

International Multispeciality Journal of Health

ISSN: 2395-6291



www.imjhealth.org

Volume-7, Issue-7, July 2021

Preface

We would like to present, with great pleasure, the inaugural volume-7, Issue-7, July 2021, of a scholarly journal, *International Multispeciality Journal of Health*. This journal is part of the AD Publications series *in the field of Medical, Health and Pharmaceutical Research Development*, and is devoted to the gamut of Medical, Health and Pharmaceutical issues, from theoretical aspects to application-dependent studies and the validation of emerging technologies.

This journal was envisioned and founded to represent the growing needs of Medical, Health and Pharmaceutical as an emerging and increasingly vital field, now widely recognized as an integral part of scientific and technical statistics investigations. Its mission is to become a voice of the Medical, Health and Pharmaceutical community, addressing researchers and practitioners in below areas

Clinical Specialty and Super-specialty Medical Science:

It includes articles related to General Medicine, General Surgery, Gynecology & Obstetrics, Pediatrics, Anesthesia, Ophthalmology, Orthopedics, Otorhinolaryngology (ENT), Physical Medicine & Rehabilitation, Dermatology & Venereology, Psychiatry, Radio Diagnosis, Cardiology Medicine, Cardiothoracic Surgery, Neurology Medicine, Neurosurgery, Pediatric Surgery, Plastic Surgery, Gastroenterology, Gastrointestinal Surgery, Pulmonary Medicine, Immunology & Immunogenetics, Transfusion Medicine (Blood Bank), Hematology, Biomedical Engineering, Biophysics, Biostatistics, Biotechnology, Health Administration, Health Planning and Management, Hospital Management, Nephrology, Urology, Endocrinology, Reproductive Biology, Radiotherapy, Oncology and Geriatric Medicine.

Para-clinical Medical Science:

It includes articles related to Pathology, Microbiology, Forensic Medicine and Toxicology, Community Medicine and Pharmacology.

Basic Medical Science:

It includes articles related to Anatomy, Physiology and Biochemistry.

Spiritual Health Science:

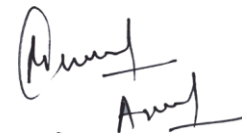
It includes articles related to Yoga, Meditation, Pranayam and Chakra-healing.

Each article in this issue provides an example of a concrete industrial application or a case study of the presented methodology to amplify the impact of the contribution. We are very thankful to everybody within

that community who supported the idea of creating a new Research with *IMJ Health*. We are certain that this issue will be followed by many others, reporting new developments in the Medical, Health and Pharmaceutical Research Science field. This issue would not have been possible without the great support of the Reviewer, Editorial Board members and also with our Advisory Board Members, and we would like to express our sincere thanks to all of them. We would also like to express our gratitude to the editorial staff of AD Publications, who supported us at every stage of the project. It is our hope that this fine collection of articles will be a valuable resource for *IMJ Health* readers and will stimulate further research into the vibrant area of Medical, Health and Pharmaceutical Research.



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Research Area: Pediatric Surgery & Laparoscopy.

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Relaparotomy in Children in a Developing Country: A 10-Year Review

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Received:- 8 July 2021/ Revised:- 16 July 2021/ Accepted: 21 July 2021/ Published: 31-07-2021

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Abstract—

Background: Complications arising from abdominal surgeries may necessitate a relaparotomy. The purpose of this study was to evaluate the indications, outcome and factors affecting mortality following pediatric relaparotomy in Enugu, Nigeria.

Methods: This was a retrospective study of children that had relaparotomy at the pediatric surgery unit of Enugu State University Teaching Hospital, Enugu over a 10-year period. The parameters assessed included patients' demographics and other factors that may affect mortality following relaparotomy using a multivariate analysis.

Results: A total of 683 laparotomies were performed during the study period, out of which 31(4.5%) patients had relaparotomy. The ages of the patients ranged from 2 weeks to 15 years, with a median of 10 years. Typhoid intestinal perforation was the most common initial pathology that necessitated the initial laparotomy and right hemicolectomy with ileotransverse anastomosis was the most common initial procedure performed. Anastomotic leak (61.3%) was the most common indication for relaparotomy and surgical site infection (29%) was the most common complication following relaparotomy. Mortality rate was 19.4% and statistical analysis (multivariate analysis) showed post-operative complication as the only factor that affected mortality (p value = 0.04).

Conclusion: Relaparotomy is inevitable in many unsuccessful primary laparotomies. The mortality rate in developing country like Nigeria is high and efforts should be made towards improving outcome.

Keywords: Abdominal, children, complications, developing country, relaparotomy, review.

