

# A Study on Effectiveness of Relaxation Technique on Anxiety among Hypertensive Clients in Selected Community in Jaipur

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Received:- 01 July 2021/ Revised:- 12 July 2021/ Accepted: 22 July 2021/ Published: 31-07-2021

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## Abstract—

*Anxiety is a common experience of human beings that their minds and bodies are closely interlinked. Any disturbance in either of them is bound to affect the other. Mental worries lead to physiological problems and bodily discomfort does impact on the mind.*

*The study objectives are:*

- 1. To assess the level of anxiety among the hypertensive clients by using Beck anxiety scale.*
- 2. To find the effect of relaxation techniques on level of anxiety among hypertensive clients.*
- 3. To find an association between anxiety level and selected demographic variables.*

*The article assumes that*

- 1. Hypertensive client have anxiety.*
- 2. Relaxation technique (pranayama breathing) is effective techniques for reducing the level of anxiety on hypertensive clients.*

**Keywords—** *Community area; hypertensive clients, anxiety; Relaxation technique (pranayama breathing).*

## I. INTRODUCTION

Anxiety is a common experience of human beings that their minds and bodies are closely interlinked. Any disturbance in either of them is bound to affect the other. Mental worries lead to physiological problems and bodily discomfort does impact on the mind.

We are all familiar with the talk about suffering from tension, nervousness, or stress. The person who suffers from anxiety have no difficulty in understanding the experience. Anxiety is an extremely unpleasant feeling; it can make people feel frightened, uneasy, unhappy and sometimes desperate. The anxiety may affect the body, the thoughts and emotions and the life style of the individual. The physical symptoms associated with anxiety includes breathing difficulty, feeling faint, dry mouth, pounding heart, muscle aches and pain, excessive sweating, bowel/ urinary problems etc.

Everybody feels some degree of anxiety which is normal and useful. If we are unable to get anxious at all, it would be extremely unnatural phenomenon. We need anxiety to deal with difficult situations like exams and interview etc. Anxiety can become a problem when it rises beyond the normal limits, if it goes on for too long or if it happens too often and in inappropriate situations. This may happen to some people because of painful feelings that have been able to come to terms with<sup>1</sup>.

Hypertension is called as “**Silent Killer**” because people who have it are often symptom free. It has been recognized that hypertension is a global problem with its prevalence increasing rapidly over the decades. The first and the most

important step in the strategy for preventing hypertension is making people aware of the need to prevent hypertension and the preventive measures which is the central philosophy of primary health care<sup>2</sup>.

Hypertension is the primary and most common risk factor for heart disease, stroke and renal disease. It is estimated that one in six people worldwide, or nearly one billion, are affected by high blood pressure, and further estimated that this number will increase to 1.5 billion by 2025. The WHO also stated that high blood pressure is the most attributable cause of cardiovascular death.

Anxiety disorders are often associated with a specific pattern of somatic illnesses like cardiac disorders, hypertension, gastrointestinal problems, difficulties getting pregnant, asthma, migraine, etc.; individuals with both anxiety disorders and medical illness need therefore to be evaluated carefully for cooccurrence<sup>3</sup>.

## II. CONCEPTUAL FRAMEWORK

A conceptual framework is a network of interrelated concepts that provide a structure for organizing and describing the phenomenon of interest. Research studies are based on a theoretical or conceptual framework that facilitates visualizing the problem and places the variables in logical context<sup>8</sup>.

Conceptualization is a process of forming ideas, designs and plans. A conceptual framework deals with the concepts assembled together by virtue of their relevance to research problems, which provides a certain framework of reference for clinical practice, research and education<sup>9</sup>.

Based on extensive review of literature, discussion with experts in the field, and the experience of the investigator as a nurse, the investigator felt that Ernestine Wiedenbach's (1969) prescriptive theory is the best suited model to study the effectiveness of Relaxation Techniques (pranayama breathing) on anxiety among hypertensive clients in selected community in Jaipur.

