unmanaged postoperative pain has consequences which include deleterious physiological effects, increased healthcare utilization, and poor clinical outcomes, such as acute pain predisposing to the development of chronic post-surgical pain (CPSP) (Yusuke Mazda, 2021).

Surgical care has a role in treating a broad spectrum of diseases in the alleviation of human suffering. It is required at all ages; from neonates with congenital anomalies to elderly people with cataracts. Surgery can be preventative, as in reducing HIV transmission through circumcision, or curative, as in many cancers. It is often a component of acute emergency care, such as bowel perforations and trauma, as well as the treatment of chronic diseases such as osteoarthritis and inflammatory bowel disorders. (John Rose, 2015)

Remarkable gains have been made in global health in the past 25 years, but progress has not been uniform. Mortality and morbidity from common conditions needing surgery have grown in the world's poorest regions, both in real terms and relative to other health gains. At the same time, development of safe, essential, life-saving surgical and anaesthesia care in low-income and middle-income countries (LMICs) has stagnated or regressed. In the absence of surgical care, case-fatality rates are high for common, easily treatable conditions including appendicitis, hernia, fractures, obstructed labour, congenital anomalies, and breast and cervical cancer. (John G Meara 2015).

Research has shown that more than 50% of patients have insufficient postoperative pain relief despite the use of multiple pain management modalities. Insufficient pain relief leads to several patho physiological effects. One of the barriers to optimal pain relief is patient's lack of knowledge regarding the options available for pain management and their potential side effects. (Muhammad Nasir, 2020)

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Postoperative pain management is a major concern for surgical patients. Ineffective pain relief leads to several pathophysiological and psychological issues that may hinder smooth postoperative recovery .Bozimowski has reported that patients having adequate knowledge are more likely to experience positive outcomes.(E.Sakai, 2016) Postoperative pain is an anticipated and temporary (2 to 5 days) increase in background is most commonly the result of increased pain from newly created wounds at the skin site. Pharmacologic management of postoperative pain includes a temporary increase in background opioid analgesic support but can also include the use of continuous regional block techniques in the immediate postoperative period.(Shelley A.Wiechman,)

REVIEW OF LITERATURE

Review of literature is discussed under following headings:

- Studies related to the incidence and prevalence of general abdominal surgeries.
- Studies related to post operative pain
- Studies related to effectiveness of Benson's relaxation technique (BRT) inϖ reduction of pain in post-operative patients.

1. Studies related to the incidence and prevalence of general abdominal surgeries

Brigid M. Gillespie (2021) Over 300 million operations are performed worldwide, annually. General surgical procedures are the most commonly performed, particularly in higher income and middle-income

countries. However, healing can be delayed when complications arise. Surgical site infection (SSI), defined as wound infections occurring within 30 days after surgery.

John Rose (2015) in her study estimate that at least 321·5 million surgical procedures would be needed to address the burden of disease for a global population of 6.9 billion in 2010. Minimum rates of surgical need vary across regions, ranging from 3,383 operations per 100,000 in Central Latin America to 6,495 operations per 100,000 in Western Sub-Saharan Africa. Global surgical need also varied across sub-categories of disease, ranging from 131,412 procedures for Nutritional Deficiencies to 45.8 million procedures in Unintentional Injuries.

SiddheshZadey (2023) the Lancet Commission on Global Surgery (LCoGS) in 2015 estimated that over 98% of people in South Asia, the most densely populated region in the world, lacked timely access to safe and affordable surgical care.**3**

2. Studies related to post-operative pain

C.Small and H. Laycock (2020) Acute postoperative pain management Acute pain occurs following tissue injury associated with surgery and should resolve during the healing process. This normally takes up to 3 months, after which pain is considered to be chronic or persistent. Pain is a multidimensional experience, personalized to each patient. Surgical procedures cause injury to tissues. The surgical injury triggers feelings of fear, anxiety and frustration.

