

**EFFECTIVENESS OF PLAY THERAPY ON LEVEL
OF PAIN PERCEPTION AMONG TODDLERS
RECEIVING INTRAMUSCULAR INJECTION**



DISSERTATION SUBMITTED TO

**THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY
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IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE AWARD OF
DEGREE OF

MASTER OF SCIENCE IN NURSING

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**A STUDY TO ASSESS THE EFFECTIVENESS OF PLAY
THERAPY ON LEVEL OF PAIN PERCEPTION AMONG
TODDLERS RECEIVING INTRAMUSCULAR INJECTION
AT K.C.MULTISPECIALITYHOSPITAL, AVADI,
CHENNAI, 2010 – 2011**

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ABSTRACT

The prick of the needle in any part of the body is painful. Intramuscular injections are a fairly uncomfortable invasive procedure. Relief of pain is a basic need and right of all children. Care should be taken to reduce the amount of discomfort a person has to endure while receiving this type of injection. Pediatric nursing is traditionally involved in professional and competent care of children. Play therapy, a non-pharmacological method act as an effective tool on procedural pain perception among toddlers.

A study was conducted to assess the effectiveness of play therapy on level of pain perception among toddlers receiving intramuscular injection at K. C. Multispeciality Hospital, Avadi, Chennai. 2010-2011. The objective of the study was to compare the effectiveness of play therapy on level of pain perception among experimental and control group.

The study was conducted by adopting a quasi experimental post test only control group design. 60 toddlers who fulfilled inclusion criteria were selected and assigned 30 in experimental and 30 in control group by non-probability purposive sampling technique. The conceptual framework adopted was based on Weidenbach's Helping Art of Clinical Nursing.

In experimental group, the play therapy was given with sound producing dancing doll during intramuscular injection. Similarly in control group, no intervention was given during intramuscular injection and post test level of pain perception was assessed by using behavior pain assessment scale score. Analysis revealed that the toddler in experimental group showed a highly significant decrease in level of pain perception at $p < 0.001$.

The overall findings of the study showed that the play therapy with sound producing dancing doll was effective in reducing pain perception among toddlers receiving intramuscular injection. Therefore, play therapy can be used as a safe and effective tool, which helps in reducing the level of pain perception.

CHAPTER – I

INTRODUCTION

**“Play is a window through which we come
to understand the child from both inside and outside”**

- Sheridan

The future of our country depends on the health and strength of our children. Pediatric nursing is traditionally involved in professional and competent care of children. One of the most dramatic advances in pediatric nursing is atraumatic child health care. The word pain comes from the Greek word “Poine” which means punishment or penalty. International association for the study of pain defines pain as “An unpleasant subjective sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage”.

To the child of any age, a visit to the hospital can be a frightening event, a worst and traumatizing experience. The children’s image about hospital is a place where they get injections. Injections of any kind can hurt when they happen to see a nurse or a doctor with an injection syringe. The emotional disturbance and fear knows no boundary in children and threatened by painful procedures.

Relief of pain is a basic need and right of all children. However, children undergo painful therapeutic interventions such as intramuscular injection as part of their immunization schedule or treatment regimen. Intramuscular injections are a fairly uncomfortable invasive procedure. Care should be taken to reduce the amount of discomfort a person has to endure while receiving this type of injection.

Basically pain reducing methods can be grouped into two categories. Non-pharmacological and pharmacological. Whenever possible both should be used. Pain is often associated with fear, anxiety and stress. In pharmacological management, non opioids and nonsteroid anti-inflammatory drugs are suitable for mild to moderate pain, opioids are needed for moderate to severe pain. A number of non-pharmacological techniques such as distraction, relaxation, positioning, comfort devices, guided imagery

and cutaneous stimulation provide coping strategies that may help to reduce pain perception in adults, but the most commonest method is play in children, which makes pain more tolerable and decreases anxiety.

Comprehensive reviewed pain measures for children recommends that play therapy with sound producing dancing doll makes an auditory and visual distraction on level of pain perception among children aged between zero to three years during intramuscular injection.

The use of play in therapy was first elicited by pioneers of child psychotherapy. Play has been perceived as a beneficial therapy in every culture around the world. It helps to relieve muscle tension, reduce stress and improves cognitive skills. In general play is relatively safe and interesting too. Play therapy has opened a doorway to new possibilities and accomplishments in rendering a traumatic child health care in the new millennium.

BACKGROUND OF THE STUDY

According to Maclean, in a pediatric emergency department, nearly 20,000 children visit per year and there are 1727 procedures performed in 1210 children (18% of the total 6545 children) among which intramuscular injection is the commonest procedure.

The estimation of needle phobias range from 4.9% to 9% among children; Even if only 1% of the child population suffer from needle phobia it would still amount to more than two to five million children. Given a range number of children who report these fears and the concept of anticipatory distress is important in developing easily implanted intervention strategy.

A child receiving intramuscular injections show behavioral changes like breath holding, kicking the limbs, screaming and other discomfort. This leads to fear, anxiety and cry among other children.

Here is a table representing the behavioral responses during an intramuscular injection

Behavioral responses during intramuscular injection	Percentage (%)
Kicking the limbs	30
Breath holding spells with cry	50
Screaming	10
Other discomfort	10

SIGNIFICANCE AND NEED FOR THE STUDY

In early life, excessive activities like kicking the limb, breath holding due to pain and injury may change the course of development and causes long term changes in somatosensory and pain processing.

Marzieh Hasapourab, et al., (2005), stated a study on the effect of local cold therapy and distraction in pain relief using penicillin intramuscular injection in children. 90 children with ages from 5 to 12 were chosen randomly and divided into three groups. The first group received local cold therapy, the second group received distraction and the third group (the control group) received routine care. The data were collected through interview and questionnaire. Oucher scale was used to measure pain intensity. Descriptive and inferential statistics were used to analyse the findings. The findings of the study indicated that pain intensity was significantly higher in the control group than the experimental groups. Also, pain intensity among children was inversely proportional to their age. The study concluded that non-pharmacologic pain methods like local cold therapy and distraction are recommended to decrease pain intensity in children.

Dahlquist LM, et al., (2002), narrated a study on effects of distraction for children of different ages who underwent repeated needle sticks. Six children with chronic illnesses ranged in age from two to eight years. Several different cognitive distractors were used for the children based on their respective developmental levels. The needle stick procedures during which treatment was implemented included intramuscular injections, implanted port accesses and intravenous placements. Nine sessions of distraction were provided in which a therapist taught parents to coach their children to use distraction techniques. Reductions in child behavioral distress during the distraction treatment program were observed in five out of the six cases. Concomitant improvements in parental reports of

child distress, parents' self-report of feeling upset during the medical procedures, nurse estimates of child's heart rate and cooperation were found. Follow-up data were available for one of the successfully treated children. His improvements were maintained for both intramuscular injections and portacatheter accesses over 16 weeks without therapist involvement.

Sweet SD, et al., (1998), conducted a study to compare the relative importance of mothers' versus medical staffs' behavior in the prediction of infant immunization pain behavior. The objective of the study was to examine the relative importance of mothers' versus medical staffs' behavior in the prediction of infant pain during routine immunization. 60 infants aged 6 to 18 month received immunizations. Recording by video were used to code infant pain behavior using the Neonatal Facial Action Coding System. The findings of the study, maternal and staff vocalizations showed different patterns of relation with infant pain behavior. Mothers' distress-promoting behavior (e.g., reassurance) predicted increased infant pain behavior, while staffs' coping-promoting behavior (e.g., distraction) predicted decreased infant pain behavior.

Ebner CA (1996), indicated a study on cold therapy and its effect on procedural pain in children. A quasi-experimental design was used to determine if cold therapy decreased the perceived pain associated with intramuscular injections in children. A convenience sample of 40 children aged 10 to 18 years were randomly assigned to the control or experimental group. The experimental group had an ice pack placed on the injection site for 15 min prior to injection, whereas the control group received injections according to hospital protocol. Ice therapy did not show any significant in reduction in procedural pain. However, distraction and parental support were effective.

The indications of emotional difficulties are greatest among children between six months and six years of age and increase markedly if hospitalization is long or frequently recurs. Parents and teachers of children recently hospitalized, frequently report behavior problems suggestive of difficulties with separation, fearfulness and regressions. It is challenging for nurses and other health care professionals to watch children with bewildered, confused or in pain. The nurse must understand their own feelings about illness and death as well as about the necessities for painful procedures in order to be effective in providing support to children.

The child should be prepared for the painful procedure, by provision of sensory procedural information and coping skills. The coping skills such as relaxation, distraction or imaginary can be used to reduce both qualitative and quantitative aspects of the pain.

Distractions focus child attention on interesting or challenging tasks from painful medical procedures. Distraction is useful for children of all ages undergoing procedural pain. Children can be distracted by music, video games, storytelling, blowing parts blower etc. Toddlers can be distracted by showing them sound producing dancing doll.

The untreated pain lead to acute consequences like prolonged hyperglycemia, decreased pain threshold, increased hormonal release, break down of fat and storage of carbohydrate. The long term consequences like further cognitive deficits, poor motor performance and attention deficits also occur. Surveys found that children felt the injection more painful than the condition causing the pain.

Hence, it motivated the researcher to undertake a study to assess the effectiveness of play therapy by sound producing dancing doll to make an auditory and visual distraction on level of pain perception among toddlers receiving intramuscular injection, which may definitely have a positive implication in toddlers.

TITLE

Effectiveness of play therapy on level of pain perception among toddlers receiving intramuscular injection.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of play therapy on level of pain perception among toddlers receiving intramuscular injection at K. C. Multispeciality Hospital, Avadi, Chennai, 2010-2011.

OBJECTIVES

1. To assess the level of pain perception among toddlers receiving intramuscular injection in the experimental group.
2. To assess the level of pain perception among toddlers receiving intramuscular injection in the control group.
3. To compare the effectiveness of play therapy on level of pain perception among experimental and control group.
4. To associate the level of pain perception among experimental and control group with their demographic variables.

VARAIBLES

Independent Variables

Play therapy

Dependent Variables

Level of Pain perception

Demographic Variables

Age, gender, birth order in the family, treatment plan, religion, presence of care givers, education of care givers, occupation of care givers, family monthly income and area of living.

ASSUMPTIONS

1. Toddlers receiving intramuscular injection may experience pain.
2. Play therapy may have an effect on level of pain perception among toddlers receiving intramuscular injection.

NULL HYPOTHESIS

H₀₁ - There is no significant difference in the level of pain perception among toddlers receiving intramuscular injection between experimental and control group.

OPERATIONAL DEFINITIONS

Effectiveness

It refers to impact of play therapy and level of pain perception among toddlers receiving intramuscular injection which is assessed by Behavioral Pain Assessment Scale score.

Play therapy

It refers to diverting the toddler's attention and concentration from pain perception by sound producing dancing doll during intramuscular injection.

Pain Perception

It refers to the subjective experience by the toddlers during intramuscular injection which is measured by using Behavioral Pain Assessment Scale score.

Toddler

It refers to children in the age group of one to three years.

Intramuscular injection

It refers to any medication injected into the muscle.

DELIMITATIONS

1. The study was delimited to the period of four weeks of data collection.
2. This study was delimited to selected settings in Chennai

PROJECTED OUTCOME

1. Play therapy can be made as an effective way of pain management among toddlers receiving intramuscular injections.
2. This non – pharmacological measure is safe and inexpensive pain relief measure in toddlers which can be implemented in all pediatric setting.

SUMMARY

This chapter deals with the background of the study, significance and the need for the study, title, statement of the problem, objectives, variables, assumptions, null hypothesis, operational definitions, delimitations of the study and projected outcome.

ORGANIZATION OF THE REPORT

Further aspects of the study are presented in the following chapter

Chapter II : Review of literature and conceptual framework

Chapter III: Methodology

Chapter IV: Data analysis and interpretation

Chapter V: Discussion

Chapter VI: Summary, recommendations, nursing implications and limitations.

This is followed by references and appendices.

CHAPTER – II

REVIEW OF LITERATURE

“A great literature is chiefly the products of injuring mind in revolt against the immovable certainties of nation”.