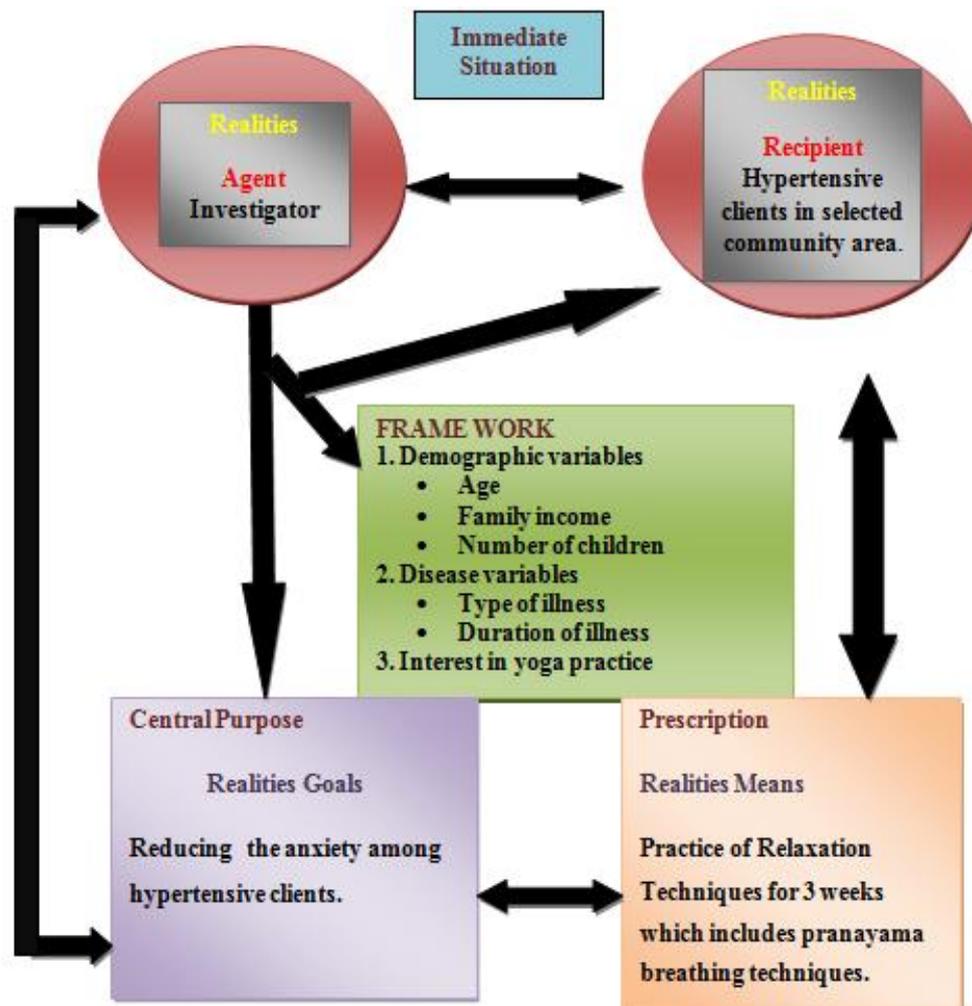


FIGURE 1: Conceptual Frame Work based on Ernestine Wiedenbach's Prescriptive Theory.

### III. SCOPE OF THE STUDY

1. The study aims at assessing the effect of Relaxation Techniques (pranayama breathing) in reducing the anxiety of hypertensive clients of selected community of Jaipur.
2. The findings of the study will encourage the health worker to plan a programme for reducing the anxiety, hypertension and other problems of the community area.
3. The findings of the study will help the health care professionals to implement various programs and therapies for the hypertensive clients to reduce the anxiety, stress and other problems of the community people.

### IV. METHODOLOGY

The methodology of research indicates the general pattern of organizing the procedure of gathering valid and reliable data for the problem under investigation 9.

In this chapter methodology adopted for the study is discussed. The methodology of the study includes research approach, research design, variables, setting of the study, population, sample and sampling technique, sampling criteria, development and description of tool, content validity of tool and reliability of the tool, development of procedure for relaxation techniques, pilot study and data collection process and plan for data analysis. On the whole it gives a general pattern for gathering and processing research data.

#### 4.1 Research Approach:

An evaluative research approach was used for this study. An evaluative research is an applied form of research that involves, finding out how well a programme, practice, or policy is working 36. The main goal of the present study was to evaluate the effectiveness of relaxation techniques on anxiety among hypertensive clients.

