EFFECTIVENESS OF ORIGAMI ON HOSPITALIZED ANXIETY AMONG CHILDREN ADMITTED IN PEDIATRIC WARD OF SREE MOOKAMBIKA MEDICAL COLLEGE HOSPITAL, KULASEKHARAM.

A DISSERTATION SUBMITTED TO THE TAMIL NADU
DR.M.G.R.MEDICAL UNIVERSITY, CHENNAI,
IN PARTIAL FULFILMENT FOR THE
DEGREE OF MASTER OF
SCIENCE IN NURSING
OCTOBER 2017

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BONAFIDE CERTIFICATE

This is to certify that the dissertation entitles "**A Study to Assess the Effectiveness of Origami on Hospitalized Anxiety Among Children Admitted in Pediatric Ward of Sree Mookambika Medical College Hospital, Kulasekharam**" is a bonafide research work done by **Mrs. Christy Susan Mathew**, II year M.Sc. Nursing, Sree Mookambika College Of Nursing, Kulasekharam, under the guidance of **Mrs. Dali Christabel H, M.Sc. (N), Ph.D (N).,**Head of the Department in Child Health Nursing, in partial fulfillment of the requirement for the degree of Master of Science in Nursing under The Tamil Nadu Dr. M.G.R. Medical University, Chennai.

Place : Kulasekharam **Principal**

Date :07.08.2017 Sree Mookambika College of Nursing

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Place : Kulasekharam **Head of the Department**

Date :07.08.2017 Sree Mookambika College of Nursing

DECLARATION

I hereby declare that the present dissertation titled "**A Study to Assess the Effectiveness of Origami on Hospitalized Anxiety Among Children Admitted in Pediatric Ward of Sree Mookambika Medical College Hospital, Kulasekharam**" is the outcome of the original research work undertaken by me under the guidance of **Mrs. Dali Christabel H, M.Sc. (N), Ph.D (N).,**Head of the Department in Child Health Nursing, Sree Mookambika College Of Nursing, Kulasekharam. I also declare that the material of this has not formed anyway the basis for the awarded of any degree or diploma in this university or any universities.

Place : Kulasekharam **Mrs. Christy Susan Mathew**

Date :07.08.2017 II year M.Sc Nursing

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"Man's efforts are always crowded by God's grace and blessing"

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INVESTIGATOR

ABSTRACT

Introduction

Hospitalized children will regress with the skills that they had previously mastered. Within a safe environment, the sick child needs expert physical care, emotional support, expression of feelings (through play) and continuation of school education, to promote continued growth, both in acute and chronic illness. This concept helps to minimize the emotional trauma to the children and their parents for better adjustment during hospital stay.

Statement of the Study

A Study to Assess the Effectiveness of Origami on Hospitalized Anxiety Among Children Admitted in Pediatric Ward of Sree Mookambika Institute of Medical Sciences Kulasekharam.

Objectives

1. To find the pre test and post-test level of hospitalized anxiety among children of experimental group and the control group.
2. To determine the effectiveness of Origami on hospitalized anxiety among children of experimental group with control group.
3. To find the association between hospitalized anxiety among children with the selected demographic variables

Hypotheses

- H_1- There is a significant difference on the level of hospitalised anxiety among children before and after intervention.
- H_2- There is a significant association between the level of hospitalized anxiety among children with selected demographic variables.

Methodology

The study was quasi-experimental study with an evaluative approach. The study was conducted in Pediatric wards of Sree Mookambika Institute of Medical Sciences Kulasekharam. Data collection period was one month. Population was hospitalized school age children. Samples were children admitted in Pediatric ward

aged between 6-12 years. Purposive sampling technique was used. Sample size was 40(20 children in each experimental and control group). The tools used for data collection were demographic variables and Hospital Anxiety Assessment Checklist. Three point scale to assess the hospital anxiety of the children.

Findings of the Study

The findings revealed that the pre test mean score of the experimental group was 33.2 and that of control group was 31.75. The post test means score of experimental group was 28.9 and that of control group was 30.9. It showed that before implementing therapy, the experimental group had increased level of hospitalised anxiety than the control group. The t value was 6.61, df=38, table value= 2.02 and $p<0.05$, so it is highly significant. There is no statistically significant association between pre-test level of hospitalized anxiety with the selected demographic variables of experimental and control group except for age and care taker of the child during hospitalization.

Conclusion

The conclusion drawn from the findings of the study are, The study result showed that, during pre-test there was 12 (60%) children in experimental group and 15 (75%) children in control group had mild level of anxiety and 8 (40%) children in the experimental group and 5(25%) children in the control group had moderate level of anxiety and there was no children who had severe level of anxiety. During post-test, 18 (90%) of the children in experimental group and 17(85%) children in control group had mild level of anxiety, 2(10%) children in the experimental group and 3(15%) children in the control group had moderate level of anxiety and there was no children who had severe level of anxiety. So the posttest reveals that 90% of children in the experimental group had reduction in the anxiety level and 15% children in the control group had reduction in the anxiety level. The results showed that both the groups had difference in exhibiting the hospitalized anxiety; however the experimental group children could adapt faster than the control group children.(mean difference of both the groups= 3.45).

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CHAPTER I

INTRODUCTION

"The playing adult steps sideward into another reality;

The playing child advances forward to new stages of mastery."

- **Erik. H. Erikson.**

The concept of health and illness are changing. As defined by the ***World Health Organization*** (WHO), "It is a state of complete physical, mental, and social wellbeing and not merely the absence of disease". This statement might be amplified to say that health exist when a person can meet the minimal physical, physiological, intellectual, psychological and social requirement to function appropriately to its age, sex and level of growth and development.

The segment of life span that extends from age 6 years to 12 years have a variety of labels. As children enter the school years, their play takes on new dimensions that reflect a new stage of development. Children of school-age will have a developmental task of industry versus inferiority. In this, the child shows their industrial behavior by playing and involving in competitive activities. So any event which is obstructing the child from getting involved in the tasks may hinder the child's developmental prognosis.

Illness threatens both the physical and psychological development of children. Sickness causes pain, restrain of movement, long sleepless periods, restriction of feeds, separation from parents and home environment which may result in emotional trauma. Hospitalization and prolonged illness can retard growth and development and cause

adverse reactions in the child based on stages of development. During hospitalization and prolonged illness the children are concerned with fear, worry, fantasies, modesty and privacy. They react with defense mechanisms like regression, separation anxiety, negativism, depression, phobia, unrealistic fear, suppression or denial of symptoms and conscious attempts of mature behavior. Nurses should play a vital role in helping out the children and the family members to cope effectively with hospitalization.

Besides the physiological effects of the health problem, the impact of illness and hospitalization on a child increases anxiety and fear. Sickness causes pain, restrain of movement, long sleepless periods, restriction of feeds, related to the overall process and the potential for bodily injury and pain. In addition, children are separated from their homes, families, friends, and what is familiar to them, which may result in separation anxiety. There is general loss of control over their lives and sometimes their emotions and behaviors. The result may be anger, guilt, regression, acting out, and other types of defense mechanisms to cope with this effect.

Child's concept of hospitalization is viewed as a consequence of wrong doing. Hospitalization can produce major stressors for children that may limit their opportunities for play. Additionally hospitalization may reduce the opportunity to play. A study result reveals that the children who were hospitalized have been found to display delayed play skills compared to typically developing children.

Admission to the hospital can be a positive psychological experience for children, if prepared properly. It helps to develop confidence in dealing with stressful situation in future. Consistent support to the children and their parents can only bring positive outcome. Hospitalized children are more acutely ill than in the past, and their stays are getting increased. In addition, the hospitalized child is more likely to have a chronic or

terminal disease or to have special needs that require specialized care. Hospitalization can be overwhelming for a child, and are stressful for both parents and children. Hospitalization of children upsets the family and puts the children in an unfamiliar place with strange people and may involve uncomfortable procedures. Hospitalized children will regress with the skills that they had previously mastered. Within a safe environment, the sick child needs expert physical care, emotional support, expression of feelings (through play) and continuation of school education, to promote continued growth, both in acute and chronic illness. This concept help to minimize the emotional trauma to the children and their parents for better adjustment during hospital stay.

Childhood hospitalization creates a unique environment that provides exceptional challenges for children to achieve mastery over their environment. Hospitalization can produce major stressors for children that may limit their opportunities for play. Childhood hospitalization can create feelings of anxiety, homesickness, pain, fear and guilt related to viewing hospitalization as a consequence for bad behavior. Additionally hospitalization has been found to produce negative effects on children's play skills. Children who are hospitalized have been found to display delayed play skills compared to typically developing children, decreased levels of playfulness and decreased variation in their play routines.

Play is a range of voluntary and motivated activities which creates pleasure and enjoyments in children. Play is always associated with child’s level of activity and also influences the children’s higher functioning. Play is frequently associated with cognitive development and socialization. Play always promotes learning and also incorporates several behavior changes in children. Modern findings in neuroscience suggest that play

promotes flexibility of mind, which includes adaptive practices such as creating multiple ways to achieve a desired result or creative ways to improve or recognize a given situation.

Children play wherever they are. The children's integral work is to play. Play promotes healing and helps the child to cope with stressful situations. Play is not a purposeless activity which serves only to pass the childhood hours, but it is a vital factor in intellectual, social and emotional development of a child. (Ryan. S, 2000).

Some of the great thinkers like "Aristotle and Plato" have reflected about the fundamental needs of play in a child's life. There are several benefits that have been explained by several theorist which have been described as play is a joyful, fun and enjoyable activity that helps in elevating the inner spirits and brightens the outlook on life. It also helps in expanding the self-expression, self-knowledge, self-actualization and self-efficacy (North Carolina Association for play therapy). Play helps in relieving the feelings of stress and boredom, and connects us to be with people in a positive way, and stimulates creative thinking and exploration, and regulates our emotions, and boosts our ego. In addition, play also allows us to practice skills and roles needed for survival. Fostering of learning and development are best achieved through play.

Children are free from anxiety and other hospital related stress and also they learn colours, numbers, sizes and shapes through play (ie) by making Origami like paper boat, airplanes, fortune-teller etc., and the child enhance their creative skills and get diverted from their illness and parental separation. Diversional activity of making Origami is a range of voluntary and motivated activities which creates pleasure and enjoyments in children. Diversional activity is always associated with child's level of activity and also influences the children's higher functioning. This is also associated with cognitive development and socialization and always promotes learning and also incorporates several

behavioral changes in children. Modern findings in Neuroscience suggest that play promotes flexibility of mind, which includes adaptive practices such as creating multiple ways to achieve a desired result or creative ways to improve or recognize a given situation (Hockenberry M., 2008).

As nurses, when we create a stimulating environment, the children automatically move on to a higher level of functioning and thinking and improve their intellectual skill. Making handicrafts/ origami provides the child an opportunity to creative expression, diversion, and effective coping. In a hospital environment, a supervised and guided diversional program provides warmth, friendly and happy atmosphere which will help the child continue to grow and develop. In most of the super-speciality and multi-speciality hospitals, there is a specialist who coordinates the play as well as the diversional programmes.

NEED OF THE STUDY

In the early 2000s, children of all ages and from every socioeconomic background often prefer television, computers, and battery-operated toys to self-directed, imaginative, and creative play. This tendency leaves children developmentally deprived, because imaginative and fantasy play allows children to explore their world and express their innermost thoughts and feelings, hopes and fears, likes and dislikes. Through play, decisions are made without penalty or fear of failure. Play allows children to gain control of their thoughts, feelings, actions, and helps them achieve self-confidence. Spending time in hospital can be very stressful for children and their parents, and distress can affect how children recover from their illness.

Many studies have been done in International level on manifested behavior among hospitalized children. But in National level only few studies have been done. In India

(2011), the total child population of 5-14 years of age is 24.6 Crores and Tamil Nadu is 2, 44,137. According to Government of India's Ministry of Statistics and Program Implementation (2012), every year children of 5-14 years of age are getting hospitalized for various reasons like, over 60% of children are anemic, certain infectious and parasitic diseases (22.9%), injury and poisoning (12.5%), diseases of the nervous system (11.5%), diseases of the circulatory system (10.5%), diseases of the respiratory system (8.5%) and acute respiratory infections are leading causes of child morbidity (30%) followed by diarrhea (20%).One in every 100 children in India between age group of 0-14 years suffers from acute respiratory infection. Almost one in every five children in India below the age of 14 suffers from diarrhea.

2013 report shows that, worldwide there were 6.4 million children of 0-17 years get hospitalized each year. So all of these children get hospitalized for their illness often. Reactions and responses to illness and hospitalization depend on a number of factors including the unique characteristics and common situations associated with each developmental stage. The result requires nursing strategies that prepare children and their families for this experience while at the same time minimizing negative effects.

Children in the hospital needs play provision, not only for the reason that they have natural needs for play, but also for other reasons such as to reduce parental and child stress and anxiety, to encourage sensory motor and intellectual development, to improve socialization and creativity, to stretch his/her imaginations and to express effectively, to prevent developmental regression, to facilitate communication between staff and children and to encourage the child co-operation in hospital procedures.

Play-when one thinks of play, the immediate thought would be of children and their fun. But one does not realize that the scope of influence it has on the growth and

development of a child. Play is a very important component of child's life. It has a special importance in the hospital to help sick children to continue to grow and develop, to preserve their sense of wholeness, to understand hospital procedures and to act out emotions. For hospitalized children, the hospital is a new environment with a new routine. Moreover, sick children with pain in hospital feel more frustrated. The purposes are numerous such as intellectual and motor development, creativity and development of higher functions. Play has been well known to divert child's mind. The value of play to a hospitalized child has been recognized and the hospital is responsible to meet the physical, mental and emotional needs of the child. Play should also be provided to the child to reduce the fear and anxiety of a hospitalized child.

Saucier stated that Play activities can be used in a multitude of setting and in multidisciplinary fashion Ziegler state that one of every four children will be hospitalized at least once before reaching school age. The physical and psychosocial stress of hospitalization may be influences by the child developmental level, causing behavior changes, somatic complaints and a prolonged hospital stay. Through the use of careful developmental assessments, preoperative tours and therapeutic play techniques, fear can be allayed misconceptions correlated emotionally charged issues addressed and appositive self-image created. Other purposes of therapeutic play are helps sick children gradually regain independence through enjoinment of group experiences. Creativity can be developed through playing with toys, games and group projects during the literature review, the investigator came across studies in relation to play activity and its effectiveness, in reducing the child anxiety, which are done in foreign settings.

During the literature review, the investigator came across studies in relation to play activity and its effectiveness in reducing the child anxiety and the manifested behavior,

which are done in foreign settings. Studies done regarding the relationship between play activities and anxiety of hospitalized children are very few in India.

Statement of the Problem:

A Study to Assess the Effectiveness of Origami on Hospitalized Anxiety Among Children Admitted in Pediatric Ward of Sree Mookambika Medical College Hospital, Kulasekharam.

Objectives:

1. To find the pre test and post-test level of hospitalized anxiety among children of experimental group and the control group.
2. To determine the effectiveness of Origami on hospitalized anxiety among children of experimental group with control group.
3. To find the association between hospitalized anxiety among children with the selected demographic variables

Hypothesis:

- H_1- There is a significant difference on the level of hospitalized anxiety among children before and after intervention.
- H_2- There is a significant association between the level of hospitalized anxiety among children with selected demographic variables.

Operational Definition:

Effectiveness

Effectiveness is defined as the observed behavior, which is exhibited by the child, after the intervention with paper toys as measured by Modified Hospital Anxiety Assessment Check List.

Origami

Origami means creating various sizes and shapes of toys using waste paper/colour paper by the children what the child likes to do under the guidance of the investigator at an average of 30-40 minutes for 3 days.

Hospitalized Anxiety

It refers to an uncomfortable feeling of worry, nervousness, anxious response and unusual preoccupation about noxious consequences during hospitalisation as measured by using Hospital Anxiety Assessment Check List.

Children

Refers to school age children admitted in paediatric ward between the age group of 6-12yrs, both male and female children, irrespective of their illness who can sit and involve themselves in paper toy making.

VARIABLES

Dependent variable →Hospitalized Anxiety

Independent variable→Origami

Demographic variable

The demographic variable in includes age, sex, birth order, area of residence, type of family, income, religion, previous exposure to the hospital, number of hospitalization within last one year, reason for previous hospitalization and care taker of the child.

ASSUMPTIONS

- Hospitalized children may have anxiety
- School age children are able to express their feelings, fear and anxiety.
- Origami helps the child to cope with the stress of hospitalisation and reduce the anxiety

DELIMITATIONS

- The study was conducted to 40 samples only
- The study is related to school age children only

ETHICAL CONSIDERATION

Written permission was obtained from the hospital authorities to conduct the study in Sree Mookambika Medical College Hospital. Written permission was obtained from the HOD of Department of Pediatrics to conduct the study in the Pediatric wards. Oral consent obtained from primary care givers of the selected children. Children had their own voluntariness to participate or to withdraw from the study.

CONCEPTUAL FRAMEWORK

The conceptual framework for the present study is based on Sister Callista Roy's Adaptation Model.

Sister Callista Roy, from Los Angeles, California, had worked as a Pediatric nurse and had noticed the great resiliency of children and their ability to adapt in response to major physical and psychological changes. Roy was impressed by adaptation as an appropriate conceptual framework for nursing. Roy's Adaptation Model for Nursing was derived in 1964 from Harry Helson's work in psychophysics. This theory would fit into the study appropriately (Mariner, 1986).

The concepts of Roy's adaptation theory are input, control process, effector and output.

Input

The input is classified into classes of stimuli like:

i. Focal stimuli, which immediately confront the individual and the one to which the person must make an adaptive response;
ii. Contextual stimuli, which are the other stimuli present that contribute to the behaviour caused or precipitated by the focal stimuli and
iii. Residual stimuli, those factors that may be affecting behaviour but whose effects are not validated.

In this study, the focal stimuli are hospital anxiety, pain during hospitalization. The contextual stimuli are hospital environment, hospital personnel, the invasive and non- invasive procedures and the nursing care activities rendered to the child. The

residual stimuli are age of the child, number of hospitalization and reason for previous hospitalization.

Control process

The control process mainly includes the coping mechanism. Roy views the regulator and cognator as methods of coping. The regulator is a subsystem coping mechanism which responds automatically through neural- chemical- endocrine process. The cognator is a subsystem coping mechanism, which responds through complex processes of perception and information processing, learning judgment and emotion.

In this study, the hospitalized child's control processes or the coping mechanism are influenced by his/ her perception of the stimuli. The child perceives these stimuli and exhibits adaptation in the form of behavior like cry, does not smile, does not respond, exhibits anger, stares blankly, biting others, hitting on the wall, refuses to cooperate etc. To control these stimuli, the child exhibits varied reactions.

Effector

Effectors are the classification of ways of coping that manifest regulator and cognator activity that is physiological, self-concept, role function and interdependence.

In this study, for the experimental group, the effector is origami. And for the control group, it is the routine play, which is present in the ward.

Output

Output of the person as a system is the responses of the person. Output responses can be both external and internal. Thus, these responses are the persons' behaviors. Output responses become feedback to the person and to the environment. The adaptation level is influenced by the combination of stimuli, the regulator and the cognator ability which helps in the perception and control of the stimuli. Depending on the perception and control, the individual may or may not adapt to the situation.

Depending on the coping mechanisms, the child will have an effect on his/ her physiological, psychological and social functioning. This will lead to either effective or ineffective adaptation. Effective adaptation will lead to child's cooperation to hospital events and recovery. Ineffective adaptation will lead to lack of cooperation to hospital events and treatment and impedes recovery. Thus, the child starts scanning the hospital environment for further adaptation. The understanding of the child's behavior serves as an input to the health care team to plan and implement child centered care in Pediatric wards.

