

**A QUASI EXPERIMENTAL STUDY TO ASSESS  
THE EFFECTIVENESS OF VIDEO ASSISTED  
PRE OPERATIVE TEACHING ON THE LEVEL  
ANXIETY AMONG SCHOOL AGE CHILDREN  
UNDER GOING CARDIAC SURGERY IN  
APOLLO HOSPITAL, CHENNAI**

**BY**

**301317104**

**A DISSERTATION SUBMITTED TO THE  
TAMILNADU Dr.M.G.R. MEDICAL UNIVERSITY,  
CHENNAI, IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE AWARD OF THE  
DEGREE OF MASTER OF SCIENCE IN NURSING**

**OCTOBER – 2015**

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**Research Guide and clinical specialist guide: -----**

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**Prof. Mrs.M.KAVIMANI, R.N, R.M, M.S.N**

**SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE AWARD OF THE DEGREE OF  
MASTER OF SCIENCE IN NURSING FROM THE TAMILNADU  
Dr.M.G.R. MEDICAL UNIVERSITY, CHENNAI.**

**OCTOBER – 2015**

## **DECLARATION**

I hereby declare that the present dissertation titled “**A quasi experimental study to assess the effectiveness of video assisted pre operative teaching on level of anxiety among school age children under going cardiac surgery in Apollo Hospital at Chennai**”, outcome of the original research work undertaken and carried out by me, under the guidance of Research Guide Prof. Mrs. M. KAVIMANI, R.N, R.M, Principal, Shivaparvathi Mandradiar Institute of Health Sciences, College of Nursing and the Clinical Speciality Guide

Prof. Ms. D.PREMALATHA, R. N, R. M, M.S.N.

I also declare that the material of this has not found in any way, the basis for the award of any degree/ diploma in this University or any other University.

by

**301317104**

## **DECLARATION**

I hereby declare that the present dissertation titled “A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED PRE OPERATIVE TEACHING ON THE LEVEL OF ANXIETY AMONG SCHOOL AGE CHILDREN UNDER GOING CARDIAC SURGERY IN APOLLO HOSPITAL, CHENNAI. is a bonafide work done Mrs. Roseline.S and Sivparvathi Mandradiar Institute of Health Sciences in partial Fulfillment of the University rules and regulations for award of Master of sciences in Nursing Under my guidance and supervision during the OCTOBER 2015.

Signature of the Guide & Head of the Department:

Signature of the Principal:

**CERTIFIED THAT THIS IS THE BONAFIDE WORK OF**

**301317104**



**AT THE SHIVPARVATHI MANDRADIAR INSTITUTE OF HEALTH SCIENCES, COLLEGE OF NURSING SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF NURSING FROM THE TAMILNADU Dr .M.G.R. MEDICAL UNIVERSITY, CHENNAI.**

**Examiners:**

1. \_\_\_\_\_

2. \_\_\_\_\_

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## LIST OF ABBREVIATIONS

ABBREVIATIONS	EXPLANATIONS
SPMIHS	Shiv Parvathi Mandradiar Institute of Health Sciences
Fig, F	Figure, Frequency
H	Hypothesis
M.Sc (N)	Master of Science in Nursing
n	Total Number of Samples
No	Number
%	Percentage
SD	Standard Deviation
MD	Mean Difference
P	Probability

## **ABSTRACT**

**“A study to assess the effectiveness of video assisted pre operative teaching on level of anxiety among school age children under going cardiac surgery in Apollo hospital at Chennai** was done by 301317104 as a partial fulfillment of the requirement of the degree of Master of science in Nursing at shivparthi mandradiar institute of health science under the Tamilnadu Dr.MGR medical university Chennai ,during the year of 2013-2015

### **The objectives of the study were**

- To assess the pre test and post test level of anxiety among school age children under going cardiac surgery in experimental and control group.
- To assess the effectiveness of video assisted pre operative teaching on level of anxiety among school age children under cardiac surgery in experimental group
- To find the association between the post level of anxiety and the selected demographic variables of school age children under going cardiac surgery in experimental group

### **The research hypothesis formulated were**

H<sub>1</sub> There is significant difference between the Pre test and Post test level of anxiety among school age children undergoing surgery in experimental group.

H<sub>2</sub> there is a significant difference between the level of anxiety among school age children undergoing surgery in experimental group and control group

H<sub>3</sub> there is a significant association between the level of anxiety and the selected demographic variables among school age children undergoing surgery in experimental group

The conceptual frame work of this study was derived from modified J.W.Kennys open system model. The investigator organized the review of literature arranged under three sections as follows. Studies related to anxiety among school age children under going s under studies related to pre-operative teaching among school age children undergoing surgery. Studies related to effectiveness of video assisted teaching on anxiety. The research design used was a quasi experimental design. The 60 samples for the studies were chosen using non randomized purposive sampling method. The data collection was validated by one surgeon pediatric consultant, psychologist and four nursing experts .Demographic variable of each sample was collected by interview method and the anxiety was assessed by modified spence anxiety scale, the setting was Apollo Hospital, Chennai. Video assisted teaching program was conducted for samples in experimental group. Data were edited, organized, analysed and interpreted by descriptive and inferential statistics. The finding revealed the effectiveness of video teaching program.

The finding of the study showed that there was a significant ( $p < 0.005$ ) decrease in level of anxiety among school age children under going cardiac surgery after attending the video assisted teaching program. There was no significant between the level of anxiety and the selected demographic variables in experimental group except type of family and the birth order. The conclusion of the study was that video assisted pre operative teaching method was an effective method to reduce the anxiety level of children undergoing major surgery. The limitation, implication, and recommendation were adequately spelt.



# **CHAPTER – 1**

## **INTRODUCTION**

**“Every child comes with the message that God is not yet discouraged of man”.**

**Rabindranath Tagore**

## **BACKGROUND OF THE STUDY**

Anxiety is a psychological and physiological state characterized by cognitive, somatic, emotional, and behavioural components. These components combine to create an unpleasant feeling that is typically associated with uneasiness, fear, or worry. Anxiety is considered to be a normal reaction to stress. It may help a person to deal with a difficult situation. But increased anxiety may leads to negative behaviours such as agitation, crying, spontaneous urination, restlessness.

Every child should have tender loving care and sense of security about protection from parents and family members. They should have opportunity for development of independence, trust, confidence and self-respect. There should be adequate social and emotional interaction with discipline. The child should get scope for self-expression and recreation. Parents should be aware of about achievements of their children and express acceptance of positive attitude within the social norms.

The child experiences during hospitalization are stress, hospital food, clothing, unfamiliar faces, witnessing of parental anxiety, exposure and touching

of “private parts” by a stranger. Preoperative anxiety in children may lead to delaying of anesthesia effect. Recovery may be delayed as well due to anxiety as it provokes the release of stress hormone.

The various factors that describe the level of anxiety in children. Factors such as age of the child, anxiety level of the parents, personality, home care given by the parents and quality of previous medical experience. It was suggested by study that children who are shy in nature, anxious parents, upsetting past surgical experience, are at greater risk of preoperative anxiety. Thereby, it becomes important that along with the children undergoing surgery, education should be given to the parents and children.

Many studies are done on children undergoing minor surgeries but only few have been done in children undergoing major surgeries. It is been observed that in major surgeries, hospitalization along with multiple medical procedures can cause more anxiety and can create a negative behavior as compared to minor surgeries in children whereas the major surgeries need more pre-surgical preparation.

Pre-operative anxiety in children is a common phenomenon that has been associated with a number of negative behaviors during the surgery (e.g., agitation, crying, spontaneous urination, and restless). Pre-operative anxiety has also been associated with the display of a number of maladaptive behaviors during post-operative period including postoperative pain, sleeping disturbances, parent-child conflict, and separation anxiety. For these reasons, researchers have sought out interventions to treat or prevent childhood preoperative anxiety and possibly decrease the development of negative behaviors during post-operative period. Such interventions include sedative premedication, parental presence during anesthetic induction, behavioral preparation programs, music therapy, play therapy and acupuncture.

Congenital heart disease (CHD) accounts for nearly one-third of all major congenital anomalies with a prevalence rate of 9.3 per 1000 live births in Asia. Children with congenital heart disease often require surgical or interventional treatments and continued medical care throughout their life. Even though medical and surgical advancements have simplified the management of congenital heart disease, it has also become more expensive.

Overall mortality for congenital cardiac surgery is 3.9% nationwide as seen in a study where they evaluated 68 centers and 35, 6776 operations from 2006-2009. Our mortality has been under 2.5% every year for the past six years and in both 2011 and 2102 was 1.4%.

Recently, we looked at three life-threatening congenital heart defects that require surgical repair, Tetralogy of Fallot (TRTF), Total Anomalous Pulmonary Venous Return (TAPVC) and Transposition of the Great Arteries (TCTGV)

Congenital heart defects are problems with the heart's structure that are present at birth. Congenital heart surgery is the operative treatment of structural abnormalities involving the heart and major blood vessels. Although these defects generally result from congenital malformations, they also include acquired defects in infants and children.

According to American heart association Congenital heart defects are the most common type of birth defect. They affect 8 of every 1,000 newborns. Each year, more than 35,000 babies in the United States are born with congenital heart defects. Many of these defects are simple conditions that are easily fixed or need no treatment. A small number of babies are born with complex congenital heart defects that require special medical care soon after birth.

Over the past few decades, the diagnosis and treatment of these complex defects has greatly improved. As a result, almost all children who have complex heart defects survive to adulthood and can live active, productive lives. Most people who have complex heart defects continue to need special heart care throughout their lives. They may need to pay special attention to how their condition may affect certain issues, such as health insurance, employment, pregnancy and contraception, and other health issues. In the United States, about 1 million children's are living with congenital heart defects.

The first decades of the 20<sup>th</sup> century, medical opinion held that any surgical attempts to treat heart disease were not only misguided, but unethical. Despite such reservations, innovative surgeons showed that heart wounds could be successfully repaired. Then, extra cardiac procedures were performed to correct patent ductus arteriosus, coarctation of the aorta, and tetralogy of Fallot. Direct surgery on the heart was accomplished with closed commissurotomy for mitral stenosis. The introduction of the heart-lung machine and cardiopulmonary bypass enabled the surgical treatment of other congenital and acquired heart diseases. Advances in aortic surgery paralleled these successes. The development of coronary artery bypass grafting greatly aided the treatment of coronary heart disease. Cardiac transplantation, attempts to use the total artificial heart, and the application of ventricular assist devices have brought us to the present day.

Children under going cardiac surgery often exhibits symptoms of depression and anxiety post operatively .post-operative children's who are anxious are depressed are likely to adhere to medical recommendations such as exercise, proper nutrition and self-management practices. Recuperation after surgery may be further hindered by anxiety and depression resulting in delayed wound healing, infection, and an increase in morbidity and mortality. Anxiety may enhance sympathetic nervous system activity and complicate patient care.

The important responsibility of health care providers is to reduce the severity of stressors, by reducing the intensity and frequency of these stressors and by promoting positive coping mechanisms. Thus the health care providers can improve the child's response to hospitalization, decrease recovery time and improve lifelong attitudes about health care

Good participation can help the child to feel less anxious about the anesthesia and surgery and get through the recovery period faster. The key is the parents should provide information to the child level of understanding and to correct any misunderstanding and get rid of fear and feeling of guilt. It helps the child to understand why surgery is needed and to become familiar with hospital and some of the procedure the child under go.

## **NEED FOR THE STUDY**

Surgery can be a life threatening experience for everyone, especially for children. Children are more vulnerable for anxiety due to their lack of knowledge of procedures, a lack of perceived control, a lack of explanation in child-appropriate terms, and a lack of pain management. Hospitalized children may experience high level of anxiety due to many different factors both physical and psychological. Physical factors such as hospital setting, medical procedures and experienced symptoms cause anxiety and fear in children. Psychological factors such as the unfamiliarity of the hospital, the staff and the routine, separation from their mother increase children's anxiety. That's why, psychological preparation before surgery has been effective in decreasing the level of anxiety of children and providing adaptation to the hospital setting and medical treatment.