Wanxia JU etal (2019) The International Association for the Study of Pain describes pain as 'an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage'. A large majority of patients undergoing surgery experience post-operative pain, which is not only agonizing and distressing, but may also contribute to complications and to a delayed recovery. Pain exacerbates stress responses, which lead to increased
tissue breakdown, coagulation and fluid retention, and have deleterious effects on the recuperation of patients. Abdominal surgery is considered to be one of the most painful surgical procedures .Inadequate pain control in such individuals can lead to impaired respiration, disrupted sleep, loss of appetite, prolonged hospitalization, patient dissatisfaction and increased treatment costs.

Muhammad Nasir, Aliya Ahmed (2020) conducted a study on Knowledge About Postoperative Pain and Its Management in Surgical Patients. Results revealed that the average age of the patients was 42.97 ± 13.05 years. Excellent and good knowledge were observed in 11.61% and 21.94% patients, respectively, whereas fair and poor knowledge were seen in 42.58% and 23.87%, respectively. Inadequate knowledge was more marked regarding analgesic side effects and addiction risk. Education level, history of surgery, and adequate information provision about pain management plan by surgeons preoperatively were significantly associated with a higher level of knowledge about pain and its management (value 0.0005, 0.002, and 0.0005, respectively)

SaadaElsayedRady, HodaAbdouAbd El-Monem El-Deeb (2020) was conduct the quasiexperimental research design with a pretest-posttest.at surgical departments on 80 adult patients who were undergoing abdominal surgery and were divided into two equal groups 40 in study group and 40 in control group at Damanhour National Medical Institute. The results revealed that pain intensity was significantly absent from the entire study group, while it was significantly present among 42.5% of the control group. All of the study subjects had a good post-operative quality of recovery compared to only7.5% of subjects in the control group.4

3. Studies related to effectiveness of Benson's relaxation technique in reduction of pain in post operative patients

Rahmiwati, LisavinaJuwita ,PutriRamadani , RatnaDewi (2024) conducted a quasi-experimental research design with a pre and post-test design on Benson Relaxation Techniques in reducing pain and Sleep Quality on 20 Post Appendectomy Patients selected hospital in Bukittinggi, Indonesia. The results revealed that the average pain score of respondents before the intervention was 2.6 (moderate pain) and the average score after the intervention was 3.9 (pain decreased). Benson's relaxation has an effect on pain, with a p-value of 0.00 4 ≤ 0.05.

Bommi.K (2016) A study was conducted on effect of benson's relaxation technique on post-operative pain among women undergone abdominal hysterectomy, (mention journal name) in Pudukkottai, a true experimental study was undertaken to evaluate the efficiency of Benson's relaxation therapy on pain reduction in 60 post-Caesarean mothers. The results showed that the experimental group's mean pain score was 75.6 percent in pretest, whereas the control group's was 76.8%. In the post-test, the mean pain score in the experimental group was 17.3 percent, compared to 31.3 percent in the control group. The mean stress score in pretest in the experimental group was 61.25 percent, while it was 58.92 percent in the control group. Thus it become evident that Benson's relaxation therapy was effective in reducing the level of pain in experimental group.

4Soumya Raj K, Rakhi R Pillai (2021) conducted a quasi-experimental design with pertest post test control group design on effectiveness of Benson's Relaxation Therapy on Reduction of Post caesarean Pain among Mothers in a Amrita Hospital at Kochi on 60 post caesarean mothers (30 in each group). The result were revealed that, a significant difference between pre-test and post test stress and pain in the experimental group, which is statistically significant with p-value <0.05. When comparing percentage distribution of post-test pain in both groups, majority of experimental group (76.7%) had mild pain and 23.3% of them had moderate pain. On the contrary, in the control group, only 16.7% of the post Caesarean mothers had mild pain and about 50% had moderate pain, and 33.3% had severe pain.