What is already known about the topic: There is no publication on pediatric relaparotomy from West African. A literature search on pediatric relaparotomy in Africa showed only one paper from Ethiopia which recorded high mortality especially in neonates.

What does this article add: To the best of my knowledge, this is the first article from West Africa that brings up information on pediatric relaparotomy. This article adds information on the unique experience from West Africa.

I. INTRODUCTION

Abdominal surgeries may be associated with myriad of complications that necessitates reoperation. Simply put relaparotomy means a repeat abdominal operation after the initial operation. Most researchers define relaparotomy as abdominal surgeries performed within 60 days after the initial surgery [1,2]. There is no consensus on the classification of relaparotomy. Early or late, emergency or elective, planned or unplanned are some of the proposed classifications [3]. Survival and recovery following relaparotomy have been used by some clinicians as an indicator of the quality of surgical care [4]. Most common indications for relaparotomy include intra-abdominal fluid collection, anastomotic leak, bleeding, wound dehiscence, bowel necrosis, bowel obstruction [5,6]. Before a decision for a relaparotomy is taken, an important question has to be answered: Will reoperation make the patient's clinical condition better or worse [7]. Improvements in imaging investigations have greatly assisted surgeons in taking informed decisions [7]. It must be remembered that relaparotomy is fraught with lots of morbidity and mortality because the patient is at higher risk of wound complications and fascial dehiscence [7].

There is paucity of data on pediatric relaparotomy in Nigeria and this study will help evaluate the current state of surgical care of pediatric patients in Enugu, Nigeria. The aim of this study was to evaluate the indications, outcome and factors affecting mortality of pediatric patients who underwent relaparotomy at a teaching hospital in Enugu, Nigeria.

II. METHODS

This was a retrospective study of children aged 15 years and below who had relaparotomy (during the same hospitalization and within 60 days) between January 2009 and December 2018 at the pediatric surgery unit of Enugu State University Teaching Hospital (ESUTH) Enugu, Nigeria. ESUTH is a tertiary hospital located in Enugu, South East Nigeria. The hospital serves the whole of Enugu State, which according to the 2016 estimates of the National Population Commission and Nigerian National Bureau of Statistics, has a population of about 4 million people and a population density of 616.0/km². The hospital also receives referrals from its neighboring states. Patients who have had relaparotomy for the same pathology at a peripheral hospital before referral to ESUTH for reoperation were excluded from this study. Patients with incomplete medical records were also excluded from the study. Information was extracted from the medical records, operation notes, operation register, and admission-discharge records. The information extracted included age, gender, diagnosis and procedure performed at the initial laparotomy, duration between operation and reoperation, indication for relaparotomy, definitive operative procedure done at relaparotomy, number of relaparotomies, post relaparotomy complications, duration of hospital stay and outcome of treatment. Complications arising from the initial laparotomy were the indications for the relaparotomy. These complications were in the form of intestinal obstruction, anastomotic leak causing peritonitis or burst abdomen. All the laparotomies and relaparotomies were performed by consultant pediatric surgeon. There was no senior registrar in the pediatric surgery unit during the study period. The follow-up period for a possible relaparotomy was 60 days and the patients were followed up for 6 months for assessment of outcome of relaparotomy. Ethical approval was obtained from the ethics and research committee of ESUTH. Statistical Package for Social Science (SPSS) version 21, manufactured by IBM Cooperation Chicago Illinois, was used for data entry and analysis. Data were expressed as percentage, median, mean and range. Chi square or student's T test was used to test for significance. Multivariate analysis was used to evaluate the effect of the factors on outcome and p value < 0.05 was considered statistically significant. The primary outcome measure was the mortality rate and secondary outcome measure was the factors that affect the mortality following relaparotomy.

III. RESULTS

3.1 Patients' demographics

There were 35 cases of relaparotomies performed during the study period but only 31 cases had complete case records and formed the basis of this report. A total of 683 laparotomies were performed during the same period which gives a relaparotomy rate of 4.5%. There were 23 males (74.2%) and 8 females (25.8%), which corresponds to a male to female ratio of 2.9:1. The ages of the patients ranged from 2 weeks to 15 years, with a median of 10 years. Regarding the initial laparotomy, 28 cases (90.3%) were emergencies whereas 3 cases (9.7%) were elective surgeries. The median interval from initial laparotomy to relaparotomy was 6 days (range 3-7). The mean duration of hospital stay was 18.3 days (range 11-23). Details are shown in Table 1.