Congenital heart disease (CHD) is the most common cause of major congenital anomalies, representing a major global health problem. Twenty-eight percent of all major congenital anomalies consist of heart defects. Reported birth prevalence of CHD varies widely among studies worldwide. The estimate of 8 per 1,000 live births is generally accepted as the best approximation. CHD, by definition, is present from birth. The most practical measurement of CHD occurrence is birth prevalence per 1,000 live births

**According to American college of cardiology (2011)** congenital heart disease (CHD) accounts for nearly one-third of all major congenital anomalies. CHD birth prevalence worldwide and over time is suggested to vary; however, a complete overview is missing. This systematic review included 114 papers, comprising a total study population of 24,091,867 live births with CHD identified in 164,396 individuals. Birth prevalence of total CHD and the 8 most common subtypes were pooled in 5-year time periods since 1930 and in continent and income groups since 1970 using the inverse variance method. Reported total CHD birth prevalence increased substantially over time, from 0.6 per 1,000 live births (95% confidence interval [CI]: 0.4 to 0.8) in 1930 to 1934 to 9.1 per 1,000 live births (95% CI: 9.0 to 9.2) after 1995. Over the last 15 years, stabilization occurred, corresponding to 1.35 million newborns with CHD every year. Significant geographical differences were found. Asia reported the highest CHD birth prevalence, with 9.3 per 1,000 live births (95% CI: 8.9 to 9.7), with relatively more pulmonary outflow obstructions and fewer left ventricular outflow tract obstructions. Reported total CHD birth prevalence in Europe was significantly higher than in North America (8.2 per 1,000 live births [95% CI: 8.1 to 8.3] vs. 6.9 per 1,000 live births [95% CI: 6.7 to 7.1];  $p < 0.001$ ). Access to health care is still limited in many parts of the world, as are diagnostic facilities, probably accounting for differences in reported birth prevalence between high- and low-income countries. Observed differences may also be of genetic, environmental, socioeconomical, or ethnic

origin, and there needs to be further investigation to tailor the management of this global health problem.

**According to American heart association** Congenital heart disease (CHD) is the most. Total CHD birth prevalence increased substantially from 0.6 per 1,000 live births (95% confidence interval [CI]:0.4 to 0.8) in 1930 to 1934 to 9.1 per 1,000 live births after 1995. The increase over time was S-shaped, with a first steep increase from 1930 to 1960, followed by stabilization around 5.3 per 1,000 live births from 1961 to 1975, a second steep increase from the late 1970s until 1995, and eventually stabilization around 9.1 per 1,000 live births in the last 15 years. Significant geographical differences were found. The highest reported total CHD birth prevalence was found in Asia (9.3 per 1,000 live births [95% and the lowest in Africa (1.9 per 1,000 live births). Reported total CHD birth prevalence in Asia was significantly higher compared with all other continents, Europe had the second highest reported total CHD birth prevalence (8.2 per 1,000 live births).

Congenital heart disease affects 8 per 1000 live births, and 2 or 3 of these infants are estimated to have critical disease requiring cardiac catheterization or cardiac surgery<sup>(7)</sup>. There are approximately 1,25,000 children born with congenital heart diseases every year in India. There has been a steady increase in incidence of heart diseases for children, In India, around 2% in 1960 and currently 12%-13%. In these 78% of children has anxiety before undergoing cardiac surgery.

According to centre of disease control, Out of 34,517 individuals examined, 661 were diagnosed with CHDs, giving a prevalence of 19.14 per 1000 individuals. The most common defect was ventricular septal defect (33%), followed by atrial septal defect (19%) and tetralogy of Fallot (16%). The majority of CHD cases (58%) diagnosed were between 0 and 5 years of age. The

prevalence of CHDs in adults was 2.4 per 1000 individuals in this cohort, with atrial septal defect (44.5%) being the most frequent defect.

Up to 50% of children develop significant behaviour stress and anxiety before their surgery. Although these behaviour manifestations cause significant hardship to children and parents, perhaps of even higher significance is the impact of these pre-operative behaviour on post-operative recovery.

Forty three of 10,964 infant had CHD I.E 3.9/1000 live births. incidence of CHD was higher in preterm as compared to full term live birth (22.69 vs 2.36/1000 live birth).diagnosis was confirmed by echocardiography including 2D doppler and color flow imaging. Twenty eight percent of the infant with CHD had other associated somatic anomalies, down syndrome being the commonest 9.3%.patent ductus arteriosus 41.9%and ventricular septal defect VSD(34.9)were the commonest lesion with an incidence of 1.6and 1.4/1000 live births, respectively. incidence of PDA was higher probably because of large number of pre term deliveries. During follow up of 6-18 months, 34.9% of the infant with CHD died. The diagnosis of CHD was confirmed at autopsy in 20%of the deaths.

More than 5 million children undergo surgery every year, and it is reported that up to 50% of these children develop significant behavior stress and anxiety before their surgery. Although these behavior manifestations cause significant hardship to children and parents, perhaps of even higher significance is the impact of these pre-operative behaviour on post-operative recovery.

Nurse researcher with her clinical experience in paediatric ward has seen that the children undergoing cardiac surgery had expressed anxiety during admission and preoperatively. There are studies has been conducted regarding the effectiveness of play therapy in reduction of pre-operative anxiety in General



surgeries but very few studies related to video assisted therapy and few studies related to reduction of pre-operative anxiety before undergoing cardiac surgery, This study is to make understand the importance of teaching in preoperative setup regarding OR environment and also to reduce the anxiety level of the children who posted for surgery will be cleared of the ideation related to OR and feel relaxed during internal shifting for the surgery/procedure unbonding from their parents

## **STATEMENT OF THE PROBLEM**

A study to assess the effectiveness of video assisted pre operative teaching on the level of anxiety among school age children under going cardiac surgery in Apollo Hospital, Chennai.

## **OBJECTIVES**

1. To assess the Pre test and Post test level of anxiety among school age children under going cardiac surgery in experimental and control group.
2. To assess the effectiveness of video assisted preoperative teaching on the level of anxiety among school age children undergoing cardiac surgery in experimental group.
3. To find the association between the Post test level of anxiety and the selected demographic variables of children under going cardiac surgery in experimental group.

## **HYPOTHESIS**

**H<sub>1</sub>:** There is a significant difference between the Pre test and Post test level of anxiety among school age children undergoing surgery in experimental

**H<sub>2</sub>:** There is a significant difference between the Post test level of anxiety among experimental and control group

**H<sub>3</sub>:** There is a significant association between the level of anxiety and the selected demographic variables among school age children undergoing cardiac surgery in experimental group

## **OPERATIONAL DEFINITION**

### **Assess**

This refers to measures taken to find out the level of anxiety among school age children undergoing surgery modified Spence anxiety scale

### **Effectiveness**

This refers to reduction in anxiety score after the video assisted therapy by comparing pre and Post test anxiety scale

### **Anxiety**

This refers to a chronic state of children tension which affects on both the mind and the body regarding surgery measured by modified Spence anxiety rating scale

## **Children**

The children who were between 6-12 years of age group undergoing cardiac surgery.

## **Video Assisted Teaching**

Video assisted teaching programme refers to the systematic video on pre operative teaching which includes orientation of the operating room and postoperative exercise

## **Cardiac Surgery**

This refers to the correction of congenital cardiac disorder including cyanotic and a cyanotic condition by surgical intervention.

## **DELIMITATIONS**

The study will be delimited to

1. The children aged between 6-12 years
2. Children undergoing only open heart surgery due to congenital abnormalities

## **CONCEPTUAL FRAMEWORK BASED ON MODIFIED J.W .KENNYS OPEN SYSTEM MODEL**

According to **Polit and Hungler (2003)**, a conceptual frame works refers to a frame work of preposition for conducting research conceptual framework provides clear description of variable suggesting ways or method to conduct study and guiding the interpretation, evaluation and intergration of study findings.

The present study is based on the concept of J.W.Kenny's open system model. According to J.W.Kenny all living system are open. They are in continuous exchange of matter energy and information, which result in varying degree of interaction with environment from which the system receives input and gives output in form of matter, energy and information

### **Input**

Input can be a matter, energy and information from the environment. In present study the environment refers to hospital and information refers to the collection of demographic data from the hospital record and the child's care taker.

### **Throughput**

The matter energy and information are continuously processed through the system which is also called complex transformation known as through put process is used for input (i.e.,) energy and information for the maintenance of homeostatis of system. It refers to the different operational product in the overall programme implementation and includes factor that facilitate or block implementation at various stages. In the present study the throughput refers to

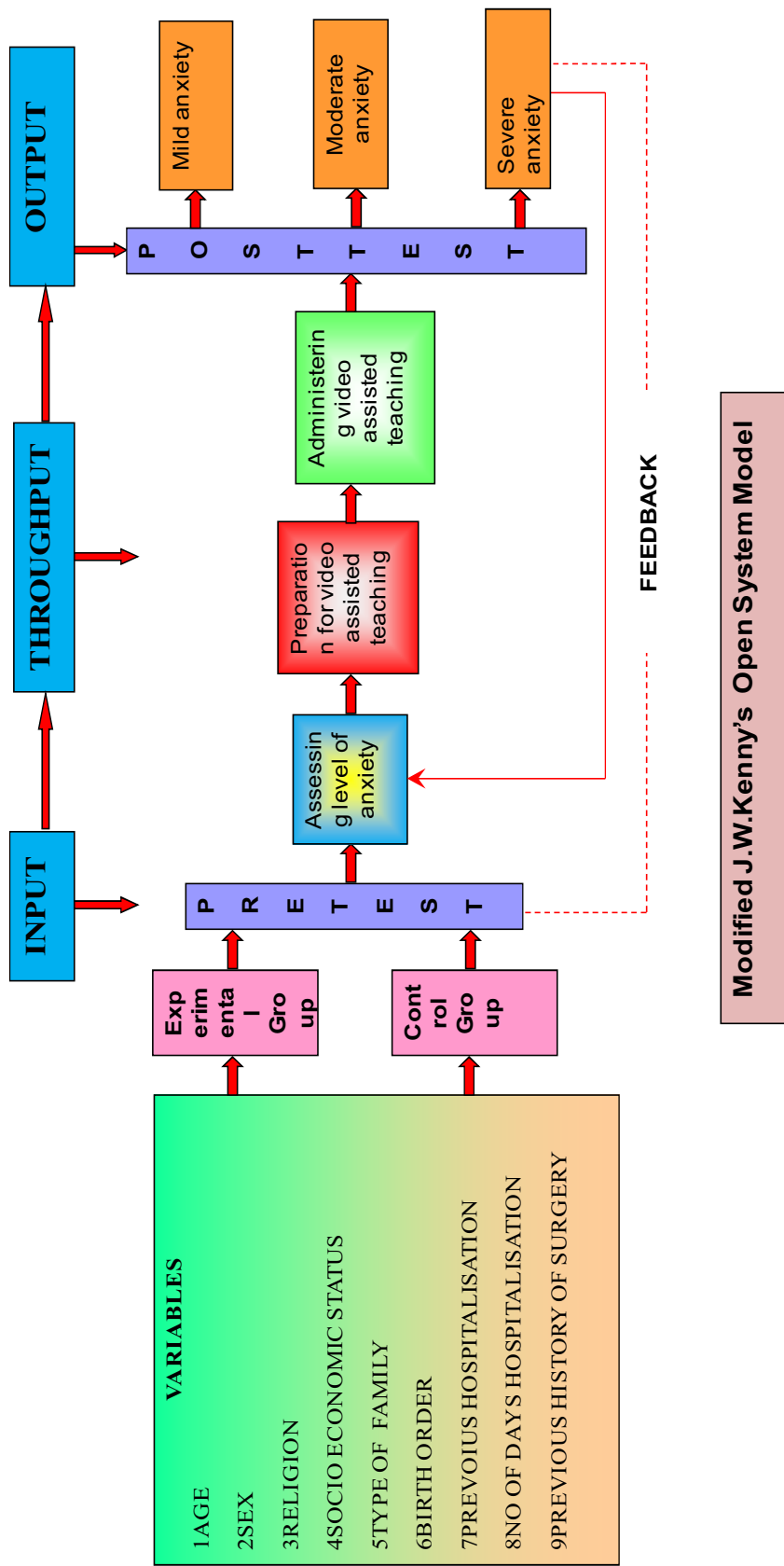
Pre test providing the regular treatment and video assisted pre operative teaching for school children under going cardiac surgery and regular treatment for control group

## **Output**

After processing the input and throughput the system return to the matter energy and information to the environment in an altered state .change is an feature of the process that is observable and measureable as output which should be different from that which is entered into the system. In the present study significant changes in the level of anxiety in experimental group and no significant change in the level of anxiety in control group is considered as output.