- McClain H.L

A review of literature is an important step in the development of research project, and it also provides useful comparative material when the data collected in analyzed”.

- Abdellah

Good researchers do not exist in vacuum. Research findings should be an extension of previous knowledge and theory as well as a guide for future research activities. In order to develop a new knowledge the researcher reviews the existing work and also it is essential to understand what is already known about the topic. The review of literature provides a foundation upon which to base new knowledge.

It is a brief summary of previous research and the writing of recognized experts provides evidence the researcher in familiar with what is already known and with what is still untested.

Part – I: Literature related to study

Review of literature was organized under the following headings.

Section A : Literature related to general information on play and play therapy

Section B : Literature related to pain perception in children

Section C : Literature related to play therapy on pain

Section D : Literature related to pain assessment scale

Section E : Literature related to play therapy in hospital settings

Section F : Literature related to other therapies for pain

Part – II: Conceptual framework

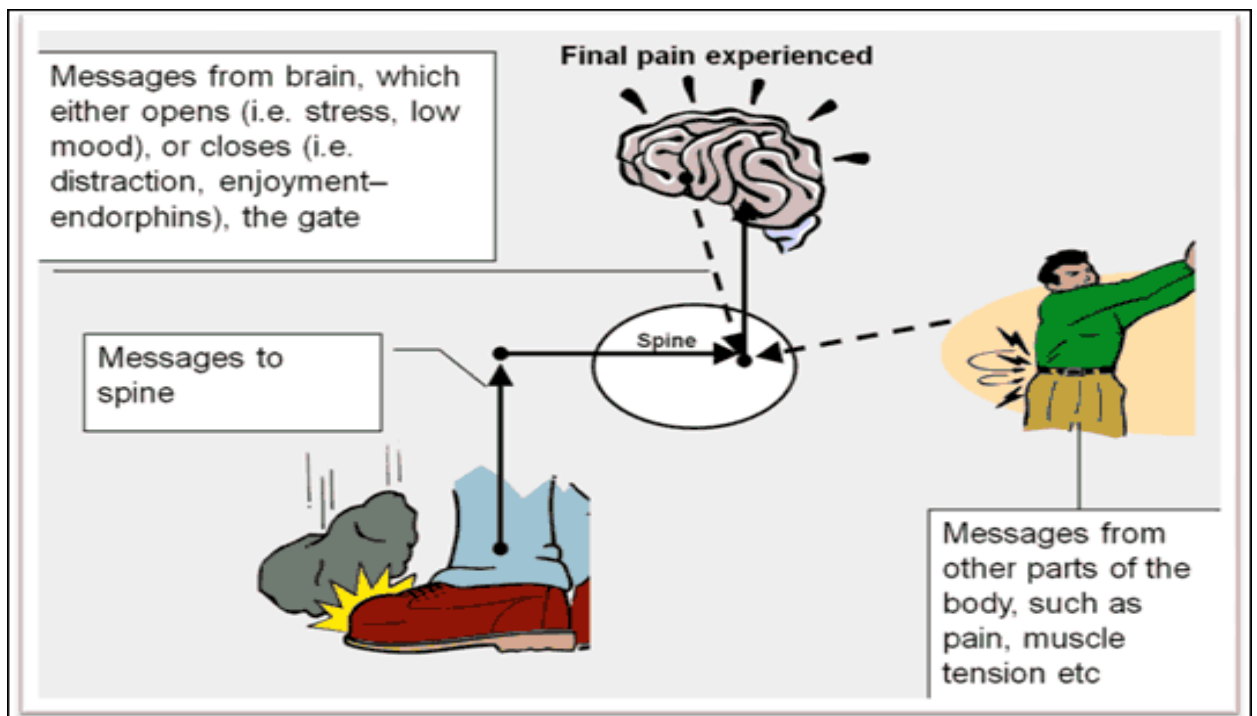
A. GENERAL INFORMATION ABOUT PLAY AND PLAY THERAPY

Definition

According to Lamb .N (2006) defined play as the occasion where the adult is engaged in interaction with the infant or attempted to stimulate the infant other than by simply vocalizing, smiling or engaging in care taking activities. Smiling, looking and laughing were defined as affiliative behavior, while proximity touching, approaching, seeking to be help fusing and reaching were considered to be attachment behaviors.

Gate Control Theory

Gate Control was the basis for Melzack and Wall' (1965). The authors proposed that large diameter (touch, pressure, vibration) and thin (pain) fibers meet at two places in the dorsal horn of the spinal cord: the “transmission” (T) cells and the inhibitory cells. Both large fibers and thin fibers signals excite the T cells and when the output of the T cells exceeds a critical level, pain begins. The job of the inhibitory cells is to inhibit activation of the T cells. The T cells are the gate on pain and inhibitory cells can shut the gate. If the diameter and thin fibers have been activated by noxious event, there will be exciting T cells (opening the gate). At the same time, the large diameters fibers will be exciting the inhibitory cells (tending to close the gate).



Therapeutic Powers of Play

The use of fantasy, symbolic play, and make-believe is a developmentally natural activity in children's play. Play is not only central but critical to childhood development. For a variety of species, including humans, play can be nearly as important as food and sleep. The intense sensory and physical stimulation that comes with playing helps to form the brain's circuits and prevents loss of neurons. Play is so critical to a child's development that it is promoted by the United Nations 1989 Convention on the Rights of the Child, Article 31.1, which recognizes "the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts." Play is perhaps the most developmentally appropriate and powerful medium for young children to build adult-child relationships, develop cause-effect thinking critical to impulse control, process stressful experiences, and learn social skills. Play can provide a child the sense of power and control that comes from solving problems and mastering new experiences, ideas and concerns. As a result, it can help build feelings of confidence and accomplishment (Drewes, 2005). Through play and play-based interventions children can communicate nonverbally, symbolically, and in an action-oriented manner.

Play is used in therapy by play therapists and child clinicians as a means of helping children deal with emotional and behavioral issues. Play therapy and the use of play-based interventions is by no means a new school of thought. The use of play to treat children dates back to the 1930s to Hermione Hug-Hellmuth, Anna Freud, and Melanie Klein. Several adult therapies have since been adapted for use with children, such as child-centered play therapy adapted by Virginia, sand play therapy evolving out. In the safe, emotionally supportive setting of a therapy room, the child can play out concerns and issues, which may be too horrific or anxiety producing to directly confront or talk about in the presence of a therapist who can help them to feel heard and understood. The toys become the child's words and play their language, which the therapist then reflects back to the child to foster greater understanding.

Curative Factors of Play

Therapists from differing theoretical orientations have long been interested in the healing or curative factors in psychotherapy. It is only over the past 25 years that child clinicians and researchers have looked more closely at the specific qualities inherent in

play behavior that makes it a therapeutic agent for change (Russ, 2004). The goal is to understand what invisible but powerful forces resulting from the therapist-client play interactions are successful in helping the client overcome and heal psychosocial difficulties. A greater understanding of these change mechanisms enables the clinician to apply them more effectively to meet the particular needs of a client. Freud wrote of insight, facilitated by the therapist's interpretations and analysis of transference. Yalom (1985) wrote about "therapeutic factors" or change mechanisms that he believed were inherent in group psychotherapy. They included acceptance, altruism, catharsis, instillation of hope, interpersonal learning, self-disclosure, self-understanding, universality, vicarious learning, and guidance. Offered critical factors that transcended theoretical schools of thought: counter-conditioning, extinction, cognitive learning, reward and punishment, transfer and generalization, imitation and identification, persuasion, empathy, warmth, and interpretation. Schaefer (1999) was the first to describe the therapeutic powers of play. Based upon a review of the literature, he identified 25 therapeutic factors

a) Self-Expression

Developmental limitations in expressive and receptive language skills, limited vocabulary repertoire, and limitations in abstract thinking ability contribute to young children's difficulty in communicating effectively.

b) Access To The Unconscious

Through the specially chosen toys, games, and materials for their therapeutic and neutral stimulus qualities, the child can reveal unconscious conflicts via the defense mechanisms of projection, displacement, and symbolization. With the support of the play therapist in a safe environment, the child can begin to transform and integrate unconscious wishes and impulses into conscious play and actions.

c) Direct And Indirect Teaching

Play allows you to overcome knowledge and skills deficits in clients by direct instruction. For example, when you teach social skills to children using dolls, puppets, and role plays, the children are more likely to learn and remember the lessons. The use of fun and games captures children's attention and increases their motivation to learn.

d) Abreaction

Through the use of play, children reenact and relive stressful and traumatic experiences and thus gain a sense of power and control over them.

e) Stress Inoculation

The anticipatory anxiety of upcoming stressful life events, such as a family move, starting school, birth of a sibling, or visit to a doctor or dentist, can be lessened by playing out the event in advance.

f) Counter conditioning of Negative Affect

Two mutually exclusive internal states are not able to simultaneously coexist, such as anxiety and relaxation or depression and playfulness. Thus allowing a child to play hide-and-seek in a darkened room can help in conquering fear of the dark.

g) Catharsis

Catharsis allows for the release and completion of previously restrained or interrupted affective release via emotional expression (e.g., crying) or activity (e.g., bursting balloons, pounding clay, or punching an inflated bunching bag).

h) Positive Affect

While involved in play, children tend to feel less anxious or depressed. Enjoyable activities contribute to a greater sense of well-being and less distress.

i) Sublimation

Sublimation allows the channeling of unacceptable impulses into substitute activities that are socially acceptable. The child who physically hits another may be redirected, helped to practice and learn through repetition alternative means of expressing negative feelings by using “war-like” board games (chess, checkers), card games (war), or competitive sports activities.

j) Attachment And Relationship Enhancement

Play has been found to facilitate the positive emotional bond between parent and child. Studies of Parent-Child Interaction Therapy have shown success in promoting parent-child attachment and relationship enhancement.

k) Moral Judgment

Piaget (1932) first asserted that children's spontaneous rule-making and rule-enforcing play in informal and unsupervised play situations was a critical experience for the development of mature moral judgment.

l) Empathy

Through role-play, children are able to develop their capacity for empathy, the ability to see things from another's perspective.

m) Power/Control

Children feel powerful and in control during their play. They can make the play world conform to their wishes and needs. In marked contrast with the sense of helplessness children experience during a disaster, play affords them a strong sense of power and control.

n) Competence and Self-Control

Play provides children with unlimited opportunities to create, such as through stories, worlds constructed in a sand tray or drawings, whereby they can gain a sense of competence and self-efficacy that boosts their self esteem.

o) Sense of Self

Through the play and child therapist's use of a child-led, child-centered approach, a child can begin to experience complete acceptance and permission to be himself without the fear of judgment, evaluation or pressure to change.

p) Accelerated Development

Preschool children's levels of development can advance in play beyond the ordinary accomplishments of their age period and function at a level of thinking that will only become characteristic later on observed that children in play are always above their average age and their daily behavior.

q) Creative Problem Solving

Numerous studies have demonstrated that play and playfulness are associated with increased creativity and divergent thinking in children important than the end

product, children can freely, without fear of consequences, come up with novel combinations and discoveries that can aid them in solving their own problems and social problems.

r) Fantasy Compensation

In play, children can get immediate substitute gratification of their wishes. A fearful child can be courageous, or a weak child can be strong. Robinson saw play as essentially a compensatory mechanism operating much like a daydream. Impulses and needs that cannot find expression in real life find an outlet through fantasy.

s) Behavioral Rehearsal

In the safe environment of play, socially acceptable behaviors, such as assertiveness versus aggressiveness, can be rehearsed and practiced. The play and child therapist can model in play new behaviors that are more adaptive for the child through use of puppets and role-play, which the child can then repeatedly practice to ensure skill development and mastery.

t) Rapport Building

One of the most potent therapeutic powers of play is the relational component of rapport building. This occurs when the client responds positively to the playful and fun-loving therapist. Since most children do not come willingly to therapy, they need to be initially engaged in the process through therapist/child play interactions. Also, since “play is the language of the child,” it provides a natural medium for communicating with and establishing a relationship with the child.