TABLE 1
DEMOGRAPHIC PROFILE OF THE PATIENTS

Gender	
Male	23 (74.2%)
Female	8 (25.8%)
Age range	2 weeks to 15 years (median 10 years)
Nature of the initial surgery	
Emergency	28 (90.3%)
Elective	3 (9.7%)
Interval from initial laparotomy to relaparotomy	3 to 7 days (median 6 days)
Age groups	
Neonates (< 1 month)	2 (6.5%)
Infants (1-12 months)	6 (19.4%)
12 months to 15 years	23 (74.1%)
Duration of hospitalization	18.3 days (range 11-23)

3.2 Diagnoses before initial laparotomy

The most common initial diagnosis that necessitated the initial laparotomy was typhoid intestinal perforation (29%). Others are shown in Table 2.

TABLE 2
DIAGNOSES BEFORE INITIAL LAPAROTOMY

Initial diagnosis	Number	Percentage
Typhoid intestinal perforation	9	29.0
Intussusception	8	25.8
Ruptured appendix	5	16.1
Strangulated hernia	4	12.9
Colostomy closure	3	9.7
Intestinal atresia	2	6.5

3.3 Initial procedure performed

Right hemicolectomy with ileotransverse anastomosis was the most common initial procedure performed. Others are depicted in Table 3.

TABLE 3
INITIAL SURGICAL PROCEDURES

Surgical procedure	Number	Percentage
*RHC with ITA	12	38.7
Peritoneal abscess drainage	8	25.8
Segmental bowel resection	8	25.8
Closure of intestinal perforation	3	9.7

**RHC= Right hemicolectomy, ITA=Ileotransverse anastomosis*

3.4 Indications for relaparotomy

The indications for relaparotomy include anastomotic leak 19 (61.3%), intra-peritoneal abscess 8 (25.8%), intestinal re-perforation from a new site 2 (6.5%), bleeding 1 (3.2%) and intestinal obstruction 1 (3.2%).

3.5 Number and relaparotomy procedure performed

Twenty-eight patients (90.3%) had a single re-exploration whereas only 3 patients (9.7%) were re-explored twice. Intestinal reanastomosis was performed in 16 patients (51.6%), enterostomy 9 (29%), drainage of residual abscess 5 (16.1%) and adhesiolysis for adhesive intestinal obstruction 1 (3.2%).

3.6 Post-operative complications following relaparotomy

Fourteen patients (45.2%) did not develop any complications. Nine patients (29%) had surgical site infection, 5 patients (16.1%) had incisional hernia and 3 patients (9.7%) had burst abdomen. Seven out of 9 patients (77.8%) that had surgical site infection had typhoid intestinal perforation as their primary pathology. The 3 patients that had burst abdomen are the patients that were re-explored twice.

3.7 Outcome and factors affecting mortality

Twenty-three patients (74.1%) did well and were discharged home. Two patients (6.5%) signed out against medical advice. Mortality occurred in 6 patients (19.4%). There was no mortality among the patients that were re-explored twice and re-exploration was considered an independent risk factor. The most common cause of mortality was overwhelming sepsis with multiple organ failure. Table 4 shows the result of statistical analysis of the different factors with regards to mortality.

TABLE 4
FACTORS AFFECTING MORTALITY

Variables	Coefficients	P value
Age of the patients	0.166	0.96
Initial diagnosis	0.207	0.73
Duration of symptoms	0.097	0.56
Initial procedure	0.051	0.09
*Complications following relaparotomy	1.365	0.04
Indication for relaparotomy	0.598	0.55

**Statistically significant.*

IV. DISCUSSION

Relaparotomy has been described as a therapeutic manipulation when the healing process is incomplete [8]. Some authors have also described relaparotomy as a high-risk, no-choice operation while others call it a surgeon's nightmare [9, 10]. When adequate cleaning of the peritoneal cavity is not achieved or complications such as anastomotic leak and intestinal obstruction occur; there will be a need for relaparotomy. However, accurate and timely identification of patients in need of relaparotomy could be challenging because of lack of established prediction model [11].

