

Effectiveness of Relaxation Technique on Level of Anxiety before Upper Gastrointestinal Endoscopy (UGE)

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Abstract

Introduction - Most of us have experienced anxiety at one point in life, whether it is waiting in a queue for Viva or before the performance, everyone has experienced butterflies in the stomach. Two types of anxiety broadly categorize anxiety into Trait and state anxiety forms. The general tendency of a person to be anxious is known as Trait Anxiety, whereas State Anxiety refers to the anxiety experienced at one moment due to a stressful situation. The present study was aimed to determine the effectiveness of relaxation techniques on the level of anxiety of clients undergoing Gastrointestinal Endoscopy procedures.

Materials and Methods: The present study consisted of patients divided into a control group and an experimental group. All of the participants filled State-Trait Anxiety Inventory (STAI). The experimental group was given a relaxation technique and then both groups were asked to complete STAI. The collected data were analyzed through frequency, percentage, Chi-square, Yates correction and Fisher exact test.

Results: Before the intervention was carried out, there was no significant difference between the two groups in terms of the rate of state and trait anxiety ($p < 0.05$). After the intervention, the rate of state and trait anxiety decreased significantly ($p < 0.05$) in the experimental group. Conclusion: In patients subjected to endoscopy, psychological preparation was effective in reducing their anxiety and thus this can be considered as an efficient method in decreasing anxiety

Keywords - Relaxation Technique, Upper Gastrointestinal Endoscopy (UGE), Anxiety

Introduction

Mental well-being is the aptitude to cope up with humankind to bring satisfaction and peace. Four magnitudes of health have an imminent role to achieve

the goal of a completely healthy environment. Physical strength, patience, mental balance, social and spiritual wellbeing and overall energy is required to toil towards the aim¹. Illness is a highly individual state in which the person's physical, demonstrative, logical, communal developmental, or spiritual functioning is thought to be diminished². Out of many such emotional behavior characteristics, one is anxiety that varies from person to person. Anxiety can be identified by excessive worry, feeling nervousness, unexplained uneasiness.

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Anxiety is an emotion without a specific object. It has psychological accompaniment such as excessive sweating tremors Rapid heartbeat dilated pupil and dry mouth³. Stress and anxiety are used vice versa mostly, however, these two are not the same. Anxiety is a normal reaction to a stressful situation and can be favorable in few situations. It helps one to deal with the anxious situation at the workplace⁴. When anxiety is in its extreme stages, it is difficult for an individual to perform any task with concentration⁵.

Anxiety can be commonly found among school-going children. Individuals get fearful and anxious in hospital settings, normally due to knowledge deficit and invasive procedures such as angiography, ultrasound, endoscopy colonoscopy, CT scan and MRI, etc.⁶ The general tendency of a person to be anxious is known as Trait Anxiety, whereas State Anxiety refers to the anxiety experience at one moment due to a stressful situation.

During any invasive procedure, the level of anxiety may go from mild to severe forms and may disturb the procedure causing a delay in diagnosis of disease⁷. The fact that the side effects of endoscopy are low but sampling is only possible when endoscopy is done. Upper gastric Endoscopy is one of the most fearful and anxiety-provoking experiences and studies suggest that 8 % withdraw from the procedure due to fear and non-cooperation. Efforts to eliminate anxiety must be taken to ease the patient to some extent⁸.

The mind-body technique can be used to treat anxiety and panic disorder chronic pain coronary artery disease depression headache difficulty sleeping and loss of urinary control. Meditation includes physical relaxation mental calmness and favorable emotional states such as loving-kindness. Tai chi and Qigong help in lowering blood pressure⁹.

Since endoscopies can evoke anxiety, feelings of vulnerability, embarrassment and discomfort,

several methods are being used to reduce patient pre-procedural worries, including psychological intervention using relaxation and coping techniques, relaxation music and even sedation¹⁰. A pre-endoscopy patient education increases compliance decreasing both the need for repeated examination and the attendant costs.

Material and Methods

The Present Study adopted a pre-test post-test control group design. The study was conducted in S.R Mid City hospital, Haridwar. Subjects were divided into experimental (n2) and control groups (n1) by systematic randomized technique. The sample size was calculated using the Cochran formula based on a previous study. Total 61 samples were divided into (n1 = 30) (n2 = 31) Subjects were selected who met the inclusion criteria and gave written consent to be part of the study. Tools used to collect the data were sociodemographic variables and STAI (State trait Anxiety Inventory). Reliability of tools was established with Pearson coefficient correlation and it was found to $r = 0.8$. The researcher had gone for the one-month training program of yoga and meditation to learn relaxation techniques. Non-invasive 61 points relaxation technique was used before the endoscopy procedure among the experimental group. The sample in the Control group received normal instruction about the upper gastrointestinal endoscopic. Formal written administrative permission was obtained from concerned authorities prior.

Analysis and Interpretation

After the data was collected through demographic profiles from two groups, descriptive statistics were employed to examine the effect of the intervention on the level of anxiety through T-test and Chi-square tests, Yates, and Fisher's exact test.