The therapeutic factors within play should not be viewed as mysterious but as capable of being understood, altered, and even fully controlled. The use of individualized treatment goals facilitates and guides the therapist in deciding which therapeutic powers to apply. Further research is needed to elucidate the specific therapeutic powers of play that are most effective with specific presenting problems of clients. This prescriptive matching of change agents with underlying causes will result in the most cost-effective play interventions.

Mary Jave (1996), In her article on “Imagine the possibilities / guided imagery” with toddlers and preschoolers states that, preschoolers love to make things and play capitalizing on the love play. We can help them through difficult experience. This is done by creating an atmosphere of trust allowing them to initiate a variety of activities while at the same time achieving success and feeling proud of their accomplishments. They may say I did not or did not cry or it may be proud smile. We can share the tasks to be done you start counting our snow balls and see how high you count before and I finish pulatin this bracelet (tape) on preschoolers have a vivid imagination and frequently turn and experience into play knowing this we can involve them in rich imagination stories and games during treatment and procedures that otherwise create anxiety and pain.

B. LITERATURE RELATED TO PAIN PERCEPTION IN CHILDREN.

According to Uman et al (2007), needle related procedures are a common source of pain and distress for children several psychological (cognitive – behavioral) interventions to manage or reduce pain and distress are available. However a previous comprehensive systemic review of the efficacy of these interventions has not been conducted. So he conducted a study to assess the efficacy of cognitive – behavioral psychological intervention for needle related procedural pain and distress in children and adolescent. Participants included children and adolescents aged 2 to 19 years undergoing needle related procedures. Only randomized controlled trials (RCTs) with at least five participants in each study arm comparing a psychological intervention group with a control or comparison group were eligible for inclusion. 2 review authors independently extracted data and assessed trial quality. Included studies were coded for quality using the Oxford Quality Scale devised by Jadad and colleagues. Standardized mean differences with 95% confidence interval were computed for all analysis using Rev Man 4.0 software. Results showed that 28 trials with 1951 participants were included together, these studies included 1039 participants in treatment conditions and 951 in control conditions. The most commonly studied needle – procedures were immunizations and injections.

Kolk et al (2006), recommended a experimental study to identify the effects of combination of local anesthesia precision of sensory and procedural information and parental involvement during venipuncture, 31 children were randomly assigned to one of 2 conditions: preparation or no preparation independent raters, who were blind to group assignments scored segments of the videotaped behavior of the children according to the

Groninger Distress Scale. Prepared children displayed significantly less distress before and during venipuncture than not prepared children, regardless of their gender, ethnic origin, age, injection history and the tension of their parent. He concluded that prevention and reduction of distress during venipuncture will help in increasing the cooperation during procedure.

According to Young (2005), pain is subjective. The individual pain response is learned through social learning and experience. Early pain experiences may play a particularly important role in shaping an individual's pain responses. Painful medical procedures such as immunization, venipuncture and dental care and minor emergency department procedures such as laceration repair compose a significant portion of the average child's experience with painful events. Inadequate relief of pain and distress during childhood painful medical procedures may have long term negative effects on future pain tolerance and pain responses. It reviewed the evidence for long term negative effects of inadequately treated procedural pain, the determinants of an individual's pain responses, tools to assess pain in children and intervention to reduce procedural pain and distress.

C. LITERATURE RELATED TO PLAY THERAPY ON PAIN

Thampy M.N (2003), recommended a study to evaluate the effectiveness of play therapy in helping children between 3 to 12 years in coping with painful procedures. 52 samples were assigned based on convenient sampling technique to the experimental and the control group. Research design used in this study was post test experimental and control group design. The tools were a questionnaire and observational rating scale to observe the reactions of the children during painful procedures. The findings of the study revealed that adequate coping ability was shown by 62.5% in verbal responses, 3.1% in facial expressions, 34.4% in posture and 46.9% in physical activity of the behavior rating scale. The study concluded that play therapy had helped in improving coping ability of children during painful procedures and children with play therapy coped better than children without play therapy.

Gillis I.J (2001), conducted a comparative study to assess the effectiveness of play therapy in gaining co-operation of the children during painful procedures like blood sampling, intravenous infusions, etc. Among the hospitalized children, 48 samples aged 3 to 5 years were assigned based on random sampling technique to the experimental and the

control group. Research design in this study was post test experimental and control group design. Research design used in this study was post test experimental and control group design. The conceptual framework was based on Roy's Adaptation Model. The tool was observational rating scale to observe the reactions of the children during painful procedures. The play activities were administered to the children just before the painful procedures. The findings of the study showed that 81.7% of the children reflected significant co-operation during painful procedures at 0.05 level. The study concluded that there was an effectiveness of activities in gaining cooperation of the children during painful procedure.

Sridevi. K (1996), equated an experimental study to evaluate the effectiveness of play therapy in the reduction of post operative pain CMC Hospital, Vellore. 50 samples aged 5 to 10 years were assigned based on purposive sampling technique to the experimental and control group. Research design used in this study was post test experimental and control group design. The concept of the study was explained with the help of Roy's Adaptation Model. The pain scale and also observation checklist were used to measure the pain level appropriately. The findings of the study revealed that 82.5% of the children showed that their pain significantly reduced from severe to mild condition at 0.05 level. The study concluded that play diverted children from pain thereby improving their coping abilities and made the hospital experience a pleasant one.

D. LITERATURE RELATED TO PAIN ASSESSMENT SCALE

Martha et al (2003), collected evidence report to test the validity of the face, leg, activity, cry and consolability of FLACC behavioral pain assessment scale for use with children 30 children aged 3 to 7 years (5.01 ± 1.44) who have undergone a variety of surgical procedures were observed and assessed for pain intensity at 20 + 2 hours after surgery. FLACC scores were assigned by one of the nurse investigators and a self report of pain using the FACES scale was obtained from the child. There were significant and positive correlation between the FLACC and FACES score for the entire sample and for the scores of children 5 to 7 years but not for children less than age 5. These findings provide additional support for the construct validity of the FLACC Pain Assessment Tool.

Hester et al (2000), stated a study to support the validity of the FLACC Pain Assessment tool in post operative children as demonstrated by significant positive correlation between FLACC and FACES Score. 3 to 4 years children who have undergone surgeries were taken as samples. The findings from this study lend support to the overall construct validity of the FLACC as a measure of post operative pain in children. Further study in a variety of settings involving diverse cultures and races provide data for further validation and generalization of this scale.

Merkel (1997), conducted a study to evaluate the reliability and validity for the FLACC Pain Assessment tool which incorporates 5 categories of pain behaviours, among 89 children aged 2 months to 7 years (3.0 ± 2.0 years) who had undergone a variety of surgical procedures, were observed in the post anesthesia care unit (PDCU). The study consisted of (1) measuring interrater reliability, (2) testing validity by measuring changes in FLACC scores in response to administration of analgesics and (3) comparing FLACC scores to other pain ratings. The tool used here was FLACC Pain Behavioral Scale and Objective Pain Scale. The results showed that FLACC tool was found to have high interrater reliability. Validity was also supported by the correlation with scores assigned by the objective pain scale and nurse's global rating of pain. Thus the FLACC provides a simple framework for quantifying pain behavior in children who may not be able to verbalize the presence of severity of pain.

E. LITERATURE RELATED TO PLAY THERAPY IN THE HOSPITAL SETTINGS

Furtado and Limara. R.S (2001), equated a study on playing in hospital in addition to nursing care. The study design was experimental and control group design. 30 preschool children were assigned to the experimental and the control group based on random sampling technique. A questionnaire and observation checklist was used to collect the data. The findings of the study showed that there was significant difference on reduction of pain fear, tension and also anxiety at 0.05 level. This study points out that the act to play has repercussions in the child nurses and hospital. To the child it is not obstructing the development, but helping them in the understanding about what is occurring with themselves and discharge, pain, fear, tension, anxiety and frustration promote satisfaction,

fun, spontaneity and allows it to transform experience, change the current view about the hospitalization that hospital is not only painful and suffering place.

Hall.L, Reet.M (2000), equated a study on enhancing the state of play. Children's nursing play is recognized as an essential component of a child's life. Playing with children in hospital can aid nurses in assessing, communicating and providing nursing care. Play workshops can facilitate nursing students' understand the importance and benefits of play. Play can benefit children, healthcare professionals and parents in the hospital setting. Play workshops encourage children's nurses to view play as an integral part of role.

Meschiany.A, Krontal.S (1998), collected evidence reports on study of toys and games in play therapy. The present article discusses the difference between play therapy with toys and play therapy with games from a psychodynamic point of view. Toys are regarded as offering the child an opportunity to develop a variety of transference reaction. While games because of their inherent competitive characteristic, restrain the scope of possible transference reactions. The authors claim that therapist should consider these eventualities when choosing which games or toys are to be available in the therapy room. This choice might determine, in advance, the initial characteristics of the parents' transferences.

Pressdee.D et al (1997), narrated a study on the use of play therapy in the preparation of children undergoing MRI (Magnetic Resonance Imaging). It has become an important technique in the evaluation of a wide range of congenital and acquired conditions in children. The use of surface coils may exacerbate this, often necessitating recourse to sedation to anesthesia. They describe a technique involving play therapy which they have found useful in the preparation of young children for MRI and which has reduced the number of non-diagnostic scans and the need for sedation or anesthesia.

Collier and Mark Inner (1990), indicated a study on play therapy in hospitalized children and remarked that play means recreation. A structured technique programme on play preparation was conducted by the research in the city hospital, Nottingham findings of the study indicated that the toys and play materials were the excellent ways of educating children during medical procedures.

Antonio I.J (1984), stated a study on therapeutic use of play for most hospitalized children centers around self and stressful situations as perceived by the child. Play can be a tool to understand and intervene with pediatric patients. Collaboration with nurses who are clinical specialist early childhood educators, and others who have experts knowledge of children and play equipment is useful to plan purposeful play programs or play sessions for special needs of hospitalized children. Nurses can use play to provide pediatric patients with emotional and cognitive growth promoting activities which facilitate a more positive hospital experience and long-term outcome.

Chan, J.M (1980), indicated a study on preparation of child for procedures and surgery through play unstructured and structured play sessions which enable children to anticipate threatening events and mobilise their coping behaviors. 56 samples aged 3 to 6 years were assigned based on convenient sampling technique to the 2 experimental and control group design. The findings of the study revealed that through manipulating appropriate play material including miniature size medical equipment, 72% of children understood preparation for procedures, misinterpreted or denied as measured by questionnaire method. Concrete experiences (example doctor puppet play) enabled 64% of children to understand hospital routines and sequence of events as measured by observation checklist. Sensory experiences (example needle play) help 76% of children to dramatise situations and to adopt changes of role from passive to active ones as measured by observation. The study concluded that psychological preparations for necessary procedure and surgery through play results in children enduring and cooperating more readily and have more trust in all medical personnel.

Butler.A et al (1975), narrated a study to evaluate the effectiveness of play therapy on anxiety of preschool in the hospital environment using post test experimental and control group design. 44 samples aged 2 to 6 years were assigned to the experimental and the control group based on the convenient sampling technique. The tools were Child Anxiety Scale and Observational Rating Scale to observe the reactions of the children. The findings of the study revealed that play can be a simple, effective way of helping 77% of (preschool) child to deal with the stranger and sometimes painful hospital world and to master situations that might otherwise be overwhelming. The study concluded that the type of play can be incorporated easily into the nursing care plan and can become an essential aspect of the care of the hospitalized (preschool) child.

F. LITERATURE RELATED TO OTHER THERAPIES FOR PAIN

Negin Masoudi Alavi (2000), recommended a study Effectiveness of acupressure to reduce pain in intramuscular injections It was a crossover single blind experimental design. Sixty-four patients were recruited into the study, each subject received an injection with acupressure applied to one buttock and an injection without acupressure to the other buttock or vice versa. The two conditions were randomly allocated. The perception of pain was measured on a visual analogue scale. Thirty-two (50%) were female. The mean age was 28 ± 9.9 years old. Fifty patients were injected with penicillin 6.3.3 (78%) and 14 patients received penicillin G plus procaine (22%). The mean score for perceived pain intensity for the acupressure injection was 3 ± 2 and the mean score for the injection without acupressure was 5 ± 2 . The result showed that the perceived pain intensity was at average 2.5 lower in the acupressure group comparing to ordinary injection ($P < 0.000$). According to findings the acupressure can reduce the pain of intramuscular injection.