In the present study, the relaparotomy rate of 5.1% is similar to the reports of Grussner et al but at variance with the report of Negussie et al [5, 12]. Tera and Aberg reported an incidence of 1% where as Lunkoet al reported 10.6% [13, 14]. The incidence of relaparotomy may depend on the expertise and skill of the operating surgeon. The male preponderance recorded in the current study is consistent with the report of a similar study done in Ethiopia [5]. However, the median age of our patients is not in agreement with the report of Negussie [5]. The reason for this is not clear but might be explained by differences in the predominant pathology. For instance, typhoid intestinal perforation, which occurs commonly in older children, was the most common indication for the initial surgery in the present study while Negussie et al reported intussusception as the most common indication in their series. When compared with elective laparotomy, emergency laparotomy is associated with lots of adverse outcomes [15]. In line with the report of other researchers, majority of our patients had emergency laparotomy. Indications for relaparotomy in our patients are similar to other reports in pediatric and adult relaparotomy [5, 16]. These indications present as emergencies that require immediate surgical re-exploration. Intervals from initial operation to relaparotomy vary widely with the indications [6]. The median period of 6 days in the present study is supported by the reports of previous workers [17, 18, 19]. However, Hasan et al and Anantha et al reported a median interval of 11.55 days and 12.3 days respectively [10, 20]. The time interval between initial operation and relaparotomy may depend on the particular complication arising from the initial operation. For instance, post-operative bleeding and anastomotic leak may present before post-operative intestinal obstruction.

Laparotomy for typhoid intestinal perforation was the most common primary surgery in the index study. Typhoid fever is systemic disease, with surgical complications, that is transmitted faeco-orally through contaminated food and water due to poor standard of hygiene and unavailability of potable water. Complications of typhoid fever are quite common in developing country. A study done in North Central Nigeriastated the need for early relaparotomy for intra-peritoneal complications arising from surgery performed for typhoid intestinal perforation [21]. However, Negussie reported intussusception as the most common indication for initial laparotomy [5]. The reason for this difference is not known but might be explained by the disease pattern in different settings.

Anastomotic leak was the most common indication for relaparotomy in the present study. This finding is consistent with the report of other researchers [19, 22]. Other important indications included bleeding and intra-peritoneal collections [5, 6]. However, cases of negative relaparotomy have been reported [23]. No negative laparotomy was recorded in the present study. Most of our patients had a single relaparotomy. All mortalities were in patients that had single relaparotomy. One study from Ethiopia reports that the number of relaparotomies is an indicator of the measure of surgical care [5]. However, another study from South Africa reported that the number of relaparotomy does affect the morbidity but not the mortality of patients that had relaparotomy [24]. In the present study, intestinal reanastomosis was the most common procedure performed at relaparotomy. However, on a background of gross peritoneal fecal contamination, we offered our patients an enterostomy. This is due to the high chance of another anastomotic leak. However, a study done in Netherlands reported

better outcome with intestinal reanastomosis despite gross peritoneal soilage [25]. Good surgical skills and possible complications of enterostomy may have informed the decision for reanastomosis.

Performing relaparotomy in children entails operating on critically ill children and is fraught with complications. Surgical site infection was the most common complication recorded in our patients post relaparotomy. Similar studies also recorded surgical site infection as a post-operative complication following relaparotomy [5, 7]. Although surgical site infection increases morbidity and hospital stay of the patients, it is not associated with mortality [26]. The high rate of surgical site infection (29%) recorded in the present study may have accounted for the long hospital stay of our patients. Surgical site infection requires repeated and prolonged wound dressing before adequate healing occurs.

The mortality rate of 19.4% recorded in the present study tallies with the report of other studies [5, 24]. Some other studies, however, reported higher mortality rates [19, 27]. The indications for relaparotomy and age group of the patients may explain the differences in mortality rates. Complication arising from relaparotomy was the only factor found to affect mortality in the present study. Amongst the complications, infective post-operative complication leading to overwhelming sepsis was found to be statistically significant ($p = 0.001$) as the cause of mortality. This may be explained by the fact that complication such as burst abdomen following relaparotomy requires further operative treatment with attendant risks of anaesthesia and surgery in a child with depleted body reserves.

V. LIMITATIONS OF THIS STUDY

1. Retrospective nature of this study: A prospective study would have provided a detailed review of the factors affecting mortality.
2. This study is limited by the small number of cases. A larger number of cases would have availed better analysis and basis for critical comparison with other published larger series.
3. This was a single institution experience which may not be generalizable to other institutions. Future multi-centre study is needed to determine the actual incidence and outcome of relaparotomy in Enugu, Nigeria.

VI. CONCLUSION

Relaparotomy in a developing country like Nigeria is relatively common and the attendant mortality of 19.4% is high. Complication following relaparotomy was the only factor found to affect mortality in the present study. Early detection of complications, improved training of surgeons and provision of facility will improve outcome of laparotomy in children in developing countries.

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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 with¹.

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 care².

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 cooccurrence³.

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 context⁸.

Conceptualization is a process of forming ideas, designs and plans. A conceptual frame work deals with the concepts assembled together by virtue of their relevance to research problems, which provides a certain frame work of reference for clinical practice, research and education⁹.

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.