Table -1 Comparing Pre and post State & Trait Anxiety Levels among both groups

State Anxiety	Groups	Mild (21-40)	Moderate (41-60)	Severe (61-80)
Pre-Test Scores	Control	6%	20%	74%
	Experimental	-	36%	64%
Post Test Scores	Control	14%	84%	2%
	Experimental	49%	51%	-

Table -2 Comparing Pre-Post State & Trait Anxiety Levels among both groups

POST - STATE ANXIETY	Mean±SD	Meandifference	't' value
Post-Test Control Group	50.1 ± 7.8	5.8	2.48*
Post-Test Experimental Group	44.3 ± 9.9		
POST TRAIT ANXIETY			
Post- Test Control Group	52.1 ± 7.6	9.89.8	4.18*4.18**
Post-Test Experimental Group	42.8 ± 9.5		

t'59 = 1.67 at the level of P < 0.05 Significant

Table -3 Associating Pre-State Anxiety Levels among experimental groups

S.N	Pre-Endoscopy State Anxiety	Moderate	Severe	Calculated value
1	Education Qualification			7.33#*
	Primary/ secondary	5	19	
	Graduation/ Post Graduation	6	1	
2	Previous- Exposure			4.30#*
	No	5	16	
	Yes	7	3	

- Yates, \$- fisher's Exact, chi- @ df1 = 3.84 at P < 0.05

Table -4 Associating Pre-Trait Anxiety Levels among experimental groups

S.N	Pre-Endoscopy Trait Anxiety	Moderate	Severe	Calculated value
1.	Education Qualification			
	Primary/ secondary	8	15	4.66#*
	Graduation/ Post Graduation	7	1	

-Yates, \$- fisher's Exact, chi- @ df1 = 3.84 at P < 0.05

Results

The study consisted of 61 patients; 32 women and 29 men who were equally divided into control and experimental groups ($p > 0.05$)

There was no significant difference between the two groups in terms of demographic factors ($p > 0.05$).

According to the results of the study, only State anxiety before intervention had a significant association with previous exposure among the experimental group and educational qualification had a significant association with Trait anxiety also among the Experimental group. [Table - 2, 3]

The intervention had a significant effect on post-intervention State and Trait anxiety at $p > 0.05$. [Table - 1]

The results of the study also indicated that level of anxiety had no association with age, gender, area of living ($p > 0.05$)

Discussion

The study intended to evaluate the effectiveness of relaxation techniques on anxiety levels of patients undergoing gastrointestinal endoscopy. The Relaxation technique was given to the client before endoscopy and on statistical evaluation was found to be effective in reducing the anxiety level. This finding is in line with other studies conducted on patients

before endoscopy. Similar findings were also reported in some other studies which investigated the effects of various noninvasive methods like deep breathing, meditation, yoga, relaxing music and other relaxation techniques which calms the mind and nervous system. Similar studies were done to see the efficacy of various interventions on the level of anxiety by various authors.

The result of this research study was supported by Salwa. A. Mohammed performed a study to determine the effectiveness of teaching to decrease the level of anxiety. There was significant improvement at all levels of post anxiety after intervention at a $P < 0.05$ level of significance. It showed that patients experienced less pain, breathing difficulties who were given prior information¹¹. Sadeghimoghaddam S. et.al. In his study showed that relaxation and prayer therapy is effective in promoting hope and reducing anxiety in patients with coronary artery disease¹². Smitha T. et.al. Evaluated the benefit of STP (Structured Teaching Program) on the level of knowledge and anxiety where it was proved statistically that interventions do lessen the anxiety levels¹³.

Another study was performed by Sasmita D et.al. On the awareness and pre-procedural anxiety levels. Study findings showed that awareness was increase so the anxiety was relieved¹⁴. EL Hassan H et.al. Showed that music led to a significant reduction in the post-

treatment STAI scores¹⁵. Behrouzian F. conducted a study where the effect of the interventions was more noticeable on the state anxiety¹⁶. Yusuf and Kuzdere, concluded that all types of music had an effect on reducing patients' preoperative anxiety, and listening to Classical Turkish Music was particularly the most effective one¹⁷. Padam et.al. Listening to Vedic chants and Indian classical instrumental music has beneficial effects on alleviating anxiety levels induced by the apprehension of invasive procedures and can be of therapeutic use¹⁸.

Limitation

Individuals with major psychological problems were not included in the study. The effect of cognitive, information and behavioral interventions was not separately examined. The intervention period was short.

Conclusion

The result of this study showed that relaxation interventions before endoscopy can decrease patients' anxiety. Endoscopy or any other procedure where an individual has to stay alone may increase anxiety levels and can become a hindrance in diagnostic procedures. Thus, it is recommended to provide the endoscopic department with trained endoscopists and nurses or make sure that a psychologist attends the medical team.

Conflict of Interest : Nil

Source of Funding : Self

Ethical Clearance : Ethical clearance was taken from the ethical committee of Shri Swami Bhumanand College of Nursing. The written permissions were taken from the Endoscopy centers of Haridwar before the data collection. Written informed consent was taken prior to the pre procedural assessment.

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