Experimental group

Among experimental group, the use of Origami takes care of the psychological and diversional aspects and the anxiety is further inhibited. This Origami reduces the hospital anxiety experienced or exhibited by the child. Thus, according to Roy's adaptation theory, the positive adaptation reduces the hospital anxiety.

Control group

In the control group, there was only the routine play present in the ward is given to the child. Therefore, there was less or decrease in the adaptation level, which increases or remains as it and these were not diverted and the child felt it. Ineffective adaptation will lead to lack of cooperation to hospital events and treatment and impedes recovery.

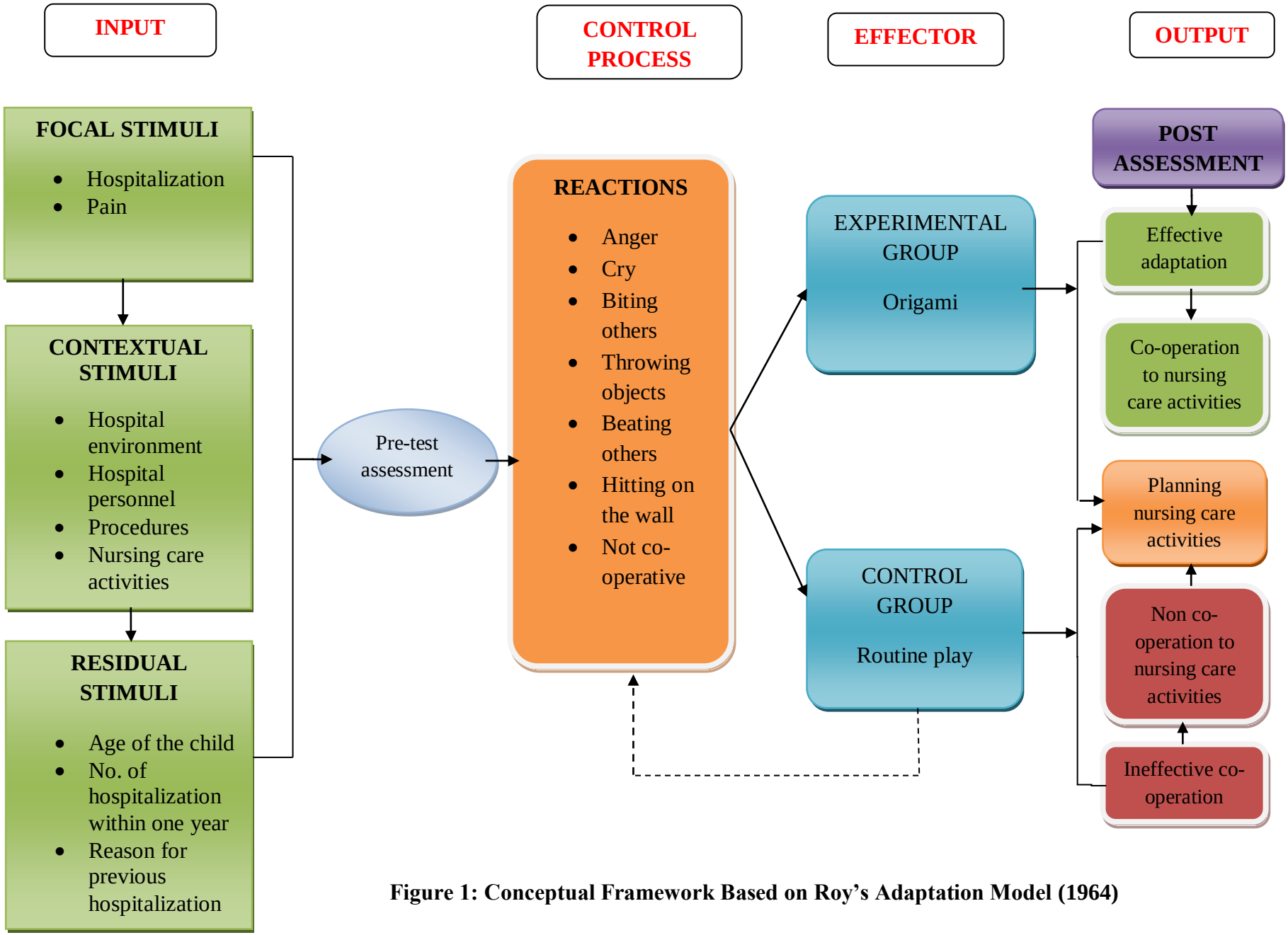

Figure 1: Conceptual Framework Based on Roy's Adaptation Model (1964)

CHAPTER- II

REVIEW OF LITERATURE

This chapter deals with the contents of review of literature and the conceptual framework. The conceptual framework for the present study was based on Roy's Adaptation Model.

Literature review is a process that involves finding, reading, understanding and forming conclusions about the published research and theory on a particular topic. Related research and non-research literature are reviewed to broaden the understanding and gain insight into the selected problem under study. It helps to develop the instruments and select variables to be included in the study. The overall process of review of literature is to develop a strong knowledge base to carry out a research and other scholarly educational and clinical practice activities.

The literature reviewed for the present study is organized and presented under the following headings:

Section 1: Studies related to hospitalized children

Section 2: Studies related to the effect of play in hospitalized children

Section 3: Studies related to the effectiveness of Origami on hospitalized anxiety among children.

Section 1: Studies related to hospitalized children

Helma Maria, Asha P. S et al (2014)conducted study were to assess the fears of school-age children during their hospitalization, assess parental perceptions of nursing support during their child's hospitalization and to find association between children's fear and selected variables. Non experimental typical descriptive design was adopted. The study was conducted in Regional Advanced Pediatric Care Center, Mangalore with the sample size of 60 hospitalized school-age children and their parents. Non-probability purposive sampling technique was used to select the sample. Majority of the school-age children (91.67%) had moderate fear and 8.33% had high fear of hospitalization. Majority (70%) of parents have perceived fully satisfactory nursing support and 30% were satisfied with nursing support provided during their child's hospitalization. He concluded that nurses should encourage children to express their fears and discuss their coping strategies and promote the quality of family-centered care and should be aware of the importance of the several types of nursing support in meeting the requests of parents.

Kames B.Obaid (2013) conducted a study to assess psychosocial impact of hospitalization on ill children, ages from 6 to 12 years in Pediatric Oncology Wards. Seventy-five participants (mothers), from two different hospitals, were recruited using a non-probability (purposive) sampling strategy. Data collection included interviews with (n=75) of parents of pediatric oncology patients from the Children Welfare Teaching Hospital and Central Child Teaching Hospital in Baghdad city. The Child Behavior and Psychosocial Problems checklist was used to evaluate psychosocial impact. The results of the study indicated that impact of hospitalization was mild on the most of the participants (n = 50; 66.0). He concluded that hospitalization is still

have many psychosocial impact on children in oncology wards and identification of psychosocial risk factors based on the Child behavior and psychosocial problems could be helpful in predicting child psychopathology and could help in decrease psychosocial problems related to hospitalization.

A study was conducted by **Millet C, Lee.J.T** (2010) in the hospitals of England to assess whether the implementation of English smoke-free legislation in July 2007 was associated with a reduction in hospital admissions for childhood asthma. Interrupted time series study using Hospital Episodes Statistics data from April 2002 to November 2010 was used. Sample consisted of all children, aged ≤14 years having an emergency hospital admission with a principle diagnosis of asthma. The study concluded that there were huge reductions in asthma admission rates among children from different age, gender, and socioeconomic status groups and among those residing in urban and rural locations.

A cross-sectional study was conducted by **Silva.D.R, Viana.V.P.** (2009) in the emergency room of a tertiary care University Hospital at Portugal. The main aim of the study was to evaluate the prevalence of respiratory symptoms as the motive for emergency room visits by pediatric patients. The investigators have reviewed the total number of emergency room visits per day. Children who presented with at least one respiratory symptom were included in the study. The results indicate that during the study period, there were 37,059 emergency room visits, of which 11,953 (32.3%) were motivated by respiratory symptoms. The prevalence of emergency room visits due to respiratory symptoms was 38.9% among children. In children, the rates of hospitalization and mortality were 11.9% and 0.3%, respectively. From this study, it

was found out that, a high prevalence of respiratory symptoms as the motive for emergency room visits by pediatric patients.

Moghaddam B, Kokab, et.al. (2008) have done a study on the concept of hospitalization of children from the view point of parents and children. This study is a phenomenology study of qualitative research within the framework of Husserl Eidetic phenomenology through comprehensive interviewing. 20 samples (12 children and 8 parents) were chosen and interviewed. The samples were children of 7–11 years old and their parents. The samples were selected from 22 Bahman Hospital and the surgery ward of 15 Khordad Hospital during the study. The result shows that, hospitalization creates stress and anxiety in both parents and children.

Colville G, Kerry S, Pierce C, (2008) has done a study on children's factual and delusional memories of intensive care. The sample size was 102 children, aged between 7-17 years. The data was collected using interview about the children's Pediatric Intensive Care Unit (PICU) experience 3 months after discharge from PICU, a checklist of intensive care memories and a screen for post- traumatic stress disorder (the Impact of Event Scale).. The findings showed that delusional memories are reported by almost one-third of children and are associated both with the duration of opiates/ benzodiazepines and risk of post-traumatic stress.

Bloch Y.H, Toker A., (2008) done a study was to examine the effects of the "Teddy Bear Hospital" to reduce the children's fear of hospitalization in pre-schoolers. The study group contains 41 preschool children aged 3-6.5 years and 50 preschool children of same age and from a similar residential area was taken as the control group. A simple one-item visual analogue scale of anxiety about hospitalization was used for assessment. The study result was, the baseline levels of

anxiety were not different between group Children in the “Teddy Bear Hospital” group reported significantly lower levels of anxiety than the control group.

Imelda Coyne (2007) conducted a study on children’s experiences of hospitalization. Data were collected via semi-structured interviews with 11 children aged between seven and 14 years from four pediatric units in England. The children identified a range of fears and concerns, which included separation from parents and family; unfamiliar environment; investigations and treatments; and loss of self-determination. The children’s loss of self-determination over personal needs exacerbated their fears and concerns. It needs to be recognized that compliance with hospital routines is a variable, which influences children’s reaction to hospitalization. The findings clearly indicate that children need adequate information tailored to their needs, that their views are sought in the planning and delivery of their care and that hospital environments need to be made more child-centered. Interventions designed to reduce children’s stress during hospitalization are not only likely to decrease their stress at the time, but also likely to influence how future experiences are appraised and manage.

Section 2: Studies related to the effect of play in hospitalized children

William.H.C, Joyce.Oi.Chung et.al (2016) conducted a study regarding play interventions to reduce anxiety and negative emotions in hospitalized children. A nonequivalent control group pre-test and posttest, between subject design was conducted in the two largest acute-care public hospitals in Hong Kong. 304 children (aged 3-12yrs) admitted in these hospitals were invited to participate in the study of them, 154 were received interventions and 150 received usual care. At the end of the study, the researchers concluded that the children who received the hospital play

interventions had fewer negative emotions and experienced lower level of anxiety than those who received usual care. The findings from the study emphasize the significance of incorporating hospital play interventions to provide holistic and quality care to ease the psychological burden of hospitalized children.

Sri Ramdaniati, Susy H et al (2015) conducted a comparison study on art therapy and play therapy in reducing anxiety on preschool children who experience hospitalization. A quasi-experimental study with pre- posttest two-group design was used. The sample size was 23 children preschool age for art therapy and 25 children for play therapy with sample technique performed purposive sampling. Intervention of art therapy and play therapy each performed for 3 days with duration about 30 minutes. The result showed that there is a difference in anxiety between before and after the action in the play therapy group. Therefore, it is concluded that art therapy and play therapy can reduce the level of anxiety on preschool children that experience hospitalization.

Konstantinos K, Laila T, et al (2015) conducted a study to assess the importance of play during hospitalization. He founded that during hospitalization, play either in the form of therapeutic play, or as in the form of play therapy, is proven to be of high therapeutic value for ill children, thus contributing to both their physical and emotional well-being and to their recovery. It helps to investigate issues related to the child's experiences in the hospital and reduce the intensity of negative feelings accompanying a child's admission to hospital and hospitalization. Play is widely used in pre-operative preparation and invasive procedures, while its use among children hospitalized for cancer is beneficial. He conclusion that the use of play in hospital may become a tool in the hands of healthcare professionals, in order to provide

substantial assistance to hospitalized children, as long as they have appropriate training, patience, and will to apply it during hospitalization.

Janet.E.R, Geoffey Dougherty, et al (2014) conducted a study to examine psychological and behavioral responses in children aged 3 to 12 years over a three year period following PICU hospitalization and compare them to children who have undergone ear, nose and/or throat (ENT) day surgery. This mixed-methods prospective cohort study enrolled 220 children aged 3 to 12 years during PICU hospitalization (study group, n = 110) and ENT day surgery hospitalization (comparison group, n = 110). Psychological and behavioral characteristics of the child and parent anxiety and parenting stress were assessed prior to hospital discharge, and again at each of the 5 subsequent time points, using standardized measures. Psychological and behavioral response scores for both groups were compared at each follow-up time point. He expected to identify clinical characteristics and child- and parent-related factors that facilitated ability to recognize children at risk and to develop interventions targeted at factors such as parent anxiety and child distress in the early post-discharge period. The study produced new knowledge in a previously unexplored area with potential for high impact in growing area of novel childhood experience.

Kinjal Patel, Suresh et al (2013) conducted a study aimed at to assess the effectiveness of play therapy on anxiety among hospitalized children in selected hospitals at Vadodara. The convenient sampling technique was used to select the sample for the study. Data was collected by using a structured anxiety rating score. In experimental posttest mean score, 37.87 and SD was 14.708 respectively. The obtained ‘t’ value 14.015 statistically was significant at 0.001 level. So research

hypothesis was accepted. It clearly shows that the level of anxiety was reduce in experimental group in posttest. The study concluded that children's was anxious in the pre-test and were as in the post-test shows that children's was not anxious or reduced so, it indicates that play activities was effective.

Nisha K and Uma Rani (2013) conducted a study to determine the effectiveness of play intervention on anxiety among children admitted in preoperative wards of selected hospitals at Mangalore. The study design was two group pre-test post- test design. The sample comprised of 60 preoperative school age children in the age of 6-12 years who were selected by Purposive sampling technique, divided into experimental, and control group. Pretest anxiety was assessed and play intervention (video game) was given to the experimental group along with the routine care and only routine care to the control group. The study result showed that the calculated't' value (t= 4.225) was greater than the table value (t58 = 1.671) at 0.05 level of significance. The finding of the study shows that the play intervention was effective in reducing the anxiety among preoperative children.

Chin J.-C., & Tsuei M. (2013) conducted a study was to explore the digital game-based learning for children with chronic illnesses in the hospital settings. Three eight-year-old children with leukemia participated in this study. In the first phase, the multi-user game-based learning system was developed and implemented during the first iteration. Children could create their own or co-construct narratives and play mathematics games in the multi-user system. Then developed the multi-modal digital game-based learning activities in the second iteration. Children showed highly motivation to engage in learning activities. The results supported that the multi-modal digital game-based learning provided the social interactive processes and learning

motivation, which effectively served the learning and psychosocial needs of chronically ill children.

Potasz C, De Varela MJ, et.al (2013) has done a study to use unstructured play as an intervention to help children cope with the stress of hospitalization. The study was a randomized clinical trial. Urinary cortisol (a stress marker) was examined in 53 children hospitalized for respiratory disease from a public hospital and the children were divided into two groups that did and did not play. In addition, the children were categorized into two age groups, 4-7yrs old and 7-11yrs old. The results were, boys and girls at the age of 7-11 years old from the play group showed a decrease in cortisol levels after participating in play activities. In younger children of 4-7years, the intervention does not seem to be more effective.

Lindo N.A, Chung C, et.al, (2012) have done a study to examine the impact of child-centered play therapy (CCPT) training on graduate counseling students' play therapy attitudes, knowledge, and skills. 13 students participated in the study. Mixed methodology approach was used. The result shows that, there were statistically significant improvement in the attitude, knowledge and skills about play therapy among students.

Mishna F, Morrison J, et al (2012) has done a qualitative study of a school-based ecological treatment intervention (play therapy) for maltreated children and to articulate best practice guidelines. 63 interviews were conducted at 6, 12, and 18 months with parents, teachers, and therapists of 11 maltreated children, exploring the child's development, the influence of therapy on the family, and the therapist's relationship with teachers and parents. The findings indicate that play therapy was effective in improving the children's emotional, social, and academic functioning.

Gemma Clack G, Kevin Crowley K., et.al (2010) have done a study in University of Glamorgan, Wales. The study was to investigate the awareness of play therapy in childcare practitioners working in the areas of health, social care, education and childcare. Samples were 65 childcare practitioners. The tool used was structured questionnaires. One child care professional from each of the four sectors was selected to take part in a follow-up interview. The results from the questionnaires and follow-up interviews showed that while most of the child care professionals had had a limited knowledge about play therapy.

Klaus M. D, Jason Roy et al (2010) conducted an open pilot trial to establish whether a modified form of CBT can benefit young children**.** Participants were 37 anxious children aged 37-89 months attending a university anxiety specialty clinic. Symptom severity and functioning were assessed before and after treatment by independent evaluators. Feasibility and acceptability of the intervention were high. Parents attended part of each treatment session and were considered part of the treatment team. Patients exhibited significant improvement from pre – to post-treatment assessments after an average of 8.3 treatment sessions, using the Strengths and Difficulties Questionnaire (SDQ) and the Global Assessment of Functioning Scale (GAF) ratings. In addition, he added that modified form of CBT with active parent involvement might be a useful tool in treating anxiety disorders in preschool and early school aged children.

William. H.C. Lopez. V (2008) of Chinese University of Hong Kong, have conducted a study to examine the effectiveness and appropriateness of using therapeutic play in preparing children for surgery. A randomized control trial method was done with 203 children of 7-12yearsof age was included in the study. The study

was conducted for a period of 13 months. The experimental group received therapeutic play, and the control group received routine information preparation. Children in the experimental group reported significantly lower state anxiety scores in pre and post-operative periods and exhibited fewer negative emotions at induction of anesthesia than children in the control group. No significant differences were found between the two groups in post-operative pain. The study provides some evidence that therapeutic play is effective in pre- as opposed to post- surgical management of children.

A study was conducted by **Farrell. J, Cope. S.B** (2008) among Iranian children to compare the effect of play activities on the level of anxiety after surgery in an interventional and control group. 75 children aged 5 to 12 years were selected using purposive sampling technique and was randomized into interventional (38 children) and the control (37 children) group. The anxiety symptoms were assessed using State Trait Anxiety Inventory for children, children's Manifest Anxiety Scale and Yale Pre-operative Anxiety Scale. The results showed that anxiety score was lowered in the interventional group when compared to the control group and was statistically significant. The study concluded that attending playrooms and using play activities might reduce the anxiety level induced by surgical procedure in children.

A quasi-experimental study was conducted by **Xavier. T**. (2005) to assess the effectiveness of play activities in reducing anxiety among hospitalized children in Bangalore. Convenient sampling was used and 60 pre-schoolers between the age group of 3-6 years were selected and were grouped under experimental (30 children) and control (30 children) group. Data was collected using hospital observed behavioral checklist. The findings showed that children in both the groups were

anxious in the pre-test whereas in the post-test the anxiety level was reduced to a greater extend among the children of the experimental group. The study concluded that play therapy was effective in hospitalized children and it helps in reducing the anxiety level among the hospitalized children.

