

# Study Protocol

## EFFICACY OF BENSON'S RELAXATION TECHNIQUE ON STRESS AND PAIN AMONG WOMEN UNDERGONE ABDOMINAL HYSTERECTOMY

### ABSTRACT

**Introduction:** Relaxation programs can be effective in establishing psychological tranquility for patients after surgery<sup>1</sup>. Hysterectomy is the surgical removal of the uterus and its surrounding structures<sup>2</sup>. The vast majority of individuals who undergo surgery endure post-operative pain, which is not only excruciating and distressing, but can also lead to problems and a longer recovery time. Pain worsens stress reactions, resulting in increased tissue breakdown, coagulation, and fluid retention, all of which are detrimental to patient recovery<sup>3</sup>.

**Background:** Women's reproductive health is a worldwide issue with far-reaching impacts for the health, well-being, and development of the entire population<sup>4</sup>. A hysterectomy is performed on about 300 women out of every 100,000<sup>5</sup>. Younger women may be depressed following a hysterectomy since they have squandered their fertility<sup>6</sup>. Dr. Herbert Benson developed the Benson relaxation technique, which is a type of meditation that focuses on muscle relaxation followed by focused breathing to relieve stress<sup>7</sup>.

**Objective** - 1. To assess the stress and pain among women undergone abdominal hysterectomy in experimental group. 2. To assess the stress and pain among women undergone abdominal hysterectomy in control group. 3. To assess the efficacy of benson's relaxation technique in stress and pain among women undergone abdominal hysterectomy in experimental group. 4. To find out association between stress and pain score with selected demographical variables in experimental group. 5. To find out association between stress and pain score with selected demographical variables in control group.

**Methodology** – A pretest post-test control group and experimental group research design was adopted to assess the efficacy of benson's relaxation technique on stress and pain among women undergone abdominal hysterectomy. In this study 100 women who fulfill the inclusion criteria were selected by purposive random sampling technique to collect data. Secondary outcome involve evaluation of efficacy of benson's relaxation technique given to the experimental group.

**Expected Results:** This study is mainly planned to evaluate efficacy of benson's relaxation technique on stress and pain among women undergone abdominal hysterectomy. Hence, it is expected that the stress and pain may reduced around 60% after providing benson's relaxation technique to women undergone abdominal hysterectomy. The conclusion will be drawn from the results and will be published in peer review journal.

**Keywords** – Efficacy, Benson's Relaxation Technique, stress, pain, women, abdominal hysterectomy

### INTRODUCTION:

Hysterectomy is the surgical removal of the uterus and its surrounding structures. Uterine fibroid, uterine dysfunctional bleeding, endometriosis, cancer of the uterus, ovary, cervix, chronic pelvic pain, obstetrical haemorrhage, uterine prolapsed, leiomyoma, and other conditions are among the reasons for hysterectomy. Gynecological illnesses are the conditions that women are most concerned of, as they experience a variety of symptoms as a result of disorders<sup>2</sup>. Women who had a vaginal hysterectomy rather than a laparoscopic-assisted or abdominal hysterectomy had a shorter hospital stay<sup>8</sup>.

Pain is defined as "an unpleasant sensory and emotional experience accompanied with existing or potential tissue damage, or described in terms of such damage," according to the International Association for the Study of Pain<sup>3</sup>. Surgery curtails the body's integrity, including bio-psycho-social-spiritual components, and might result in discomfort, such as pain reaction. The vast majority of individuals who undergo surgery endure post-operative pain, which is not only excruciating and distressing, but can also lead to problems and a longer recovery time. Pain worsens stress reactions, resulting in increased tissue breakdown, coagulation, and fluid retention, all of which are detrimental to patient recovery<sup>3</sup>.

Individuals who undergo a hysterectomy are likely to be more stressed than those who undergo any other surgical operation resulting in a change in their reproductive organ<sup>4</sup>. After a hysterectomy, psychological and emotional stress has a detrimental emotional impact. Early detection and action by healthcare providers has been suggested as a way to avert these harmful effects on these women's psychological well-being. This is especially relevant to young women, who are more vulnerable to psychological distress<sup>9</sup>.