Reza Momen, Maryam Roshandel , Seyyed Amir Hosein Pishgooie (2017) was conduct A quasi experimental study on , 62 patients undergoing lumbar laminectomy surgery Intervention (n=31) and control (n=31) in AJA hospitals.. The mean pain intensity after the first stage of the intervention was 37.5±76.1 in the experimental group and 77.6±17.1 in the control group, after the second stage of the intervention 80.4 ± 25.1 in the experimental group and 5.77±1.47 in the control group and after the third stage of the intervention was 67.3±14.1 in the experimental group and 06.5±92.in the control group respectively.

SmithaThadathil, Sindhumol PK.(2018) conducted aquasi experimental study with pre and post-test design on reducing pain in 38 women after Caesarean section conduct on Tertiary care centre the mean of pain score before intervention was 6.26 and the after intervention is 5.74 there was statistically significant reduction in pain perception at 95% CI (p<0.005).

Riddhi kumara par mar, Anjali tiwari (2021) conduct a quasi experimental study to evaluate the effect of Benson's relaxation therapy (BRT) on level of pain among post Caesarean section mothers with pre and post-test design in five experimental and five control group. The mean pain score for experimental group reduced from 7 to 2.2 while in control group it was 7.60 at per-intervention and 4.6 at follow-up. Rona F. Levin, Levin was conducted a study in Long Island and Jewish-Hillside Medical Centre to assess the effectiveness of Benson's relaxation techniques in the management of postoperative

pain on 40 women who were undergoing elective cholecystectomy. The BRT group was significantly different from the CA group with (P=0.011).

PranaliMacwan, Neha Parmar, Paras Savaliy (2022) conducted a Quasi experimental design ineffectiveness of Benson's Relaxation Therapy on reduction of pain and stress among post L.S.C.S Primigravida Mothers with pre-test –posttest design on 60 post-natal mothers 30 for experimental group and 30 for control group selected from Dr. N. D. Desai hospital from Nadia City. Mean Difference of pre-test and post -test is 3.24 (32.4%) and calculated "t" value is 29.512 which is more than tabulated value 2.045. In control group, Mean Difference of pretest and post-test is 0.30 and calculated "t" value is 2.208. So, after administration of BRT pain score was reduced in experimental group than the control group.

Fatma Mostafa Mohammed , Amel Ahmed Hassan, Hend Abdallah, El Sayed Afifi (2023) A quasi experimental study on effect of Benson Relaxation Technique on Intensity of post caesarean section pain among primipara women with pre and post-test design in Post-partum unit of Obstetrics and Genecology wards at Benhauniversity hospital. Sample consisted of 120 primipara women after caesarean section which divided into two groups study and control group (60 for each).the mean of pain score before intervention was 68.3 and after intervention the score was 53.3. A statistically significant difference was observed in pain intensity between two groups after application of Benson relaxation technique at the($p< 0.05$) as pain intensity decreased in the study group more than the control group.

RashaAlsayed Ahmed, JackleenGendy(2023) Conducted a quasi-experimental studyon effect of Benson's Relaxation Therapy to reduce Pain among 100 postthoracic surgery patientsUndergoing Thoracic Surgery in Badr University Hospital,HelwanUniversity. The mean of pain score before intervention was 57.1 and after intervention was 55.4. Also there was a highly statistical significant difference existed between study and control groups regarding pain scores at 3 rd postoperative day at $p<0.001$

Zahra Molazem , MadinehAlizadeh , MasoumeRambod (2021) A study on the effect of Benson's Relaxation Technique on Pain Intensity with pre and post-test design on 80 haemophilia patients and were divided into an intervention (relaxation technique) and a control (routine care) group in the hemophiliacenter of Shahid Dastgheib hospital , Shiraz University. After the intervention, the mean scores of pain intensity in the intervention group were and in the control groups were 5.8 respectively. After the intervention, a difference was found between the groups regarding the mean score of pain intensity (P=0.007). (P<0.001). and its subscales (P<0.05) as well as total pain acceptance (p<0.001)

Zahra Keihani, Rostam Jalali, Mohammad Bagher Shams,(2019) was conduct a study on effect of Benson Relaxation on the Intensity of Spinal Anaesthesia Induced Pain After Elective General and Urologic Surgery on 64 post-operative anaesthesia patients who were assigned to intervention and control group. The results were the mean pain score in the control group before and after the intervention was 5.34 and 5.62, respectively $p<0.001$.