An experimental study was conducted by **Doverty. N** (2005) in the Maimonides Medical Center, New York to evaluate the effectiveness of play in reducing anxiety during administration of pre-operative oral medication. The samples were 100 hospitalized children 8-12 year of age randomized into two equal groups. The experimental group (n=50) was given a small toy to play, control group (n=50) receive no toy. The anxiety of each child was assessed using the Modified Yale preoperative Anxiety Scale. The results showed significantly less anxiety in children who received a toy before oral administration compared to control group so the study concluded that giving a toy to play during preoperative medication reduces the anxiety among hospitalized children.

Section 3: Studies related to the effectiveness of origami on hospitalized anxiety among children

An evaluative study was done by **Beres. A, Lelovics.Z** (2011) in Smiling Hospital Foundation at Hungary to evaluate the effects that Smiling Hospital artist have on hospitalized children. 24 children were selected randomly and were included in the interventional group and 9 children were included in the non-interventional group. Most of the children who were included in the study had diarrhoea and was admitted in the Infectology Ward. Blood samples were taken in a non-painful way through branules, 30 minutes before and 1 hour after the visit of magicians, musicians, story tellers, puppeteers and handicraft artist. Blood lymphocyte count

and Th1/ Th2 cytokine levels were determined. This paediatric study suggested that, immunological changes may develop when more attention is given to the hospitalized children.

A qualitative study was undertaken by **Wikstorm (**2005) at a play therapy unit in a Swedish hospital. The purpose was directed towards investigating what takes place during play therapy when children were given the opportunity to use expressive arts such as clay, paint, craft and/ or textile, and the meaning children input into their art objects. The study describes an approach to working with the hospitalized children when they visited the play therapy unit. The study period was of 3 years. Purposive sampling was done and twenty two hospitalized children (n=22) participated in the study. The result also showed that expressive arts were a media for communication. Expressive arts should be used as a tool to help the child express her/ him when being hospitalized, because children not always express emotional pain by crying, sleeplessness or decreased communication.

CHAPTER- III

METHODOLOGY

This chapter deals with description of methodology followed in the study which is discussed under the following headings such as research design, setting, variables, population, sample criteria, sample, sampling technique, development of the tool, content validity, ethical consideration, pilot study, reliability, data collection procedure and plan for data analysis.

RESEARCH APPROACH

Quantitative research approach was used in this study.

RESEARCH DESIGN

In this study, Quasi-experimental research design was used as research design.

Research design notations

GROUP	PRE-TEST	INTERVENTION	POST-TEST
Experimental group	O_1	X_1	O_2
Control group	O_1	_	O_2

O_1–Pre-test level of hospitalized anxiety in Experimental Group

O_2–Post-test level of hospitalized anxiety in Experimental Group

X_1 – Helping the children to make paper toys

O_1– Pre-test level of hospitalized anxiety in Control Group

O_2– Post-test level of hospitalized anxiety in Control Group

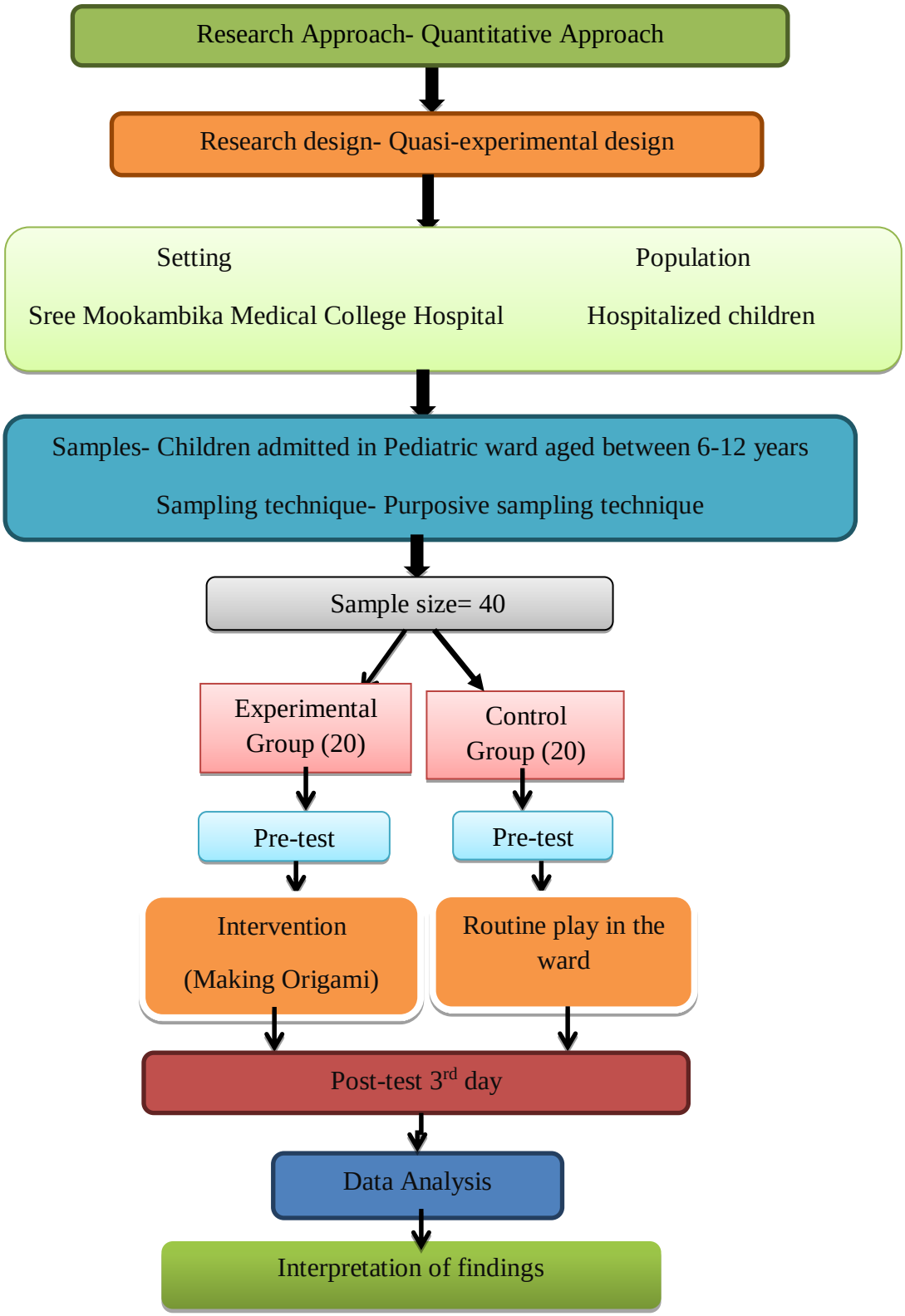

Figure 2: Schematic representation of methodology

SETTING OF THE STUDY

The study was conducted in Pediatric wards of Sree Mookambika Medical College Hospital Kulasekharam, Kanyakumari Dist. It is a 650 bedded hospital. The pediatric ward comprises of 60 beds. The department admits children with medical and surgical conditions in the Pediatric ward. Every day almost 13 patients were admitted in the ward. The department provides sophisticated cares for all Pediatric patients including adolescents up to the age of 15 years.

POPULATION

The population consists of all hospitalized school age children in the age group of 6-12yrs who are admitted in pediatric ward of Sree Mookambika Medical College Hospitaland whoever fulfills the inclusion criteria.

SAMPLE SIZE

Sample size consists of 40 children. Out of 40, 20 samples selected for experimental group and 20 samples selected for control group.

SAMPLING TECHNIQUE

Purposive sampling was used to allocate the children into experimental and control group. The samples were selected based on the inclusion and exclusion criteria.

SAMPLING CRITERIA

The following criteria were set for the selection of the sample.

Inclusion criteria

- Children admitted in Paediatric ward during data collection.
- Children admitted for more than 3 days
- Both male and female children
- Children with any kind of illness.
- Conscious
- Children who are ambulated after surgery.

Exclusion criteria

- Critically ill and immediate post-operative children
- Children who are physically and mentally challenged
- Children with complications such as unconsciousness, severe burns

DEVELOPMENT & DESCRIPTION OF THE TOOL

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

After wide reading, the researcher developed the tool as per the following:

Section A: The demographic variable included are age, sex, birth orders, place, type of family, income, religion, previous exposure to the hospital, number of hospitalization within last one year, reason for previous hospitalization and care taker of the child.

Section B: A Hospital Anxiety Assessment Checklist to assess the hospital anxiety in children. The researcher consisting of 20 behavioral responses on different aspects prepared it. It has got three aspects namely reaction during vocalization, cooperation

during hospitalization and reaction related to bodily injury and pain. The above three aspects had specific items under each heading such as,

a) Reaction during vocalisation – 7 items

b) Co-operation during hospitalisation – 9 items

c) Reaction related to bodily injury and pain – 4 items

Scoring key

The score indicates,

1 mark → Always exhibits the behaviour

2 mark → Sometimes exhibits the behaviour

3 mark → Never exhibits the behaviour

Scoring Procedure

Score	**Anxiety Level**
20 – 33	Mild Anxiety
34 – 46	Moderate Anxiety
47 – 60	Severe Anxiety

Scoring interpretation

Anxiety Level	**Score**	**Percentage**
Mild	20 – 33	Upto 55 %
Moderate	34 – 46	56 – 77 %
Severe	47 – 60	78 – 100 %

DESCRIPTION OF THE INTERVENTION USED

Origami is the toys made of paper. They are constructed in several ways by folding or by cutting, decorating or assembling pieces of paper with glue or tape to create a paper doll or paper model.

The investigator had gained skill in making origami mainly boat, tree, Christmas tree, airplanes, hat, crown, snapper, fortune teller, jumping frog, boat, butterfly, and hanging snowflakes for the children between 6-12 years of age. The child was given an option to make the origami based on his/ her preference among the toys mentioned. The Origami was made out of colour paper/ newspaper/ plain paper, which were provided by the investigator. The choice of the paper was also based on the child's preference. The first step in making the toy was initiated by the investigator and was asked to repeat by the child, as it was explained to the child. The child was appreciated on completion of the toy. If the child is not able to complete the toy, the child will be helped by the investigator to redo the Origami.

VALIDITY OF THE TOOL

The content validity was sought from experts in the department of Pediatric Nursing. The experts were requested to give the opinions and suggestion regarding the relevancy, adequacy and appropriateness of the tool for further modification. The validation was based on the criteria checklist. All the items on the tool were rated to be relevant. The suggestions of the experts were included in the tool.

RELIABILITY OF THE TOOL

The reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring.

The tool after validation was subjected to test for its reliability. The reliability was established and it was found to be r =0.9 which indicate that the tool is reliable.

PILOT STUDY

A pilot study was carried out at the end of the planning phase of research, in order to explore and test the research elements. The pilot study was conducted in the month of January for a period of 7 days. The total sample size for the pilot study was 4. The study was conducted after obtaining permission from the concerned authority and got oral permission from primary care giver of the children who took part in the study. It was conducted in a similar way as the final data collection. There were no modifications made in the tool after the pilot study. The tool was found to be reliable.

DATA COLLECTION PROCEDURE

The data collection was done from 01.02.2017 to 29.02.2017 .The investigator introduced self to the child and the family and also explained the purpose of conducting the study. A good rapport was created with the child and the family, and then got their oral consent.

The demographic variables were collected with the help of interview questionnaire and the responses were documented. After that, the investigator has done the pre-test assessment of hospital anxiety using the hospital anxiety assessment checklist for both the experimental group and the control group.

Before introducing Origami, the investigator had explained about origami to the children of experimental group (20). Then the investigator made the child to sit comfortably on the bed and ensured that the child is free from pain, hunger and sleep. The child was encouraged to make toys of his/her preference for the next three

consecutive days, as per the child's interest. On the third day post test was conducted at the end of the day using the checklist to identify the change in anxiety.

For the control group children (20), the post test was conducted on the third day, after the routine play in the ward like watching television, children playing with their own toys. Using the same checklist, anxiety was identified during the post- test. The post-test observations were made at the end of the day and the investigator see that the child is free from pain, hunger and sleep during the time of observation.

After completing everything, the investigator extended her thanks towards the participants and the care-giver for their full co-operation. For each child it takes about 15-30 minutes for making a toy. There were no drop-outs of children from the pre-test group during the post-test.

PLAN FOR DATA ANALYSIS

The data obtained were entered in MS-excel 2010 and analysed by statistical analysis. On the first day of assessment, the pre-test was conducted and after introducing Origami to the experimental group and routine play activities for the control group, post- test was conducted on the third day. The score obtained by the children are classified into three categories, which are explained in development and description of the tool. The data obtained are analysed in terms of objectives of the study using descriptive (mean & standard deviation) and inferential statistics (Paired 't' test, Chi-square test).The significant difference between the levels of pre-test and post-test both in experimental group and the control group was determined by using paired 't' test. The association between the pre-test levels of hospital anxiety with selected demographic variables was determined using Chi-square test separately for experimental group and control group.

CHAPTER- IV

ANALYSIS AND INTERPRETATION OF FINDINGS

This chapter deals with the analysis and interpretation of findings of the study.

Data analysis is the systematic organization and synthesis of research data, testing of research hypothesis and using those data. Interpretation is the process of making sense of the results of a study (Sharma. K, 2011).

The collected data were grouped and analyzed by using descriptive and inferential statistics.

The Objectives of the study are

1. To find the pre test and post-test level of hospitalized anxiety among children of experimental group and the control group.
2. To determine the effectiveness of Origami on hospitalized anxiety among children of experimental group with control group.
3. To find the association between hospitalized anxiety among children with the selected demographic variables

The Data Obtained are Tabulated as Follows

SECTION 1:

Frequency and percentage distribution of samples in experimental group and control group according to demographic variables.

SECTION 2:

Frequency and percentage distribution of samples in experimental group and control group according to the level of hospitalized anxiety

SECTION 3:

Effectiveness of Origami on hospitalised anxiety and comparison of mean in experimental and control group.

SECTION 4:

Association between hospitalized anxiety among children and selected demographic variables.

SECTION 1: FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLES IN EXPERIMENTAL AND CONTROL GROUP ACCORDING TO DEMOGRAPHIC VARIABLES

Table 1:

Frequency and Percentage Distribution of Samples According to Demographic Variables

(N=40)

Sl. No.	DEMOGRAPHIC VARIABLES	Experimental group(n=20)		Control group (n=20)	
		No.	%	No.	%
1	**Age of child (in years)**				
	a) 6-8 yrs	10	50	9	45
	b) 9-12 yrs	6	30	8	40
	c) 12-14 yrs	4	20	3	15
2	**Sex of the child**				
	a) Male	11	55	12	60
	b) Female	9	45	8	40
3	**Birth order**				
	a) First child	10	50	10	50
	b) Second child	8	40	9	45
	c) Third child	2	10	1	5
4	**Area of residence**				
	a) Urban	14	70	13	65
	b) Rural	6	30	7	35

Table one Continued …..

Sl. No.	DEMOGRAPHIC VARIABLES	Experimental group(n=20)		Control group (n=20)	
		No.	**%**	**No.**	**%**
5	**Type of family**				
	a) Joint family	7	35	8	40
	b) Nuclear family	13	65	12	60
6	**Monthly income of the family (in Rupees)**				
	a) 2,000-4,000	3	15	4	20
	b) 4,001-6,000	5	25	5	25
	c) 6,001-10,000	9	45	8	40
	d) Above 10,000	3	15	3	15
7	**Religion**				
	a) Hindu	13	65	11	55
	b) Christian	5	2	6	30
	c) Muslim	2	10	3	15
8	**Previous history of hospitalization of the child**				
	a) Yes	8	40	11	55
	b) No	12	60	9	45
9	**Number of hospitalization within last one year**				
	a) Nil	12	60	9	45
	b) One	7	35	10	50
	c) Two	1	5	1	5

Table one Continued …..

Sl. No.	DEMOGRAPHIC VARIABLES	Experimental group(n=20)		Control group (n=20)	
		No.	%	No.	%
10	**Reason for past hospitalization***				
	a) Medical illness	7	35	9	45
	b) Surgical illness	1	5	2	10
11	**Care taker of the child**				
	a) Father	3	15	3	15
	b) Mother	15	75	16	80
	c) Grand Parents	2	10	1	5

*Only child with previous history of hospitalization are included.

Table 1 depicts that,

For the age, in the experimental group 10(50%) were in the age group of 6-8years, 6(30%) in 9-11 years and 4(20%) in 12- 14 years and in control group 9(45%) were in the age group of 6-8 years, 8(40%) were in 9-11 years and 3(15%) were in 12-14 years

According to the sex of the child, in the experimental group, 11 (55%) of children were boys and 9(45%) were girls and in control group, 12(60%) of children were boys and 8(40%) were girls.

Considering the birth order of the child, maximum number of children is the first child, 10(50%) both in the experimental group and the control group, second child was 8(40%) in experimental group and 9(45%) in control group, and the third child was 2(10%) in experimental group and 1(5%) in control group.

Most of the children, both in experimental group and control group lives in urban area, 14(70%) and 13(65%) whereas 6(30%) and 7(35%) of children in experimental and control group lives in rural area.

The maximum number of children belong to the nuclear family, 13(65%) in the experimental group and 12(60%) in the control group whereas 7(35%) in experimental group and 8(40%) in control group belongs to joint family.

With regard to the income of the family, 3(15%) children in experimental group and 4(20%) in control group had a monthly income of Rs.2000-4000, 5(25%) of children both in experimental group and control group had a monthly income of Rs.4001-6000, 9(45%) children in experimental group and 8(40%) in control group had a monthly income of Rs.6001-10000 and 3(15%) of children both in experimental group and control group had a monthly income of Rs.10,000 and above.

The highest number of children were Hindus 13(65%) in experimental group and 11(55%) in control group, 5(25%) in experimental group and 6(30%) in control group were Christians and 2(10%) in experimental group and 3(15%) in control group were Muslims.

Considering the previous history of hospitalization, 8(40%) in the experimental group and in the control group11 (55%) children had previous history of hospitalization whereas 12(60%) in the experimental group and 9(45%) in control group does not had previous history.

Among children having history of hospitalization within last one year, 7(35%) and 10(50%) children in experimental group and control group were admitted once in hospital, whereas, 1(5%) children in both experimental and control group were

admitted twice in hospital, 12(60%) in experimental and 9(45%) in control group does not had any history of hospitalization.

Among hospitalized children, 7(35%) and 9(45%) children in the experimental group and control group were admitted because of medical illness, whereas, 1(5%) of experimental group and 2(10%) children of control group were admitted for surgical illness.

Regarding the caretaker of the child in hospital, in experimental group, 3(15%) were fathers, 15(75%) were mothers and 2(10%) were grandparents where as in control group, 3(15%) were fathers, 16(80%) were mothers and 1(5%) were grandparents.