## **FEEDBACK**

Feedback gives information of environmental response to the system; output is utilized by the system in adjustment correction and accommodation to the interaction with the environment. In the present study the effectiveness of video assisted pre operative teaching is considered as different in mean and testing hypothesis



Feedback: Not Done

Modified J.W.Kenny's Open System Model

### CONCEPTUAL FRAME WORK

## CHAPTER – 2

### REVIEW OF LITERATURE

According to **(Polit and Hungler, 2003)**

The review of literature is a broad, comprehensive, in depth, systematic and critical review of scholarly publication, unpublished scholarly print material and personal communication.

A literature review is a written summary of the state of existing knowledge on a research problem. The task of reviewing research literature involves the identification selection critical analysis and, written description of existing information on topic

The review of literature is organized under the following headings

**Section A:** Studies related to anxiety among school age children undergoing surgery

**Section B:** Studies related to pre-operative teaching among school age children under going surgery

**Section C:** Studies related to effectiveness of video assisted teaching on anxiety among school age children

## **SECTION A: STUDY RELATED TO ANXIETY AMONG SCHOOL AGE CHILDREN UNDER GOING SURGERY**

**Lamontagne LL, et.al (2001)** conducted a study on anxiety and postoperative pain in children who underwent major orthopedic surgery by convenience sample of 74 adolescents who underwent major orthopedic surgery for repair of idiopathic scoliosis and their parents were selected to investigate the relationships among school age children's and parents' preoperative and postoperative anxiety and children's postoperative pain. Age-appropriate versions of Spielberger's State-Anxiety scales used to measure children's and parents' anxiety, and a visual analog scale used to assess the children's pain intensities. Children's state anxiety level were increased from preoperative to postoperative levels, and their postoperative anxiety levels positively related to their pain intensities on days 2 and 4 following the operation. Parents' anxiety decreased from preoperative to postoperative levels, and their postoperative anxiety level positively related to their children's postoperative anxiety. Studying both parents and children helped to explain the variance in children's self-reported anxiety. Parents' emotional states are important indicators of children's emotional states and, subsequently, their pain experience. The results of this study suggested that allowing children to assist in the assessment of their postoperative pain may help health care professionals to understand the subjective component of pain. The findings also emphasized that the importance of including parents in future studies in which the aim was to understand children's behavioral responses and recovery outcomes

**Balmer R et.al (2004)** conducted a study on Anxiety related to dental general anesthesia changes in children and their parents with an aim to examine the anxiety levels of children referred for dental general anesthesia and their parents at various key points of the referral and anesthetic procedure. Structured interviews and anxiety measures were conducted with 50 children attending the



Department of Pediatric Dentistry,. Interviews were conducted with parents and children prior to initial assessment, following assessment and prior to a general anaesthesia. Anxiety was measured at each interview, using the Visual Analogue Scale for parents and the Wenham's Picture test for children. A fourth telephone interview was conducted with parents one week after the GA when the degree of upset caused to parents and children by the procedure was evaluated. Anxiety of children remained constant at each interview. Parent and child anxiety were not related to each other. There was a rise in parent anxiety following initial assessment in response to a routine referral and progressing to general anesthesia ( $p < 0.05$ ) Child distress was strongly related to anxiety at each of the three interviews prior to the GA. The anxiety levels of children did not appear to change throughout the whole GA assessment and treatment process. Parent anxiety rose significantly following assessment and again just prior to the GA. Factors contributing to parent upset post treatment were child upset and pre treatment parent anxiety levels. Children who were most anxious prior to GA found the procedure most distressing.

**Kain AN, et.al (2001)** conducted a randomized, controlled trial a on sensory stimuli and anxiety among school age children undergoing surgery to find the effectiveness of a behavioral intervention aimed at reducing the anxiety of children undergoing anesthesia and surgery. The intervention consisted of dimmed operating room (OR) lights (200 Lx) and soft background music (Bach's "Air on a G String," 50-60 dB). anesthesiologist, interacted with the child during the induction of anesthesia. Children undergoing surgery were randomly assigned either to a low sensory stimulation group (LSSG,  $n = 33$ ) or to control group ( $n = 37$ ). By using validated behavioral measures of anxiety (mYPAS) and compliance, children were evaluated at the preoperative holding area and during the induction of anesthesia. On postoperative Days 1, 2, 3, 7, and 14, the behavioral recovery of the children was assessed by using the Post Hospitalization Behavior Questionnaire. The study found that the LSSG was

significantly less anxious compared with the control group on entrance to the OR ( $P = 0.03$ ) and on the introduction of the anesthesia mask ( $P = 0.003$ ). Also, the compliance during the induction of anesthesia was significantly better in children assigned to the LSSG ( $P = 0.02$ ). The incidence of postoperative behavioral changes, however, did not differ significantly between the two groups ( $P = ns$ ). they concluded that children who were exposed to low-level sensory stimuli during the induction of anesthesia and who were exposed to background music exhibit lower levels of anxiety and increased compliance during induction when exposed to a single care-provider in a dimmed, quiet operating room with background music.

**Caldwell Andrew et.al (2006)** conducted a study on Preoperative anxiety, postoperative pain, and behavioral recovery in young children undergoing surgery. A total of 241 children aged 5 to 12 years underwent elective outpatient tonsillectomy and adenoidectomy. Before surgery the child and parental situational anxiety and temperament were measured. After surgery, all the children selected as sample were admitted to a research unit in which postoperative pain and analgesic consumption were assessed every 3 hours. After 24 hours in the hospital, children were discharged and followed up at home for the next 14 days. Pain management at home was standardized. Parental assessment of pain in their child showed that anxious children experienced significantly more pain both during the hospital stay and over the first 3 days at home. During home recovery, anxious children also consumed, on average, significantly more codeine and acetaminophen compared with the children who were not anxious. Anxious children also had a higher incidence of emergence delirium compared with the children who were not anxious (9.7% vs 1.5%) and had a higher incidence of postoperative anxiety and sleep problems. Preoperative anxiety in young children underwent surgery were associated with a more painful postoperative recovery and a higher incidence of sleep and other problems.

**Al Jundi et.al (2010)** conducted an Observational cross sectional study on factors affecting preoperative anxiety in children undergoing general anaesthesia for dental rehabilitation. The primary aim was to examine anxiety levels, and to identify factors affecting preoperative anxiety among healthy children undergoing general anesthesia for dental rehabilitation and also to assess parental distress and attitude to accompanying their children during this procedure. Anxiety levels of 118 children admitted to the Day Case unit of King Abdullah teaching hospital in Irbil, Jordan, for dental rehabilitation under general anesthesia (Anxiety levels of the children were assessed at different phases (before and during induction of GA) using the Global Mood Score (GMS) with parental presence. . Parental distress and attitudes to accompanying their children were assessed using a structured questionnaire. The effects of certain variables such as age, sex, reason for referral, past GA experience, accompanying parent, and parental distress, on children's anxiety during this procedure were assessed using multivariate analysis. The level of significance was  $<0.05$  There was a significant increase of child anxiety on GMS reaching its highest level in phase three (induction phase). A multivariate test (MANOVA) showed that previous experience of the child with GA, and reason for referral to dental rehabilitation under GA, significantly predicted child anxiety (P-value of 0.019 and 0.012) respectively. However, parental distress, accompanying person, age, and sex of the child, did not affect child anxiety. Parental distress was at its highest level in phase three, mothers were significantly more stressed than fathers and parental distress was significantly increased when a child was  $<5$  years of age. Factors contributing to increased child anxiety during induction of GA for dental rehabilitation were age, previous GA experience, and referral for GA at a very young age. Most parents, especially mothers, were distressed during the induction phase, therefore sufficient preoperative preparation of those children and parents is necessary to achieve best patient management.

**Cantó MA, Quiles JM. et.al (2008)** conducted a study on evaluation of the effect of hospital clown's performance about anxiety in children subjected to surgical intervention and recruited 60 children aged 6 to 10 years who underwent elective surgery. 30 children had clowns before the surgery (case group) and 30 was control group. In the case group, two clowns performed for children. The anxiety was measured with several scales (STAIC, CCPH, faces scale). The outcomes showed both groups had increase level of anxiety but the children of the case group showed less increase at the anxiety's score.. Children who receive the clown's performance, had less distressed and with less fear than the control group.

**Patel A, Schieble T, et.al (2006)** conducted a randomized prospective study on, distraction with a hand-held video game to reduces pediatric preoperative anxiety. The level of anxiety was assessed after admission and again at mask induction of anesthesia, by using the modified Yale Preoperative Anxiety Scale and Postoperative behavior changes were assessed with the Post hospital Behavior Questionnaire (PHBQ). 112 children with the age group of 4-12 years who underwent outpatient surgery was selected for the study. Patients were randomly assigned to three groups: parent presence (PP), PP+a hand-held VG, and PP+0.5 mg.kg<sup>-1</sup> oral midazolam (M) given >20 min prior to entering the operating room. There was a statistically significant increase in anxiety ( $P < 0.01$ ) in groups M and PP at induction of anesthesia compared with baseline, but not in video game group. Video game patients demonstrated a decrease in anxiety from baseline (median change in m YPAS -3), the difference compared with PP (+11.8) was significant ( $P = 0.04$ ). The change in anxiety in the M group (+7.3) was not statistically different from other groups. Sixty-three percent of patients in VG group had no change or decrease in anxiety after treatment, compared with 26% in M group and 28% in PP group ( $P = 0.01$ ). There was no difference in anxiety changes between female and male patients.

## **SECTION B: STUDIES RELATED TO PREOPERATIVE TEACHING AMONG SCHOOL AGE CHILDREN UNDER GOING SURGERY**

**Jafar Sadegh Tabrizi (2012)** conducted a study on Preoperative Education to decrease Preoperative Anxiety among school age children Aged 8 - 10 Years Old and Their Mothers after obtaining the institutional ethics committee approval and written informed parental consent. Children who underwent small operations were included in this prospective randomized study. The participants were allocated into the intervention (n =18) and control (n =18) groups. Children in the first group were prepared routinely. In the second group children and their mothers received data about anesthesia and operation by the booklet. Children-maternal anxiety was assessed using the anxiety level form, at the night and in the morning before surgery. Few days after surgery mothers, residents, and children experiences and satisfaction from anxiety management were assessed in the focus group discussion. Mean scores and standard deviations of state anxiety in the intervention group before and after training were  $33.1 \pm 5.5$  and  $30.8 \pm 6$ , respectively ( $P = 0.06$ ). In the control group it was  $32 \pm 6.5$  on the night and  $34.1 \pm 6.7$  in the morning before surgery ( $P = 0.00$ ). Comparison between groups was not significant ( $P = 0.6$ ) and ( $P = 0.1$ ). The mean levels of anxiety in the control group mothers on the night before and in the morning of surgery were  $39.2 \pm 13.1$  and  $42.8 \pm 14$  ( $P = 0.00$ ), respectively. In the intervention group, mothers' anxiety before education was  $41 \pm 12.7$  and after education it was  $35.6 \pm 9.5$  ( $P = 0.04$ ). Comparison between groups was not significant ( $P = 0.7$ ) and ( $P = 0.1$ ). According to the focus group discussions, booklet study, provided education, sympathy of medical team, spiritual issues and beliefs reduced anxiety and fear of surgery. Anesthesia and lack of knowledge of what will happen, crying and restlessness of children increased preoperative anxiety.

**Rice M, Glasper A, Keeton D, et.al (2007)** conducted an observational study on the effect of a preoperative education program on perioperative anxiety in children. The distress of children at the induction of anesthesia (DAI) is unpleasant for all involved and potentially harmful. Many strategies such as premedication or parental presence at induction have been described to minimize it. A preoperative education program for the children undergoing day care surgery was undertaken to assess effectiveness of preoperative education program. 94 children aged between 2 and 16 years of age were included in the study; 21 attended the programme and 73 did not. Patient anxiety using the modified Yale Preoperative Anxiety Scale was measured by blinded observers on the day ward, in the preoperative waiting room and at induction of anesthesia. Parental anxiety at the same locations was self reported using a visual analogue scale. Patient who had pre operative teaching had favorable effect on patient anxiety levels in all three locations but only reached statistical significance in the waiting room ( $P = 0.007$ ).