#### 4.2 Research Design:

A research design is a blue print for conducting a study that maximizes control over factors; this could interfere with the validity of the findings 9.

One group pre test-post test design was adopted for this study.

According to Campbell and Stanley (1963), the one group pre-test-post-test design is depicted as 01 X 02

01 - Pre- test

X - Relaxation techniques

02 - Post-test

**TABLE 1**  
**SCHEMATIC REPRESENTATION OF RESEARCH DESIGN.**

Group	Phase I	Phase II		Phase III	
	Preparation of procedure for relaxation techniques.	Pre-test <b>0<sub>1</sub></b>	Relaxation techniques <b>X</b>	Post test <b>0<sub>2</sub></b>	Analysis of data & interpretation of findings.
Hypertensive client of selected community in Jaipur.	<ol style="list-style-type: none"> <li>1. Review of existing literature.</li> <li>2. Discussion with experts.</li> <li>3. Preparation of blue print.</li> <li>4. Preparation of procedure of relaxation techniques.</li> <li>5. Content validity of procedure.</li> <li>6. Pre-testing of tool.</li> </ol>	Assessing the anxiety level of hypertensive clients by using Beck Anxiety Inventory.	Implementing relaxation techniques practice for 20 minutes for 3 weeks.	Assessing the level of anxiety among hypertensive clients by using Beck Anxiety Inventory after practice of relaxation technique.	Analysis of the baseline proforma by descriptive statistics. Comparing the pre and post test scores. Association between level of anxiety and selected demographic variables.

### **4.3 Sampling Criteria:**

#### **4.3.1 Inclusion criteria:**

- Who are not diagnosed to have hypertension and anxiety.
- Who are not on any treatment for anxiety and other psychiatric disorders.
- Who are not on any treatment for hypertension.

#### **4.3.2 Exclusion criteria:**

- Who are not willing to participate.
- Who are practicing other relaxation techniques.
- Who are contraindicated for pranayama breathing.

### **4.4 Data Collection Instruments:**

Data collection tools are the procedures or instruments used by the researcher to observe or measure the key variables in the research problem.

The following instruments were used for the collection of data.

1. Demographic proforma
2. Beck Anxiety Inventory
3. Procedure for relaxation techniques (pranayama breathing).

The investigator developed a procedure for relaxation techniques after consulting the experts in the field of yoga and naturopathy, psychiatry nursing, reviewing the literature, and from personal experience and the knowledge and skill on yoga.

1. Preparation of first draft of procedure for relaxation techniques.
2. Development of criteria check list.
3. Content validity of the procedure for relaxation techniques.
4. Preparation of final draft of relaxation techniques.

### **4.5 Preparation of First Draft of Procedure For Relaxation Techniques:**

The following steps were included in the blue print for developing relaxation techniques practice,

- Comfortable position
- Focusing the attention
- Breathing techniques
- Concentration on breathing
- Feeling the pleasure

### **4.6 Description of the Final Instruments:**

#### **4.6.1 Demographic Performa**

The demographic Performa contains 14 items such as, Age, gender, Religion, Education, Geographical background, Occupational status, Marital Status, Number of Children, Type of family, Income Per month, Type of food, living arrangement with family members, Family history of any illness, parental history of any illness.

#### **4.6.2 Beck Anxiety Inventory**

The Beck Anxiety Inventory (BAI) was developed by Aaron T. Beck to address the need for an instrument that would reliably discriminate anxiety from depression while displaying convergent validity. Such an instrument would offer

advantages for clinical and research purpose over existing self-report measures, which have not been shown to differentiate anxiety from depression adequately. The scale consists of 21 items, each describing a common symptom of anxiety. The respondent is asked to rate how much he or she has been bothered by each symptom over the past week on a 4 point scale ranging from 0 to 3. The items are summered to obtain a total score that can range from 0 to 63. The scale obtained high internal consistency and item-total correlations ranging from 0.30 to 0.71 (median = .60). The correlations of the BAI with a set of self-report and clinician-rated scales were all significant. The correlation of the BAI with the HARS-R and HRSD-R were 0.51 and 0.25, respectively. The correlation of the BAI with the BDI was 0.48. Convergent and discriminate validity to discriminate homogeneous and heterogeneous diagnostic groups were ascertained from three studies. The results confirm the presence of these validities. Hence the reliability of the scale is 0.71 and the validity appears very high.