The above findings are presented as figures from Figure 1 to Figure 10

Distribution of subjects according to the age of the child represented as bar diagram figure 1

Distribution of subjects according to sex of the child represented as bar diagram figure 2

Distribution of subjects according to the birth order of the child represented as bar diagram figure 3

Distribution of subjects according to the place of residence of the child represented as bar diagram figure 4

Distribution of subjects according to the type of family of child represented as bar diagram figure 5

Distribution of subjects according to the income of the family represented as bar diagram figure 6

Distribution of subjects according to the religion of the child represented as bar diagram figure 7

Distribution of subjects according to previous exposure of child to hospitalization represented as bar diagram figure 8

Distribution of subjects according to number of hospitalization within last one year for the child represented as bar diagram figure 9

Distribution of subjects according to past reason for hospitalization to the child represented as bar diagram figure 10

Distribution of subjects according to caretaker of the child represented as bar diagram figure 11

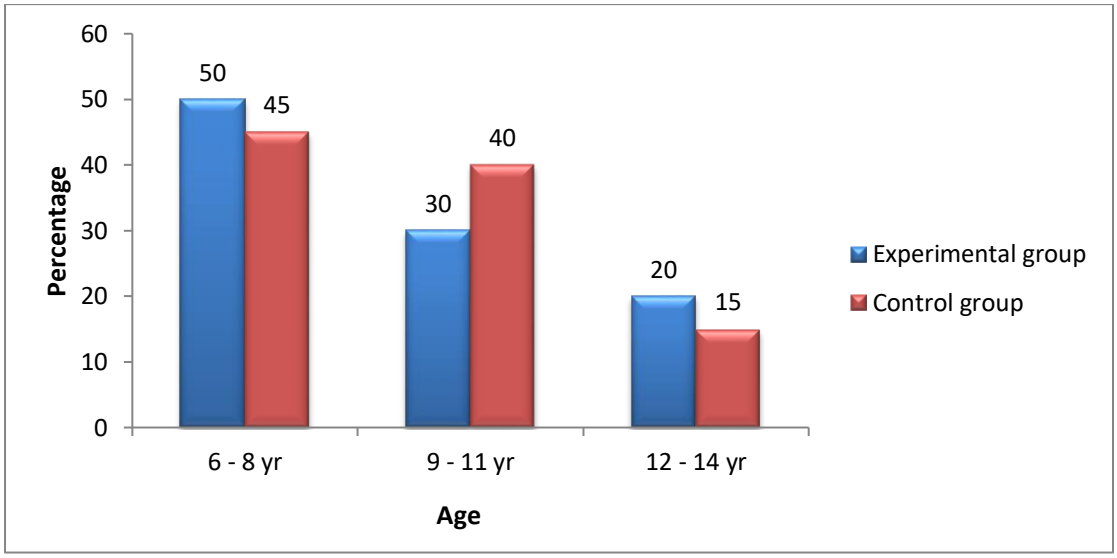

Figure 1 Distribution of Samples According to Age of the Child

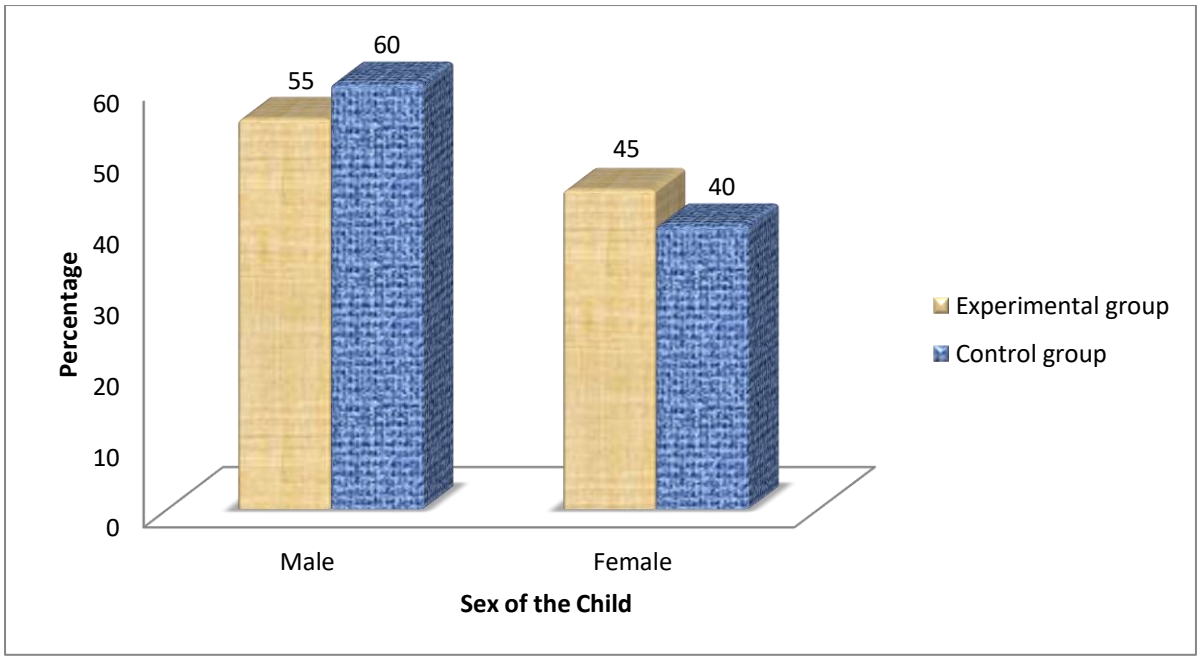

Figure 2 Distribution of Samples According to Sex of the child

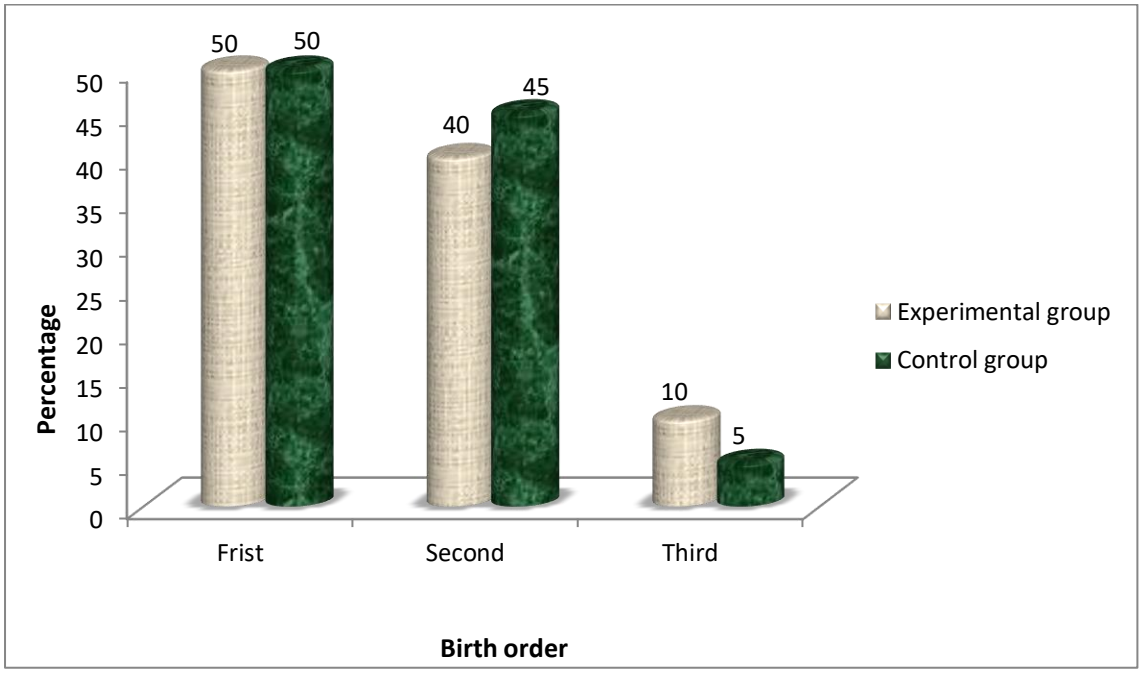

Figure 3 Distribution of Samples According to the Birth Order of the Child

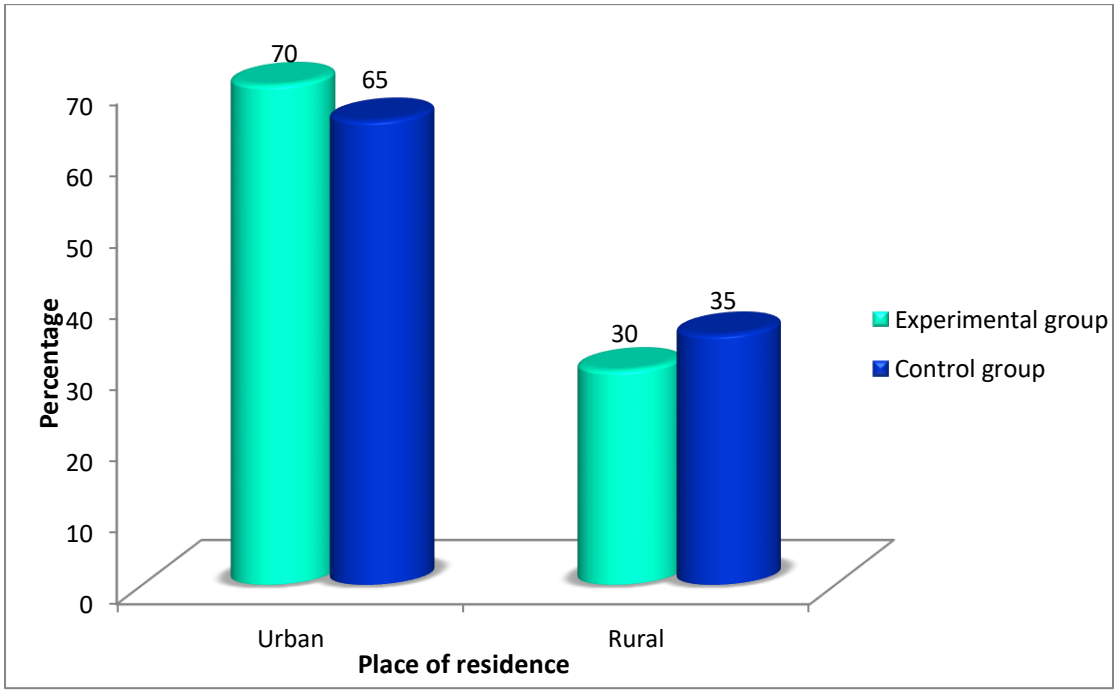

Figure 4 Distribution of Samples According to the Place of Residence

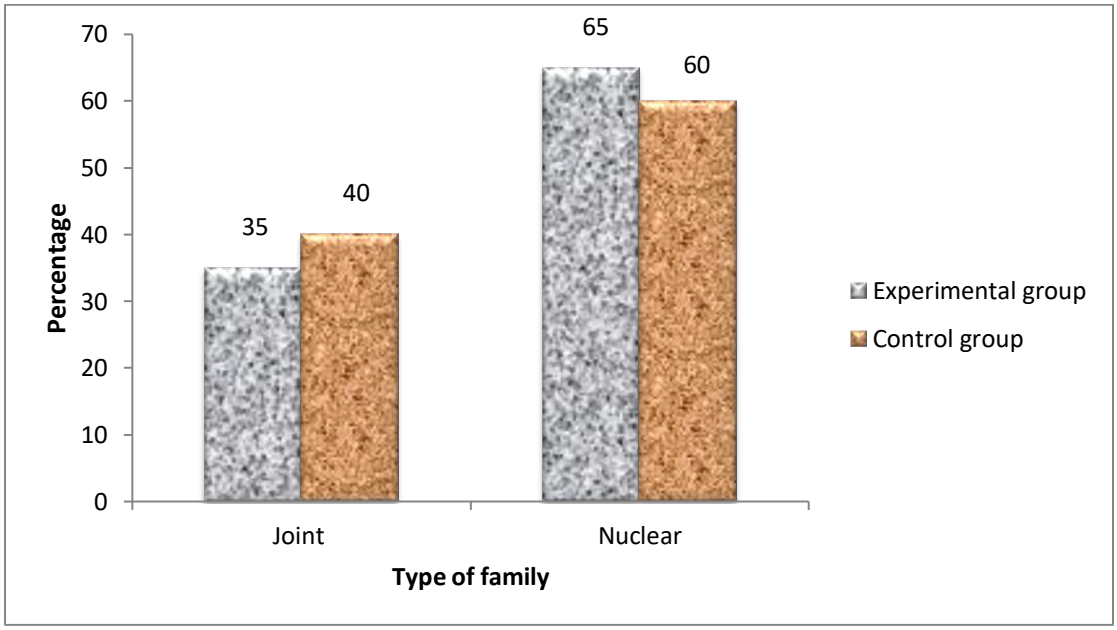

Figure 5 Distribution of Samples According to the Type of Family

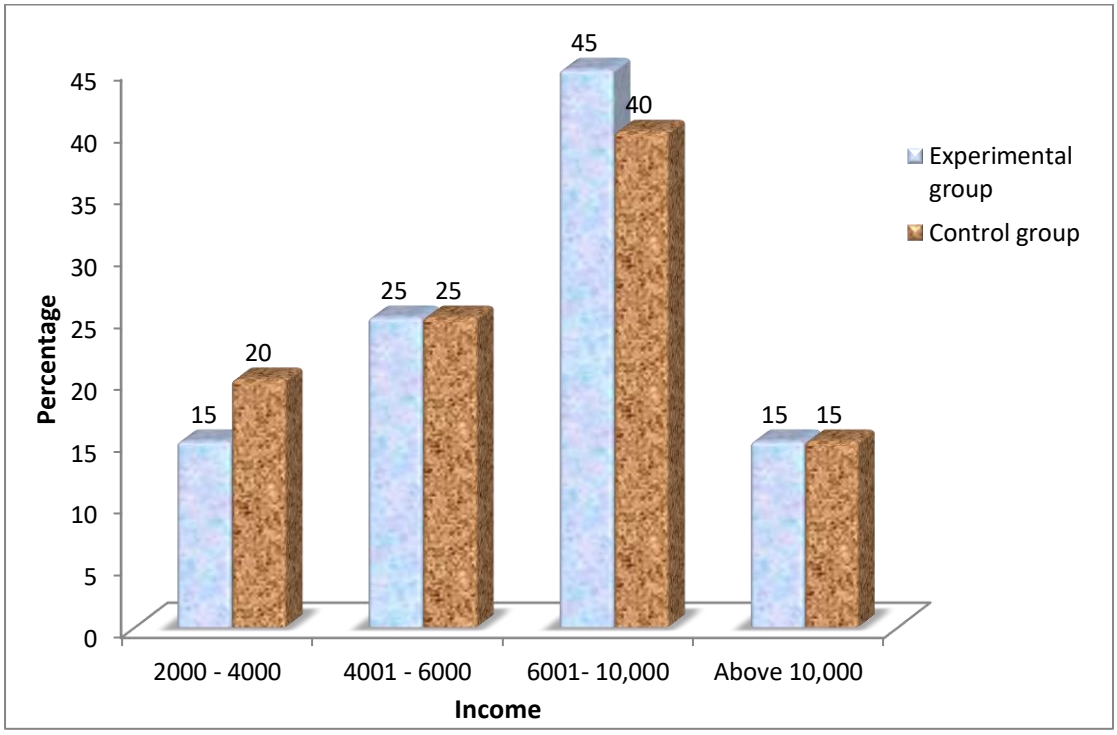

Figure 6 Distribution of Samples According to the Income of the Family

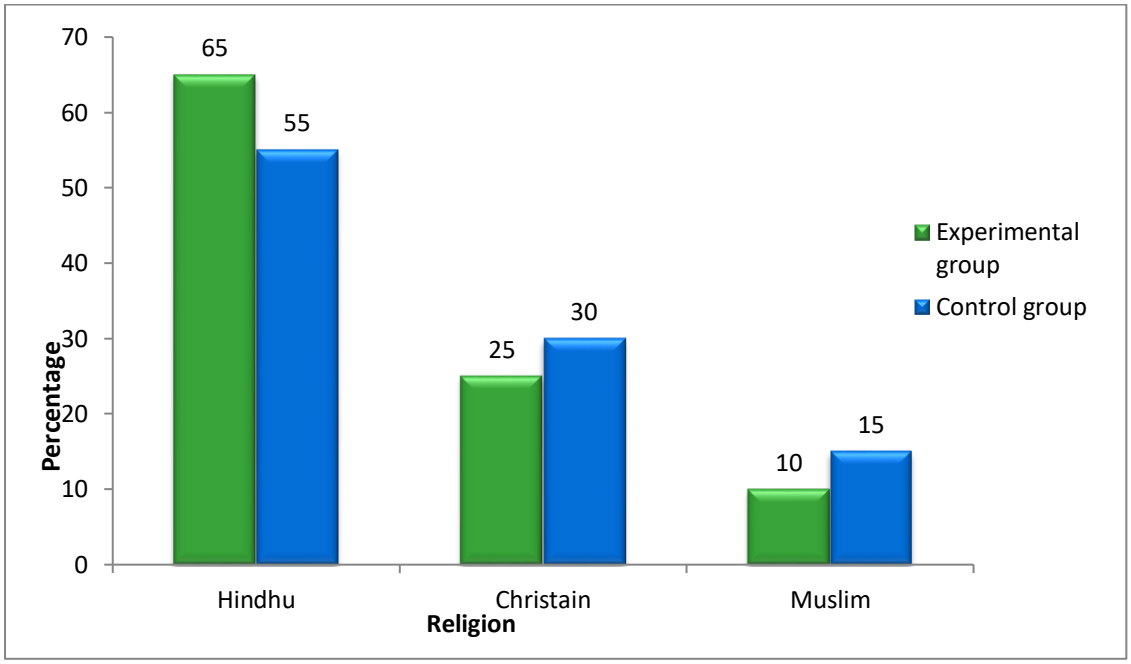

Figure 7 Distribution of Samples According to the Religion of the Child

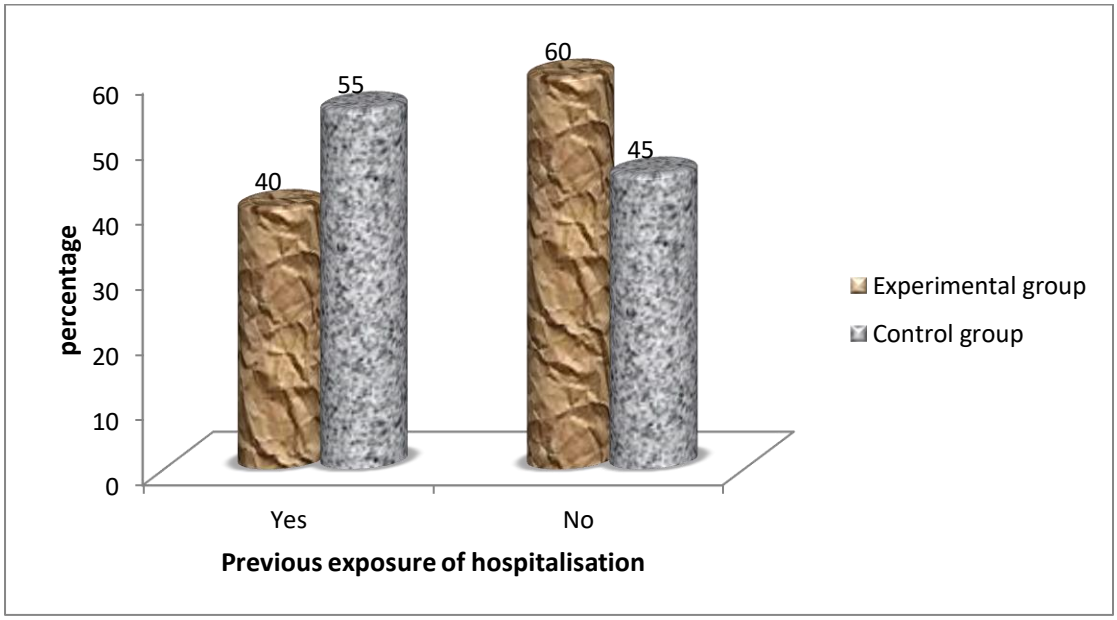

Figure 8 Distribution of Samples According To Previous Exposure Of Hospitalization to the child