**Kain ZN, et.al (1996)** conducted a cross-sectional study on Preoperative preparation of children in children's hospital. 143 children and their parents were selected for this study. Children older than 6 years were least anxious on separation from their parents if they participated in the preparation program more than 5 to 7 days prior to surgery, moderately anxious if they did not receive preparation, and most anxious if they received the preparation 1 day prior to surgery ( $P = 0.04$ ). Multivariable regression analysis (for overall model,  $F = 2.14$ ,  $p = 0.02$ ) revealed that although the preparation program itself was not a predictor of a child's behavior on separation to the operating room, the interaction between child's age and timing of the program ( $p = 0.003$ ), and child's previous hospitalization were predictors of children's anxiety response. Similarly, in the preoperative holding area, independent predictors of anxiety included timing of the preparation program, age of child, and the child's baseline temperament characteristics. The results showed that complexities in assuming that a

behavior-based preoperative preparation program is effective for all pediatric outpatients. The effects of such an intervention vary with the child's age, the timing of the intervention, and a history of previous hospitalization.

**Cuzzocrea et.al (2001)** conducted a study to evaluate the effectiveness of a psychological preoperative program in reducing preoperative anxiety and in promoting compliance of pediatric participants with surgical procedures. 50 children and their mothers were selected for the study. The child anxiety was assessed using modified Yale Pre-operative Anxiety Scale, compliant behaviors with Induction Compliance Checklist; and mothers' anxiety with Amsterdam Pre-operative Anxiety and Information Scale. Children of the first group were less anxious ( $p < 0.005$ ) and more cooperative in the preoperative period and during anesthesia induction than in the other condition. The psychological program was also more efficient in reducing mothers' anxiety. Finally, the mothers of group 1 showed a significantly higher satisfaction and judged as significantly more effective the program proposed to prepare their children than the mothers of group II. Preparing children through playful dramatization of the operative procedure, manipulation of medical instruments and psychologist's support may be useful in pediatric surgery.

**Nirmal Kaur, Prem Verma, et.al (2006)** conducted a quasi experimental study on Effectiveness of planned preoperative teaching on self-care activities for patients undergoing cardiac surgery. Sample was selected by using convenient sampling technique. Total 40 subjects, 20 each in the experimental (Group I) and control group (Group II). In each group an equal number of subjects, 10 each, were included undergoing two types of cardiac surgery, i.e. open (group A) & closed (group B) heart surgery. A checklist with 40 items was framed to assess the level of performance during preoperative period, before the implementation of teaching on self-care activities and as well as on the 4th and 7th postoperative day. The control group did not receive any preoperative

teaching. Data analysis showed that statistically there was no significant ( $P>0.05$ ) difference of Pre test performance scores was found between the two groups. A comparison of Post test performance scores between both groups showed that experimental group had strongly statistically significant ( $P<0.001$ ) increase in performance of total scores as well as each variable of self-care activities. The findings of the study reflected that the preoperative teaching is an extremely effective media to increase the level of performance and enhance the early recovery of the subjects. The findings of the study reflected that the preoperative teaching is an extremely effective media to increase the level of performance of the subjects as information about self-care activities is a prerequisite to compliance. It also strengthens the self-care abilities and leads to uneventful postoperative recovery.

**Asilioglu et.al (2004)** conducted a experimental study on The effect of preoperative education on anxiety of open cardiac surgery patients. The purpose of this experimental study was to evaluate the effect of preoperative teaching method on anxiety levels of the patients. This study consisted of 100 patients having open cardiac surgery. Out of 100 patients 50 were placed in the intervention group while the remaining 50 were in the control group. The patients in the intervention group were given a planned teaching according to the patient education booklet. Patients in the control group were informed about pre- and postoperative routines by a nurse by the purpose of comparing anxiety levels of the patients in the intervention and control groups. The anxiety level of the patients in control and intervention groups was measured on the 3rd day after the operation by using the Self-Evaluation Questionnaire for State and Trait Anxiety Inventory. The mean postoperative state and trait anxiety score in the control group was slightly higher than the mean of the patients in the intervention group. There was no statistically significant difference in the state and trait anxiety scores between the groups, and the patients in the intervention group had lower scores than the patients in the control group. In addition, all patients in the



intervention group stated that they were satisfied with the preoperative teaching given by the researcher.

**Lee CK, Lee IF, et.al (2013)** conducted a study on Preoperative patient teaching about the practice and perceptions among pediatric surgical ward nurses. Data were collected by using self-reported preoperative teaching questionnaires together with nurse demographic data sheets. Sampling setting was an acute public hospital and all nurses working in surgical wards (n = 100) were approached in the study. A total of 86 nurses returned the questionnaires. 'Details of anaesthesia' was the most prominent preoperative teaching component rated by nurses although their major teaching was pertained to 'preoperative preparation'. In addition, oral explanation was reported as the most prevalent way of information delivery and internet was the least preferred method. Discrepancies between nurses' perceptions and actual practice were found in this study. Moreover, nurses' time availability, language barriers and tight operation schedules were perceived as top factors affecting the provision of preoperative teaching. Furthermore, nurses' satisfaction with such patient teaching was significantly associated with their professional training and their daily workload in the clinical setting.

### **SECTION C: STUDY RELATED TO EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON ANXIETY**

**Kupietzky A et.al (2006)** conducted a study on effects of video information on parental preoperative anxiety level and their perception of conscious sedation vs. general anaesthesia for the dental treatment of their young child. 40 parents were included and completed the trial. The pre screening anxiety level of parents was 2.79 (+/-1.05, SD) and was not significantly different than the post screening anxiety level of 2.91 (+/- .99 SD, paired t- test p=0.432). The majority of parents preferred Conscious Sedation to General

anaesthesia for the treatment of their child prior to screening of the video. Among them few choose GA (n=5) all, but one changed their choice after viewing the video to CS. However, this difference was not found to be statistically significant due to the small number of subjects in this group (McNamara test,  $p = 0.125$ ). Most parents voiced the opinion that the video film contributed to their knowledge and also considered GA as having more risks than CS. An interesting finding was that a statistically significant difference was found regarding parent's perception of the two procedures and what they actually saw in the video. The majority of parents stated that their initial perception of GA was not similar to their viewing experience, conversely, Conscious Sedation matched their expectations. Parents' anxiety regarding their child's dental treatment under General anaesthesia or Conscious Sedation is not affected by the viewing of a video film depicting either method. Parent's perception of GA is different than the actual procedure and may affect their choice of treatment.

**Hardman JG, Bedfordth NM, et.al (2010)** conducted a study on the effect of preoperative multimedia information on pre operative anxiety in patients undergoing procedures under regional anaesthesia. Provision of preoperative information can alleviate patients' anxiety. Sample 110 patients undergoing upper or lower limb surgery under regional anaesthesia into the study and control groups. The study group watched a short film (created by the authors) depicting the patient's in-hospital journey including either a spinal anaesthetic or a brachial plexus block. Patients' anxiety was assessed before and after the film and 1 hr before and within 8 hr after their operation, using the Spielberg state trait anxiety inventory and a visual analogue scale. There was no difference in state and trait anxiety between the two groups at enrolment. Women had higher baseline state and trait anxiety than men ( $P=0.02$ ). Patients in the control group experienced an increase in state anxiety immediately before surgery ( $P<0.001$ ), and patients in the film group were less anxious before operation than those in the control group ( $P=0.04$ ). After operation, there was a decrease in state anxiety

from baseline in both groups, but patients in the film group were less anxious than the control group ( $P=0.005$ ). Preoperative video information reduces the anxiety of patients undergoing surgery under regional anaesthesia. This type of information is easily delivered and can benefit many patients.

**Salzwedel C, Petersen C, et.al (2008)** conducted a randomized controlled trial on effect of detailed, video-assisted anesthesia risk education on patient anxiety and the duration of the pre anesthetic interview. Video-assisted patient education during the pre anesthetic clinic visit is a new intervention to increase knowledge transfer to the patient regarding anesthesia procedure and risks. A little is known about whether video-based patient education influences patient anxiety and the duration of the pre anesthetic visit. 209 consecutive patients, who visited the anesthesia clinic before major operations, were randomly assigned to one of three groups: no-video (Group 1), video-before-interview (Group 2), and video-after-interview (Group 3). Anxiety levels were measured before and after the interview using the state trait anxiety inventory and a visual analog scale (anxiety). Patient knowledge regarding anesthesia technique, anesthesia-related risks, and patient satisfaction were assessed after the interview using standardized questionnaires. There were no significant differences in anxiety levels and patient satisfaction among the three groups. Patient knowledge was significantly higher in the video groups compared with the no-video group. The duration of the pre anesthetic interview was significantly extended in Group 2 (video-before) (23.1 +/- 14.0 min), compared with Group 1 (no-video) (17.6 +/- 7.2 min), and Group 3 (video-after) (18.3 +/- 9.6 min). This difference was even more profound in subgroups of patients scheduled for anesthesia techniques with invasive monitoring. Our study suggests that the use of a video for detailed anesthesia risk education does not change patient anxiety, but leads to a better understanding of the procedure and

risks of anesthesia. When the video is shown before the pre anesthetic interview, the interview was longer.

**Arch Mal Coeur Vaiss (2006)** conducted a study on effects of video information in patients undergoing coronary angiography 200 consecutive patients undergoing coronary angiography were enrolled. The first one hundred were assigned to conventional education conducted by the physician (control group) and the second one hundred had consent obtained in the conventional manner assisted by video information (experimental group). The outcome variables for this comparison consisted of a standard anxiety score using (Spielberger State Anxiety Inventory questionnaire) immediately after written informed consent. In addition, before discharge, patients graded the tolerability and satisfaction on a 4-point scale. The groups were similar with regard to their baseline characteristics and anxiety score (37+23 vs 37+23). Patients who had not had prior experience of catheterization had higher baseline anxiety than those who had prior angiography (45 + 22 vs 31 + 20;  $p = 0.027$ ). Patients who watched the video were significantly less anxious after informed consent (28 + 21 vs 34 + 22;  $p = 0.048$ ) and had a significantly lower heart rate (65 + 10 vs 71 + 12;  $p = 0.03$ ). The benefits of video information were especially prominent in those with higher anxiety scores at baseline (score after 45 + 24 vs 57 + 26;  $p = 0.046$ ). Tolerability were higher in the video group compared with no video group (98% vs 86%;  $p = 0.003$ ). Finally, satisfaction of information for informed consent process was higher in video group than in no video group (99% vs 76%;  $p = 0.001$ ). a video information decreased anxiety level after written informed consent and improved tolerability and satisfaction scales in patients undergoing coronary angiography. The most likely to benefit from video information are patients with higher anxiety level at baseline. Beneficial effect on informed refusal should be investigated in larger population.

**Sreeleka Rajesh et.al (2014)** conducted a study to assess effectiveness of video assisted teaching program on knowledge regarding non pharmacological pain relieving intervention for children in selected hospital. A structured questionnaire is used to assess the knowledge of the staff nurse regarding non pharmacological pain relieving interventions for children in selected hospitals. In the pre-test more than half (53.3%) of the staff nurses had average knowledge, 40% of them had poor knowledge and 6.7% had good knowledge regarding non-pharmacological pain relieving interventions before the video assisted teaching program, but in the Post test there was significant improvement in the knowledge scores 80 % of nurses had good knowledge. None of the demographic variables was found to have significant association with knowledge of the staff nurses. Hence the video assisted teaching regarding non pharmacological pain relieving interventions for children is effective in rendering knowledge and bringing awareness.

**Surendras et.al (2013)** conducted a quasi experimental study effectiveness of video assisted teaching on level anxiety in children with the age group of 10-14yrs undergoing general surgery. 80 samples were selected using purposive sampling technique. Modified Yale peri operative anxiety scale were used to assess the level of anxiety. The overall Pre test mean anxiety score was  $9.09 \pm 1.96$ , which is 36.36 and the Post test score after intervention is  $17.15 \pm 2.05$  which is 6.86% of total score the difference in mean percentage between Pre test and Post test was 32.24. It shows the video assisted teaching is more effective than any other module to decrease the anxiety.

**Xing Lian Gao et.al (2012)** conducted a quasi experimental study on effect of interesting video on relief of pre operative anxiety in school aged children. 90 children were randomly selected and assigned into two groups. Children anxiety was assessed by using Yale pre operative anxiety scale. The experimental group were admitted to general pre operative room with parents

for 15-20 min and taken into the operating room .during anesthesia induction the investigator attracted the children attention using an interesting video with encouragement and attention diversion In operating room children compliance was assessed by using the induction compliance check list. No significant difference in yale pre operative anxiety score were observed between two groups upon entering the operating room( $p>0.05$ ). The children compliance with anesthesia induction was significantly higher in the experimental group than in the control group ( $p<0.005$ ). showing interesting video or games can reduce school age children pre operative anxiety and improve their compliance with anesthesia induction

## **CHAPTER – 3**

### **RESEARCH METHODOLOGY**

According to **Burns and Groove (2002)** methodology of research organizes all the component of study in a way that is most likely to lead to valid answer to the problem that have been posed.

