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EFFECTIVENESS OF GUIDED IMAGERY THERAPY AND PHYSICAL RELAXATION TECHNIQUES ON PATIENTS' ANXIETY LEVEL PRE OPERATION BENIGNAL PROSTATE HYPERPLASIA AT DR. HOSPITAL. ADJIDARMO YEAR 2023

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Abstract

Background: Benign Prostate Hyperplasia is an enlarged prostate gland, which can block the prostatic urethra and cause obstruction of the flow of urine out of the bladder. Management Surgical procedures in BPH patients will have an impact on anxiety before surgery. PMR and guided imagery are relaxation techniques that can help activate the relaxation response. The general objective of this study was to determine the effectiveness of PMR therapy and guided imagery as non-pharmacological therapy on the anxiety level of preoperative BPH patients. Research Methods: This research is an experimental study, using a quasi-experimental design. In this study, there were two groups, namely the group that received PMR treatment and the guided imagery treatment group in preoperative BPH patients. The number of members of each group is 10 people. The technique used to test the effectiveness of the PMR and guided imagery groups was the Mann Whitney test. Research Results: Based on data analysis using the Mann-Whitney test about the level of anxiety between the Guided Imagery group and the PMR group, a p-value of 0.000 was obtained. Based on this value, because p <0.05, which means that there is a difference in the level of anxiety between the Guided Imagery group and the PMR group. Conclusion: There is a difference in the level of anxiety between the Guided imagery group and the PMR group. When viewed from the median and minimum-maximum values, it can be seen that there is a better reduction in anxiety levels in the Guided imagery group when compared to the PMR group.

Keywords: Benign Prostate Hyperplasia, PMR, Guided Imagery, Preoperative

Introduction

Prostate Hyperplasia is an enlarged prostate gland, which can block the prostatic urethra and cause obstruction to the flow of urine out of the bladder. Based on data from the World Health Organization (WHO) in 2018, it is estimated that around 59 men out of 100,000 people suffer from BPH or around 70 million worldwide. In Indonesia, BPH is second only to urinary tract stones, and in general, it is estimated that almost 50% of men in Indonesia aged over 50 years are found to suffer from BPH or an estimated 2.5 million people (WHO, 2017).

Long-term management of patients with BPH is surgery. One of the most common procedures performed on patients with BPH is Transurethral Resection of the Prostate (TURP) surgery, which is a surgical procedure that involves inserting a resectoscope through the urethra to excise and resect the obstructed prostate gland. (IAUI 2015). This procedure causes a surgical wound which results in pain in the post-operative wound (Wayan., 2020).

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Preoperative is the initial stage of perioperative nursing. When facing surgery, especially in Benign Prostate Hyperplasia patients (Lerner et al, 2021), clients will experience various stressors. Waiting for surgery to be carried out will cause fear and anxiety in clients who associate surgery with pain, possible disability, becoming dependent on other people and possibly death (Pedriali et al 2016). The fear and anxiety that patients may experience can be seen from signs and symptoms such as: increased heart rate, uncontrolled hand movements, damp palms, restlessness, asking the same questions repeatedly, difficulty sleeping, frequent urination (Carpenter, et al. al 2016).

Anxiety and stress have a tremendous impact on individuals undergoing surgery for benign prostate hyperplasia, as they can hinder lifestyle changes, which

will affect compliance with the recommended diet and therapy, it will not work well so if this happens then the risk of complications that will occur can increase the frequency of hospitalization, which in turn will affect the amount of treatment costs to be greater which can also have the potential to increase mortality. (Saelan et al 2021).

This arises due to lack of experience in dealing with these problems or the characteristics of the individual himself who is not used to dealing with problems. Stress is a force or stimulus that moves an individual to produce a response and tension. Individuals who experience stress will respond according to their existing coping mechanisms, influenced by their knowledge and life experience (Indriastuti, et al 2020). Physical Relaxation Techniques is a stress management technique that is based on the workings of the sympathetic and parasympathetic systems. Apart from that, when the muscles are relaxed it will normalize the functions of the body's organs (Charalambous, 2016).

After someone relaxes, it can help their body relax, thereby improving various aspects of physical health (Zees et al 2021). This can also be applied to anxious patients, especially pre-operative patients with Benign Prostate Hyperplasia. Apart from that, there is also guided imagery therapy, where in a study it was explained that guided imagery therapy in pre-operative patients who experienced anxiety after being given the guided imagery relaxation technique experienced a decrease in anxiety levels (Pratama, 2020).