RESEARCH METHODOLOGY

The Research Approach adopted for this study was Quantitative research approach.

Research Design True Experimental design with one group pre-test post-test design was adopted for this study.

SETTING OF THE STUDY

This study was conducted in MGM &LSK hospital,Kishanganj.

VARIABLES

dependent variable was the level of pain among post operative patients. The independent variable is the Benson's relaxation technique.

SAMPLING CRITERIA

Inclusion criteria

- The study included, Post-operative patients admitted in MGM &LSK Hospital.
- Post-operative patients who were able to co-operate for Benson's relaxation technique.
- Post operative patients who stay in hospital for 5 days.
- Post operative patients willing to participate in the study
- Post operative patients available during data collection.

Exclusion criteria

- The study excluded, Post operative patients with complications .
- Post operative patients with systemic medical illness.
- Post operative patients willing to participate in the study.
- Post operative patients available during data collection.

POPULATION

The population of this study is all Post operative patients who are admitted to the post-operative ward of MGM &LSK Hospital, Kishanganj.

Target population

The target population of the study was Post operative patients.

Accessible

. Accessible population of this study was postoperative patients between their 2nd to 5th post-operative day who fulfil the inclusion criteria.

SAMPLE

In this study, the sample consisted of Post operative patients between their 2nd and 5th post-operative day admitted in MGM &LSK Hospital, Kishanganj, who fulfilled the inclusion criteria.

SAMPLE SIZE

The sample size consists of 30 Post-operative patients admitted in post-operative ward.

SAMPLING TECHNIQUE

Purposive sampling technique was adopted for selecting the sample.

The samples that were on second postoperative day after surgery were selected. Benson's relaxation technique was given for 2nd post operative day patients for duration of 10 minutes per day for 3 days.

ETHICAL CONSIDERATION

The investigator strictly followed the ethical principles preceding the study. Formal approval was obtained from research committee of Faculty of nursing Mata Gujri University, Kishanganj. Official permission was obtained from the ethical committee of the selected settings. Oral and written consent was obtained from each participant before starting the data collection.

DATA COLLECTION PROCEDURE

Prior permission was obtained from Institutional Review Board. Formal permission was obtained from the Medical superintendent of concerned settings. The data collection procedure was done for a period of 1 month. The data was collected from hospitalized post operative patients between 2nd and 5th postoperative day.

DATA ANALYSIS

Data collected were analyzed using both descriptive and inferential statistics such as mean, standard deviation, paired't" test and chi square.

SECTION A

Table 1: DATA PERTAINING TO FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES AMONG POST OPERATIVE PATIENTS

n=30

S.NO	Demographic Variables	Frequency (f)	Percentage (%)
1	Age a. Bellow18 years b. 18-24years c. 25-31years d. 31 above		
2	Gender a. Male b. Female		
3	Marital Status a. Married b. Unmarried		
4	Education a. Illiterate b. Primary c. Secondary d. Higher Secondary e. Degree & above		
5	Type of family a. Joint family b. Nuclear family		
6	Religion a. Hindu b. Muslim c. Christian d. Sikh		
7	Residence a. Urban b. Rural		

8	Occupation a. Employee b. Unemployment		
9	Income a. Below 25000-35000 b. Above 35000-45000 c. Above 45000-60000 d. Above 60000		
10	Type of surgery a. Abdominal b. Orthopaedic		
11	Previous history of Hospitalization a. Yes b. No		