Psychological therapies that boost empowerment and self-efficacy, in addition to established clinical measurements, may be a cost-effective strategy to improve the aspects of rehabilitation that patients value<sup>8</sup>.

Relaxation techniques are a way for reducing postoperative pain by relieving mental and physical stress, relieving anxiety and accompanying muscle tension, and thereby acting on muscle spasms brought on by surgical intervention. The use of relaxation techniques in the postoperative phase will minimize the patient's use of analgesics, reduce the drugs' adverse effects, and ensure that the patient receives the best nursing care possible<sup>13</sup>.

## **BACKGROUND OF THE STUDY:**

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Numerous women in the community are miserable as a result of hysterectomy, which causes their body image and self-esteem to be altered by the loss of something that is a part of their femininity.

In the United States, one in every three women over the age of 60 has had a hysterectomy, making it the second most common major surgical treatment performed on women globally. In many high-income countries, it is also the primary cause of non-obstetric surgery among women. Hysterectomy is a surgery that necessitates extra physical and psychological care from nurses in hospitals or outpatient clinics<sup>9</sup>.

According to Khastiger et al. (2000), the majority of retrospective research have found that hysterectomy has a detrimental psychological impact<sup>4</sup>. This is the most prevalent non-obstetrical surgical procedure for women in the United States. A hysterectomy is performed on approximately 300 women per 100,000<sup>5</sup>. An

abdominal hysterectomy is a surgical operation that removes the uterus through a small incision in the lower abdomen<sup>6</sup>.

Hysterectomy surgery was performed 3.2 percent of the time in India, with the highest rate (8.9%) in Andhra Pradesh and the lowest rate (0.9%) in Assam. In rural India, the prevalence was higher than in urban India<sup>11</sup>.

Chronic pain can have a substantial psychological influence as well as a physically devastating consequence<sup>10</sup>. Because of the emotional and physical constraints of the particular situation, gynaecological clients frequently require more understanding than other clients. Stress treatment can be pharmacological or non-pharmacological. Where pharmacological procedures are costly and frequently linked with side effects. Recent research has centred on non-pharmacological approaches<sup>4</sup>.

Dr. Herbert Benson developed the Benson relaxation technique, which is a type of meditation that focuses on muscle relaxation followed by focused breathing to relieve stress<sup>7</sup>

'Benson characterised the relaxation response as a physiologic and homeostatic condition that counteracts the stress response. The Relaxation Response can be elicited through a variety of methods, including visualisation, muscle relaxation, energy healing, massage, acupuncture, various breathing techniques, meditation, prayer, and yoga. The relaxation response is linked to lower oxygen consumption and lower sympathetic nervous system tone.

The Benson relaxation method is a behavioural, non-pharmacological approach to deal with anxiety. This method is easiest to learn and apply to a given patient.<sup>15</sup>

## **NEED OF THE STUDY:**

Understanding how we think about femininity and women's roles in our culture might help us to grasp the implications of gynecologic surgery.<sup>16</sup>

In many nations around the world, after a caesarean section, hysterectomy is one of the most commonly performed medical procedures during reproductive ages. Hysterectomy is a surgical procedure that stops a woman's reproductive function. It has both beneficial and negative impacts on her physical and mental health.<sup>11</sup>

An open abdominal hysterectomy is a serious procedure that causes moderate to severe discomfort. Inadequate treatment to acute post-operative pain has immediate problems such as infection, neurological, cardiovascular, and thromboembolic sequelae caused by immobility. Chronic pain syndromes such as post-hysterectomy or hysterectomy chronic pelvic pain syndrome are long-term repercussions.<sup>12</sup>

Relaxation is a non-pharmaceutical method that can help you reduce stress and boost your self-esteem by affecting your mental and emotional well-being.<sup>14</sup> It can help with pain relief, hunger stimulation, sleep enhancement, energy enhancement, stress reduction, and relaxation<sup>17</sup>.