Research Methods

This research is experimental research, using a quasi-experimental design. In this study, a test was carried out first before respondents were given treatment. The test is carried out by measuring anxiety levels. Next, there were two groups, namely the group that received Physical Relaxation Techniques treatment and the guided imagery treatment group for preoperative patients. The population in this study were all BPH patients who wanted to undergo surgery at RSUD dr. Adjidarmo Lebak. The number of patients with BPH who will undergo surgery at RSUD dr. Adjidarmo Lebak in November was 26 people. As for deep sampling This research was carried out using a purposive sampling method, namely a sampling method that is based on knowledge and consultation with experts.

Research Result

The results obtained data on respondent characteristics (univariate) and therapeutic communication data as well as patient family anxiety data (bivariate). The following are the results and discussion:

Tabel. 1 Distribution of Respondents Based on Age Guided imagery group (n=20)

Age	*Guided Imagery*	
	Frekuensi	Presentase (%)
26-35 year	0	0
36-45 year	1	10
46-55 year	1	10
56-65 year	6	60
> dari 65 year	2	20
Total	10	100,0

Tabel. 2 Distribution of Respondents Based on Age Physical Relaxation Group (n=20)

Age	Physical Relaxation Techniques	
	Frekuensi	Presentase
26-35 year	0	0
36-45 year	0	0
46-55 year	1	10
56-65 year > dari 65 year	8	80
	1	10
Total	10	100

Based on table 1.1 and table 1.2 regarding data on the characteristics of respondents based on age, the majority are aged 55 - 65 years, this is in line with research by Chughtai, et al 2016 which states that around 50% of men aged over 50 years are known to have evidence of Benign Prostate Hyperplasia pathology. . In another study, it was found that around 1/3 of men aged 40 - 79 years suffered from moderate to severe LUTS caused by Benign Prostate Hyperplasia.

Then in other research, especially in Indonesia, Benign Prostate Hyperplasia is a urological disorder after urinary tract stones that are encountered in Urology clinics. It is estimated that in 2018 it will be 50% of men over 50 years old. In 2018, 45% of BPH occurred in men aged over 50 years and in 2019, 56% occurred in men aged 56 years. If calculated from the entire Indonesian population of more than 200 million, it is estimated that there are 2.5 million Indonesian men who suffering from Benign Prostate Hyperplasia. (Waluyo, S, and Marhaendra, B. 2020)

Tabel 3. Analysis of Pre and Post Anxiety Levels on Guided imagery group with paired t test

	N	Rerata ±s.b	p
Pre anxiety	10	24,30±1,2	0,000
Post anxiety	10	14,30±1,4	

Based on data analysis using the t-test regarding pre and post anxiety levels in the Guided imagery group, a p-value of 0.000 was obtained. Based on this value, $p < 0.05$, which means there is a difference in pre and post anxiety levels after guided imagery therapy. If we look at the average value of the anxiety level, it can be seen that there is a decrease in the level of anxiety in the post-measurement after guided imagery therapy.

Tabel 4. Analysis of Pre and Post Anxiety Levels in the Physical Relaxation Techniques Group using the Wilcoxon test

	N	Median (minimum-maksimum)	p
Pre anxiety	10	22 (21-24)	0,007
Post anxiety	10	19 (17-22)	

Based on data analysis using the Wilcoxon test regarding pre and post anxiety levels in the Physical Relaxation Techniques group, a p-value of 0.007 was obtained. Based on this value, $p < 0.05$, which means there is a difference in pre and post anxiety levels after Physical Relaxation Techniques therapy. If we look at the minimum-maximum value of anxiety level, it can be seen that there is a decrease in anxiety level in the post-measurement after using Physical Relaxation Techniques therapy.

Tabel 5 Analysis of Anxiety Levels between the Guided imagery Group and the Physical Relaxation Techniques Group using the Mann-Whitney test

Group	N	Median (minimum-maksimum)	p
Worry *Guided imagery*	10	14 (12-17)	0,000
Worry Physical Relaxation Techniques	10	19 (17-22)	

Based on data analysis using the Mann-Whitney test regarding the level of anxiety between the Guided imagery group and the Physical Relaxation Techniques group, a p-value of 0.000 was obtained. Based on this value, $p < 0.05$, which means there is a difference in anxiety levels between the Guided imagery group and the Physical Relaxation Techniques group. If we look at the median and minimum-maximum values, it can be seen that there is a better reduction in anxiety levels in the Guided imagery group when compared to the Physical Relaxation Techniques group.

Discussion

The results of this study provide an analysis of pre and post anxiety levels in the Guided imagery group, with a p-value of 0.000, which means there is a difference in pre and post anxiety levels after guided imagery therapy. The average value of anxiety level also provides an analysis of the decrease in anxiety level in the post-measurement after guided imagery therapy. These results are also in line with research conducted by Ilham Pratama (2020) entitled "The Effect of the Effectiveness of Guided Imagery Relaxation Techniques on the Anxiety Levels of Preoperative Patients. In the study, the results showed that there was a decrease in anxiety levels after Guided Imagery therapy was carried out in preoperative patients (Pratama, 2020).