According to **Polit and Beck (2004)** research methodology is a systematic way to solve the research problem and also to carry out the academic study and research in correct manner.

This chapter includes the description of research approach, research design, setting of the study, variables, population, sample, sample size, sampling technique, criteria for sample selection, developing and description of tool, validity and reliability of the tool, method of data collection procedure, plan for data analysis and interpretation of data.

### **RESEARCH APPROACH**

Evaluative research is generally an applied research that involves the finding out of how well the program, practice, and procedure is working. It involves the collection and analysis of information relating to the functioning of the intervention with the aim of assessing the effectiveness

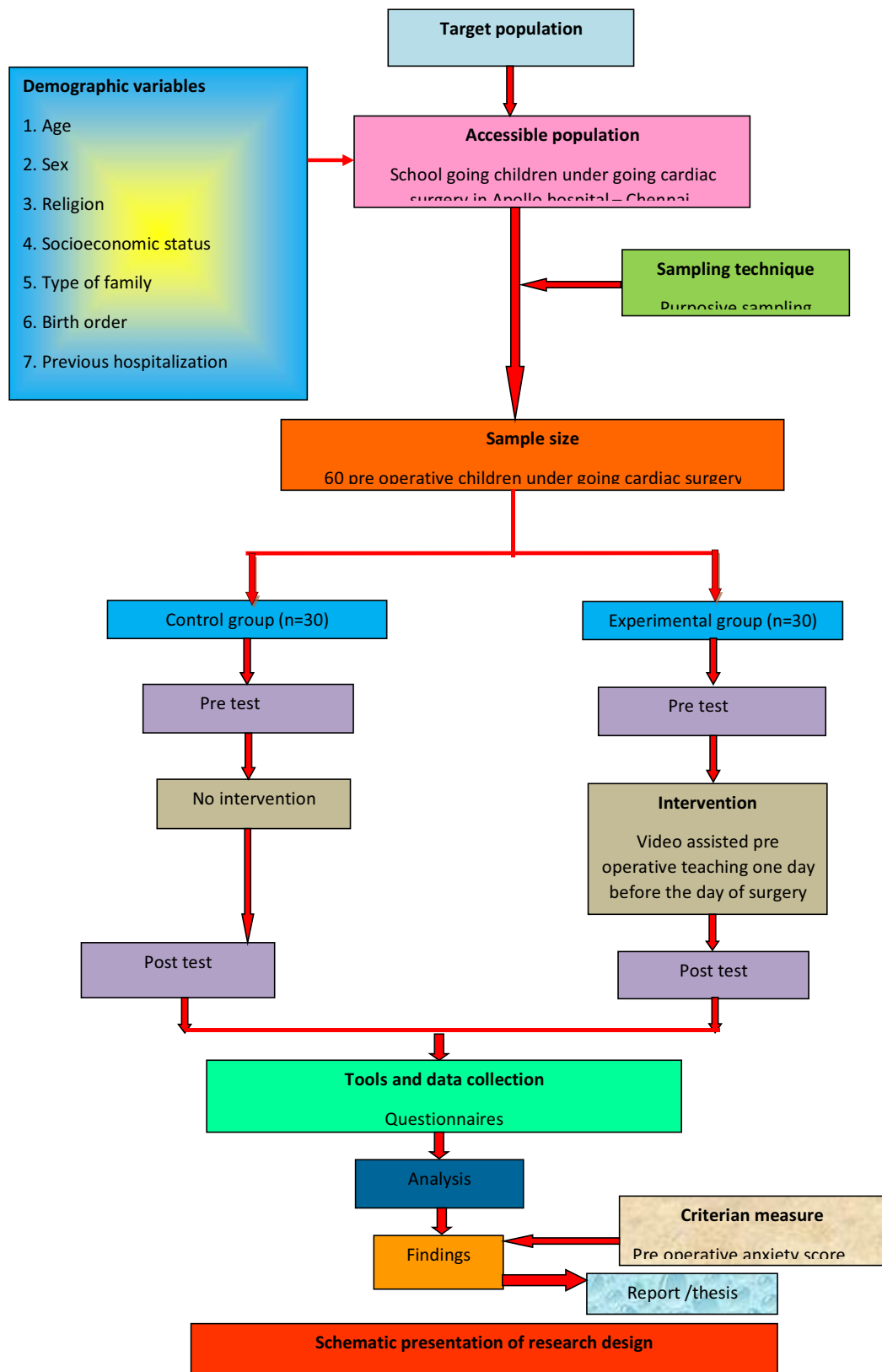
The research approach in this study was a quantitative evaluative approach quasi experimental design in nature used for this study. To be a specific pre and post design with experimental and control group were used to evaluate

the effectiveness of video assisted pre operative teaching on level of anxiety among school going children under going cardiac surgery. The experimental group was similar to control group with regard to age sex and other factor .the experimental group included were different from control group only with regard to attending video assisted teaching

## **RESEARCH DESIGN**

According to **Polit and Beck (2004)** research design refers to overall plan for addressing a research question, including specification for enhancing the integrity. The research design in this study is quasi experimental design with pre and Post test design with experimental and control group to evaluate the effectiveness of video assisted pre operative teaching on level of anxiety.





## NOTATION

<b>Purposively select children under going cardiac surgery</b>	<b>Pre test</b>	<b>Treatment</b>	<b>Post test</b>
Control group	O <sub>1</sub>	-	O <sub>2</sub>
Experimental group	O <sub>1</sub>	×	O <sub>2</sub>

The symbols are used

O<sub>1</sub> - Pre test level of anxiety

×: - Video assisted pre operative teaching

O<sub>2</sub> - Post test level of anxiety

## SETTING OF THE STUDY

According to **Polit and Hungler (2004)** research settings are specific places in a research where data collection is to be made. The selection of setting was done on the basis of feasibility of conducting the study availability of subject and permission of authorities. The present study was conducted at Apollo Specialty hospital, Chennai. An approximately 60 children underwent cardiac surgery per month.

## VARIABLES

According to **Suresh K. Sharma (2011)** variables are qualities properties or characteristic of person things or situation that changes or vary. Variables are

concept at different level of abstraction that is concisely defined to promote their measurement or manipulation with in study.

### **Independent Variables**

Independent variable is the variable which has the presumed effect on the dependent variable. In this present study the independent variable is video assist Pre-operative teaching.

### **Dependent Variable**

Dependent variable is often referred to as the consequence or the presumed effect that varies with change in the independent variable, in this present study the dependent variable is anxiety.

### **Demographic Variables**

Attribute variable are the factors that are not the part of study variable. It is also termed as extraneous variables in this presence study the attribute variables are age, sex, religion, socioeconomic status, type of family, birth order, previous hospitalization, no of days hospitalization, previous surgery.

### **POPULATION**

Population refer to the aggregate or totality of all the objects, subject or number that conform to set a specification.

## **Target Population**

The target population for this study was children under going cardiac surgery with age group of 6-12yrs and present during the period of data collection.

## **Accessible Population**

It is the aggregate of cases that confirmed to the designed criteria and which is accessible to the investigator as a part of subject for conducting the study.

The accessible population of the study was school going children who are undergoing cardiac surgery in Apollo hospital Chennai.

## **SAMPLE**

According to **Polit and Beck (2004)**, a sample is a subset of population and selected to participate in research study. It the portion of the population which represent entire population.

The sample of the study comprises of school going children under going cardiac surgery at Apollo hospital, Chennai who fulfill the inclusion criteria.

## **SAMPLE SIZE**

According to **Polit and Beck (2002)** sample size is normally decided by the study, nature of population, type of sampling technique tool variable, statistical test adopted for data analysis sensitivity of the measure.

Arbitrary decided and had sample size of 60, experimental group n = 30,  
Control group n = 30

## **SAMPLING TECHNIQUE**

According to **Polit and Beck (2004)** sampling technique refers to the process of selecting population to represent the entire population.

According to **Ram Ahiya (2001)** purposive or judgmental sampling is the researcher chooses. Person who, in this judgment about some appropriate characteristics required to the sample member were collected for this present study.

Non random Purposive sampling technique was used to select the sample for the present study.

## **CRITERIA FOR SAMPLE SELECTION**

### **Inclusion Criteria**

1. Age group male and female children between 6-12 years
2. Willing to participate in this study.
3. Able to understand the verbal instruction in Tamil.
4. Children who were undergoing cardiac surgery.
5. Children who are under going open heart surgery.

## **Exclusion Criteria**

1. Children got admission for Re-do surgery.
2. Children who had similar therapy within 6 months.
3. Mentally challenged

## **DEVELOPMENT OF THE TOOL**

The tool act as instrument to assess and collect the data from the respondent of the study, **Polit and Beck (2004)**

Tool has 2 parts

### **PART – I:**

It consists of demographic characteristics of children under going cardiac surgery. (i.e.,) age, sex, religion, socio economic status, religion, type of family, birth order, previous history of surgery. Previous hospitalization, no of days hospitalization. Type of surgery, type of congenital anomalies.

### **PART – II:**

Modified Spence anxiety scale consists of 6 positive statements and 14 negative statements.

- Positive statement are 2, 8, 10, 11, 16, 18
- Negative statement are 1, 3, 4, 5, 6, 7, 9, 12, 13, 14, 15, 17, 19, 20.

For the purpose of scoring and interpretation positive statement are reversed scored (i.e., a 4 scores 1 point and a 1 score 4 point etc.)

The overall total score for modified Spence anxiety scale ranges from a minimum of 0 to a maximum of 60: scores are classified as mild anxiety, (0-20) ‘moderated anxiety’ (21-40) and ‘severe anxiety’ (41-60).

Scoring procedure for the level of anxiety.

<b>Level of anxiety</b>	<b>Actual score</b>	<b>Percentage</b>
Mild anxiety	0-20	0-34%
Moderate anxiety	21-40	35-67%
Severe anxiety	41-60	68-100%

**Modified Spence anxiety scale:**

It consist of -20 statement and the answer to these are used to determine a patients current anxiety level, each statement in the scale is rated on a four-point scale (Never-0, sometimes -1, often-2, always-4)

**VALIDITY**

The content validity of the demographic variables modified Spence anxiety scale were validated in consultation with guide and field of experts. The experts are surgeon, pediatrician, cardiologist, psychologist and nurse specialist. The tool was modified according to the suggestion of the experts.

## **RELIABILITY**

The reliability of modified Spence anxiety scale was tested by implementing the tool on 5 children posted for cardiac surgery, at Apollo Hospital Chennai, by test retest method. The tool found to be reliable. ( $r=0.91$ )

## **PILOT STUDY**

According to, **Polit and Beck** pilot study is a small version or trail run done in preparation of a majority study. Researcher can refine this study by doing it on a small group of people, who have similar characteristics of the instead of responds. It helps the researcher to fore see the strength and weakness and problem that may encounter during the actual study.

The pilot study was conducted in Apollo Hospitals Chennai, with prior permission from authorities. Informed consent was obtained 10 samples, which were selected according to the sample criteria using purposive sampling method. Data was collected by interviewing and using a questionnaire privacy and confidentiality was found to be feasible in terms of availability of sample, co-operation of the institution, time, distance, money and material.

## **DATA COLLECTION**

The investigator selected the sample as per inclusion criteria by using purposive sampling technique. Good rapport was established with children and parents modified Spence anxiety scale was administered to assess the level of anxiety among school age children under going cardiac surgery per test anxiety level was assessed for both the groups. In experimental group video assisted teaching (i.e., pre operative teaching shown to the child). After that Post test was done for assessing the level of anxiety in both groups using same tool.



## **PLAN FOR DATA ANALYSIS**

Descriptive statistic such as percentage of mean and standard deviation was used to categorizing the data. Inferential statistic such as an paired‘t’ test was used to find out effectiveness of video assisted therapy and chi square was used to associate the level of anxiety with selected demographic variable among school going children in experimental, control group.

1. Data on demographic variables were analyzed by using frequency and percentage
2. Data on level of anxiety among school age children under going cardiac surgery were analysed by mean and standard deviation
3. Data on effectiveness of video assisted pre operative teaching on level anxiety among school age children under going cardiac surgery were analysed by paired t test
4. Data on association between the level of anxiety after video assisted pre operative teaching and their selected demographic variables were analysed by chi square

## **ETHICAL CONSIDERATION**

Ethical consideration were taken into account for the purpose of the study to assess the effectiveness of video assisted pre operative teaching on level of anxiety among school going children under going cardiac surgery in selected Hospitals. Each individual was informed about the purpose of the study and

confidentially was promised and ensured. The subject had the freedom to leave the study at his will without assigning any reason. No physical harm was done.