Ryhanen P et al (1994), stated a study to assess postoperative pain relief in children. A comparison between caudal bupivacaine and intramuscular diclofenac sodium. Two hundred and fifty children undergoing herniotomy or orchidopexy under general anesthesia were randomly allocated to receive pre-operatively either diclofenac sodium 1 mg.kg⁻¹ given intramuscularly or a caudal injection of bupivacaine 0.25% 1 ml.kg⁻¹ with or without adrenaline or no analgesia. Plasma diclofenac and beta-endorphin concentrations were determined in eight and 21 patients respectively. Postoperative pain was assessed by ward nurses who were blinded to the group allocation. Comparison with the control group showed diclofenac to be an effective analgesic. Caudal bupivacaine provided more pain-free children during the early postoperative hours, but later the need for pethidine as rescue analgesic was lower among the children who had received intramuscular diclofenac. Caudal analgesia abolished the stress-induced increase in plasma beta-endorphin level which was found in the children given diclofenac and in those who served as controls. Total plasma clearance of intramuscular diclofenac sodium appears to be higher in children than in adults. A single intramuscular dose of diclofenac significantly reduces the need for an opioid analgesic in children after inguinal herniotomy or orchidopexy, and owing to its long duration of action, it offers an alternative or complementary method of pain relief to caudal analgesia.

PART - II

CONCEPTUAL FRAMEWORK

This section deals with conceptual framework adopted for the study. A conceptual framework or model provides the investigator, the guidelines to proceed in attaining the objectives of the study based on a theory. It is a schematic representation of the steps, activities and outcome of the study.

The conceptual framework of this study is based on Wiedenbach's Helping Art of Clinical Nursing Theory. Ernestine Wiedenbach's views, this theory has a set of interrelated concepts that gives systematic view of a phenomenon that is explanatory and predictive in nature. The present study is aimed to assess the effectiveness of play therapy on level of pain perception among toddlers receiving intramuscular injection.

Wiedenbach's enrolled in the Johns Hopkins Hospital School of Nursing and wrote Family centered maternity nursing. She developed the Helping Art of Clinical Nursing Prescriptive Theory in 1964. According to Wiedenbach's the practice of nursing comprises a wide variety of services, each directed towards the attainment of one of its three components.

Step 1: Identifying the need for help

In identifying the need the nurse perceives patients as consistent or inconsistent with her concept, collect the information and identifying the need for help. There are two components in identifying the need for help.

a) General information:

This comprises of collecting the information to identify the need. In this study the investigator assessed the general information, which includes the demographic variables.

b) The central purposes:

Central purpose refers to what the nurse wants to accomplish. In this study, the investigator identified the central purpose was to reduce the level of pain perception.

Step II: Ministering the needed help

In ministering the needed help to the patients, the nurse may give advice or information, make referral apply a comfort measure or carry out therapeutic procedure. There are two components in ministering the need for help.

a) Prescription

It refers to the plan of care, the nature of action that will fulfill the central purpose. In this study, the investigator adopted sound producing dancing doll as prescription.

b) Ministering (Intervention)

The nurse may give advice or information and carry out therapeutic procedure. In this study the investigator gave sound producing dancing doll among toddlers receiving intramuscular injection.

Step III: Validating that the needed help was met

It is validating that the needed help was delivered in achieving the central purpose. This step involves the post assessment after ministering the help and comparison/analysis to infer the outcome. This approach thereby enables the researcher to make suitable decision and recommended action to continues, drop or modify the nursing action. Here it is the effectiveness of play therapy on level of pain among toddlers receiving intramuscular injection.

Realities

Realities refer to the physical, physiologic, emotional, and spiritual factors that come into play in a situation nursing actions.

i. Agent

The agent is the participating nurse or a designer who has the personal attributes, capabilities, commitment, and competence to provide nursing care. In this study the agent is the researcher.

ii. The recipient

The recipient is the patient who has personal attributes, problems, capabilities, aspiration, and abilities to cope. In this study the recipient was toddlers who underwent intramuscular injection procedure.

iii. The goal

The goal is the nurses desired outcome, it directs actions and suggests the reason for taking those actions. In this study the goal is to reduce the level of pain perception.

iv. The means

The means are the activities and devices used by the nurse to achieve the goal. In this study the mean is sound producing dancing doll.

v. The framework

The framework refers to the facilities in which nursing is practiced; it comprises human, environment, professional, and organizational aspects of care. In this study the framework refers to toddlers in K. C. Multispeciality hospital.

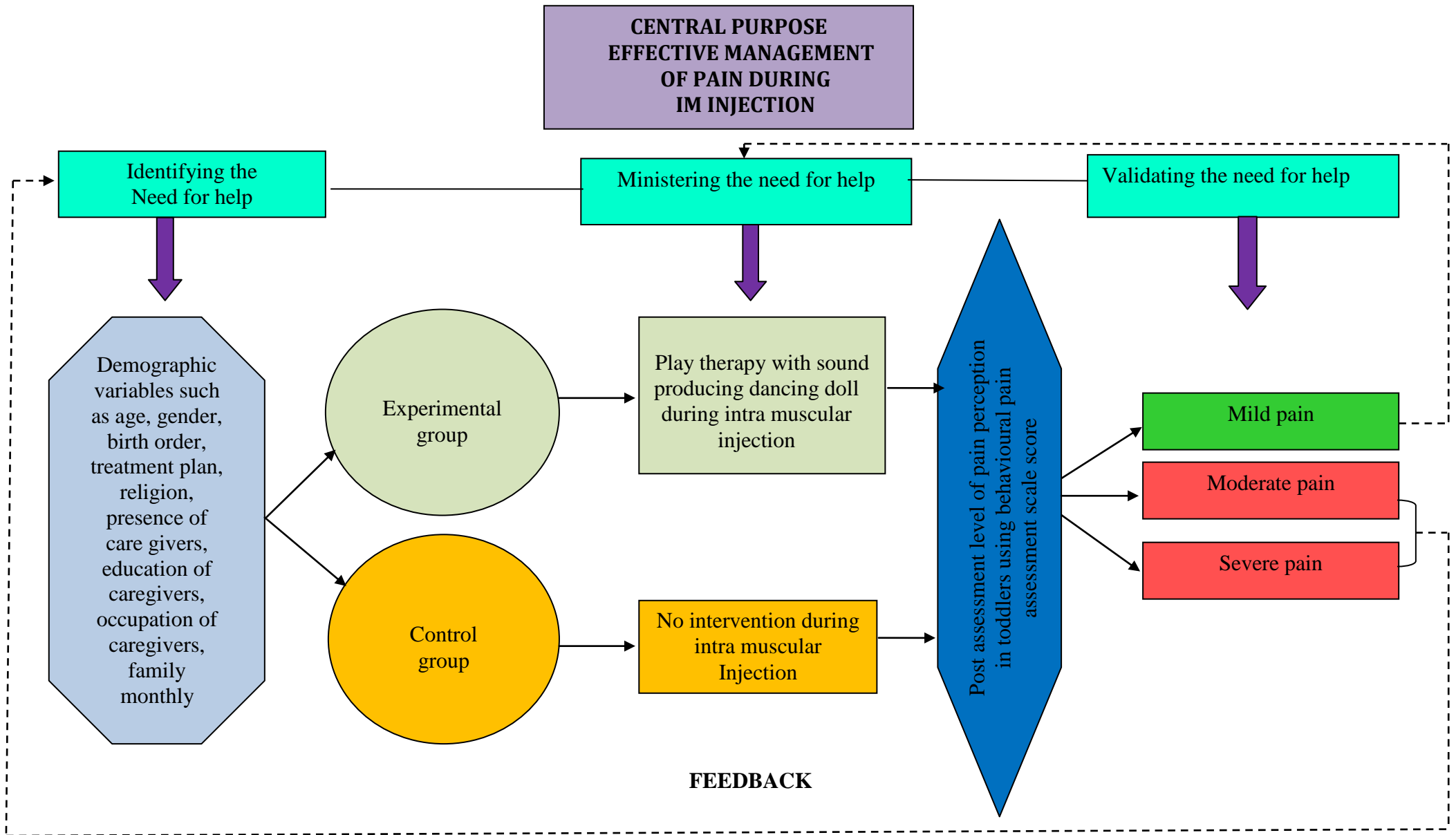


Fig.1: MODIFIED WIEDENBACH'S HELPING ART OF CLINICAL NURSING MODEL (1964)

CHAPTER – III

RESEARCH METHODOLOGY

This chapter deals with the description of different steps which were taken by the investigator for the assessment of play therapy on level of pain perception among toddlers receiving intramuscular injections. It includes research approach, research design, setting of the study, population, sample, sample size and sampling technique. It further deals with the development and description tool for data collection, content validity, pilot study, procedure for data collection and statistical analysis.

RESEARCH APPROACH

The research approach used by the investigator to assess the level of pain perception was evaluative approach.

RESEARCH DESIGN

The investigator has chosen the Quasi Experimental Post test only control group design to find the effect of play therapy with sound producing dancing doll on level of pain perception among toddlers receiving intramuscular injections. In this design there are two groups namely experimental and control. The subjects in these groups are not selected by randomization and both are not pretested.

The investigator has chosen the Quasi Experimental Post test only control group design to find the effectiveness diagrammatically shown as:

Group	Manipulation	Post-assessment
Experimental	Intramuscular injection with play therapy	Using Behavioral Pain Assessment Scale score after intramuscular injection
Control	Intramuscular injection without play therapy	Using Behavioral Pain Assessment Scale score after intramuscular injection

VARIABLES

Independent Variable

Play therapy

Dependent variable

Level of Pain perception

Demographic Variables

Age, gender, birth order in the family, treatment plan, religion, presence of care givers, education of caregivers, occupation of care givers, family monthly income and area of living.

RESEARCH SETTING

The study was conducted at K.C.Multispeciality Hospital, Avadi, Chennai. It is situated 7 kilometers away from Vel R.S Medical College - College of Nursing, Chennai.

POPULATION

Population refers to entire toddler group receiving intramuscular injection in pediatric outpatient department and it is important to make the distinction between target and accessible population.

Target Population

Target population of the study comprised of all the toddler group receiving intramuscular injection in pediatric outpatient department.

Accessible Population

Accessible population of the study comprised of all the toddler group receiving intramuscular injection in pediatric outpatient department at K.C.Multispeciality Hospital, Avadi, Chennai.

SAMPLE

The sample of the study comprises of toddler who fulfilled inclusion criteria in K.C.Multispeciality Hospital, Avadi, Chennai.

SAMPLE SIZE

The sample size for the study was 60 toddlers among 30 toddlers were in experimental group and 30 toddlers were in control group.

SAMPLING TECHNIQUE

Non-probability purposive sampling technique was used to evaluate the effectiveness of play therapy on level of pain perception among toddlers receiving intramuscular injection.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

1. Toddlers between the age group of one to three years.
2. Toddlers who received intramuscular injection (medications and immunization) only in pediatric outpatient department.
3. Both genders were included in this study.
4. Care givers of toddlers who were willing to participate.

Exclusion Criteria

1. Toddlers who were seriously ill.
2. Toddlers who were highly agitated.

METHOD OF DEVELOPING THE TOOL

The tool was developed after an extensive review of literature and also considering the opinion given by nursing medical experts

DESCRIPTION OF THE TOOL

The investigator used the tool by observational method. It consists of 2 sections.

Part I: Demographic variables

Part II: Behavior Pain Assessment (FLACC) Scale

The scale consists of items which help to assess the behavioral parameters related to pain in toddler. The toddlers were evaluated in each indicator. It is used for the children less than 7 years of age. The scoring ranges from 1 to 10 which is categorized as follows.