## V. RESULTS

The data collected from 100 hypertension subjects shows that 53 (53%) of subjects were experiencing moderate level of anxiety whereas no subjects were experiencing severe level of anxiety. Out of 53 subjects, 30 subjects were selected for practice of Relaxation technique (pranayama breathing) by simple random sampling. 30 (100%) had moderate level of anxiety during the pre test. The post test results (after practice of Relaxation technique) revealed that the anxiety was reduced to mild level in case of 27 subjects (90%) and only 3(10%) had moderate level of anxiety which indicated that Relaxation technique ( pranayama breathing) was effective in reducing the level of anxiety, among hypertensive clients.

The mean post test anxiety scores of the subjects on Beck anxiety inventory scale (15.40) were significantly lower than the mean pre – test anxiety scores (26.20) of subjects and the calculated ‘t’ value (15.037) was more than the table value (1.700) at 0.05 level of significance.

There was no significant association between level of anxiety and selected demographic variables like age, gender, religion, type of family, occupation, monthly income of family at 0.05 level of significance.

This research deals with the analysis and interpretation of the data collected in order to determine the effect of Relaxation techniques (Pranayama Breathing) on anxiety among the Hypertensive clients of selected community area, at Jaipur. The data were analyzed based on the objectives and hypothesis formulated for the study.

**TABLE 2**  
**ITEM WISE ANALYSIS OF PAIRED ‘T’ TEST VALUE BETWEEN THE PRE TEST AND POST TEST ANXIETY SCORES OF THE SUBJECT BY BAI:**

<i>Score</i>	<i>Mean</i>	<i>SD</i>	<i>t value</i>	<i>p value</i>
<b>1.Numbness</b>				
Pre-test	2.6333	0.4901	9.104	0.001 HS
Post-test	1.5333	0.6288		
<b>2.Feeling hot</b>				
Pre-test	1.2333	0.5040	3.751	0.001 HS
Post-test	0.7667	0.5040		
<b>3.Wobbling in legs</b>				
Pre-test	2.20	0.7611		0.001 HS
Post-test	1.4667	0.6288	5.117	
<b>4.Unable to relax</b>				
Pre-test	0.7667	0.6260	2.804	0.00 S
Post-test	0.5000	0.5085		
<b>5. Fear of worst happening</b>				
Pre-test	0.5000	0.5085	3.612	0.00 HS
Post-test	0.1333	0.3457		
<b>6. Dizzy or light headed.</b>				
Pre-test	0.7667	0.7279	2.112	0.00 S
Post-test	0.5000	0.5085		
<b>7.Heart pounding</b>				
Pre-test	0.8333	0.6477	2.340	0.00 S
Post-test	0.5333	0.5713		
<b>8.Unsteady</b>				

Pre-test	0.4000	0.6214	2.523	0.00 S
Post-test	0.1000	0.3051		
Pre-test				
Post-test				
<b>9.Terrified/afraid</b>				
Pre-test	1.1333	0.7760	1.153	0.00 NS
Post-test	0.9667	0.3198		
<b>10.Nervous</b>				
Pre-test	1.2333	0.7738	3.261	0.00 HS
Post-test	0.8000	0.4842		
<b>11. Feeling of choking</b>				
Pre-test	0.1667	0.3790		
Post-test	0.0667	0.2537	1.140	0.00 NS
<b>12.Hand trembling</b>				
Pre-test	2.3333	0.5467		
Post-test	1.5000	0.5723	5.221	0.00 HS
<b>13.Shaky/Unsteady</b>				
Pre-test	2.3333	0.7581	7.309	0.00 HS
Post-test	1.1667	0.5306		
<b>14Fear of losing control</b>				
Pre-test	0.3333	0.4794		
Post-test	0.2000	0.4068	1.278	0.00 NS
<b>15.Difficulty in breathing</b>				
Pre-test	0.2000	0.4667		
Post-test	0.0333	0.1825	1.980	0.00 NS
<b>16.Fear of dying</b>				
Pre-test	0.3667	0.661		
Post-test	0.3333	0.479	2.269	0.00 S
<b>17.Scared</b>				
Pre-test	1.0667	0.6396	1.161	0.00 NS
Post-test	0.9333	0.2537		
<b>18.Indigestion</b>				
Pre-test	2.2667	0.5832	5.869	0.00 HS
Post-test	1.2333	0.7279		
<b>19.Faint</b>				
Pre-test	0.9000	0.8030	3.565	0.00 HS
Post-test	0.3667	0.4901		
<b>20.Face flushed</b>				
Pre-test	2.0333	0.5560	6.530	0.00 HS
Post-test	1.2000	0.6102		
<b>21.Hot/cold sweat</b>				
Pre-test	2.0667	0.7849	6.186	0.00 HS
Post-test	1.0000	0.6432		