Herbert Benson, a Harvard physician, initially established Benson's relaxation technique in 1975, and it has since become one of the most prominent methods of relaxation. He stated that the strategy could

cause the relaxation response by lowering the autonomic nervous system's activity. Although it is hypothesised that Benson's relaxation approach can reduce stress before and during invasive procedures and may be linked to better patient outcomes, no study has been undertaken to analyse and compare the effect of this relaxation technique on various types of surgery<sup>14</sup>.

Benson's relaxation technique is simple, easy measure does not require high cost or manpower<sup>17</sup> So researchers feel the need for doing the research on reduction of pain and stress by using benson's relaxation therapy among women undergone gynecological surgeries.

## **METHODOLOGY**

A pretest post-test control group and experimental group research design was adopted to assess the efficacy of benson's relaxation technique on stress and pain among women undergone abdominal hysterectomy. In this study, interventional analytical study will be used. In this study 100 women who fulfill the inclusion criteria were selected by purposive random sampling technique to collect data. The selected women undergone abdominal hysterectomy will be divided into two groups i.e control and experimental group and their stress and pain will be assessed by perceived stress scale and numerical pain scale on 2<sup>nd</sup> postoperative day. Then intervention of benson's relaxation technique will be given to the experimental group in the morning and evening. The stress and pain will be assessed by perceived stress scale and numerical pain scale on 5<sup>th</sup> postoperative day in both groups. Secondary outcome involve evaluation of efficacy of benson's relaxation technique given to the experimental group.

## **INCLUSION CRITERIA**

- Those who are willing to participate in the study
- Those who are having second postoperative day

## **EXCLUSION CRITERIA**

- Those who are having post operative abdominal hysterectomy complications

## **RANDOMIZATION**

- All participants are selected by sequentially numbered list at random.

## **INTERVENTION**

**Step 1:** In pretest assessing the stress and pain by perceived stress scale and numerical pain scale on 2<sup>nd</sup> post-operative day in both experimental and control group among women undergone abdominal hysterectomy.

**Step 2:** Providing intervention as benson's relaxation technique in morning and evening to the experimental group.

**Step 3:** In posttest assessing the stress and pain by perceived stress scale and numerical pain scale on 5<sup>th</sup> post-operative day in both experimental and control group among women undergone abdominal hysterectomy.

## **STATISTICAL ANALYSIS**

Statistical analysis done by descriptive and inferential statistics with the help of SPSS 24.0 software.

## **ETHICAL ASPECTS**

Study was approved by the Institutional Ethics Committee (letter no –DMIMS (DU)/IEC/2021/291) and the study will be conducted in accordance with the ethical guidelines prescribed by Central Ethics Committee on Human Research.

## **EXPECTED OUTCOME/ RESULTS**

This study is mainly planned to evaluate the efficacy of benson's relaxation technique on stress and pain among women undergone abdominal hysterectomy. Hence, it is expected that the stress and pain may reduced around 60% after providing benson's relaxation technique to women undergone abdominal hysterectomy.

## **DISCUSSION**

The present study evaluate the efficacy of benson's relaxation technique among women undergone abdominal hysterectomy, the data is collected by assessing stress and pain by perceived stress scale and numerical pain scale on 2<sup>nd</sup> post-operative day as pretest in both groups. The intervention given as benson's relaxation technique twice a day in experimental group contribute to reduce the stress and pain in experimental group. The stress and pain assessed by perceived stress scale and numerical pain scale on 5<sup>th</sup> post-operative as posttest in both groups.

As a result, we focus to minimize the post-operative stress and pain among women undergone abdominal hysterectomy, in order to recognize whether the benson's relaxation technique is effective or not or their is a need of other relaxation therapies to gain the best results.

Previous research on efficacy of benson's relaxation technique on stress and pain among women undergone abdominal hysterectomy supports the above research findings as we have discussed below.