## CHAPTER – IV

### DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data collected from 60 school going children undergoing cardiac surgery (30 Experimental and 30 Control) in selected hospital, Chennai. The data collected was organized, tabulated and analyzed according to the objectives. The findings based on the descriptive and inferential statistical analysis are presented under the following sections.

#### ORGANIZATION OF DATA

**Section A:** Data on demographic variables of the school going children undergoing cardiac surgery in experimental and control group.

**Section B:** Data on Assessment of Pre test and Post test level of anxiety among school going children undergoing cardiac surgery in experimental and control group.

**Section C:** Data on Effectiveness of vide assisted pre-operative teaching on the level of anxiety among school going children undergoing cardiac surgery within and between experimental and control group.

**Section D:** Data on Association of Post test level of anxiety among school going children undergoing cardiac surgery with their selected demographic variables in the experimental and control group.

**SECTION A: DATA ON DEMOGRAPHIC VARIABLES OF THE SCHOOL GOING CHILDREN UNDERGOING CARDIAC SURGERY IN EXPERIMENTAL AND CONTROL GROUP.**

**Table 1: Frequency and percentage distribution of demographic variables of school age children undergoing cardiac surgery in experimental and control group.**

**N = 60(30+30)**

<b>Demographic Variables</b>	<b>Experimental Group</b>		<b>Control Group</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
<b>Age</b>				
6.0 to 8.0 years	3	10.00	9	30.00
8.1 to 10.0 years	15	50.00	8	26.67
10.1 to 12.0 years	12	40.00	13	43.33
<b>Sex</b>				
Male	18	60.00	18	60.00
Female	12	40.00	12	40.00
<b>Religion</b>				
Hindu	18	60.00	16	53.33
Muslim	9	30.00	4	13.33
Christian	3	10.00	10	33.33
Others	0	0.00	0	0.00
<b>Socio Economic Status</b>				
Less than 10,000	5	16.67	4	13.33

Demographic Variables	Experimental Group		Control Group	
	No.	%	No.	%
10,000 to 20,000	20	66.67	17	56.67
More than 40,000	5	16.67	9	30.00
<b>Type of family</b>				
Nuclear	27	90.00	24	80.00
Joint	3	10.00	6	20.00
Extended	0	0.00	0	0.00
<b>Birth order of the child</b>				
First	7	23.33	12	40.00
Second	23	76.67	14	46.67
Third or more	0	0.00	4	13.33
<b>Previous hospitalization</b>				
Yes	6	20.00	1	3.33
No	24	80.00	29	96.67
<b>No. of days of hospitalization</b>				
More than 1 week	9	30.00	15	50.00
Less than 1 week	21	70.00	15	50.00
<b>Previous history of surgery</b>				
Yes	3	10.00	1	3.33
No	27	90.00	29	96.67
<b>Type of congenital anomalies</b>				
Cyanotic heart disease	9	30.00	1	3.33
A cyanotic heart disease	21	70.00	29	96.67

Table 1 shows Frequency and percentage distribution of demographic variables of school age children undergoing cardiac surgery in experimental and control group.

In experimental group regarding age, majority 15(50%) were in the age group of 8.1-12yrs, 12(40%) were in the age group of 10.1-12yrs the least 3(10%) were in the age group of 6.0-8yrs. where as in control group majority 13(43.33%) were in the age group 10.1-12yrs and 9(30%) were in the age group of 6-8yrs, and the least 8(26.627%) were in the age group of 8.1-10yrs.

Regarding sex in the experimental group majority of them 18(60%) were male children, 12(40%) were female children, where as in control group 18(60%) were male children, and 12(40%) were female children.

Regarding religion in experimental group majority 18(60%) were Hindu and 9(30%) were Muslims the least 3(10%) were Christian where as in control group majority 16(53.33%) were Hindu and 10(33.33%) were Christian the least 4(13.33%) were Muslims

Regarding socio economic status majority 20(66.67%) had the family income of 10,000 to 20,000 per month, and 5(16.67) had the family income of less than 10,000 and 5(16.67%) had the family income of more than 40,000 whereas in control group the majority 17(56.67%) had the family income of 10,000 to 20,000 and 9(30%) had the family income of more than 40,000 the least 4(13.33%) had the family income of less than 10,000

Regarding type of family in experimental group majority 27(90%) were living in nuclear family, the least 3(10%) were living in the joint family, whereas in control group majority 24(80%) were living in joint family, 16(20%) were living in nuclear family.

Regarding birth order of the child in experimental group majority 23(76.67%) were fallen in the category of second birth order, 7(23.33%) were fallen in the category of first birth order, whereas in control group the majority 14(46.67%) were fallen in the category of second birth order, 12(40%) were fallen in the category of first birth, the least 4(13.33%) were fallen in the category of third birth order.

Regarding previous hospitalization in experimental group majority 24(80%) had no history of previous hospitalization, the least 9(30%) had the history of previous hospitalization, whereas in control group majority 29(96.67%) had no history of previous hospitalization, the least 1(3.33%) had the history of previous hospitalization

Regarding no. of days of hospitalization in experimental group majority 21(70%) were stayed less than one week in hospital, the least 9(30%) were stayed more than one week in hospital, where as in control group 15(50%) were stayed more than one week in hospital, 15(50%) were stayed less than one week in hospital,

Regarding previous history of surgery in experimental group, majority 27(90%) had no history previous surgery 3(10%) had history previous surgery where as in control group, majority 29(96.67) had no history previous surgery, 1(3.33%) had history previous surgery.

Regarding type of congenital anomalies in experimental group, majority 21(70%) are diagnosed as a cyanotic heart disease the least 9(30%) are diagnosed as cyanotic heart disease, where as in control group, majority 29(96.67%) are diagnosed as Acyanotic heart disease, 1(3.33%) are diagnosed as cyanotic heart disease

It was inferred that in the experimental group, majority 15(50%) were in the age group of 8.1 to 10.0 years, 18(60%) were male, 18(60%) were Hindus, 20(66.67%) had family income of 10,000 to 20,000, 27(90%) belonged to nuclear family, 23(76.67%) were second born child, 24(80%) had no previous history of hospitalization, 21(70%) were hospitalized less than 1 week, 27(90%) had no previous history of surgery and 21(70%) had a cyanotic heart disease.

In the control group, majority 13(43.33%) were in the age group of 8.1 to 10.0 years, 18(60%) were male, 16(53.33%) were Hindus, 17(56.67%) had family income of 10,000 to 20,000, 24(80%) belonged to nuclear family, 14(46.67%) were second born child, 29(96.67%) had no previous history of hospitalization, 15(50%) were hospitalized for more than and less than 1 week, 29(96.67%) had no previous history of surgery and 29(96.67%) had Acyanotic heart disease.



**SECTION B: DATA ON ASSESSMENT OF PRE TEST AND POST TEST LEVEL OF ANXIETY AMONG SCHOOL GOING CHILDREN UNDERGOING CARDIAC SURGERY IN EXPERIMENTAL AND CONTROL GROUP.**

**Fig.1: Frequency and percentage distribution of Pre test and Post test level of anxiety among school age children undergoing cardiac surgery in the experimental group and control group.**

**n = 30**

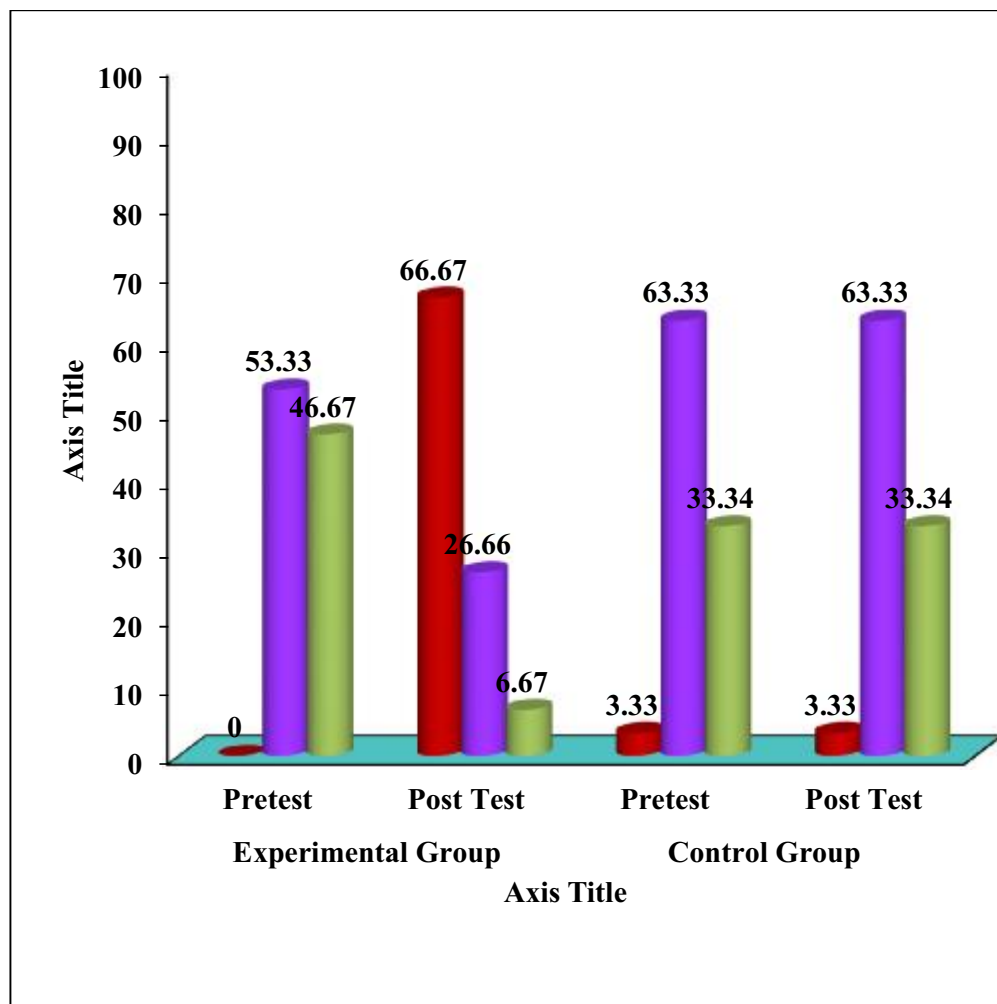


Fig.1 shows the Frequency and percentage distribution of Pre test and Post test level of anxiety among school age children undergoing cardiac surgery in the experimental group and control group.

It was inferred that in experimental group in the Pre test, majority 16(53.33%) had moderate level of anxiety and 14(46.67%) had severe level of anxiety among school going children undergoing cardiac surgery, whereas in the Post test after the video assisted pre-operative teaching majority 20(66.67%) had mild level of anxiety, 8(26.66%) had moderate level of anxiety and only 2(6.67%) had severe level of anxiety among school going children undergoing cardiac surgery.

It was inferred that in control group in the Pre test and Post test, majority 19(63.33%) had moderate level of anxiety, 10(33.34%) had severe level of anxiety and only one (3.33%) had mild level of anxiety among school going children undergoing cardiac surgery in the control group.

**SECTION C: EFFECTIVENESS OF VIDEO ASSISTED PRE-OPERATIVE TEACHING ON THE LEVEL OF ANXIETY AMONG SCHOOL GOING CHILDREN UNDERGOING CARDIAC SURGERY WITHIN AND BETWEEN EXPERIMENTAL AND CONTROL GROUP.**

**Table 2: Mean, mean percentage standard deviation mean difference and un paired t value regarding level of anxiety among experimental and c control group**

**n = 60(30+30)**

<b>Group</b>	<b>Anxiety</b>	<b>Mean%</b>	<b>Mean</b>	<b>S.D</b>	<b>Mean Diff</b>	<b>Un paired 't' value</b>
Experimental group	Pre test	66.05%	39.63	5.52	16.53	t =7.079 p<0.001, Significant
	Post test	38.5%	23.10	8.01		
Control group	Pre test	59.38%	35.63	7.66	-1.23	
	Post test	61.43	36.86	7.01		

Table 2 shows the mean, mean percentage standard deviation mean difference and unpaired 't' value regarding level of anxiety among experimental and c control group

The obtained overall Pre test mean score of anxiety in the experimental group was 39.63 and S.D was 5.52 and the overall Post test mean anxiety score was 23.10 and SD was 8.01 the mean difference was 16.53.