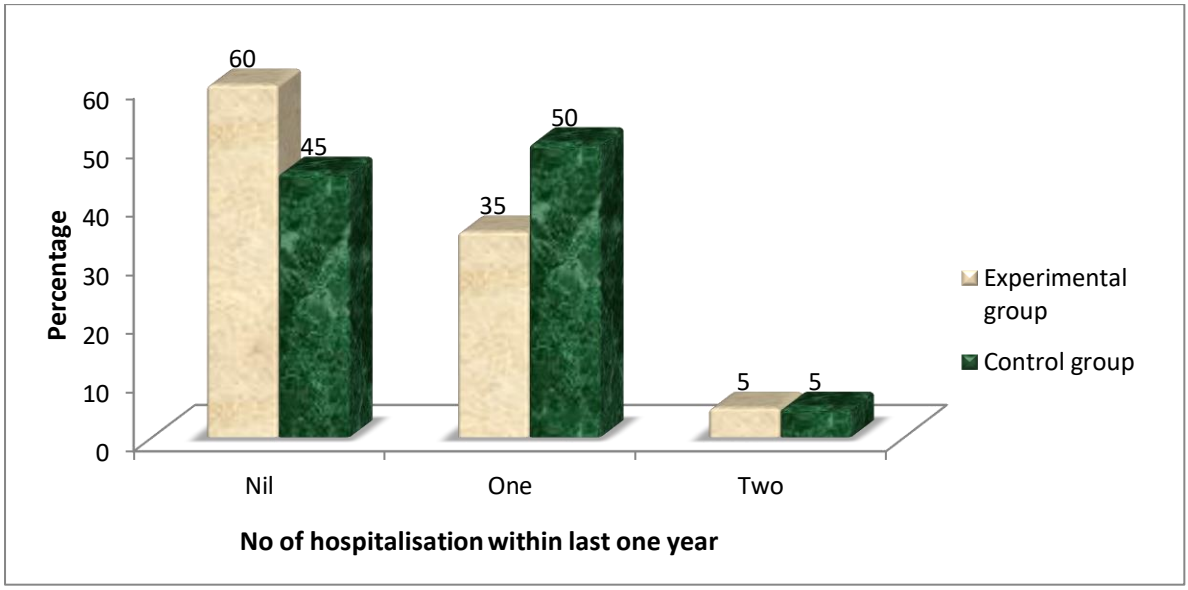

Figure 9 Distribution of Samples According to Number of Hospitalization Within Last One Year

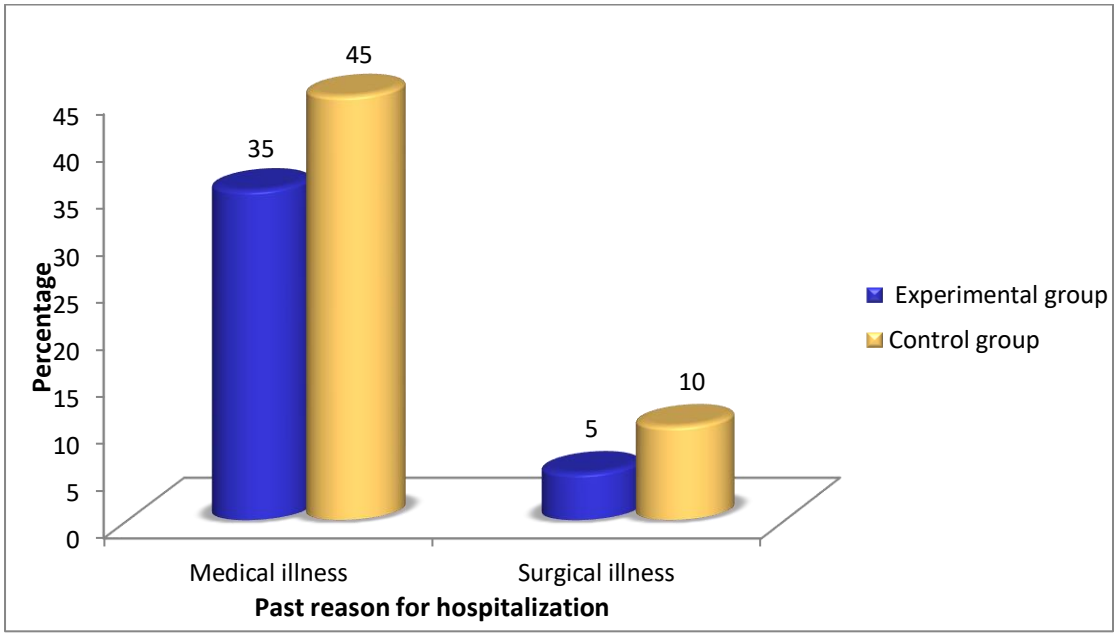

Figure 10 Distribution of Samples According to Past Reason for Hospitalization

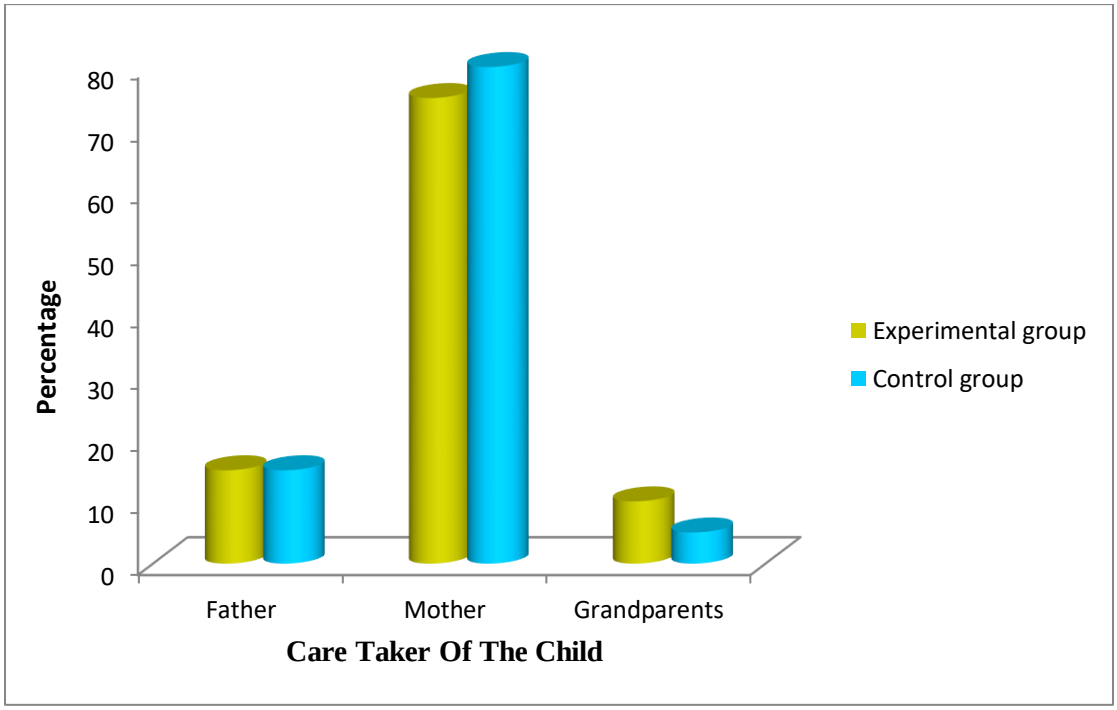

Figure 11 Distribution of Samples According to Care Taker of the Child

SECTION 2: FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLES IN EXPERIMENTAL AND CONTROL GROUP ACCORDING TO LEVEL OF ANXIETY DURING HOSPITALIZATION

Table 2

Percentage Distibution of Subjects According to Level of Anxiety

Level of Anxiety	Experimental group (n=20)				Control Group (n=20)			
	Pre test		Post test		Pre test		Post test	
	f	%	f	%	f	%	f	%
Moderate	8	40	2	10	5	25	3	15
Mild	12	60	18	90	15	75	17	85
Total	20	100	20	100	20	100	20	100

The above table shows the frequency and percentage distribution of samples according to the level of anxiety.

In experimental group, pre-test showed that 8 (40%) children had moderate level of anxiety and 12 (60%) had mild level of anxiety and in posttest, 2 (10%) had moderate level of anxiety and 18(90%) experienced mild level of anxiety. None of the children had severe level of anxiety.

In control group, pretest shows 5(25%) children had moderate level of anxiety and 15(75%) had mild level of anxiety and in posttest, 3(15%) had moderate level of anxiety and 17(85%) experienced mild level of anxiety. None of the children had severe level of anxiety.

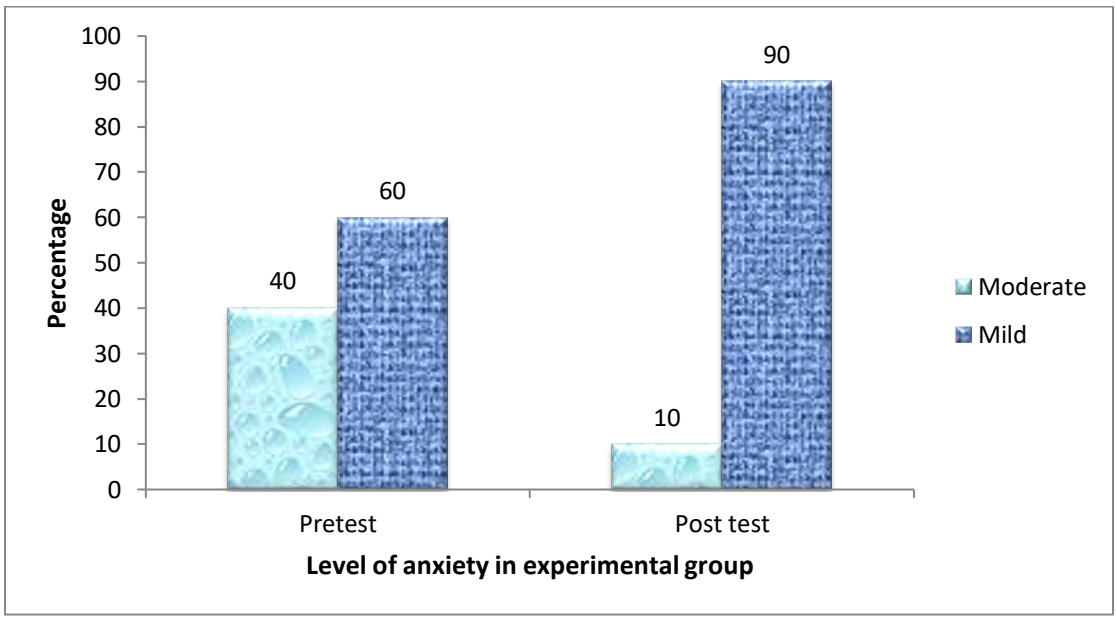

Figure 12 Distribution of Sample According to the Level of Anxiety in Experimental Group

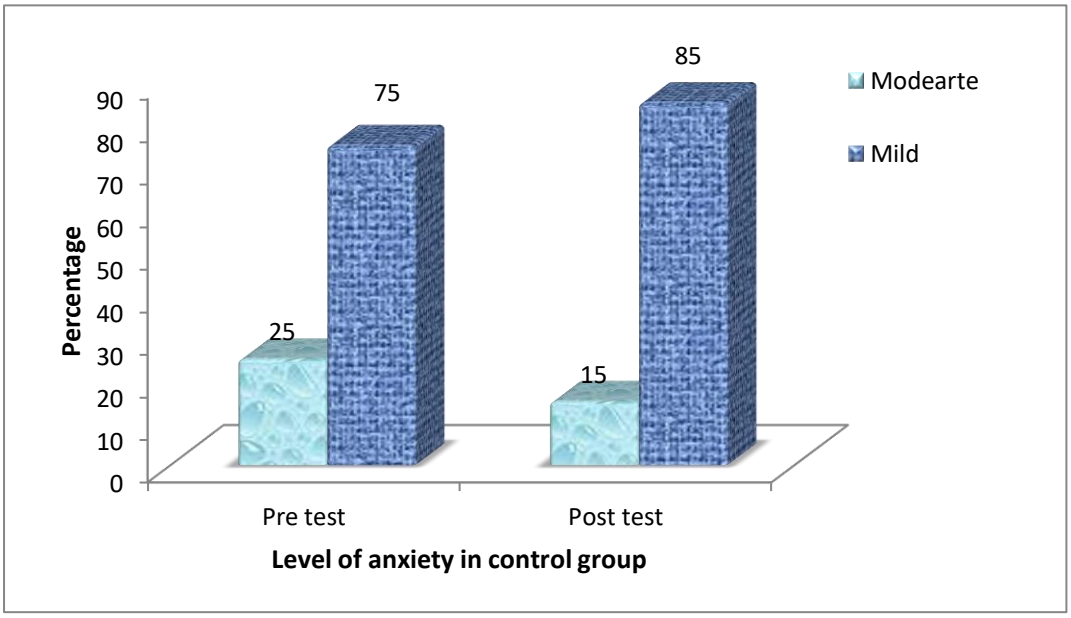

Figure 13 Distribution of Samples According to the Level of Anxiety in Control Group

SECTION 3: EFFCETIVENESS OF ORIGAMI ON HOSPITALISED ANXIETY AND COMPARISON OF MEAN IN EXPERIMENTAL AND CONTROL GROUP

Table 3

Comparison of Anxiety Scores in Experimental Group with Control Group (N= 40)

Study Group	Pre test		Post test		Reduction in Level of Anxiety		df	't' value	Table value
	Mean	SD	Mean	SD	Mean	SD			
Experimental group	33.2	4.5	28.9	3.03	4.3	2.89	38	6.61	2.02
Control group	31.75	2.54	30.9	2.75	0.85	1.10			

The above table 3 shows that the effectiveness of Origami on hospitalized anxiety in Experimental group and Control group. The pretest mean of experimental group was 33.2 and control group was 31.75 respectively.

To determine the reduction in hospitalized anxiety, pretest score comparison was done. The difference was statistically highly different, because the calculated 't' value (6.61) was higher than the table value (2.02), df=38, at $p<0.05$.

This shows that after receiving origami, experimental group had significantly greater reduction in level of anxiety compared to control group. So the research hypothesis being supported.

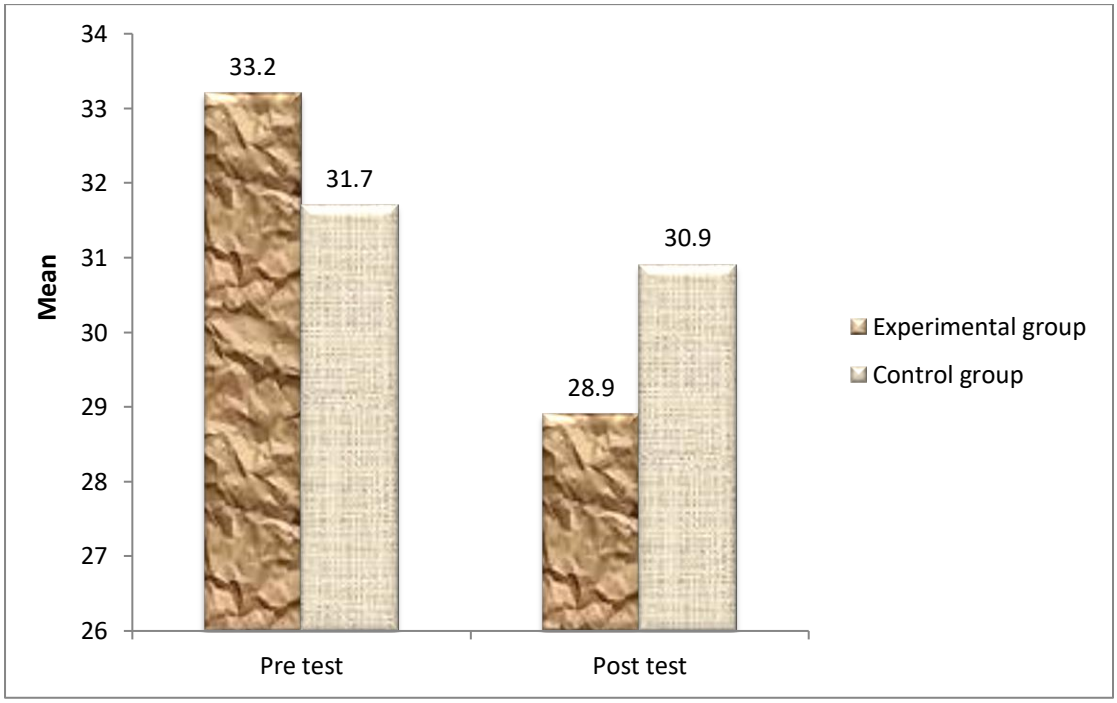

Figure 14 Pretest and Posttest Mean Values In Experimental and Control Group

SECTION 4: ASSOCIATION OF PRE-TEST HOSPITALISED ANXIETY WITH SELECTED DEMOGRAPHIC VARIABLES AMONG EXPERIMENTAL GROUP.

Table 4.1:

Association of pre-test hospitalized anxiety with selected demographic variable among experimental group n=20

Sl no	Demographic variables	No.	%	λ^2	df	Table value
1	**Age**					
	• 6-8yrs	10	50			
	• 9-11yrs	6	30	8.3*	2	5.99
	• 12-14yrs	4	20			
2	**Sex**					
	• Male	11	55	2.19	1	3.84
	• Female	9	45			
3	**Birth order**					
	• First child	10	50	3.75		
	• Second child	8	40		2	5.99
	• Third child	2	10			
4	**Area of residence**					
	• Urban	14	70	2.52	1	3.84
	• Rural	6	30			

5	**Type of family**					
	• Joint family	7	35	0.035	1	3.84
	• Nuclear family	13	65			
6	**Monthly income of the family (in Rupees)**					
	• 2000-4000	3	15	2.94	3	7.81
	• 4,001-6,000	5	25			
	• 6001-10,000	9	45			
	• Above 10,000	3	15			
7	**Religion**					
	• Hindu	13	65	3.84	2	5.99
	• Christian	5	25			
	• Muslim	2	10			
8	**Previous history of hospitalization of the child**					
	• Yes	8	40	0.094	1	3.84
	• No	12	60			
9	**Number of hospitalization within last one year**					
	• Nil	12	60	1.89	2	5.99
	• One	7	35			
	• Two	1	5			

10	**Past reason for hospitalisation**					
	• Medical illness	7	35	2.02	1	3.84
	• Surgical illness	1	5			
11	**Care taker of the child**					
	• Father	3	15		2	5.99
	• Mother	15	75	10*		
	• Grandparents	2	10			

*****Significant at p>0.05

❖ None of the child falls under the category of severe anxiety.

The table 4.1 depicts that, in experimental group, there is no statistically significant association between pre-test score and socio-demographic variables such as sex, birth order of the child, area of residence, type of family, income of the family, religion, previous exposure of hospitalization and number of hospitalization within last one year (p>0.05) except for age and care taker of the child (p<0.05).So the hypothesis is accepted (H1).