The results of data analysis using the Wilcoxon test regarding pre and post anxiety levels in the Physical Relaxation Techniques group showed a p-value of 0.007, which means there was a difference in pre and post anxiety levels after Physical Relaxation Techniques therapy. If we look at the minimum-maximum values for anxiety levels, there is a decrease in anxiety levels in the post-measurement after Physical Relaxation Techniques therapy. This is also in line with research conducted by Islamarida, Rista (2012) entitled "Effectiveness of Deep Breathing Relaxation Techniques in Reducing Anxiety Levels in Preoperative BPH Patients at the Sultan Agung Islamic Hospital Semarang" in this study explains that there was a decrease in anxiety levels after therapy. (Rista, 2012). Physical relaxation techniques are relaxation techniques that can help activate the relaxation response by performing several techniques such as deep breathing relaxation, visualization, progressive muscle relaxation, meditation, and yoga (Metro. et al, 2022).

Physical Relaxation Techniques are done by tightening and relaxing a group of muscles. Muscle contractions will be followed by relaxation of 14 muscle groups, including dominant and non-dominant hands and arms, dominant and non-dominant biceps, forehead, upper cheeks and nose, lower cheeks and jaw, neck and throat. Chest with shoulders and upper back, stomach, dominant and non-dominant thighs, dominant and non-dominant calves and dominant and non-dominant legs (Lolandia, et al, 2023). The actions carried out in this study, especially in preoperative patients, showed a decrease in anxiety because tense muscles can cause anxiety, so this anxiety can be reduced by relaxing the muscles. By tensing and relaxing several muscle groups and differentiating tense and relaxed sensations using the Physical Relaxation Techniques technique, a person can eliminate muscle contractions and experience a feeling of relaxation so that anxiety will also be reduced (Lolandia, et al 2023)

The results of the Mann-Whitney test regarding the level of anxiety between the Guided imagery group and the Physical Relaxation Techniques group obtained a p-value of 0.000. Based on these values, it explains that there is a difference in anxiety levels between the Guided imagery group and the Physical Relaxation Techniques group. If we look at the median and minimum-maximum values, it can be seen that there is a better reduction in anxiety levels in the Guided imagery group when compared to the Physical Relaxation group (Pardede, 2020). Several previous studies that discussed these two therapies were proven to reduce anxiety levels in patients, but the results of this study showed more effective results where the Guided imagery group got a better value for reducing anxiety levels than the Physical Relaxation Techniques group. Charalambous, et al (2016)

Based on psychoneuroimmunology, anxiety is a stressor that will affect the limbic system as the center for regulating emotions which occurs through a series mediated by the HPA-axis (Hypothalamus, Pituitary and Adrenal). Stress will stimulate the hypothalamus to increase the production of Corticotropin Releasing Hormone (CRF). This CRF will then stimulate the anterior pituitary gland to increase the production of Adrenocorticotropin Hormone (ACTH). This hormone will increase cortisol secretion and the action of catecholamines (epinephrine and norepinephrine). The release of these hormones stimulates increased work of the parasympathetic and sympathetic systems of the autonomic nervous system, thus affecting metabolic work such as complaining of frequent urination or difficulty urinating, heartburn, loose stools, bloating, pain in the stomach, cold sweat, heart palpitations, hypotension or hypertension, headaches and shortness of breath (Guyton and Hall, 2014). The guided imagery relaxation technique that is carried out will increase the production of the 'happiness' hormone (betaendorphin) so that the patient will feel a comfortable condition, feeling calm and relaxed which ultimately results in a reduction in anxiety (Guyton and Hall, 2014).

Conclusion

From the results of the research and discussion, it can be concluded that based on the research results, blood pressure and pulse showed a decrease after both Guided imagery and PMR therapy were carried out. Then, both Guided imagery and PMR can reduce the level of anxiety in preoperative patients with benign prostate hyperplasia, but based on the analysis, the p-value is 0.000. Based on this value, $p < 0.05$, which means there is a difference in anxiety levels between the Guided imagery group and the PMR group. If we look at the median and minimum-maximum values, there is a better reduction in anxiety levels in the Guided imagery group when compared to the PMR group.

Suggestion

For Nursing Services, it is hoped that the results of this research will become a basis for developing nursing interventions in an effort to reduce anxiety in pre-operative BPH patients. For future researchers, future research also needs to be researched in a larger sample to illustrate better effectiveness.

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