Total score	Level of pain
1 to 3	Mild
4 to 6	Moderate
7 to 10	Severe

VALIDITY OF THE TOOL

The content of the tool was validated by one pediatrician, one medical expert and three nursing experts. Minor suggestions regarding arrangement and modifications of questions were made in the tool. The expert's suggestions were incorporated and the tool was finalized and used by the investigator for the main study.

RELIABILITY OF THE TOOL

The reliability of the tool was determined by using inter-rater reliabilities technique. The reliability was done by using Spearman's Rank Correlation method. The reliabilities score was +0.94 which showed a positive correlation $r=0.94$. Hence the tool was considered reliable for proceeding the main study.

ETHICAL CONSIDERATIONS

Ethical consideration refers to a system of moral values that is concerned with the degree to which research procedure adheres to professional, legal and social obligations to the study participants.

1. The study was conducted after the approval of dissertation committee and hospital authorities
2. Formal permission was obtained from the Director of K.C. Multispeciality Hospitals, Avadi, Chennai.
3. The care giver, were already explained about the study, purpose and oral consent were obtained. Assurance was given to the caregivers that the result would be kept confidential.

PILOT STUDY

The pilot study is a trial run for main study. The refined tools were used for pilot study to test feasibility and practicability. The formal permission was obtained from the director of K.C. Multispecialty Hospitals, Avadi, Chennai. A brief introduction about self and study was explained to caregivers of toddlers, oral consent was obtained and the confidentiality of the response was assured. The experimental group received intramuscular injection with play therapy (sound producing dancing doll) and post assessment was done. For control group only intramuscular injection without play therapy and post assessment was done. The investigator conducted the study from 09.05.10 to 12.05.10. 6 toddlers who fulfilled inclusion criteria were selected and assigned to the experimental and control group. There were no practical difficulties made by investigator and tools were considered to be reliable and appropriate. Hence the same procedure was decided to be followed in main study.

DATA COLLECTION PROCEDURE

The study was conducted after the approval of dissertation committee and hospital authorities. Formal permission was obtained from director of K.C. Multispecialty Hospitals.

The main study was conducted from 15.05.10 to 15.06.10 at K.C. Hospitals, Avadi, Chennai. 60 toddlers who fulfilled inclusion criteria were selected and assigned 30 in experimental and 30 in control group.

The researcher first introduced herself to the caregivers of toddler and established a good rapport with them. The purpose of the study was explained to the caregivers of toddlers, oral consent was obtained and assured confidentiality. The toddlers were selected by using non-probability sampling technique. During intramuscular injection the toddlers were given play therapy with sound producing dancing doll. Post assessment was done by using Behavioral Pain Assessment (FLACC) Scale Score. In control group same procedure was repeated without play therapy.

Date	Experimental group	Control Group	Total
15/5/10	1	-	1
17/5/10	2	2	4
18/5/10	1	1	2
19/5/10	1	2	3
20/5/10	2	2	4
21/5/10	1	1	2
22/5/10	2	2	4
24/5/10	2	1	3
25/5/10	1	1	2
26/5/10	1	2	3
27/5/10	2	2	4
28/5/10	1	1	2
29/5/10	2	2	4
31/5/10	2	2	4
01/6/10	1	2	3
02/6/10	2	2	4
03/6/10	2	2	4
04/6/10	2	1	3
05/6/10	2	2	4
Total	30	30	60

DATA ANALYSIS PROCEDURE

The data were analysed and interpreted based on the objectives using both descriptive and inferential statistics.

Descriptive Statistics

Frequency and percentage distribution were used to analyse the demographic variables of the toddlers in experimental and control group. Mean and standard deviation were used to compare the post assessment level of pain perception among toddlers in experimental and control group.

Inferential Statistics

Independent sample 't' test was used to differentiate significant level of pain perception among toddlers in experimental and control group. Chi-Square test was used to find out the association of experimental and control group with their demographic variables.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of data collected from toddlers to assess to effectiveness of play therapy on level of pain perception during intramuscular injection at K.C. Multispeciality Hospitals, Avadi.

Descriptive and inferential statistics were used for the analyses of the data. As per the objective of the study the interpretation has been tabulated and organized.

ORGANISATION OF DATA

The findings of the study organized and presented under the following heading.

- Section A:** Frequency and percentage distribution of demographic variables.
- Section B:** Frequency and percentage distribution of post assessment level of pain perception in experimental group and control group
- Section C:** Comparison of post assessment level of pain perception between experimental and control group.
- Section D:** Association of post assessment level of pain perception among toddlers in experimental group with their demographic variables.
- Section E:** Association of post assessment level of pain perception among toddlers in control group with their demographic variables.

SECTION A

Table 1: Frequency and percentage distribution of demographic variables.

n = 60

S.No.	Demographic Variables	Experimental Group		Control Group	
		No.	%	No.	%
1	Age				
	a) 1 to 2 years	15	50.0	15	50.0
	b) 2 to 3 years	15	50.0	15	50.0
2	Gender				
	a) Male	19	63.33	16	53.33
	b) Female	11	36.67	14	46.67
3	Birth order in family				
	a) 1	13	43.33	12	40.0
	b) 2	13	43.33	11	36.67
	c) 3 and above	4	13.34	7	23.33
4	Treatment plan				
	a) Vaccine	14	46.67	12	40.0
	b) Antibiotics	16	53.33	18	60.0
	c) Others	-	-	-	-
5	Religion				
	a) Hindu	16	53.34	15	50.0
	b) Muslim	7	23.33	8	26.67
	c) Christian	7	23.33	7	23.33
	d) Others	-	-	-	-
6	Presence of caregivers				
	a) Mother	21	70.0	21	70.0
	b) Father	8	26.67	9	30.0
	c) Grand parents	-	-	-	-
	d) Other relatives	1	3.33	-	-
7	Education of caregivers				
	a) Non literate	-	-	-	-
	b) Primary education	2	6.66	5	16.67
	c) Secondary education	14	46.67	11	36.67
	d) Graduates	14	46.67	14	46.66
8	Occupation of caregivers				
	a) Unemployed	17	56.66	18	60.0
	b) Labor	5	16.67	5	16.67
	c) Business	5	16.67	5	16.67
	d) Professional	3	10.0	2	6.66
9	Family monthly income				
	a) Below ` 5000	-	-	-	-
	b) ` 5000 to 10000	10	33.33	9	30.0
	c) Above ` 10000	20	66.67	21	70.0
10	Area of living				
	a) Urban	15	50.0	12	40.0
	b) Semi urban	12	40.0	15	50.0
	c) Rural	3	10.0	3	10.0

The above table reveals, that the distribution of the respondents, with respect to their age groups, both were equally matched. Out of 30 samples 15(50%) of toddlers belongs to age group of 1 to 2 years and 15(50%) belongs to age group of 2 to 3 years both in experimental and control group.

Considering the gender, in experimental group majority 19(63.33%) of toddlers belongs to male and 11(36.67%) belongs to female. In control group majority 16 (53.33%) of toddlers belongs to male and 14 (46.67%) belongs to female.

With respect to the distribution of birth order in the family, in experimental group majority 13(43.33%) of toddlers belongs to order 1 and 2, 4(13.34%) of toddlers belongs to order 3. In control group majority 12(40%) of toddlers belongs to order 1, 11(36.67%) of toddlers belongs to order 2 and 7(23.33%) of toddlers belongs to order 3.

Regarding the treatment plan, in experimental group majority 16(53.33%) of toddlers belongs to antibiotics, 14(46.67%) of toddlers belongs to vaccine and others were nil. In control group majority 18(60%) of toddlers belongs to antibiotics and 12(40%) of toddlers belongs to vaccine and others were nil.

Considering the religion, in experimental group majority 16(53.34%) of toddlers belongs to Hindu, 7(23.33%) of toddlers belongs to Muslim, 7(23.33%) of toddlers belongs to Christian and others were nil. In control group majority 15(50%) of toddlers belongs to Hindu, 8(26.67%) of toddlers belongs to Muslim, 7(23.33%) of toddlers belongs to Christian and others were nil.

With respect to the presence caregivers, in experimental group majority 21(70%) of toddlers belongs to mother, 8(26.67%) of toddlers belongs to father, 1(3.33%) of toddlers belongs to other relatives and grandparents were nil. In control group majority 21(70%) of toddlers belongs to mother, 9(30%) of toddlers belongs to father, grandparents and other relatives were nil.

Regarding the education of caregivers, in experimental group majority 14(46.67%) belongs to secondary education and graduates, 2(6.66%) belongs primary education and Non-literates were nil. In control group majority 14(46.67%) belongs to graduates,

11(36.67%) belongs to secondary education, 5(16.67%) belongs primary education and Non-literates were nil.

Considering the occupations of caregivers in experimental group majority 17(56.66%) belongs to unemployed, 5(16.67%) belongs to labors, 5(16.67%) belongs to business and 3(10%) belongs to professionals. In control group majority 18(60%) belongs to unemployed, 5(16.67%) belongs to labors, 5(16.67%) belongs to business and 2(6.66%) belongs to professionals.

With respect to the distribution of family monthly income, in experimental group majority 20(66.67%) belongs to above ` 10000, 10(33.33%) belongs to ` 5000 to 10000 and below ` 5000 were nil. In control group majority 21(70%) belongs to above ` 10000, 9(30%) belongs to ` 5000 to 10000 and below ` 5000 were nil,

Regarding the area of living, in experimental group majority 15(50%) of toddlers belongs to urban, 12(40%) of toddlers belongs to semi urban and 3(10%) of toddlers belongs to rural. In control group majority 15(50%) of toddlers belongs to semi urban, 12(40%) of toddlers belongs to urban and 3(10%) of toddlers belongs to rural.

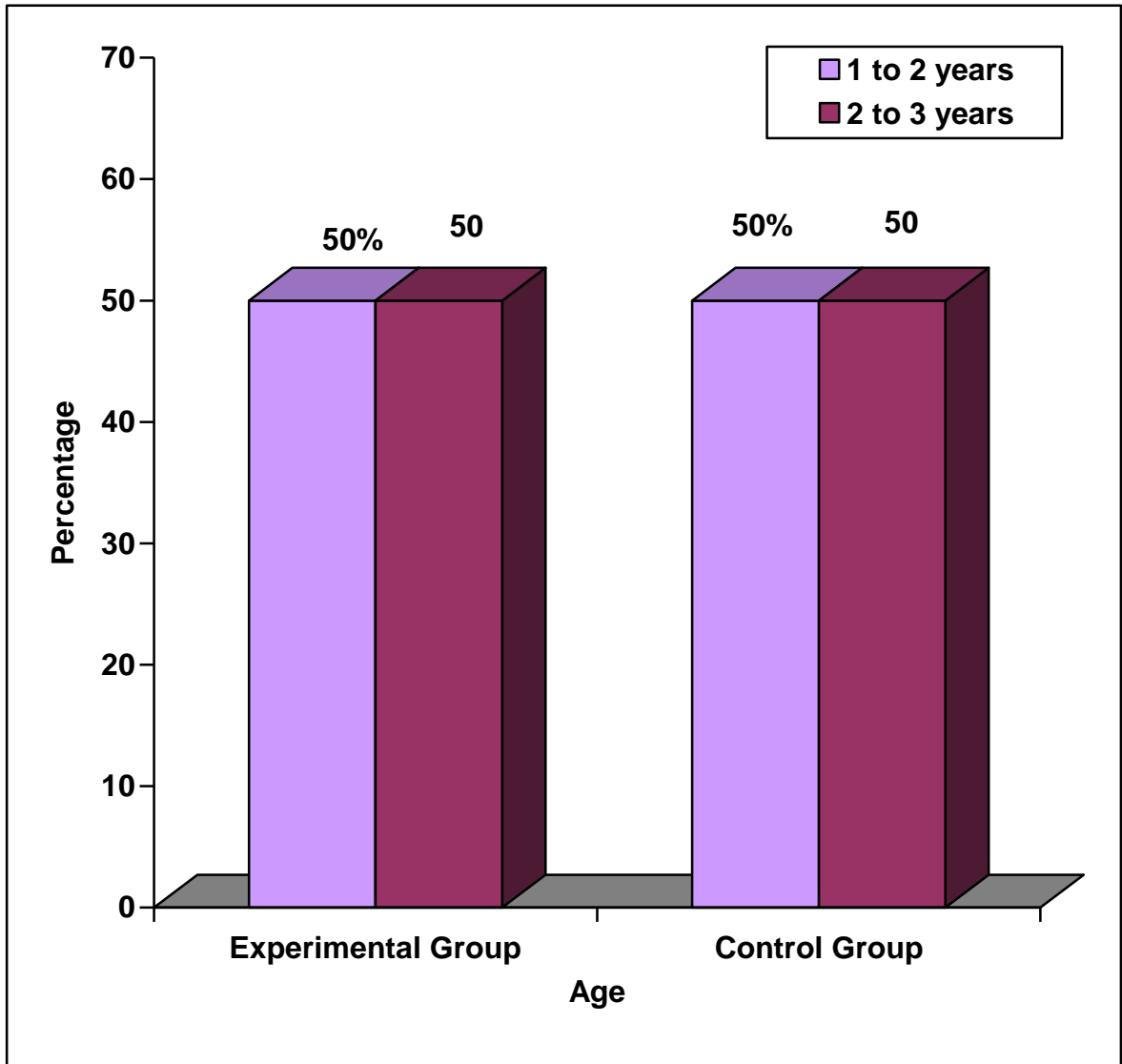


Fig.2: Percentage distribution of age of the respondents in the experimental and control group