Table 4.2:

Association of pre-test hospitalized anxiety with selected demographic variables among control group

n= 20

Sl no	Demographic variables	**No.**	**%**	**λ²**	**df**	**Table value**
1.	**Age**					
	• 6-8yrs	9	45	1.954	2	5.99
	• 9-11yrs	8	40			
	• 12-14 yrs	3	15			
2.	**Sex**					
	• Male	12	60	3	1	3.84
	• Female	8	40			
3.	**Birth order**					
	• First child	10	50			
	• Second child	9	40	3.38	2	5.99
	• Third child	1	10			
4.	**Area of residence**					
	• Urban	13	65	2.08	1	3.84
	• Rural	7	35			
5.	**Type of family**					
	• Joint family	8	40	0.035	1	3.84
	• Nuclear family	12	60			

6.	**Monthly income of the family (in Rupees)**	4	20			
	• 2000-4000	5	25	5.78	3	7.81
	• 4,001-6,000	8	40			
	• 6001-10,000	3	15			
	• Above 10,000					
7.	**Religion**					
	• Hindu	11	55		2	5.99
	• Christian	6	30	4.13		
	• Muslim	3	15			
8.	**Previous history of hospitalization of the child**					
		11	55	0	1	3.84
	• Yes	9	45			
	• No					
9.	**Number of hospitalization within last one year**					
		9	45	2.86	2	5.99
	• Nil	19	50			
	• One	1	5			
	• Two					
10.	**Past reason for hospitalization**					
	• Medical illness	9	45	1.5	1	3.84
	• Surgical illness	2	10			

11. Care taker of the child					
• **Father**	**3**	**15**			
• **Mother**	**16**	**80**	**14.2***	**2**	**5.99**
• **Grandparents**	**1**	**1**			

*significant at p>0.05

- None of the child falls under the category of severe anxiety.

The table 4.2 depicts that, in control group, there is no statistically significant association between pre-test score and socio-demographic variables such as age, sex, birth order of the child, area of residence, type of family, income of the family, religion, previous exposure of hospitalization and number of hospitalization within last one year ($p<0.05$) except for care taker of the child ($p>0.05$).

CHAPTER V

RESULT AND DISCUSSION

The present study was conducted to determine the effectiveness of Origami on hospitalized anxiety among school age children. The level of anxiety among children in both experimental and control group was assessed by hospital anxiety assessment checklist. The finding of the study was based on the statistical analysis of the data collected. 't' test was used to test the effect of Origami. Chi-square test was used to find out the association between the demographic variables and the hospitalized anxiety.

Objectives of the Study

1. To find the pre test and post-test level of hospitalized anxiety among children of experimental group and the control group.
2. To determine the effectiveness of Origami on hospitalized anxiety among children of experimental group with control group.
3. To find the association between hospitalized anxiety among children with the selected demographic variables

Discussion

Following are the findings discussed with the objectives of the study. The present study was aimed to identify the effectiveness of Origami on hospitalized anxiety among children.

The study was quasi-experimental study with an evaluative approach. The study was conducted in Pediatric wards of Sree Mookambika Medical College

Hospital, Kulasekharam. Data collected for a period of one month. The tool was divided into two sections. Section-A contains the demographic variables and Section-B contains Hospital Anxiety Assessment Checklist, having 20 behaviors. The checklist is based on three items such as reaction during hospitalization, co-operation during hospitalization and reaction related to bodily injury and pain. In Section-B, 3-point scale is used to assess the hospitalized anxiety. The study consists of 40 children (20 children in experimental group and 20 children in control group). There were no dropouts from the study. The findings of the study have been discussed in terms of objectives and theoretical base.

Demographic Variables

Maximum number of children was 6-8 years old, both in experimental group 50% and in control group 45%. Most of them were boys in experimental group 55% and in control group 60%. Majority of the children were of first child in the family both in experimental and in control group (50%). Most of them live in the urban area 70% in experimental group and 65% in control group. Most of the children belong to nuclear family 65% in experimental group and 60% in control group. 65% children in the experimental group and 55% children in the control group were Hindus. Most 60% of the children in the experimental group and 45% children in the control group do not have previous history of hospitalization. 35% in the experimental group and 45% in the control group had the reason of some medical illnesses. Most of the children had mother as their caretaker in the hospital, 75% in experimental group and 80% in control group.

Similar study was done in Bangalore by Xavier. T found that, majority of children's both in experimental group 50% and control group 60% belonged to 4-

5years. Majority of children participated in the study were male 60% both in experimental and control group. Maximum number of children 70% both in experimental and control group belonged to Hindu religion. The results of the present study are contradicting to the above study by its age, sex and religion.

The first objective of the study is to identify the pre and post-test level of hospitalized anxiety among children in experimental and control group.

The study result showed that, during pre-test there was 12 (60%)children in experimental group and 15 (75%) children in control group had mild level of anxiety and 8 (40%)children in the experimental group and 5(25%) children in the control group had moderate level of anxiety and there was no children who had severe level of anxiety. During post-test, 18 (90%) of the children in experimental group and 17(85%) children in control group had mild level of anxiety, 2(10%) children in the experimental group and 3(15%) children in the control group had moderate level of anxiety and there was no children who had severe level of anxiety. Therefore, the posttest reveals that 90% of children in the experimental group had reduction in the anxiety level and 15% children in the control group had reduction in the anxiety level.

A similar study was conducted by Xavier. T (2005) to assess the effectiveness of play activities in reducing the level of anxiety among hospitalized children. The study result showed that, during post-test 99.2%, children in the experimental group had reduction in the anxiety level and 22% children in the control group had reduction in the anxiety level.

The results of the present study are similar to the above study which shows there is reduction in exhibiting the behavior and there is reduction in the anxiety level.

The second objective of the study is to determine the effectiveness of Origami on hospitalized anxiety among children of experimental group with control group.

Paired t test is used to compare the pre-test and post-test level of hospitalized anxiety among experimental group. The result showed that, there is statistically significant difference on the level of hospitalized anxiety among children of experimental and control group ($p<0.05$). The difference in the level of hospitalized anxiety between experimental and control group is increased with days of assessment ie when the practice of Origami was done for longer period.

A quasi-experimental study was conducted by Tyndace. L, Ashley. M (2009) to assess the effectiveness of short term group play therapy in reducing anxiety among pre-school children of 4-7 years of age. The total sample size was 60 children. 30 children each in experimental and control group. Using unpaired t-test comparison was made between the post-test anxiety levels of children in both groups. The results showed that, the levels of anxiety are significantly lowered in children of experimental group than the children in the control group.

The result of the present study is similar to the above study findings that, there is statistically significant difference between the post-test level of hospitalized anxiety among experimental and control group.

A randomized control trial was done in Hong Kong by William. H.C, Lopez. V (2008), to examine the effectiveness and appropriateness of using therapeutic play in preparing children for surgery. 203 children of aged 7-12 years were included in the study. The children in the interventional group received therapeutic play and reported significantly lower state anxiety scores in pre and post- operative periods and exhibited fewer negative emotions at induction of anesthesia. The study provided

evidence that therapeutic play is effective in pre as opposed to post-surgical management of children.

The result of the present study is similar to the above study findings that, there is statistically significant difference between pre-test and post-test level of anxiety among experimental group. The comparison between the pre-test and post-test level of hospitalized anxiety among control group is found out using paired t-test. The result showed that, there is statistically significant difference between pre-test and post-test level of hospitalized anxiety among control group. ($p < 0.05$). H1 is supported.

Xavier. T (2005) has done a study to assess the effectiveness of play activities in reducing the level of anxiety among hospitalized children. The results showed that there is no significant difference between pre-test and post-test level of manifested behaviour among control group ($p > 0.05$).

This study result is contradicting with the present study result.

The third objective of the study is to associate the pre-test level of hospitalized anxiety with the demographic variables of experimental group and control group.

Chi-square test is used to find out the association between the pre-test levels of hospitalized anxiety with the demographic variables. The result showed that there is no significant association between pre-test levels of hospitalized anxiety with selected demographic variables of the hospitalized children among experimental group and control group except for age and care taker of the child during hospitalization. So H2 is accepted.

The similar study was conducted by Xavier. T (2005) to assess the effectiveness of play activities in reducing the level of anxiety among hospitalized children. The study result showed that there is association between pre-test anxiety level and birth order of the child.

The results of the present study shows that there is significant association between pre-test levels of hospitalized anxiety with age of the child whereas the above quoted study findings shows that there is significant association between pre-test anxiety level and birth order of the child and there was no association between pre-test anxiety level and any other selected demographic variables.

The findings of the study reveal that, there is reduction in hospitalized anxiety among children by making paper toys. And the researcher concludes that, the intervention of making Origami can be implemented in hospitals which help in reducing the hospitalized anxiety among admitted children.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATION AND RECOMMENDATION

This chapter deals with the summary of the study and the conclusions drawn from the study. It also explains the limitations of the study, implications of the study on different areas like nursing education, nursing administration nursing practice and nursing research.

Play activities is based on the fact that play is the natural medium of self-expression of a child. If an opportunity is given to the child to "play-out" his feelings and problems, just as in certain type of adult therapy, an individual "talk out" his difficulties (Virginia Axline).

Toys are the tools of play activity and provide more natural environment for a child. Play therapy is suitable for children from about 3 – 16 years of age although it can be adopted for after 16 years and even for adults, including the elderly (O'Connor & Scharfer, 1994).

The proper selection of toys can reduce the traumatic effects of hospitalization. Therefore the present study was intended to assess the effectiveness of Origami on hospitalized anxiety among children.

Roy's Adaptation Model theory was adopted for the study, an extensive review of literature was done for the study, which helped the investigator to identify, select critically, analyze and report existing information of the problem selected for the study.

SUMMARY

The study was undertaken to assess the effectiveness of Origami on hospitalized anxiety among children with the following objectives.

Objectives of the Study

1. To find the pre and post-test level of anxiety among hospitalized children of experimental group and the control group.
2. To determine the effectiveness of Origami among hospitalized children of experimental group with the routine therapy of the control group.
3. To find the association between hospitalised anxiety among children with the selected demographic variables.
4. Based on the objectives, hypothesis was formulated by the investigator.

Hypothesis were

1. There is a significant difference on the level of hospitalised anxiety among children before and after intervention.
2. There is a significant association between level of hospitalized anxiety among children with selected demographic variables.

Assumptions were

1. Hospitalised children may have anxiety
2. School age children are able to express their feelings, fear and anxiety.
3. Origami helps the child to cope with the stress of hospitalisation and reduce the anxiety.

The Review of Literature collected were

1. Studies related to hospitalized children
2. Studies related to the effect of play in hospitalized children
3. Studies related to the effectiveness of Origami on hospital anxiety among hospitalized children

The conceptual framework, which was used for the study, is based on Roy's Adaptation Model theory. This model is based on the concepts of input, control process, effector and output. Input consists of stimuli such as focal stimuli, contextual stimuli and residual stimuli. In this study, the focal stimuli are hospital anxiety, pain during hospitalization. The contextual stimuli are hospital environment, hospital personnel, the invasive and non- invasive procedures and the nursing care activities rendered to the child. The residual stimuli are age of the child, number of hospitalization and reason for previous hospitalization. The hospitalized child's control processes or the coping mechanism are influenced by his/ her perception of the stimuli. For the experimental group, the effector is origami. And for the control group, it is the routine play, which is present in the ward. Depending on the coping mechanisms, the child will have an effect on his/ her physiological, psychological and social functioning.

The study was quasi-experimental study with an evaluative approach. The study was conducted in Paediatric ward of Sree Mookambika Medical College Hospital, Kulasekharam. The tool was divided into two sections. Section-A contains the demographic variables and Section-B contains Hospital Anxiety Assessment Checklist, having 20 behaviours. The study consists of 40 children (20 children in experimental group and 20 children in control group). Content validity of the tool was

established from experts from the department of pediatric nursing and one expert from the department of pediatric medicine. The necessary suggestions, testing of the tool and modifications were incorporated in the final preparation of the tool. Reliability of the tool was identified in 2 samples using test retest method and the results are evaluated using Spearman's correlation method and the findings showed r- 0.9, so the tool is reliable. The pilot study was conducted during the month of January 2017 and the main study was conducted in the month of March for one month.

Descriptive statistics was used to analyze the level of hospitalized anxiety and standard deviation; inferential statistics were used to determine the significant association.

Findings of the Study

The findings of the study revealed that the pretest mean score of the experimental group was 33.2 and that of control group was 31.75 and it showed that before implementing therapy both of the group were having equal level of hospitalized anxiety. The posttest mean score of experimental group was 28.9 and that of control group was 30.9. To assess the effectiveness of hospitalized anxiety by the posttest level hospitalized anxiety score in experimental and control group. The t test value was 6.61, df=38, table value was 2.02 and $p<0.05$, so it is highly significant.

The association between level of hospitalized anxiety and demographic variables were tested by Chi- square test and found that there was no association between level of hospitalized anxiety and demographic variables except for age and caretaker of the child during hospitalization.

CONCLUSION

From the result of the study, it was concluded that administering Origami among hospitalized children were very effective in reducing the level of hospitalized anxiety. Therefore the investigator felt that more importance should be given for play therapy to reduce the level of hospitalized anxiety among school age children. Origami helps children to adapt better to unpleasant situations, especially during hospitalization. This healthy adaptation promotes quick recovery from their illness.

NURSING IMPLICATIONS

The findings of the study revealed that the effect of Origami on hospitalized anxiety among school age children have implication in the areas of the nursing profession. It is explained in the following heading like nursing practice, nursing education, nursing administration and nursing research.

Nursing Practice

1. The result of the study will help to enlighten the knowledge of nurses in making handicrafts and thus reducing hospitalised anxiety in children when they are admitted in the hospital.
2. Children in the hospital need play provision because they have natural needs for play. Also play helps to prevent developmental regression, to reduce parental and child's stress and anxiety. In relation with hospitalization, play helps to facilitate communication between staff and children, to encourage child's cooperation in hospital procedure and moreover will help a child to get adapted to the hospital environment by reducing the exhibition of manifested behaviour in them.

3. Nurse should have adequate knowledge regarding different indoor play activity and its importance in hospitalized children and nurses should play a critical role in helping the child and the family to cope effectively with hospitalization through play activities like making handicrafts, puppet shows etc.
4. So this study would not only emphasize the need for play, but also implicates that nurses must motivate the involvement of children in enhancing play in children's ward.

Nursing Education

1. In the curriculum of nursing, should include the play activity training as one of the nursing care for hospitalized children.
2. Nurse's education must motivate the students to include the play activity practices in nursing care of children in the wards.
3. Nursing curriculum should provide an opportunity to plan and conduct play activities in a variety of setting like family, community, industry, hospital, schools and other health care agencies.
4. Nurses with higher education must develop theories related to play needs.

Nursing Administration

1. The nurse administrator should take active part in policy making related to health education on play activities.
2. The nurse administrators should provide a provision for nurses to devote time for giving play activities which helps in reducing the manifested behaviour in hospitalized children.

3. Necessary administration support should be provided to conduct play activities in any setting as required and cost-effective health education material should be encouraged.
4. A hospital policy should be adopted to provide play activities to all the children who are admitted and for those children who come to out-patient department.

Nursing Research

1. The study can be published in journals to disseminate knowledge regarding the effectiveness of handicrafts in reducing manifested behaviour in hospitalized children among the health professionals.
2. The findings of the study serve as a basis for the nursing professionals and the students to conduct further studies in different aspects of play activities in hospitalized children.

LIMITATIONS

1. The study was conducted to 40 samples only. Hence the generalisation is possible only for selected samples.
2. Present study limited to small number of subjects and it was related to only school age children.
3. The tool used for data collection was not standardised. It was designed by the investigator herself for the purpose of the present study based on the objectives of the study.

RECOMMENDATIONS

- A similar study can be replicated on larger sample to make generalizability.
- A similar study can be done in a community set-up.
- A similar study can be conducted in terminally ill children, and in physically disabled children.
- A comparative study can be conducted among rural children and urban children's hospital anxiety.
- A similar study can be conducted with different study design.
- The similar study can be replicated to assess the cost effectiveness.
- The effect of other methods like music therapy, laughter therapy etc. can be assessed by similar studies with various age groups.

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APPENDIX : A

ETHICAL COMMITTEE CLEARANCE

SREE MOOKAMBIKA COLLEGE OF NURSING
(Approved by the Goverment of Tamil Nadu & Recognised by Indian Nursing Council, New Delhi, Tamil Nadu state Nurses & Midwives Council, Chennai.)
Affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai.
PADANILAM WELFARE TRUST, V.P.M.HOSPITAL COMPLEX, PADANILAM, KULASEKHARAM, K.K.DIST., TAMIL NADU, PIN : 629 161
Phone : 04651 - 280743, 280866, 280742, 280745

ETHICAL COMMITTEE CLEARANCE

Date : 16-08-2016

Lr. No.

To

Mrs. Christy Susan Mathew,

I YR .M.Sc (N),

Sree Mookambika College of Nursing,

Kulasekharam.

Ref: Research Topic: "A Study to assess the effectiveness of Origami on hospitalized anxiety among children admitted in paediatric ward of Sree Mookambika Medical College Hospital Kulasekharam".

Sub: Approval of the above reference study .

Dear Christy Susan Mathew,

Ethics committee of Sree Mookambika College of Nursing, Kulasekharam reviewed and discussed the study proposal documents submitted by you related to the conduct of the above referenced study in the meeting held on 16-08-2016.

The following ethical committee Members were present at the meeting held on 16-08-2016.

NAME	PROFESSION	POSITION IN THE COMMITTEE
Prof. Mrs. Santhi Letha	Nursing	Chair Person
Dr. Kani Raj Peter	Medical	Basic Medical Scientist
Dr. T.C. Suguna	Nursing	Clinician
Adv. Mohanan	Legal	Legal Expert
Prof. Mrs.Ajitha Retnam	Nursing	Member secretary
Dr.P. Selva Raj	Management	Philosopher
Mr. Natarajan	Social	Medical Social Worker
Mrs. Latha	Lay Person	Community Person

After due ethical and scientific consideration, the ethics committee has approved the above presentation submitted by you.

Regards,

Mrs. Santhi Letha PhD (N)

Ethics Committee Chairperson,

Sree Mookambika College of Nursing,

V.P.M. Complex, Padanilam, Kulasekharam.

Date : 16-08-2016

Place :Kulasekharam

APPENDIX : B

LETTER SEEKING EXPORT OPINION FOR TOOL VALIDITY

SREE MOOKAMBIKA COLLEGE OF NURSING
(Approved by the Goverment of Tamil Nadu & Recognised by Indian Nursing Council, New Delhi, Tamil Nadu state Nurses & Midwives Council, Chennai.)
Affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai.
PADANILAM WELFARE TRUST, V.P.M.HOSPITAL COMPLEX, PADANILAM, KULASEKHARAM, K.K.DIST., TAMIL NADU, PIN : 629 161
Phone : 04651 - 280743, 280866, 280742, 280745

Date :.....

LETTER SEEKING EXPERT OPINION FOR TOOL VALIDITY Lr. No.

To

Madam/Sir

Sub : M.Sc Nursing Programme dissertation – Validation of study tool request – reg:

Ms/Mrs. **Christy Susan Mathew** a bonafide if II Year M.Sc Nursing student of Sree Mookambika College of Nursing is approaching you to obtain validation of study tool pertaining to her dissertation in practical fulfillment of the requirement for the degree of Master of Science in Nursing. The selected topics **"A Study to assess the effectiveness of Origami on hospitalized anxiety among children admitted in paediatric ward of Sree Mookambika Medical College Hospital Kulasekharam ".**In this regard I request you to kindly extent possible technical guidance and support for successful completion of dissertation.

I enclosed here with a check list for your evaluation.

Thanking You

Yours Sincerely

PRINCIPAL
Sree Mookambika College of Nursing
Kulasekharam 629 161

PRINCIPAL

APPENDIX : C

PERMISSION LETTER FOR CONDUCTING THE STUDY

From

Christy Susan Mathew,
II Year M.Sc Nursing (Child Health Nursing)
Sree Mookambika College of Nursing,
Kulasekharam

To

The Director,
Sree Mookambika College of Nursing,
Kulasekharam

Sub : Permission to conduct data Collection in Sree Mookambika Institute of Medical Sciences

Respected Madam,

Myself Christy Susan Mathew M.Sc (N) II year student am writing this letter to inform you that I am planning to do my data collection for research in Sree Mookambika Medical College Hospital. So I Kindly request you to grant me permission to do the study and do the needful.