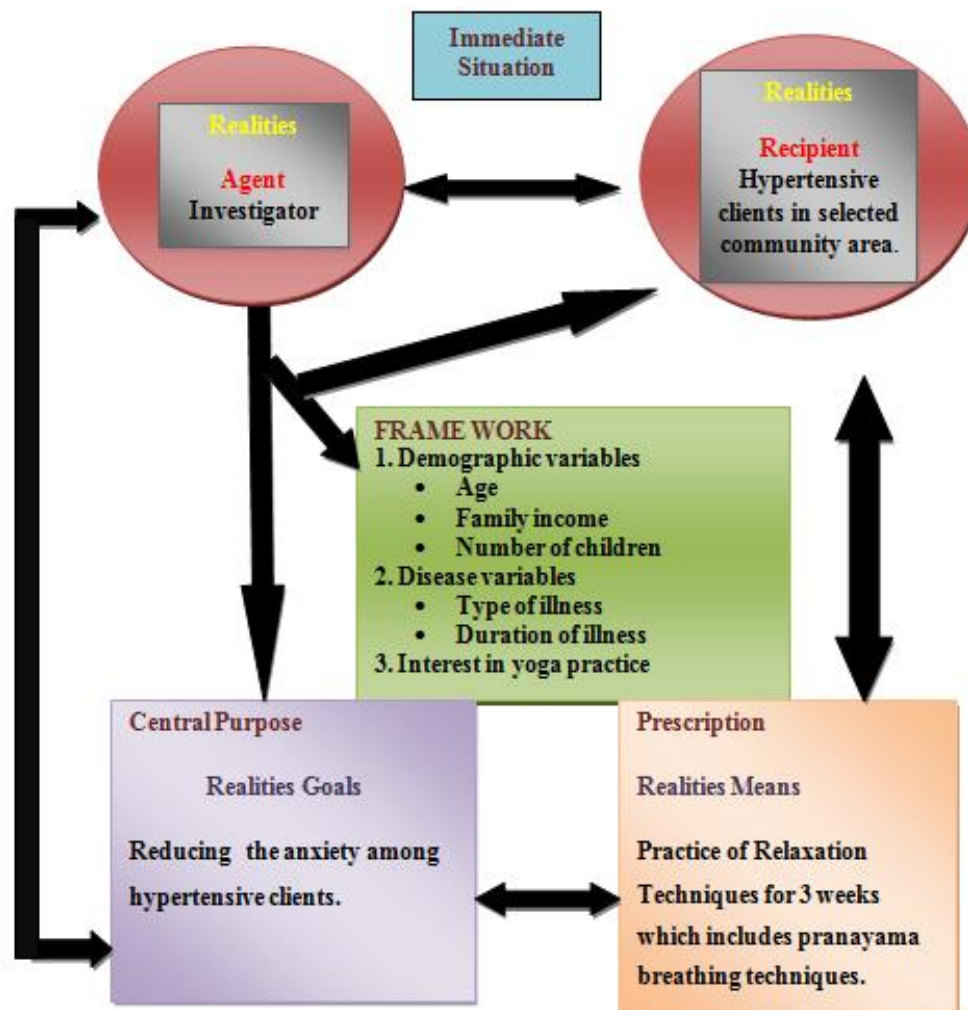


FIGURE 1: Conceptual Frame Work based on Ernestine Wiedenbach's Prescriptive Theory.

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 0₁	Relaxation techniques X	Post test 0₂	Analysis of data & interpretation of findings.
Hypertensive client of selected community in Jaipur.	<ol style="list-style-type: none"> 1. Review of existing literature. 2. Discussion with experts. 3. Preparation of blue print. 4. Preparation of procedure of relaxation techniques. 5. Content validity of procedure. 6. Pre-testing of tool. 	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>
1.Numbness				
Pre-test	2.6333	0.4901	9.104	0.001 HS
Post-test	1.5333	0.6288		
2.Feeling hot				
Pre-test	1.2333	0.5040	3.751	0.001 HS
Post-test	0.7667	0.5040		
3.Wobbling in legs				
Pre-test	2.20	0.7611		0.001 HS
Post-test	1.4667	0.6288	5.117	
4.Unable to relax				
Pre-test	0.7667	0.6260	2.804	0.00 S
Post-test	0.5000	0.5085		
5. Fear of worst happening				
Pre-test	0.5000	0.5085	3.612	0.00 HS
Post-test	0.1333	0.3457		
6. Dizzy or light headed.				
Pre-test	0.7667	0.7279	2.112	0.00 S
Post-test	0.5000	0.5085		
7.Heart pounding				
Pre-test	0.8333	0.6477	2.340	0.00 S
Post-test	0.5333	0.5713		
8.Unsteady				

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

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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