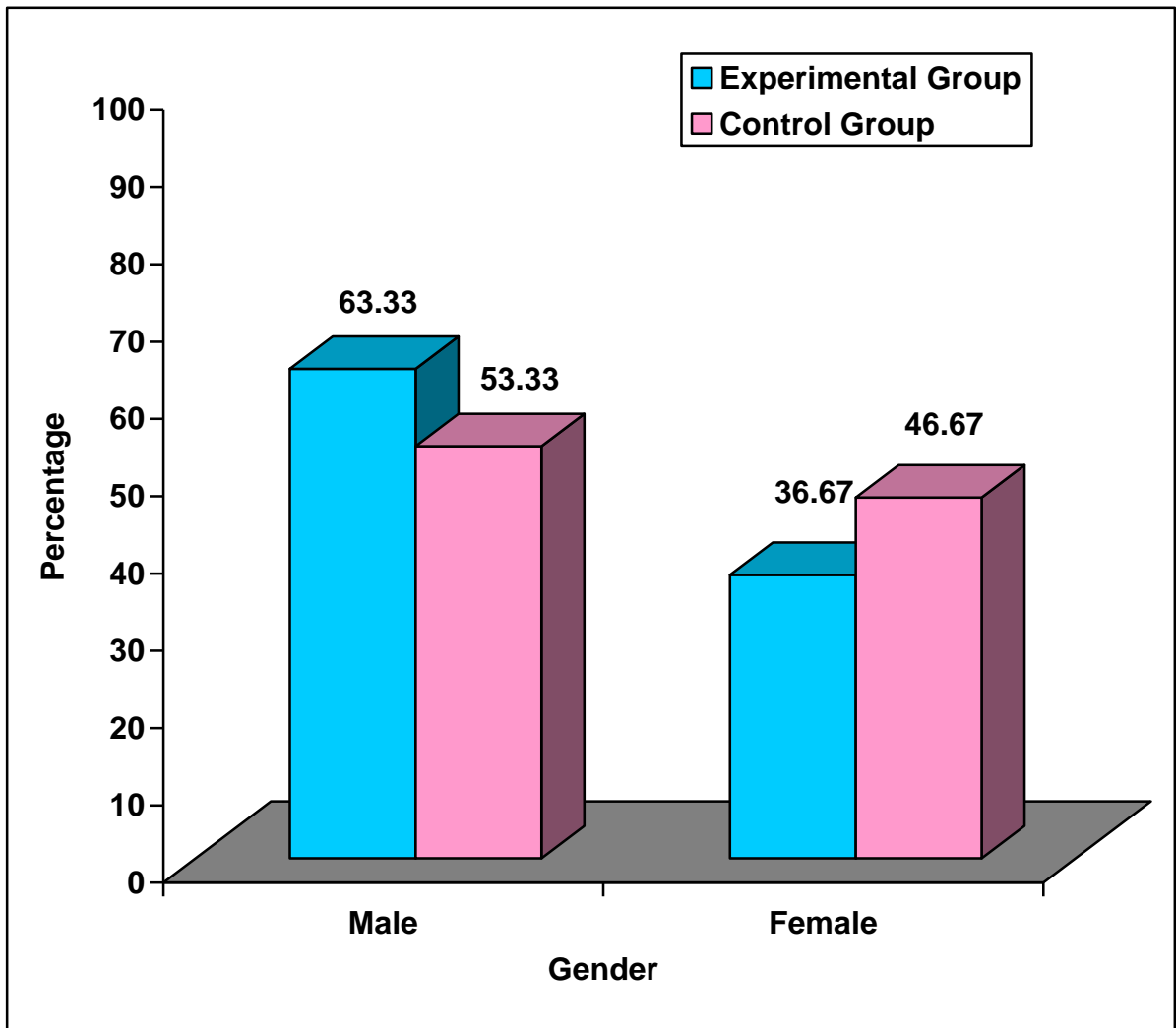


Fig.3: Percentage distribution of gender of the respondents in the experimental and control group

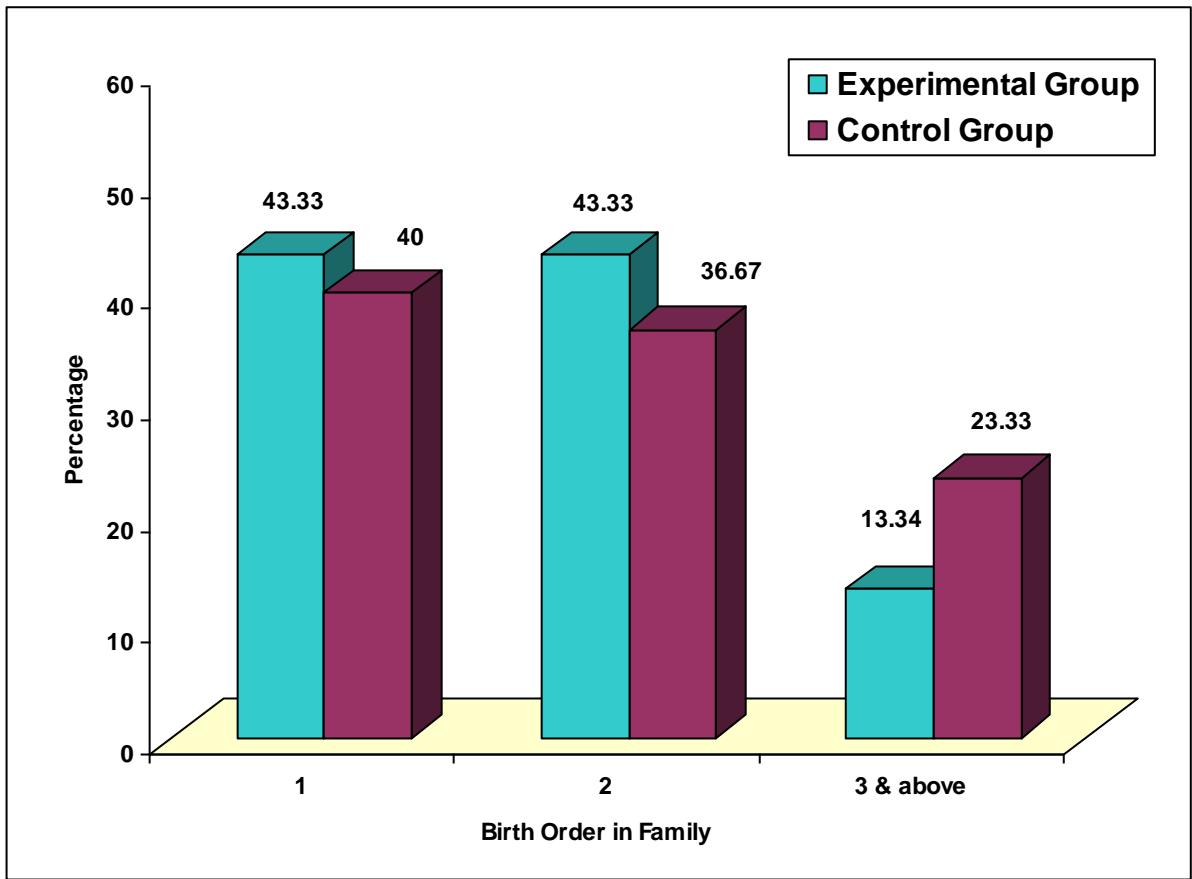


Fig.4: Percentage distribution of birth order in family of the respondents in the experimental and control group

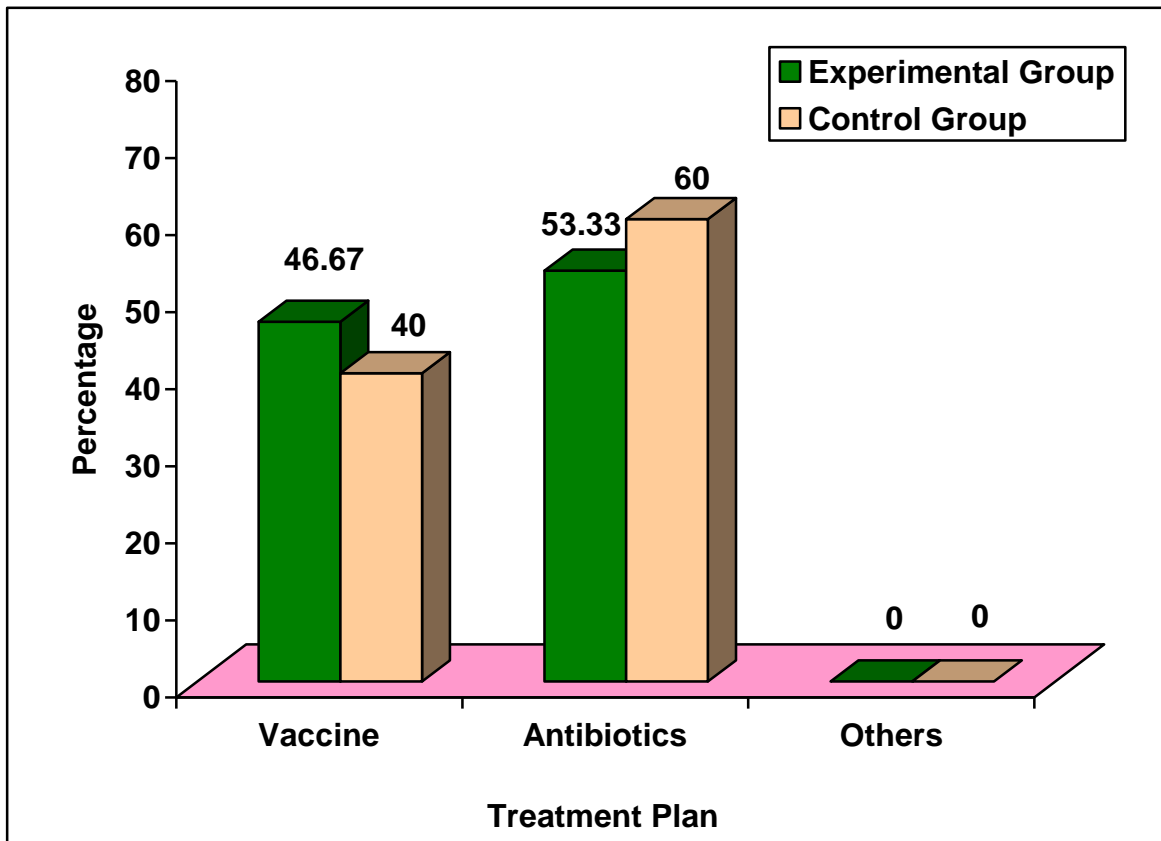


Fig.5: Percentage distribution of treatment plan of the respondents in the experimental and control group