Thanking You

Yours Sincerely

Place : Kulasekharam
Date : 25-01-2017

Christy Susan Mathew
II Year M.Sc (N)

APPENDIX : D

LIST OF EXPERTS FOR TOOL VALIDATION

1. **Dr. Elizabeth.K.E, M.D, DCH, PhD.,**

   HOD, Department of Pediatrics

   Sree Mookambika Institute of Medical Sciences

   Kulasekharam.

2. **Mrs. Dali Christabel H M.Sc (N), Ph.D (N).,**

   HOD, Child Health Nursing,

   Sree Mookambika College of Nursing

   Kulasekharam

3. **Mrs. SujaRenjiniM.Sc (N).,**

   Associate Professor,

   Sree Mookambika College of Nursing

   Kulasekharam

4. **Mrs. Kavitha M.Sc (N).,**

   Principal,

   Saraswathy College of Nursing

   Parasala.

5. **Mrs. MazhilM.Sc (N).,**

   Principal,

   Grace College of Nursing

   Marthandam

6. **Mrs. JosephinSheebaM.Sc (N), MBA.,**
   Vice Principal,
   NIMS College of Nursing
   Neyyattinkara, Trivandrum

7. **Mrs. LeenaJoseletM.Sc (N).,**
   Associate Professor,
   C.S.I. College Of Nursing
   Karakonam

8. **Mrs. MalkhijahM.Sc (N).,**
   Reader,
   Christian College Of Nursing,
   Neyyoor

APPENDIX : E

SECTION A

DEMOGRAPHIC DATA

1. Age of the child (yrs)
    a) 6-8 yrs [ ]
    b) 9-11 yrs [ ]
    c) 12-14 yrs [ ]

2.Sex of the child
    a) Male [ ]
    b) Female [ ]

3.Birth order of the child
    a) First [ ]
    b) Second [ ]
    c) Third [ ]

4.Place of residence
    a) Urban [ ]
    b) Rural [ ]

5.Type of family
    a) Joint [ ]
    b) Nuclear [ ]
    c) Single parent [ ]

6. Income of the family
    a) 2000-4000 [ ]
    b) 4000-6000 [ ]
    c) 6000-10000 [ ]
    d) Above 10000 [ ]

7. Religion
    a) Hindu [ ]
    b) Christian [ ]
    c) Muslim [ ]
8. Previous exposure of hospitalization to the child
    a) Yes [ ]
    b) No [ ]
9. Number of hospitalization within last one year
    a) Nil [ ]
    b) One [ ]
    c) Two [ ]
10. Past reason for hospitalization
    a) Medical illness [ ]
    b) Surgical illness [ ]
11. Care taker of the child during hospitalization
    a) Father [ ]
    b) Mother [ ]
    c) Grand Parents [ ]

SECTION B

HOSPITAL ANXIETY ASSESSMENT CHECKLIST

Instruction to the observer:

Observe the behavior of the child and assign a score of 1, 2 and 3 [never, sometimes and always] for each behavior if it is present, in the appropriate column repeats the same for all the observations. The scores obtained for each observation should be summed up in the score column. The final score is the total of all the scores obtained/ assigned on all the observations.

Sl No	ITEMS	SCORE		
		1	2	3
I.	**REACTION DURING VOCALIZATION** 1) Usually quiet 2) Does not smile or respond to others 3) Mumble monotonous words 4) Wails [complaints and screams] 5) Bargaining to escape from procedure 6) Verbalise fear of hospitalisation 7) Child avoids eye contact with hospital personnel			

II.	**CO-OPERATION DURING HOSPITALISATION** 1) Refuses to co-operate initially 2) Refuses to co-operate even after explanations 3) Exhibits anger by hitting, kicking, biting, throwing objects/toys etc. 4) Child spits the medication after forceful administrations 5) Child does not allow for monitoring vital signs even. 6) Child cries and always clings to the mother 7) Child exhibits resistance 8) Withdrawing from others 9) Child exhibits temper tantrums and irritable			
III. `	**REACTION RELATED TO BODILY INJURY & PAIN** 1) Appears dazed [dull/ hypoactive/ confused] 2) Manifest scary looks 3) Pushes the nurse away 4) Tries to catch the equipment [grab, secure]			

Methods of scoring:

Minimum score= 20 Maximum score=60

Score:-

On the day of admission -

After intervention -

Marks allotted for each item:

- Never → 1
- Sometimes → 2
- Always → 3

APPENDIX - F

CONTENT VALIDATION CERTIFICATE

I ---------- hereby certify that I have validated the tool of Christy Susan Mathew, 2nd year M.Sc. nursing student, Sree Mookambika College Of Nursing, Kulasekharam who is under taking the following study :-

A Study to Assess the Effectiveness of Origami on Hospitalized Anxiety Among Children Admitted in Pediatric Ward of Sree Mookambika Medical College Hospital, Kulasekharam.

Place: **Signature of the Expert**

Date**:** **Designation and Address**

APPENDIX – G

EVALUATION TOOL CHECK LIST

Name of the expert:

Designation:

College:

Respected Madam/Sir,

Kindly go through the content and place the right (√) marks against the check list in the following columns ranking from relevant to non-relevant. Whatever there is a need for modification; kindly give your opinion in the remarks column.

DATE: SIGNATURE

SECTION A

DEMOGRAPHIC VARIABLES

Item no	Relevant	Need modification	Not relevant	Remarks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

SECTION B

HOSPITAL ANXIETY ASSESSMENT CHECK LIST

Item No	Relevant	Needs Modification	Not Relevant	Remarks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

APPENDIX : H

INTERVENTION GUIDE

INTRODUCTION

Origami is the craft (or art) of folding paper into shapes and sculptures. The word derives from the Japanese word 'ori' which means "to fold" and 'kami' which means "paper" kami 'changes to' gami .Origami or handicraft making is a useful tool for teaching and assessment. It has various advantages.

- Origami adds physical involvement to the learning process.
- Helps in developing the skills and creative interests and patience in children, generally and sometimes towards a particular craft or trade.
- Handicrafts are often integrated into educational systems.
- Enhances active involvement.
- Paper folding activities can lead to lively discussions among learners.
- Learners that have a concrete learning preference get the opportunity to see and feel while they learn.
- Hands-on activities assist learners to build their own intellectual concepts.

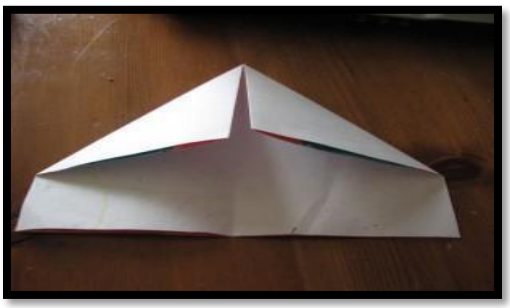
The following items were selected for intervention during the study.

- ✶ Origami/ paper boat
- ✶ Origami/ paper tree
- ✶ Origami/ paper Christmas tree
- ✶ Origami/ paper airplanes
- ✶ Origami/ paper hat
- ✶ Origami/ paper crown
- ✶ Origami/ paper snapper
- ✶ Origami/ paper fortune teller
- ✶ Origami/ paper jumping frog
- ✶ Origami/ paper butterfly
- ✶ Origami/ paper hanging snowflake

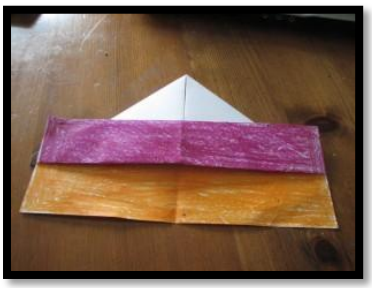
❖ STEPS FOR MAKING ORIGAMI/PAPER BOAT

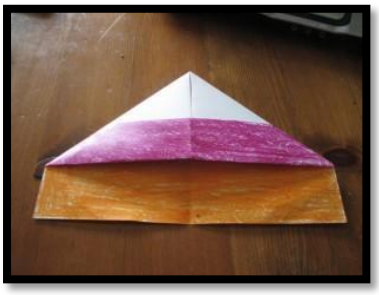
1. 1.First take a straight paper inwards.

2. Then folded it in half, pattern side



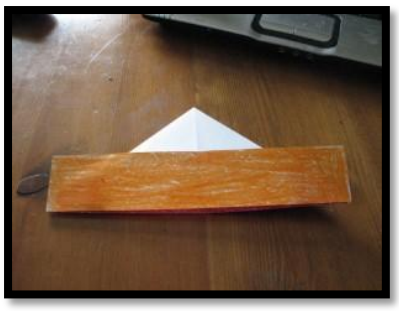
3.With the ‘open’ edge at the bottom, fold the corners down to meet in the middle. We found it helped to ‘quarter’ the sheet lightly first, so we knew where to fold to.



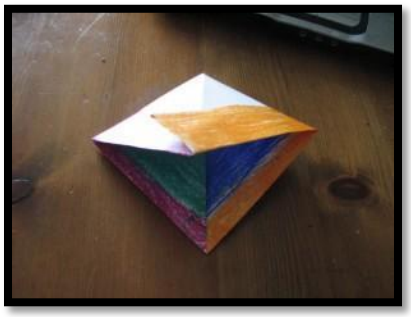


4.Fold one bottom ‘lip’ upwards. overhand the

5.And fold the little corners that triangles over the back.

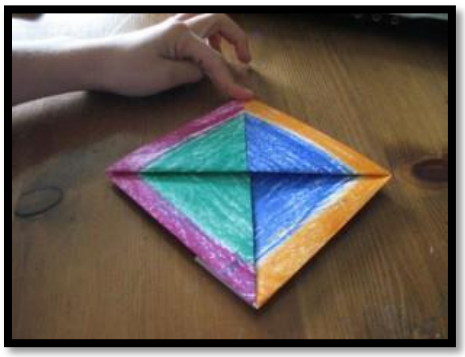


6.Turn it over and fold the other lip upward too.

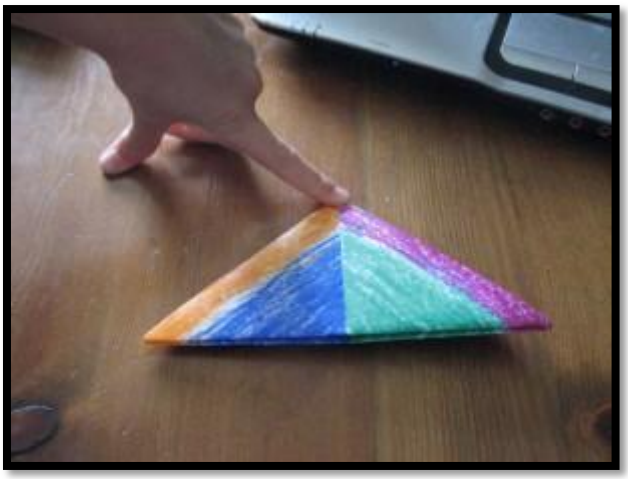


7.Open the shape up into a ‘hat’ and fold it down in the other direction so that the corners which were at each end are now together.

8.It will look like this (you will have to provide your own finger).

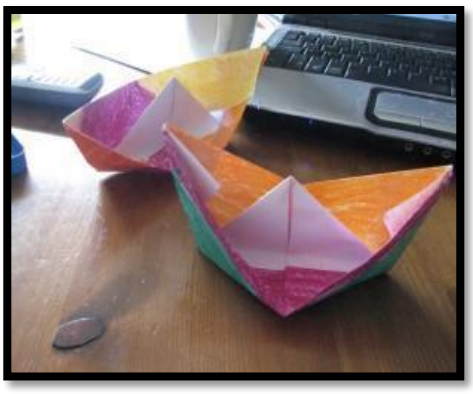


9.Fold the corner at the bottom of the new diamond up to lie flat. Effectively you open up the shape into a square.



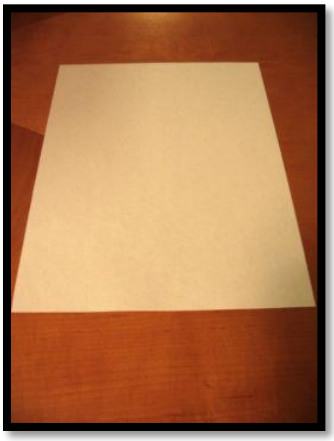
10.Turn it over and do the same.

11.As before, open it up from the bottom and flatten it in the opposite direction.



12.The two upper corners will be loose. Grasp them and pull gently apart. The boat will open up in front of you.

❖ STEPS IN MAKING ORIGAMI/PAPER AIRPLANES



1. Start with a sheet of paper, 8.5"x11"

2. Fold it in half, length-wise. Make every folded edge sharp - use your fingernails or a straight-edged ruler.

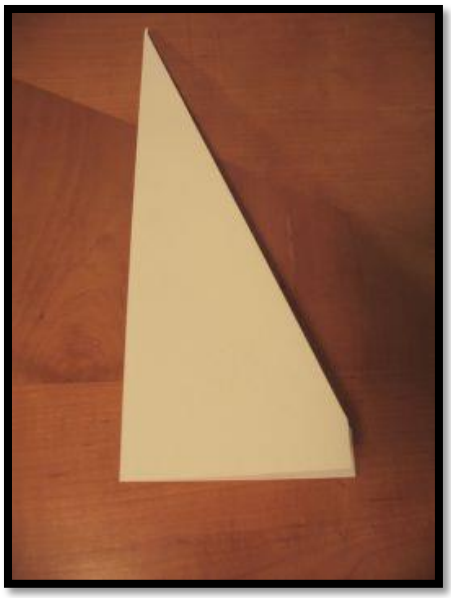
3. Open the paper.

4. Fold down the top corner, lining it up with the seam in the middle.

5. Do the same on the other side.

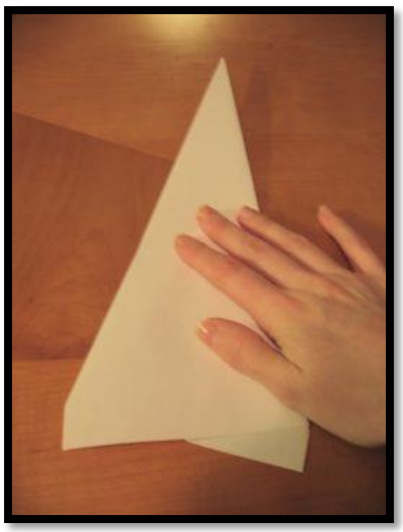
6. Now do this again. This will streamline the fuselage of the plane.

7. Duplicate this fold on the other side.



8. Fold the plane in half again and lay it on it's side.

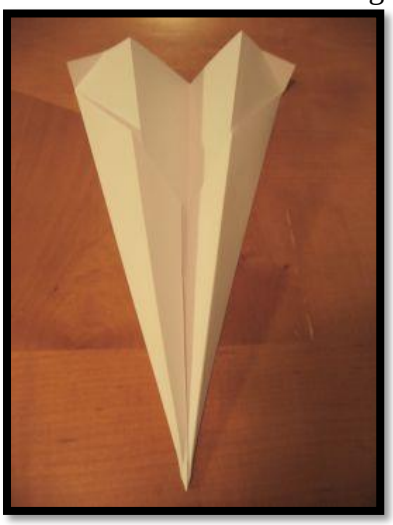
9. Fold down the wing, using the straight edge to line up the wing.

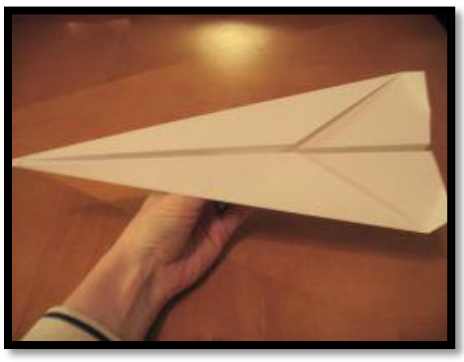


10.Duplicate this fold on the other side.

11.Your plane should look like this.

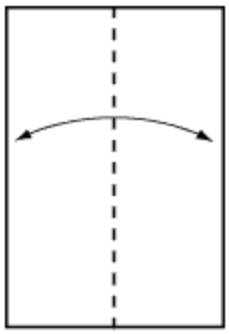
10. Fold tips up on the ends of the wings. This can be done in any angle you like - different angles will produce different flight patterns. Asymmetrical flaps will create even more creative flight patterns.



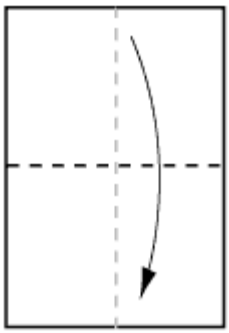


11. This is your finished plane

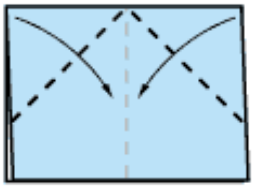
❖ STEPS IN MAKING ORIGAMI/PAPER HAT



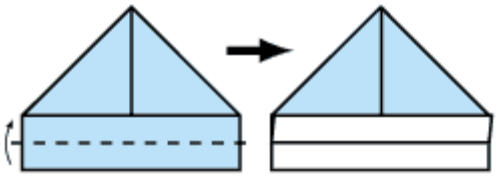
1. Start with a rectangular piece of paper, white side up. Fold the paper in half and open.



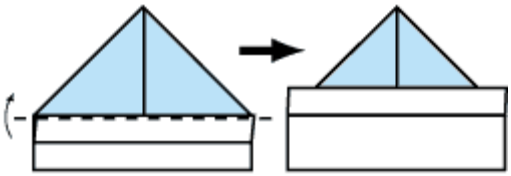
2. Now fold the top down to the bottom edge. Crease well.



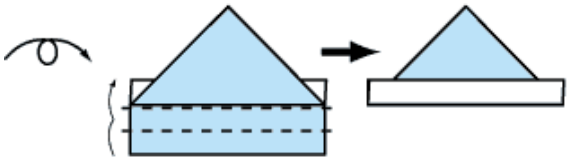
3. Fold the top corners down to the centre line.



4. Fold the bottom edge (uppermost layer only) up to the base of the triangles.



5. Fold this part up once again, and crease well.

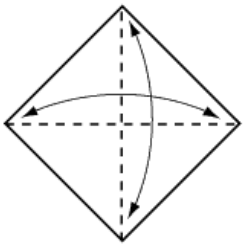


6. Turn model over, and repeat step 4 & 5 on the other side.

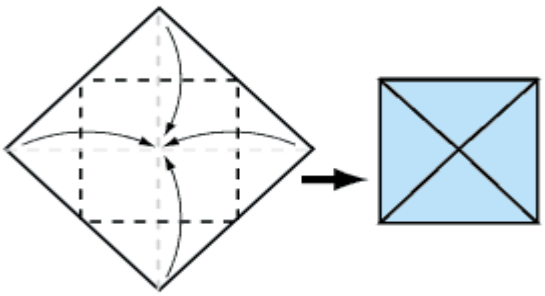
7. Open out the hat to shape it. Your hat is now finished!