In the control group the overall Pre test mean anxiety score was 35.63 and SD was 7.66 and the overall Post test mean anxiety score 36.86 and S.D was 7.01. The calculated unpaired 't' value of  $t = 7.079$  was found to be statistically highly significant at  $p < 0.001$  level. This clearly showed that the video assisted pre-operative teaching imparted to the school going children in the experimental group had positive effect which resulted in significant reduction in their Post test level of anxiety than the school going children in the control group who had undergone normal hospital routine measures.

**SECTION D: ASSOCIATION OF POST TEST LEVEL OF ANXIETY AMONG SCHOOL AGE CHILDREN UNDERGOING CARDIAC SURGERY WITH THEIR SELECTED DEMOGRAPHIC VARIABLES IN THE EXPERIMENTAL AND CONTROL GROUP.**

**Table 3: Association of Post test level of anxiety among school age children undergoing cardiac surgery with their selected demographic variables in the experimental group.**

**n = 30**

Demographic Variables	Mild (0 – 20)		Moderate (21 – 40)		Severe (41 – 60)		Chi-Square Value
	No.	%	No.	%	No.	%	
<b>Age</b>							$\chi^2 = 5.788$ d.f = 4 p = 0.216 N.S
6.0 to 8.0 years	2	6.7	1	3.3	0	0	
8.1 to 10.0 years	9	30.0	6	20.0	0	0	
10.1 to 12.0 years	9	30.0	1	3.3	2	6.7	
<b>Sex</b>							$\chi^2 = 1.667$ d.f = 2 p = 0.435 N.S
Male	12	40.0	4	13.3	2	6.7	
Female	8	26.7	4	13.3	0	0	
<b>Religion</b>							$\chi^2 = 0.625$ d.f = 4 p = 0.960 N.S
Hindu	12	40.0	5	16.7	1	3.3	
Muslim	6	20.0	2	6.7	1	3.3	
Christian	2	6.7	1	3.3	0	0	
Others	-	-	-	-	-	-	

Demographic Variables	Mild (0 – 20)		Moderate (21 – 40)		Severe (41 – 60)		Chi-Square Value
	No.	%	No.	%	No.	%	
<b>Socio Economic Status</b>							$\chi^2 = 4.087$ d.f = 4 p = 0.394 N.S
Less than 10,000	4	13.3	1	3.3	0	0	
10,000 to 20,000	12	40.0	7	23.3	1	3.3	
More than 40,000	4	13.3	0	0	1	3.3	
<b>Type of family</b>							$\chi^2 = 7.778$ d.f = 2 p = 0.020 S*
Nuclear	20	66.7	6	20.0	1	3.3	
Joint	0	0	2	6.7	1	3.3	
Extended	-	-	-	-	-	-	
<b>Birth order of the child</b>							$\chi^2 = 7.360$ d.f = 2 p = 0.025 S*
First	3	10.0	2	6.7	2	6.7	
Second	17	56.7	6	20.0	0	0	
Third or more	-	-	-	-	-	-	
<b>Previous hospitalization</b>							$\chi^2 = 0.625$ d.f = 2 p = 0.732 N.S
Yes	4	13.3	2	6.7	0	0	
No	16	53.3	6	20.0	2	6.7	
<b>No. of days of hospitalization</b>							$\chi^2 = 1.190$ d.f = 2 p = 0.551 N.S
More than 1 week	7	23.3	2	6.7	0	0	
Less than 1 week	13	43.3	6	20.0	2	6.7	
<b>Previous history of surgery</b>							$\chi^2 = 1.667$ d.f = 2 p = 0.435
Yes	3	10.0	0	0	0	0	
No	17	56.7	8	26.7	2	6.7	

Demographic Variables	Mild (0 – 20)		Moderate (21 – 40)		Severe (41 – 60)		Chi-Square Value
	No.	%	No.	%	No.	%	
							N.S
<b>Type of congenital anomalies</b>							$\chi^2 = 0.476$ d.f = 2 p = 0.788 N.S
Cyanotic heart disease	6	20.0	2	6.7	1	3.3	
Acyanotic heart disease	14	46.7	6	20.0	1	3.3	

\*p<0.05, S – Significant, N.S – Not Significant

Table 3 shows the association of Post test level of anxiety among school going children undergoing cardiac surgery with their selected demographic variables in the experimental group.

It was inferred that the demographic variables, the type of family and birth order of the child had shown statistically significant association with Post test level of anxiety among school going children undergoing cardiac surgery at p<0.05 level and the other demographic variables had not shown statistically significant association with Post test level of anxiety among school going children undergoing cardiac surgery in the experimental group.

## **CHAPTER – 5**

### **SUMMARY FINDINGS DISCUSSION, IMPLICATION, LIMITATION, RECOMMENDATION AND CONCLUSION**

This chapter deals with summary findings discussion implication limitation recommendation and conclusion. The essence of any research project is based on study finding limitation: interpretation of the research result and recommendation incorporate the study implication. It also gives meaning obtain in the study.

#### **SUMMARY**

The prime aim of the study was to assess the effectiveness of video assisted pre operative teaching on level of anxiety among school age children under going cardiac surgery.

#### **Objectives**

1. To assess the Pre test and Post test level of anxiety among school age children under going cardiac surgery in experimental and control group.
2. To assess the effectiveness of video assisted preoperative teaching on the level of anxiety among school age children undergoing cardiac surgery in experimental group.



3. To find the association between the Post test level of anxiety and the selected demographic variables of school age children under going cardiac surgery in experimental group.

## **HYPOTHESIS**

**H<sub>1</sub>:** There is a significant difference between the Post test level of anxiety among experimental and control group.

**H<sub>2</sub>:** There is a significant difference between the Pre test and Post test level of anxiety among school age children undergoing surgery in experimental group.

**H<sub>3</sub>:** There is a significant association between the level of anxiety and the selected demographic variables among school age children undergoing cardiac surgery in experimental group.

The Review of literature was done for the present study and presented in the following headings

Section-I: Studies related to anxiety among school age children undergoing surgery

Section-II: Studies related to pre-operative teaching among school age children  
undergoing surgery

Section-III: Studies related to effectiveness of video assisted teaching on anxiety

The conceptual framework adopted for the present study is based on Modified J.W.Kenny's Open System Model this model .this model helped the investigator to assess the anxiety level of school age children undergoing cardiac surgery before and after conducting video assisted teaching program.

The research design selected for this present study was quasi experimental two group Pre test and Post test design to evaluate the effectiveness of video assisted preoperative teaching on level of anxiety among school age children under going cardiac surgery. The independent variable was video assisted teaching program and dependent variables were level of anxiety of school going children under going cardiac surgery.

The investigator used modified Spence anxiety scale as tool for the present study. The content validity was obtained from experts like surgeon pediatrician, psychologist, nurse specialist and the tool was modified according to the suggestion and recommendation of the experts. The reliability was tested by implementing the tool on 6 patients at Apollo hospital, Chennai. Which is the sample area. Test retest method was used to test the reliability of the tool. The tool was found to be reliable,  $r=0.91$ .

The main study was conducted in Apollo hospital, Chennai. The samples were selected by using purposive sampling method among those who fulfill the sampling criteria. Data was gathered through modified Spence anxiety scale. The data gathered are analyzed by descriptive and inferential statistical method and interpretation is based on the objective of the study.

## **FINDINGS**

The major finding of the study is presented under following headings

### **1. FINDINGS ON DEMOGRAPHIC VARIABLES OF THE SCHOOL AGE CHILDREN UNDERGOING CARDIAC SURGERY IN EXPERIMENTAL AND CONTROL GROUP.**

It was inferred that in the experimental group, majority 15(50%) were in the age group of 8.1 to 10.0 years, 18(60%) were male, 18(60%) were Hindus, 20(66.67%) had family income of 10,000 to 20,000, 27(90%) belonged to nuclear family, 23(76.67%) were second born child, 24(80%) had no previous history of hospitalization, 21(70%) were hospitalized less than 1 week, 27(90%) had no previous history of surgery, almost all 30(100%) had open heart surgery and 21(70%) had a cyanotic heart disease.

In the control group, majority 13(43.33%) were in the age group of 8.1 to 10.0 years, 18(60%) were male, 16(53.33%) were Hindus, 17(56.67%) had family income of 10,000 to 20,000, 24(80%) belonged to nuclear family, 14(46.67%) were second born child, 29(96.67%) had no previous history of hospitalization, 15(50%) were hospitalized for more than and less than 1 week, 29(96.67%) had no previous history of surgery, almost all 30(100%) had open heart surgery and 29(96.67%) had a cyanotic heart disease.

## **2. FINDINGS ON ASSESSMENT OF PRE TEST AND POST TEST LEVEL OF ANXIETY AMONG SCHOOL AGE CHILDREN UNDERGOING CARDIAC SURGERY IN EXPERIMENTAL AND CONTROL GROUP.**

It was inferred that the Pre test, majority 16(53.33%) had moderate level of anxiety and 14(46.67%) had severe level of anxiety among school going children undergoing cardiac surgery in the experimental group whereas in the Post test after the video assisted pre-operative teaching majority 20(66.67%) had mild level of anxiety, 8(26.66%) had moderate level of anxiety and only 2(6.67%) had severe level of anxiety among school going children undergoing cardiac surgery.

It was inferred that that both in the Pre test and Post test, majority 19(63.33%) had moderate level of anxiety, 10(33.34%) had severe level of anxiety and only one(3.33%) had mild level of anxiety among school going children undergoing cardiac surgery in the control group.

## **3. FINDINGS ON EFFECTIVENESS OF VIDEO ASSISTED PRE-OPERATIVE TEACHING ON THE LEVEL OF ANXIETY AMONG SCHOOL AGE CHILDREN UNDERGOING CARDIAC SURGERY WITHIN AND BETWEEN EXPERIMENTAL AND CONTROL GROUP.**

In experimental group the Pre test mean score of anxiety in the experimental group was 39.63 with S.D 5.52 and the Post test mean score of anxiety was 23.10 with S.D 8.01.

In control group the Pre test mean score of anxiety in the control group was 35.63 with S.D 7.66 and the Post test mean score of anxiety in the control group was 36.86 with S.D 7.01.

The calculated unpaired 't' value of  $t = 7.079$  was found to be statistically highly significant at  $p < 0.001$  level. This clearly shows that the video assisted pre-operative teaching imparted to the school going children in the experimental group had positive effect which resulted in significant reduction in their Post test level of anxiety than the school going children in the control group who had undergone normal hospital routine measures.

#### **4. FINDINGS ON ASSOCIATION OF POST TEST LEVEL OF ANXIETY AMONG SCHOOL AGE CHILDREN UNDERGOING CARDIAC SURGERY WITH THEIR SELECTED DEMOGRAPHIC VARIABLES IN THE EXPERIMENTAL AND CONTROL GROUP.**

It was inferred that there was no significant association between the Post test level of anxiety demographic variables type of family and birth order of the child had shown statistically significant association with Post test level of anxiety among school going children undergoing cardiac surgery at  $p < 0.05$  level and the other demographic variables had not shown statistically significant association with Post test level of anxiety among school going children undergoing cardiac surgery in the experimental group.

It was inferred that none of the demographic variables had shown statistically significant association with Post test level of anxiety among school going children undergoing cardiac surgery in the control group.

## DISCUSSION

The result of the study were discussed according to the objectives of the study

**Objectives – 1: To assess the Pre test and Post test level of anxiety among school age children under going cardiac surgery in experimental and control group.**

In the experimental group Pre test mean score of anxiety was 39.63, Standard deviation 5.52 and the Post test mean score of anxiety was 23.10 with standard deviation 8.01. The obtained unpaired 't' value 7.079 was found to be statistically highly significant at  $p < 0.001$  level.

It was inferred that post anxiety score was decreased after the video assisted pre operative teaching in experimental group.

**Cuzzocrea et.al (2001)** conducted a study to evaluate the effectiveness of a psychological preoperative program in reducing preoperative anxiety and in promoting compliance of pediatric participants with surgical procedures. 50 children were selected for the study. The child anxiety was assessed using modified Yale pre operative anxiety scale Children of the first group were less anxious ( $p < 0.005$ ) and more cooperative in the preoperative period and during anesthesia induction than in the control group. Preparing children through playful dramatization of the operative procedure, manipulation of medical instruments and psychologist's support may were useful in pediatric surgery.