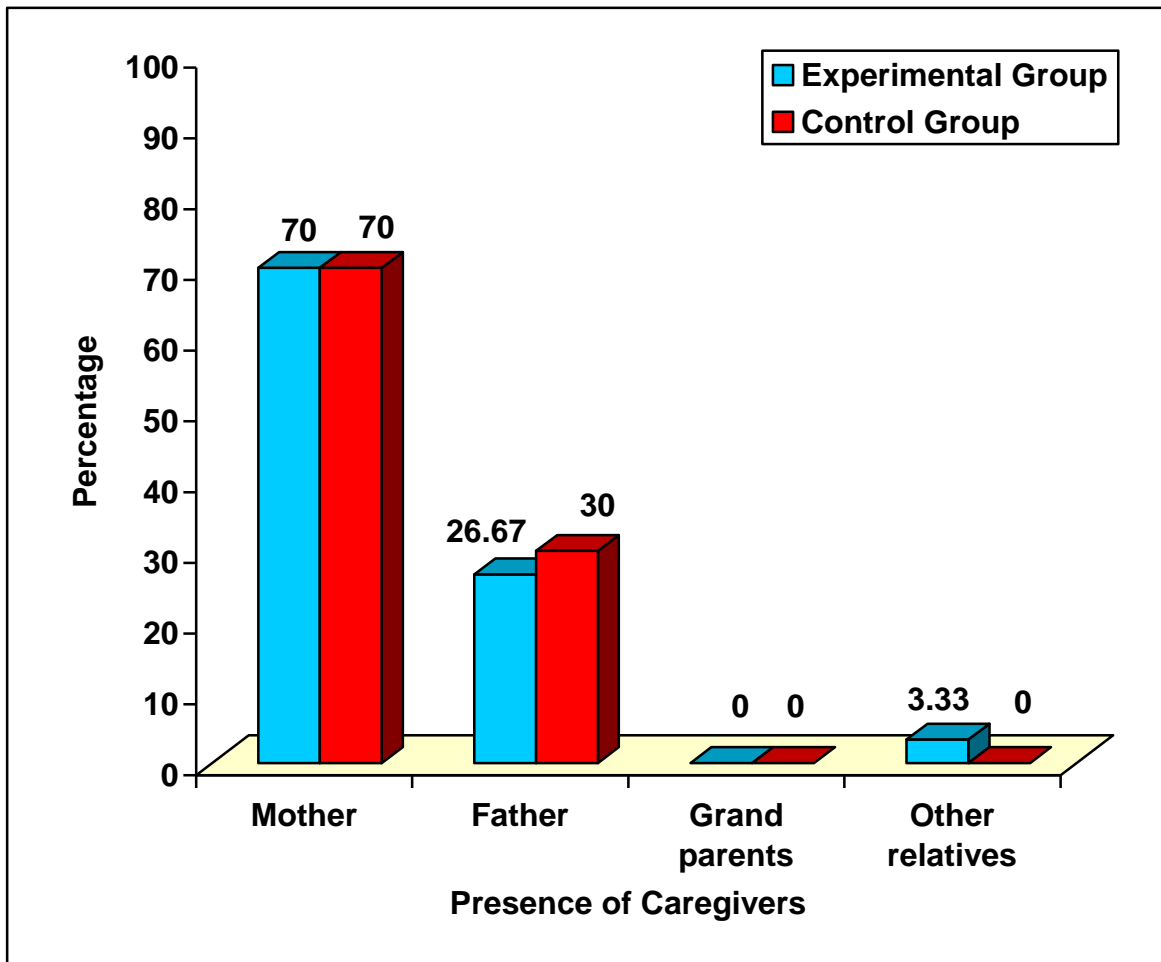


Fig.6: Percentage distribution of presence of caregivers of the respondents in the experimental and control group

SECTION B

TABLE 2: Frequency and percentage distribution of post assessment level of pain perception among toddlers in experimental group and control group

n = 60

Group	Mild pain		Moderate pain		Severe Pain	
	No.	%	No.	%	No.	%
Experimental group	26	86.67	4	13.33	0	0
Control group	0	0	5	16.67	25	83.33

The above table represents the frequency and percentage distribution of post assessment level of pain perception among toddlers in the experimental and control group.

In experimental group majority 26(86.67%) experienced mild pain and 4(13.33%) experienced a moderate pain.

In control group majority 25(83.33%) experienced severe pain and 5(16.67%) experienced moderate pain.

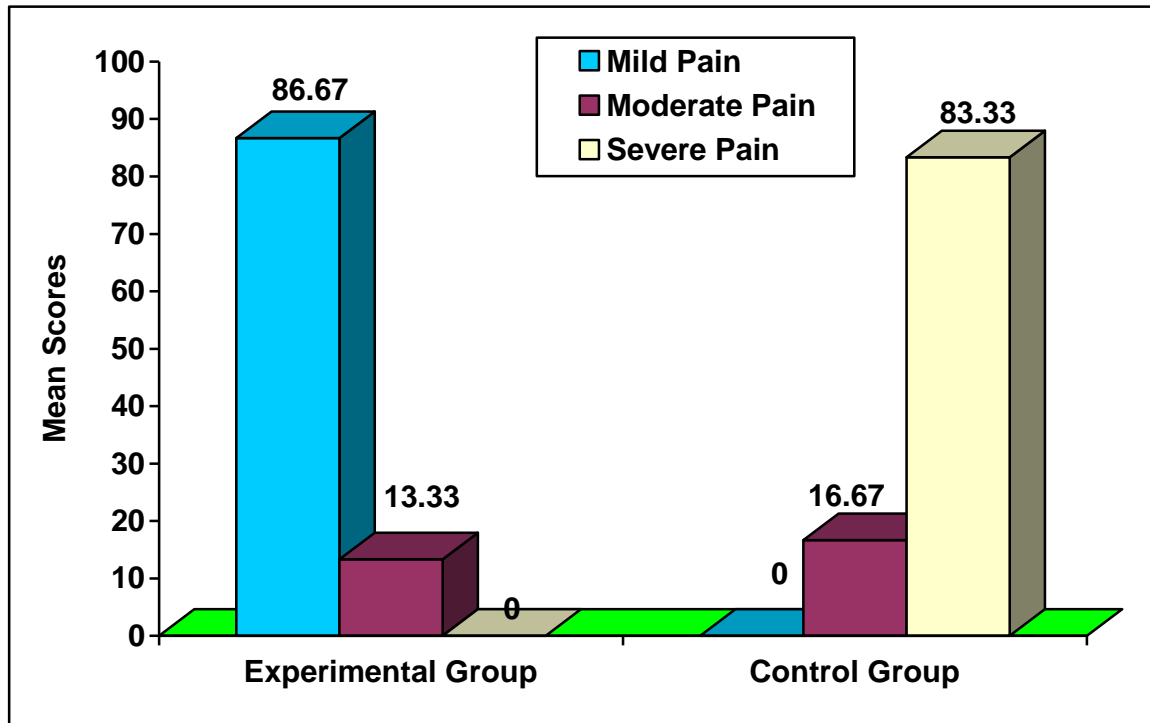


Fig.7: Percentage distribution of post assessment level of pain perception among toddlers in experimental group and control group

SECTION C

Table 3: Comparison of post assessment mean score level of pain perception among toddlers between control group and experimental group.

n=60

Group	Post assessment		Means Difference	t - value
	Means	S.D		
Experimental	2.4	0.84	5	20.83
Control	7.4	0.87		S

$p < 0.001$, S – Significant.

The above table depicts the mean and standard deviation of pain perception in the experimental and control group.

In experimental group mean was 2.4 and standard deviation was 0.84, whereas in control group mean was 7.4 and deviation was 0.87. The mean difference is 5.00. The effect of play was examined by employing independent sample 't' test with 't' value of 20.83 which is highly significant at level of $p < 0.001$. It denotes that there was a significant difference in the level pain perception among toddlers between experimental and control group.

Hence the null hypothesis H_{01} states that there is no significant difference in the level of pain perception among toddlers receiving intramuscular injection was rejected.

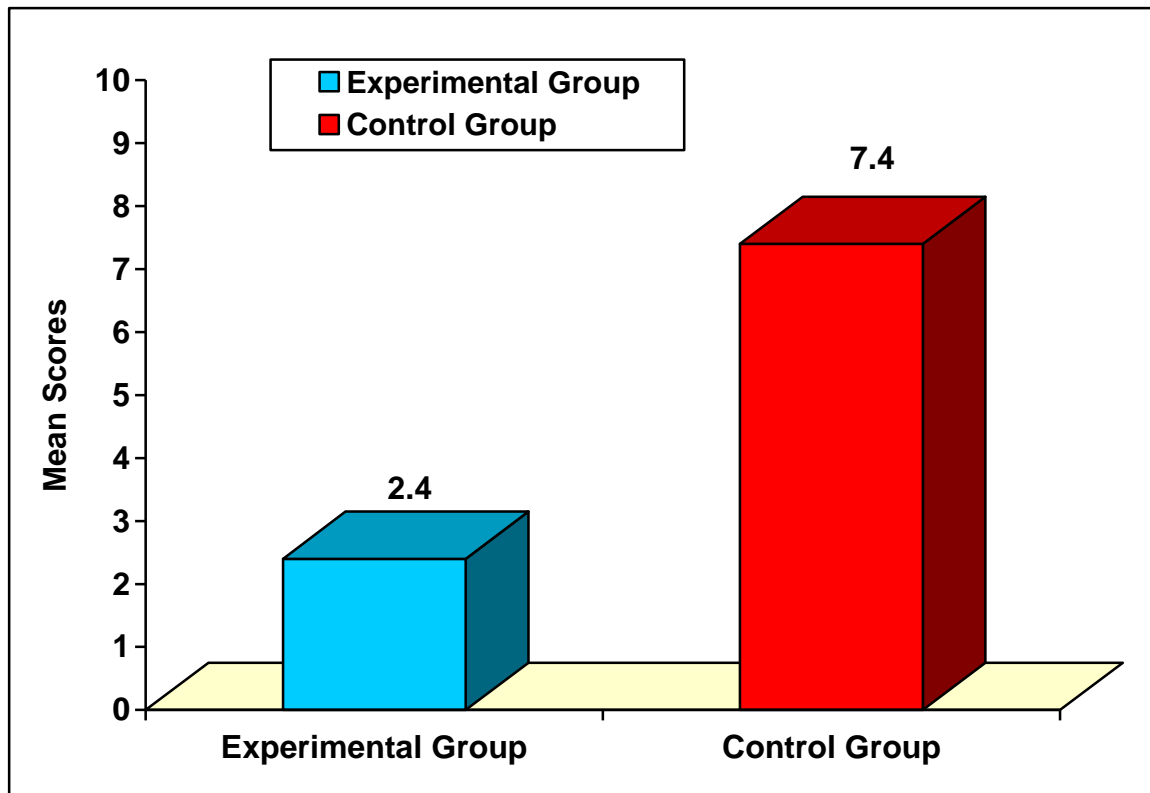


Fig.8: Comparison of post assessment mean score level of pain perception among toddlers between control group and experimental group

SECTION D

Table 4: Association of level of pain perception with the demographic variables in experimental group

n = 30

S. No.	Demographic Variables	Mild (0 to 3)		Moderate (4 to 6)		Severe (7 to 10)		Chi-Square Value
		No.	%	No.	%	No.	%	
1	Age							$\chi^2 = 1.16$ d.f = 1 N.S
	a) 1 to 2 years	14	46.67	1	3.33	-	-	
	b) 2 to 3 years	12	40.0	3	10.0	-	-	
2	Gender							$\chi^2 = 0$ d.f = 1 N.S
	a) Male	16	54.45	3	10.0	-	-	
	b) Female	10	33.33	1	3.33	-	-	
3	Birth order in family							$\chi^2 = 0.59$ d.f = 2 N.S
	a) 1	12	40.0	1	3.33	-	-	
	b) 2	11	36.67	2	6.67	-	-	
4	Treatment plan							$\chi^2 = 1.15$ d.f = 1 N.S
	a) Vaccine	13	43.33	1	3.34	-	-	
	b) Antibiotics	13	43.33	3	10.0	-	-	
5	Religion							$\chi^2 = 1.74$ d.f = 2 N.S
	a) Hindu	15	50.0	1	3.33	-	-	
	b) Muslim	5	16.67	2	6.67	-	-	
6	Presence of caregivers							$\chi^2 = 1.52$ d.f = 2 N.S
	a) Mother	17	56.67	4	13.33	-	-	
	b) Father	8	26.67	-	-	-	-	
7	Education of caregivers							$\chi^2 = 1.17$ d.f = 2 N.S
	a) Non literate	-	-	-	-	-	-	
	b) Primary education	2	6.67	-	-	-	-	
8	Occupation of caregivers							$\chi^2 = 4.76$ d.f = 3 N.S
	a) Unemployed	13	43.33	4	13.33	-	-	
	b) Labor	5	16.67	-	-	-	-	
9	Family monthly income							$\chi^2 = 1.48$ d.f = 1 N.S
	a) Below ` 5000	-	-	-	-	-	-	
	b) ` 5000 to 10000	8	26.66	2	6.67	-	-	
10	Area of living							$\chi^2 = 0$ d.f = 2 N.S
	a) Urban	13	43.33	2	6.67	-	-	
	b) Semi urban	10	33.33	2	6.67	-	-	
	c) Rural	3	10.0	-	-	-	-	

p<0.01, N.S – Not Significant.