ORIGAMI/PAPER HAT

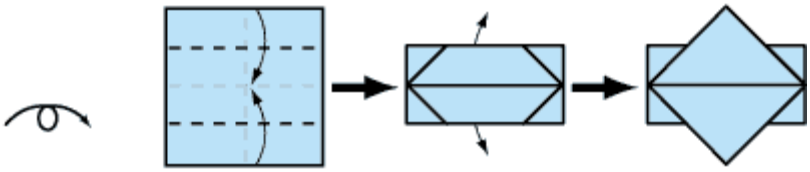
❖ STEPS IN MAKING ORIGAMI/PAPER CROWN



1. Start with your paper white side up.Fold in half, and open, then fold in half once again, in the other direction.

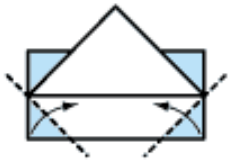


2. Now fold all corners into the centre.

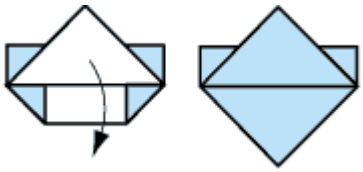


3. Turn the model over. Then fold the top and bottom toward the centre. When you do this, the triangular flaps should pop out from underneath

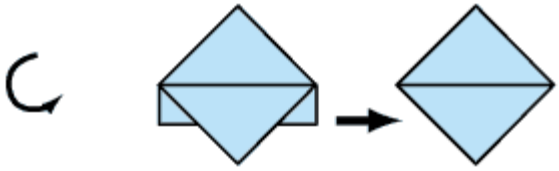
4. Fold the bottom triangle upwards.



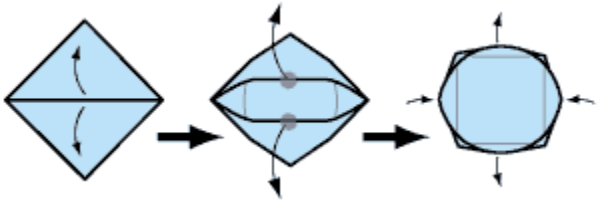
5. Fold the 2 bottom corners upwards.



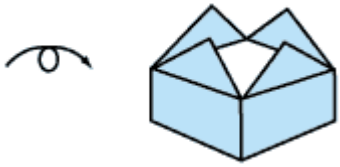
6. Fold triangle back down



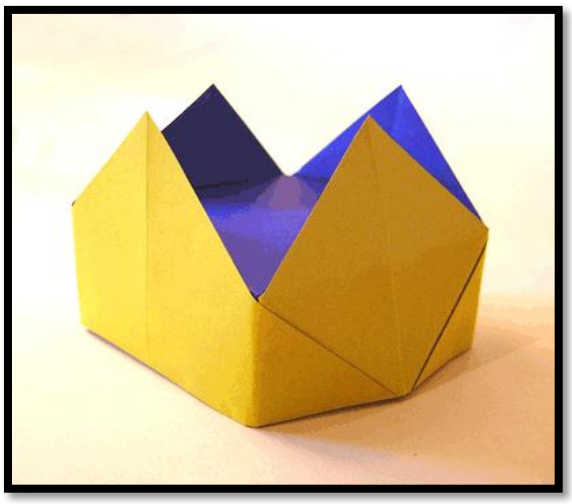
7. Rotate the model. Now repeat steps 4-6.



8. Now you need to open out the model to complete your crown. Open the flaps outward and shape the inside into a square shape

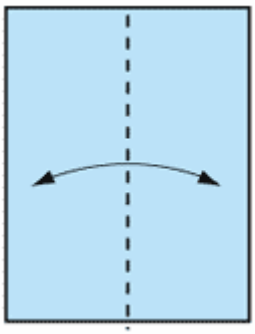


9. Turn over. Your Crown is finished!

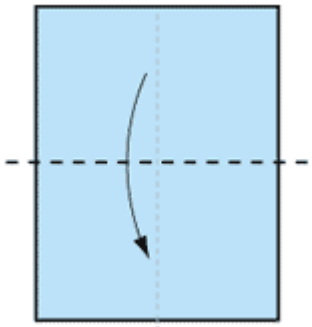


ORIGAMI/PAPER CROWN

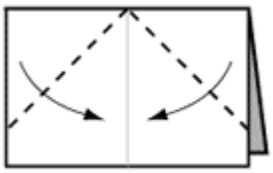
❖ STEPS IN MAKING ORIGAMI/PAPER SNAPPER



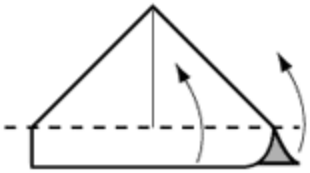
1. Start with a rectangular piece of paper, coloured side up. Fold in half, then open.



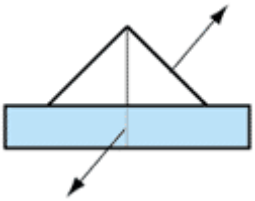
2. Fold in half downwards.



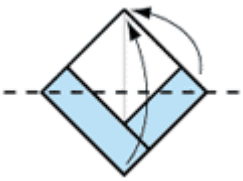
3. Bring corners in to centre line.



4. Fold uppermost layer upwards & do the same to the back. Crease well.



5. Pull the sides out and flatten.

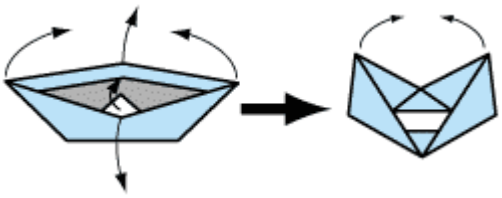


6. Fold front layer up to top, & do the same to the back.

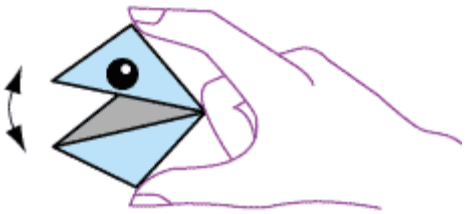
7. Pull the sides outwards and flatten.

8. Gently pull the top parts of the model outwards, making a boat shape.

9. Flatten well.

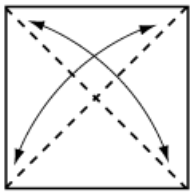


10. Tuck the little centre triangle under one of the sides. Then bring the outside corners to meet together, letting the sides move outwards.

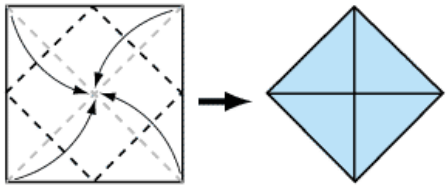


Finished Snapper. To make it snap, hold as shown and press together. It looks especiallly good with eyes!

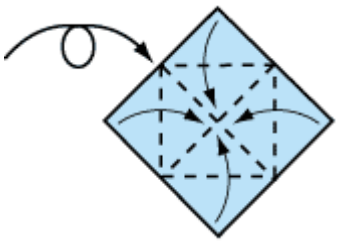
❖ STEPS IN MAKING ORIGAMI/PAPER FORTUNE TELLER



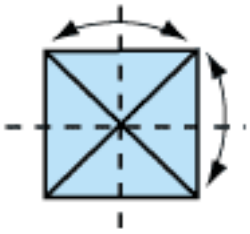
1. Start with white side up. Fold diagonally in both directions.



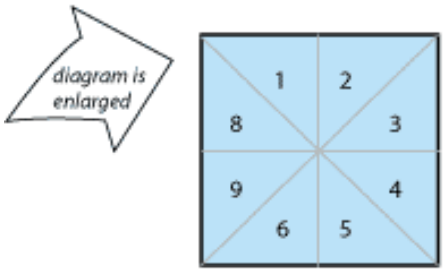
2. Fold each corner into the centre point.



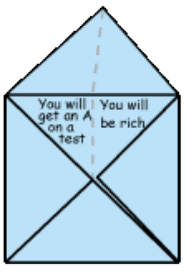
3. Turn over and again fold each corner into the centre point.



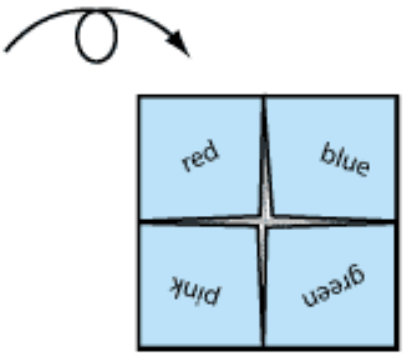
4. Fold in half along creases shown, both ways, and open.



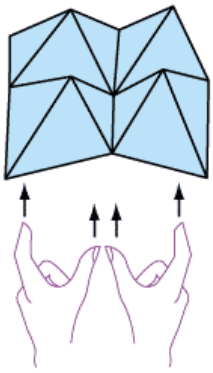
5. Number each segment from 1-8.



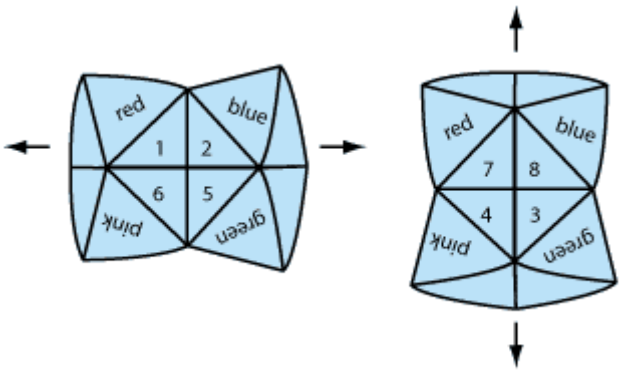
6. Open up each flap and write a fortune in each segment. Below are some examples of fortunes you can write, but you can also make up your own.



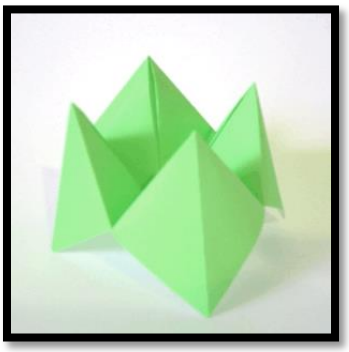
7. Turn the model over and write a colour on each flap as shown.



Finished Fortune Teller. Use your fingers to open it up.

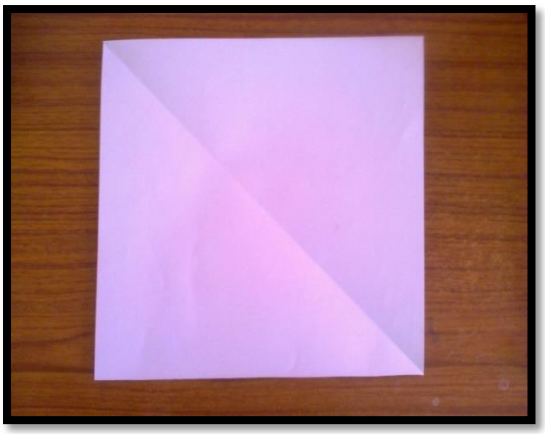


The fortune teller in action. Move your fingers together one way and then the next.

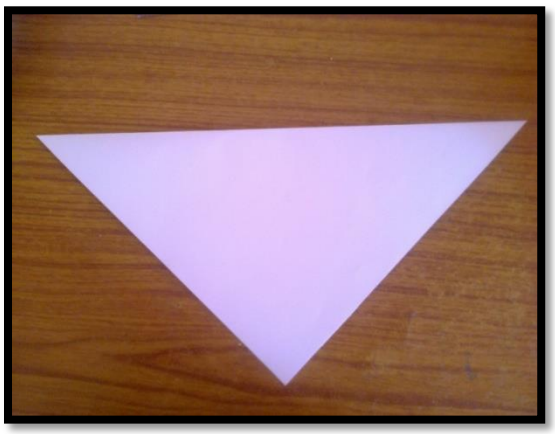


ORIGAMI/PAPER FORTUNE TELLER

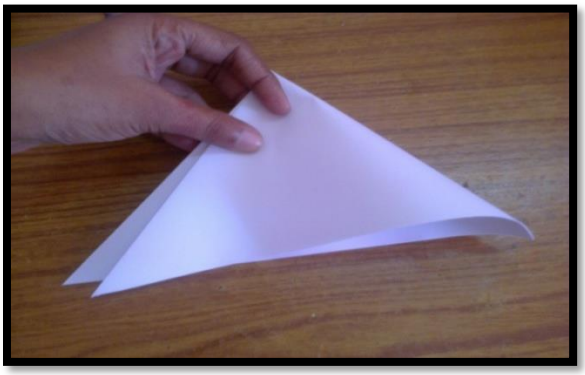
❖ STEPS IN MAKING ORIGAMI/PAPER HANGING SNOWFLAKE



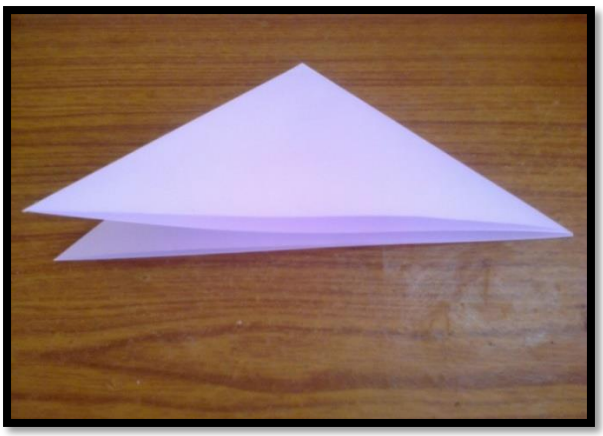
1. Take a piece of square paper



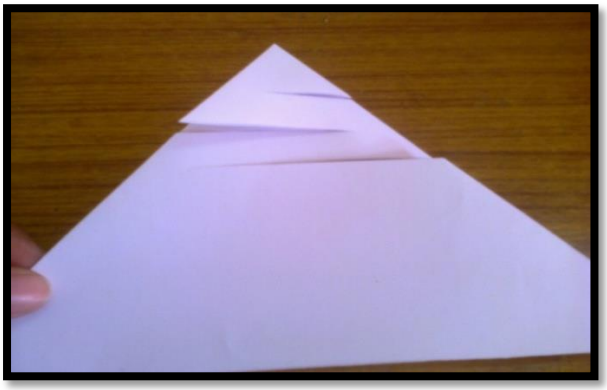
2. Fold it diagonally, such that it makes a triangle.



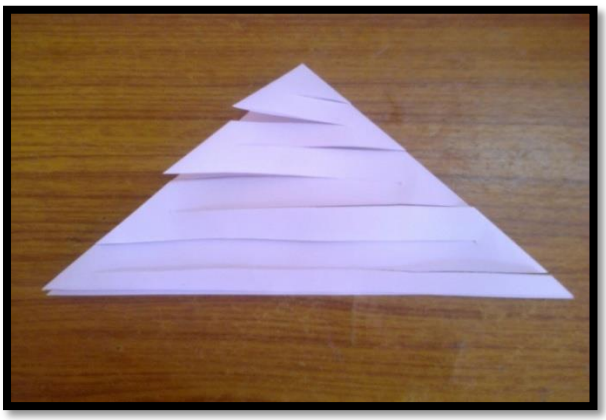
3. Again fold the triangle.



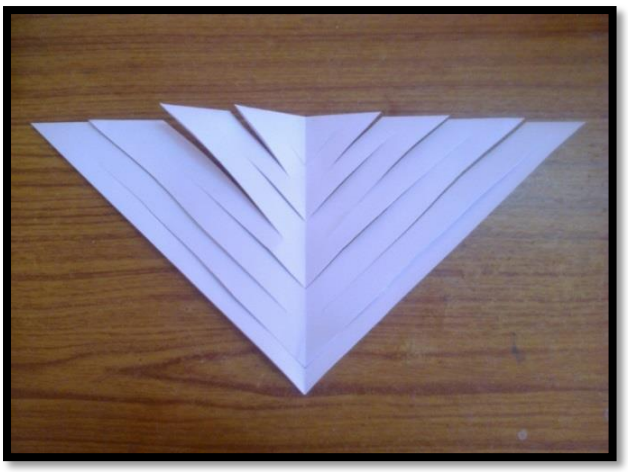
4. Make it into a two-fold triangle.



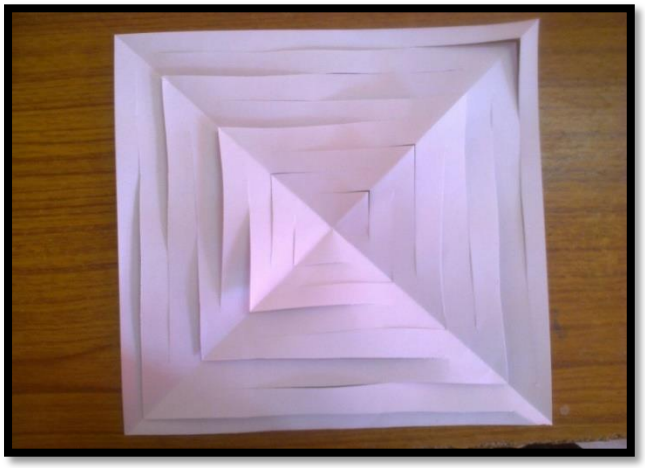
5. From the top of the triangle, start cutting the alternate slanting sides and make sure that the edges are not cut.



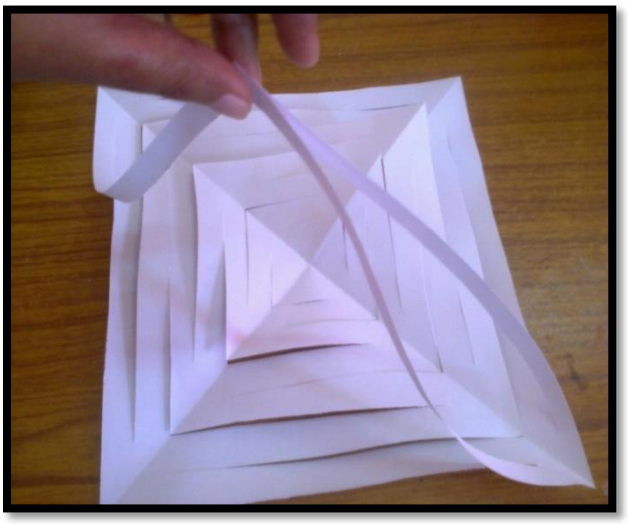
6. Parallel cuts should be made throughout the triangle at alternate sides.



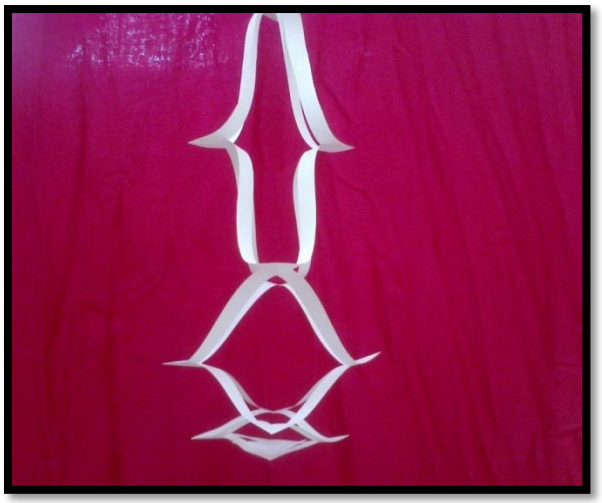
7. Unfold the top folding of the triangle.



8. Unfold the triangle fully and make it as a square.



9. Bring the outer most diagonal cuttings together and lift the paper.



10. The hanging snowflake will become ready.

CONCLUSION:

Origami/ handicraft making is something, in which you use paper and make lots of interesting things including paper frogs that jump and snapper which opens the mouth, fortune teller. Although it looks hard, it is quite simple if you are patient and follow the steps for each project closely. Origami is fun and easy to do. There are lots of things you can make. Giving origami is a thoughtful gift as well. You will be able to wow your friends. Just don't be surprised if you have to teach them how to make what you've given them! Now, get to folding!!!