**Objectives – 2: To assess the effectiveness of video assisted preoperative teaching on the level of anxiety among school age children undergoing cardiac surgery in experimental group/**

Finding were, in experimental group the Post test mean anxiety score was 23.10 standard deviation was 8.01 and the obtained 't' value 14.272 ( $p < 0.005$ ) was significant.

In control group Post test anxiety score was 36.86 standard deviation was 7.01 and the obtained 't' value 1.952 ( $p > 0.005$ ) was no significance.

The obtained t value in experimental group is ( $p < 0.005$ ) was lower than the table value

It was inferred that the Post test anxiety score in experimental group was significantly low compared to Post test anxiety score in control group. So video assisted teaching program was effective to experimental group children under going cardiac surgery

The above findings were supported by the studies which show the effectiveness of pre operative teaching in reducing anxiety.

**Xing Lian Gao et.al (2012)** conducted a quasi experimental study on effect of interesting video on relief of pre operative anxiety in school aged children. 90 children were randomly selected and assigned into two groups .children anxiety was assessed by using Yale pre operative anxiety scale .the experimental group were admitted to general pre operative room with parents for 15-20min and taken into the operating room .during anesthesia induction the investigator attracted the children attention using an interesting video with encouragement and attention diversion In operating room children compliance

was assessed by using the induction compliance check list. No significant difference in Yale pre operative anxiety score were observed between two groups upon entering the operating room ( $p > 0.05$ ). The children compliance with anesthesia induction was significantly higher in the experimental group than in the control group ( $p < 0.005$ ). Showing interesting video or games can reduce school age children pre operative anxiety and improve their compliance with anesthesia induction

**Objectives – 3: To find the association between the Post test level of anxiety and the selected demographic variables of school age children under going cardiac surgery in experimental group.**

There was no significant association between Post test level of anxiety and the selected demographic variable except (type of family, and birth order of the child)

**Surendras et.al (2013)** conducted a quasi experimental study effectiveness of video assisted teaching on level anxiety in children with the age group of 10-14yrs undergoing general surgery. 80 samples were selected using purposive sampling technique. Modified Yale peri operative anxiety scale were used to assess the level of anxiety. The overall Pre test mean anxiety score was  $9.09 \pm 1.96$ , which is 36.36 and the Post test score after intervention is  $17.15 \pm 2.05$  which is 6.86% of total score the difference in mean percentage between Pre test and Post test was 32.24. It shows the video assisted teaching is more effective than any other module to decrease the anxiety



## **IMPLICATION FOR NURSING**

The finding of the study has implication in nursing service, nursing administration and nursing research.

### **Nursing Service**

1. Video assisted teaching can be used by nursing professionals who are working in the hospital and clinical settings during various surgical procedures.
2. Video assisted teaching method can be used as one method of teaching in clinical nursing.
3. Nursing professionals can use video assisted teaching as a non pharmacological intervention in case of various situation like anxiety depression anger among school age children.
4. Video assisted teaching grasp the attention of children easily.

### **Nursing Education**

1. The students should be motivated to make up innovational approach to provide health education in different settings.
2. The nurse educator can teach and encourage the student to think comprehensively in planning the intervention to prevent pre operative anxiety.

3. The nurse educator should educate the nursing personnel regarding the causes of pre operative anxiety in children and alternative therapies to overcome anxiety.
4. Nurse educator should encourage the nursing personnel to practice pre operative education in their clinical setting by using technologies.

### **Nursing Administration**

1. Nurse administer can review the policies to include pre operative teaching as a protocol for non pharmacological intervention pre operative anxiety in children.
2. Nurse administer can support the researcher to conduct the research on various problem faced by the pre operative children.
3. It help the nurse to learn how they can manage the problem if arise, organize the program. it gives more aware about program planning and planning for budget.
4. Planning and organization of such program requires efficient team work and planning for manpower and money, material and methods and minutes to conduct successful education program in hospitals.

### **Nursing Research**

1. The study may be issued for further reference.
2. Further large scale study can be done in different settings.

3. This study paves way for further study on other teaching programme to decrease pre operative children anxiety level.

## **RECOMMENDATIONS**

The following recommendation was made by the researcher after this study.

1. A similar study can be conducted on large scale to generalize the study findings.
2. A similar study can be conducted to find out effectiveness of other teaching method like computer assisted teaching audio tape teaching method.
3. Same study can be conducted as true experimental design.
4. A comparative studies to find the effectiveness of video assisted teaching.

## **CONCLUSION**

The finding of the study showed that there was a significant association between the Post test level of anxiety and the selected demographic variables. Thus the study concludes that the video assisted teaching had significant effect in decreasing the level of anxiety among school age children under going cardiac surgery. Hence pre operative teaching for the children have significant effect in out come.

## **BIBLIOGRAPHY**

## **APPENDIX-1**

### **LETTER SEEKING PERMISSION TO CONDUCT MAIN STUDY**

**To,**

**Respected Madam/ Sir,**

Greetings from Shivparvathi Mandradiar Institute of Health Science,  
Tirupur.

**Sub:** Requisition to avail the permission to conduct Project – Regarding.

This is to certify that 301317104 is a bonafied student of our college studying M.Sc. Nursing II- Year in the academic year of 2014- 15. As part of the M.Sc Nursing curriculum prescribed by the Tamilnadu Dr. M.G.R. Medical University, Chennai, she needs to conduct a project and she is willing to do at your esteemed institution. So, kindly do the needful and grant her permission to conduct the study.

The details of the project will be briefed to you by him in person.

Thanking you

Yours sincerely,  
(PRINCIPAL)

## APPENDIX - 2

**Dr. D Janardhana Reddy, M.S., D.N.B.,**  
Chief Cardiovascular Surgeon



HEART INSTITUTES

To,  
ROSELINE.S  
M.Sc Nursing IIInd year  
Shiv paravathi mandradiar institute of health science  
Palayakottai, Erode.

From,  
Head of the department  
Cardio vascular surgery  
Apollo speciality hospital  
Vanagaram  
Chennai-95

Sub : permitted to conducted project regarding.

Dear Roseline,

Greeting with reference to your permission requested to conduct project in our institute, you are permitted to undertake the study. "To assess the effectiveness of video assisted pre operative teaching on level of anxiety among children undergoing surgery at Apollo hospitals Chennai"

Thanking you



**Dr. D J Reddy Heart Surgery Associates**

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Ph : +91 44 2553 7777 / 3020 7777  
Web : www.apollohospitals.com

## APPENDIX - 3

### LETTER REQUESTING SUGGESTION FOR ESTABLISHING CONTENT VALIDITY

From,

301317104,

II Year M.Sc (N),

Shivparvathi Mandradiar Institute of Health Sciences,

Palayakottai, Tirupur.

To,

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THROUGH,

The Principal,

Shivparvathi Mandradiar Institute of Health Sciences,

Palayakottai, Tirupur.

Respected Sir/Madam,

**Subject:** Letter requesting opinion and suggestions from experts for establishing content validity of tool...Regarding

I am II Year M.Sc Nursing student in Shivparvathi Mandradiar Institute of Health Sciences. As a partial fulfillment of Masters Degree in Nursing, I have selected the topic mentioned below for the research project to be submitted to “The Tamil Nadu Dr. M.G.R. Medical University Chennai”. **Topic: “A quasi experimental study to assess the effectiveness of video assisted teaching on the level of anxiety among school age children under going cardiac surgery in Apollo hospital ,chennai**

I kindly request you to validate the following enclosure and give your expert opinion and suggestions for necessary modifications of the tool.

Thanking you in Anticipation

Place:

Yours sincerely,

Date:

(301317104)

Enclosed here with: 1.Proposal, 2.Tool



## **APPENDIX – 4**

### **ATTACH LIST OF EXPERTS**

**Dr.D.JANARTHANAN REDDY M.S., DNB.**

Hod cardio thoracic department

Apollo Hospital Chennai

**Dr.DEEPA MATHEW M.B.B.S., DCH., MRCPCH.**

Consultatant pediatrician

Apollo Hospital Chennai

**Mrs.SANGEETHA M.Sc., Ph.D., Psychology**

Clinical psychologist

Apollo Hospital Chennai

**Mrs.DEEPA M.Sc., Nursing**

HOD Pediatric Department

MSAJ College of Nursing, Chennai.

**Mrs.STELLA SAHAYAMARY M.Sc., Nursing**

Vice Principal,

Pediatric Department

Matha College of Nursing,

Madurai.

**Mrs. BINDHU M.Sc., Nursing**

Pediatric Department

PSG College of Nursing,

Coimbatore.

**Mrs. SUGANTHI M.Sc., Nursing**

Pediatric Department

SPM College of Nursing,

Palayakottai.

## **APPENDIX – 5**

### **INFORMED CONSENT FORM**

#### **Consent form for participation in Research**

I -----give my consent to participate in the research title “A quasi experimental study to assess the effectiveness video assisted pre operative teaching on level of anxiety among school age children undergoing cardiac surgery in Apollo hospital, Chennai. ”, which is being conducted by 301317104 M. Sc (N), Shivparvathi Mandradiar Institute of Health Sciences, Palayakottai, Tamilnadu, as a part of her curriculum. I understand that this participant is entirely voluntary; I can withdraw consent at any time. I have understood that

1. The reason for the research is to assess the effectiveness of video assisted teaching
2. The benefit that I may expect from the research is reduction of anxiety.
3. No discomfort or stresses are foreseen.
4. No invocatory procedures are involved.
5. The results of the participants will be confidential.
6. The researcher will answer any further questions about the research.

Name & Signature of researcher

Name & Signature of Parent

# TOOL FOR DATA COLLECTION

SAMPLE NO:



## PART – I: BACKGROUND DATA OF THE SCHOOL GOING CHILDREN

### Instruction

This section seeks information about your children. There is no right or wrong response. Kindly put tick  mark against the correct response, which best suits for you. The interviewer will pose the questions and read the response one.

#### 1. Age

- a. 6.0 to 8.0 years
- b. 8.1 to 10.0 years
- c. 10.1 to 12.0 years

#### 2. Sex

- a. Male
- b. Female

#### 3. Religion

- a. Hindu
- b. Muslim
- c. Christian
- d. Others

#### 4. Socioeconomic status

- a. Less than 10000
- b. 10000 to 20000
- c. More than 40000

5. Type of family

- a. Nuclear
- b. Joint
- c. Extended

6. Birth order of the child

- a. First
- b. Second
- c. Third or more

7. Previous hospitalization

- a. Yes
- b. No

8. No. of days of hospitalization

- a. More than 1 week
- b. Less than 1 week

9. Previous history of surgery

- a. Yes
- b. No

**CLINICAL VARIABLES:**

1. Type of congenital anomalies

- a. Cyanotic heart disease
- b. Acyanotic heart disease

**Part – 11: Modified Spence children anxiety scale**

To assess the level of anxiety of hospitalized children between 6-12 years under going cardiac surgery

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	
<i>Never</i>	<i>Sometimes</i>	<i>often</i>	<i>Always</i>	
...	0	1	2	
3				
1. Fear of being alone in the operation theatre**	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Co-operates with IV insertion procedure*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. How they will give sedation**	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. How the operating room will be **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Being hurt during the operation**	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Whether the operation will be pain full**	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Knowing when can i see my parents after the Operation**	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Child plays with other children\*
9. Fear about going to school normally after  
Operation\*\*
- 10 interact with doctors and nurses socially\*
11. Eager to know about the operation room set up\*
12. knowing when Can I eat normal food  
after operation\*\*
13. Fear of nurses and doctors uniform in the theatre\*\*
14. Fear of surgical wound\*\*
15. Leaving my parents before the operation\*\*
16. Child is active and alert \*
-

17. Fear of playing with other children equally after surgery\*\*

18. Child co-operates with pre operative preparation\*

19. My parents being nervous\*\*

20. Whether or not my parents can stay with me after operation\*\*

**\* POSITIVE ITEMS**

**\*\*NEGATIVE ITEMS**

Scoring interpretation

It include positive and negative items

**POSITIVE ITEMS**

**NEGATIVE ITEMS**

Never - 3

Never - 0

Sometimes - 2

Sometimes - 1

Often - 1

Often - 2

Always - 0

Always - 3

SCORE  $6 \times 3 = 18$

SCORE  $14 \times 3 = 42$

Total score 60



To interpret the level of anxiety the score interpreted as follows

- 0-20 - Mild anxiety
- 21-40 - Moderate anxiety
- 41-60 - Severe anxiety