The above table 2 shows that the mean posttest scores of the items revealed much improvement in all the areas.

## VI. CONCLUSION

The findings of the study revealed that 53% of hypertensive clients had moderate level of anxiety. The mean post test anxiety scores of the subjects were significantly lower than the mean pre – test anxiety scores at 0.05 level of significance. So the research hypothesis was accepted. There was no significant association between level of anxiety and selected demographic variables like age, gender, religion, occupation and monthly income of family. So the research hypothesis was rejected. The findings concluded that Relaxation technique ( pranayama breathing) was effective in reducing the level of anxiety, among hypertensive clients from the selected community area.

The study was conducted with the objective of assessing the anxiety level among hypertensive clients by using Beck Anxiety Inventory and to study the effectiveness of relaxation technique (Pranayama breathing) on identified cases of anxiety among hypertensive clients.

**The following conclusions were drawn on the basis of the findings of the study:**

1. Out of 100 hypertensive clients 53% subjects were found have moderate level of anxiety.
2. In the pre-test almost 30 (100%) subjects had moderate level of anxiety. On the other hand in the post test 27 (90%) subjects were found to have mild level of anxiety and 3 (10%) subjects had moderate level of anxiety after practice of Relaxation technique(pranayama breathing). This points out to the fact that after the Relaxation technique(pranayama breathing), majority of client with moderate anxiety improved.
3. The mean post test anxiety scores of the subjects on Beck anxiety Inventory (15.40) were significantly lower than the mean pre –test anxiety scores (26.20) of subjects and the calculated ‘t’ value (15.037) was more than the table value (1.700) at 0.05 level of significance.
4. In the present study, Relaxation Technique (pranayama breathing) was found to be effective in reducing anxiety among the hypertensive clients in rural area.
5. There was no significant association between anxiety and selected demographic variables at 0.05 level of significance.

**VII. SUGGESTIONS**

- Rural areas have to be motivated to take actions in order to identify the problems of hypertensive clients and their emotional problems especially stress and anxiety disorders at the earliest and to initiate appropriate treatment to alleviate sufferings.
- Rural areas need to be motivated to utilize Relaxation technique (pranayama breathing) as an adjuvant therapy to reduce anxiety.
- A specialized branch of nursing could be introduced which should address the physical and psychological problems of the hypertensive clients.
- Most community mental health programs can be conducted in order to make the public aware of problems of anxiety among hypertensive clients.
- The student nurses, staff nurses and other health care professionals need to be motivated to visit the community.
- Nursing curriculum can be re planned in such a way that student nurses will get more theoretical as well as practical hours in the field of community.

**VIII. RECOMMENDATIONS**

On the basis of the present study following recommendations are made for future studies.

- A similar study can be conducted to find out the effect of Relaxation technique (pranayama breathing) among hypertensive clients with other problems such as stress disorders, phobic disorders, depression and other emotional disturbances.
- A true experimental study can be carried out with control group.
- A similar study can be carried out in other settings such as hospital settings.
- A similar study can be done on hypertensive clients in urban areas.
- A comparative study can be done on the effect of relaxation technique and aerobic exercises on anxiety among hypertensive clients.
- A cross sectional study can be conducted to find out effect of relaxation technique (pranayama breathing) among the hypertensive clients.
- A similar study can be conducted on anxiety among other medical illness like diabetic mellitus, tuberculosis, AIDS, Cardiovascular disorders, asthma, cancer and other chronic illness.

- A similar study can be conducted on anxiety among students, nurses, police personnel, traffic police officers and software professionals.
- A similar study can be conducted for large group of population.

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