At a designated hospital in Pudukkottai, a true experimental study was undertaken to evaluate the efficiency of Benson's relaxation therapy on pain and stress reduction in 60 post-caesarean mothers . The data was obtained using a numerical pain scale and a perceived stress scale in both groups, with the experimental group receiving bensons relaxation therapy during the day. The results showed that the experimental group's mean pain score was 75.6 percent in pre-test, 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. In the post-test, the mean stress score for the experimental group was 19.46 percent, compared to 29.64 percent for the control group. Thus it become evident that benson's relaxation therapy was effective in reducing the level of pain and stress in

experimental group. In both the experimental and control groups, no substantial correlation was identified between the selected demographic characteristics and the amount of pain and stress<sup>18</sup>

## **.CONCLUSION**

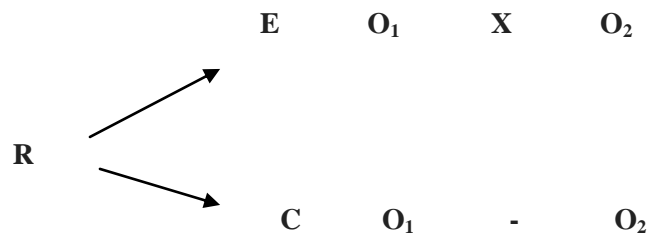
Conclusion will be drawn from the statistical analysis.

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**Fig 1. SCHEMATIC REPRESENTATION**



**R** : Randomization

**E** : Experimental group

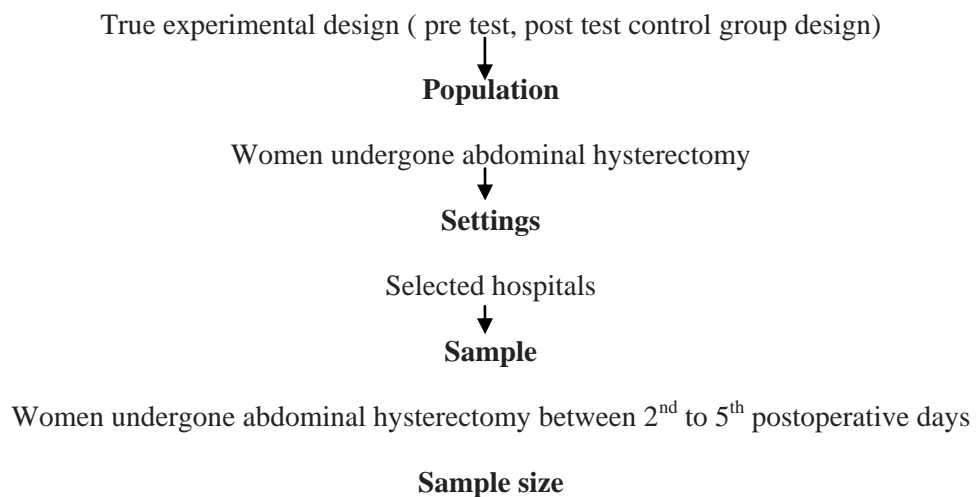
**C** : Control group

**O<sub>1</sub>**: Pre test assessment ( level of pain and stress before intervention by using numerical pain scale and perceived stress scale)

**X** : Intervention ( benson's relaxation technique)

**O<sub>2</sub>**: Post test assessment (level of pain and stress after intervention by using numerical pain scale and perceived stress scale)

**Fig 2. SCHEMATIC DIAGRAM OF STUDY METHODOLOGY**



100, Women undergone abdominal hysterectomy between 2nd to 5th post operative day ( 50 in experimental group and 50 in control group)

**Sampling techniques**

(Probability Simple Random technique)

**Tool**

Demographic data, Numerical pain scale, and perceived stress scale

**Data collection procedure**

**Experimental group**

**Control group**

Assessment of level pain and stress

Assessment of level pain and stress

Pre test

Pre test

Intervention Benson's relaxation technique

No intervention

Post test Assessment of level  
of pain and stress

Post test Assessment of level  
of pain and stress

Data analysis and interpretation (Descriptive and inferential statistics.)

UNL