The above table shows that Majority of post operative samples are 21(70%) were above 31 years, 16 (53.33%) were males, 14 (46.33%) were females, majority of them 29 (96.66%) were married, 14 (46.66%) were illiterates, 11 (36.66%)had primary education, 20 (66.66%) were from joint family, 10 (33.33%) from nuclear family; majority 20(66.66%) were from Hindu back ground 10 (33.33%) were Muslims. 28 (93.33%) belong to rural, 21(70%) were employed,9(30%) were unemployed. 23(70.66%) of post operative patients family's income range was between Rs. 25,000- 35,000 ,25(83%); All 30(100%) had abdominal surgeries like, cholicystectomy, appendectomy, hysterectomy etc; Majority 26(88.88%) were not having previous hospitalization.

SECTION B

TABLE 2: DATA PERTAINING TO FREQUENCY AND PERCENTAGE DISTRIBUTION OF PRETEST AND POST TEST LEVEL OF PAIN AMONG POST OPERATIVE PATIENTS

n=30

Level of Pain	**Pre Test**		**Post Test**	
	f	**%**	**f**	**%**
No pain	**0**	**0**	**0**	**0**
Mild pain 0-3	**0**	**0**	**29**	**97**
Moderate pain 4-6	**15**	**50**	**1**	**3**
Severe pain 7-10	**15**	**50**	**0**	**0**

The above table depicts the frequency and percentage distribution of pre-test and post-test level of pain among post operative patients. The findings revealed that, In Pre-test 15(50%) of Post operative patients had severe pain; 15(50%) had moderate pain and none of them had mild pain. In post-test 29(97%) of Post operative patients had mild pain; 01(3%) had moderate pain and none of the post operative patients had severe pain.

SECTION C

TABLE 3: DATA PERTAINING TO THE EFFECTIVENESS OF BENSON"S RELAXATION TECHNIQUE ON LEVEL OF PAIN AMONG POST OPERATIVE PATIENTS

n=30

Pre-test		Post-test		**Mean Difference (MD)**	**"t" Value (P<0.00001) (S)**
M	SD	M	SD		
6.4	**1.1017**	**2.4**	**0.7239**	**4.0**	**21.738**

Shows the effectiveness of Benson's Relaxation technique on level of pain among Post operative patients. The above table reveals that, pre-test mean score was 6.4 ± 1.1017 and the post-test mean score was 2.4 ± 0.7239. The mean pain reduction level was 4.0 and the calculated" value was 21.738, which was higher than the table value at P<0.00001

DISCUSSION

The present study was done to evaluate the effectiveness of Benson's relaxation technique on reduction of pain among post operative patients admitted at MGM &LSK hospital in Kishanganj district

OBJECTIVES OF THE STUDY WERE,

- To evaluate the level of pain among post operative patients.
- To determine the effectiveness of Benson's relaxation technique on level of pain among post operative patients.

To evaluate the level of pain among post operative patients Pre-test and post-test level of pain among post operative patients.

The findings revealed that, In Pre-test 15(50%) of Post operative patients had severe pain; 15(50%) had moderate pain and none of them had mild pain. In post-test 29(97%) of Post operative patients had mild pain; 01(3%) had moderate pain and none of the post operative patients had severe pain.

To determine the effectiveness of Benson's relaxation technique on level of pain

The results revealed that, pre-test mean score was 6.4 ±1.1017 and the post-test mean score was 2.4 ± 0.7239. The mean pain reduction level was 4.0 and the calculated" value was 21.738, which was higher than the table value at p0.00001 level. Therefore, the findings indicate that after administering Benson's relaxation technique in post operative patients, there is significant decrease in level of pain.

SUMMARY

Thus this chapter deals with analysis and interpretation of data obtained by the student researcher. The analysis of the result showed that Benson's relaxation technique has an effective role in reducing level of pain among the post operative patients.

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