The above table reveals that there is no significant association in experimental group on level of pain perception among toddlers with their demographic variables such as age, gender, birth order in family, treatment plan, religion, presence of caregivers, education of caregivers, occupation of caregivers, family monthly income and area of living.

SECTION E

Table 5: Association of level of pain perception with the demographic variables in control group

n = 30

S. No.	Demographic Variables	Mild (0 to 3)		Moderate (4 to 6)		Severe (7 to 10)		Chi-Square Value
		No.	%	No.	%	No.	%	
1	Age							$\chi^2 = 0.99$
	a) 1 to 2 years	-	-	3	10.0	12	40.0	d.f = 1
	b) 2 to 3 years	-	-	2	6.67	13	43.33	N.S
2	Gender							$\chi^2 = 0.99$
	a) Male	-	-	2	6.67	14	46.67	d.f = 1
	b) Female	-	-	3	10.0	11	36.67	N.S
3	Birth order in family							$\chi^2 = 1.68$
	a) 1	-	-	3	10.0	9	30.0	d.f = 2
	b) 2	-	-	2	6.67	9	40.0	N.S
	c) 3 and above	-	-	-	-	7	23.33	
4	Treatment plan							$\chi^2 = 0.91$
	a) Vaccine	-	-	3	10.0	9	30.0	d.f = 1
	b) Antibiotics	-	-	2	6.67	16	53.33	N.S
	c) Others	-	-	-	-	-	-	
5	Religion							$\chi^2 = 1.55$
	a) Hindu	-	-	4	13.33	11	36.67	d.f = 2
	b) Muslim	-	-	-	-	8	26.67	N.S
	c) Christian	-	-	1	3.33	6	20.0	
	d) Others	-	-	-	-	-	-	
6	Presence of caregivers							$\chi^2 = 2.88$
	a) Mother	-	-	5	16.67	16	53.33	d.f = 1
	b) Father	-	-	-	-	9	30.0	N.S
	c) Grand parents	-	-	-	-	-	-	
	d) Other relatives	-	-	-	-	-	-	
7	Education of caregivers							$\chi^2 = 3.94$
	a) Non literate	-	-	-	-	-	-	d.f = 2
	b) Primary education	-	-	2	6.66	3	10.0	N.S
	c) Secondary education	-	-	-	-	11	36.67	
	d) Graduates	-	-	3	10.0	11	36.67	
8	Occupation of caregivers							$\chi^2 = 1.75$
	a) Unemployed	-	-	3	10.0	15	50.0	d.f = 3
	b) Labor	-	-	1	3.33	4	13.34	N.S
	c) Business	-	-	-	-	5	16.67	
	d) Professional	-	-	1	3.33	1	3.33	
9	Family monthly income							$\chi^2 = 1.44$
	a) Below ` 5000	-	-	-	-	-	-	d.f = 1
	b) ` 5000 to 10000	-	-	2	6.67	7	23.33	N.S
	c) Above ` 10000	-	-	3	10.0	18	60.0	
10	Area of living							$\chi^2 = 2.42$
	a) Urban	-	-	1	3.33	11	36.67	d.f = 2
	b) Semi urban	-	-	4	13.33	11	36.67	N.S
	c) Rural	-	-	-	-	3	10.0	

p<0.01, N.S – Not Significant.

The above table reveals that there is no significant association in control group on level of pain perception among toddlers with their demographic variables such as age, gender, birth order in family, treatment plan, religion, and presence of caregivers, education of caregivers, occupation of caregivers, family monthly income and area of living.

CHAPTER – V

DISCUSSION

This chapter deals with the discussion of the findings of the study analyzed based on the objectives of the study, hypothesis, statistical analysis and related literature of the study. The problem stated was a quasi experimental study to assess the effectiveness of play therapy on level of pain perception among toddlers receiving intramuscular injection at K.C. Multispeciality Hospitals, Avadi, Chennai. 2010-2011.

The objectives of the study were as follows

1. To assess the level of pain perception among toddlers receiving intramuscular injection in the experimental group.
2. To assess the level of pain perception among toddlers receiving intramuscular injection in the control group.
3. To compare the effectiveness of play therapy on level of pain perception among experimental and control group.
4. To associate the level of pain perception among experimental and control group with their demographic variables.

Frequency and percentage distribution of the demographic variables in experimental and control group were as follows

Age groups of the toddlers were equally matched. Out of 30 samples 15(50%) in age group of one to two years, 15(50%) in age group of two to three years both in experimental and control group. Considering the distribution of the respondents with their gender in experimental group majority 19(63.33%) of toddlers belongs to male and in control group majority 16 (53.33%) of toddlers belongs to male. With respect to their birth order in the family in experimental group majority 13(43.33%) of toddlers belongs to order 1 and 2, in control group majority 12(40%) of toddlers belongs to order 1. Regarding the distribution of the respondents to their treatment plan in experimental group majority 16(53.33%) of toddlers belongs to antibiotic and in control group majority 18(60%) of toddlers belongs to antibiotic. Considering the distribution of respondents with their religion in experimental group majority 16(53.34%) of toddlers belongs to Hindu and in control group majority 15(50%) of toddlers belongs to Hindu.

With respect to the distribution of respondents, with respect to their presence caregivers, in experimental group majority 21(70%) belongs to mother and in control group majority 21(70%) belongs to mother. Regarding the distribution of respondents to their education of caregivers, in experimental group majority 14(46.67%) belongs to secondary education and graduates, in control group majority 14(46.66%) belongs to graduates. Considering the occupations of caregivers in experimental group majority 17(56.66%) belongs to unemployed and in control group majority 18(60%) belongs to unemployed. With respect to family monthly income, in experimental group majority 20(66.67%) belongs to above ` 10000 and in control group majority 21(70%) belongs to above. ` 10000. Regarding the area of living, in experimental group majority 15(50%) belongs to urban and in control group majority 15(50%) belongs to semi urban.

The first objective was to assess the level of pain perception among toddlers receiving intramuscular injection in the experimental group.

In experimental group, assessment of level of pain showed 26(86.67%) toddlers experienced mild pain and 4(13.33%) toddlers experienced moderate pain. This was consistent with the study conducted by Gillis I.J (2001), who selected 48 samples aged 3 to 5 years were assigned based on random sampling technique to the experimental and control group. The play activities were administered just before painful procedure. The findings of the study showed that 81.7% of the children reflected significant co-operation during painful procedures at 0.05 levels. The study concluded that there was an effectiveness of activities in gaining cooperation of the children during painful procedure.

The second objective was to assess the level of pain perception among toddlers receiving intramuscular injection in the control group.

In control group assessment of level of pain showed that 5(16.67%) toddlers experienced moderate pain and 25(83.33%) experienced severe pain. The study findings were consistent with the study conducted by Thampy M.N (2003), who found that play therapy had helped in improving coping ability of children during painful procedures and children with play therapy coped better than children without play therapy.

The third objective of the study was to compare the effectiveness of play therapy on level of pain perception among experimental and control group.

In experimental group mean was 2.4 and standard deviation was 0.84, whereas in control group mean was 7.4 and deviation was 0.87. The mean difference was 5.00. The effect of play was examined by employing independent sample 't' test with 't' value of 20.83 which was highly significant at level of $p < 0.001$. It denotes that there was a significant difference in the level pain perception among toddlers between experimental and control group.

This study was consistent with the study conducted by Sridevi. K (1996), who selected 50 samples in postoperative ward. The findings of the study revealed that 82.5% of the children showed that their pain significantly reduced from severe to mild condition at 0.05 level. The study concluded that play diverted children from pain thereby improving their coping abilities and made the hospital experience a pleasant one.

The fourth objective was to associate the level of pain perception among experimental and control group with their demographic variables.

The analysis revealed that there was no significant association of any of the demographic variables both in experimental and control group with their level of pain perception. This study consistent with a study conducted by Marzieh Hasapourab et al (2005), who conducted a study on the effects of local cold therapy and distraction in pain relief during intramuscular injection in children. 90 children from 5 to 12 years were chosen randomly and divided into three groups. The first group received local cold therapy, the second group received distraction and the third group (the control group) received routine care. The findings of the study indicated that pain intensity was significantly higher in the control group than the experimental groups. Also pain intensity among children was inversely proportional to their age.

The following hypothesis was formulated and was tested for its significances.

The null hypothesis H_{01} stated that there is no significant difference in the level of pain perception among toddler receiving intramuscular injection between the experimental and control group. The present study shows that there was a significant difference in the level of pain perception between experimental and control group after play therapy. Hence the null hypothesis formulated was rejected and the difference was proved.

The assumptions of the study made were

1. Toddlers receiving intramuscular injection may experience pain.

The first assumption that toddlers receiving intramuscular injection may experience pain was here by accepted because the present study results also have proved that the control group assessment of level of pain perception showed that 5(16.67%) toddlers experienced moderate pain and 25(83.33%) experienced severe pain.

2. Play therapy may have an effect on level of pain perception among toddlers receiving intramuscular injection.

The second assumption that play therapy may have an effect on level of pain perception among toddlers receiving intramuscular injection was here by accepted because the present study results also have proved that the experimental group, assessment of level of pain showed 26(86.67%) toddlers experienced mild pain and 4(13.33%) toddlers experienced moderate pain.

The conceptual framework was based on Wiedenbach's Helping Art of Clinical Nursing Theory (1964). It has 3 components are Central purpose, Prescription and Realities. A nurse develops a prescription based on a central purpose and implements it according to the realities of the situation. Hence the researcher adopted this model and model guided the researcher to take likelihood action.

The overall findings of the study showed that the play therapy with sound producing dancing doll was effective in reducing pain perception among toddlers receiving intramuscular injection. It was demonstrated to the staff nurses in the hospital and the sound producing dancing doll was donated to the hospital at the end of the study for the benefit of toddlers in future.

CHAPTER – VI

SUMMARY, RECOMMENDATIONS, NURSING IMPLICATIONS AND LIMITATIONS

This chapter presents the summary, nursing implications, recommendations and limitations of the study based on the objectives selected.

SUMMARY

The prick of the needle in any part of the body is painful. Intramuscular injections are a fairly uncomfortable invasive procedure. Relief of pain is a basic need and right of all children. Care should be taken to reduce the amount of discomfort a person has to endure while receiving this type of injection. Pediatric nursing is traditionally involved in professional and competent care of children. Play therapy, a non-pharmacological method acts as an effective tool on procedural pain perception among toddlers.

The objectives of the study were

1. To assess the level of pain perception among toddlers receiving intramuscular injection in the experimental group.
2. To assess the level of pain perception among toddlers receiving intramuscular injection in the control group.
3. To compare the effectiveness of play therapy on level of pain perception among experimental and control group.
4. To associate the level of pain perception among experimental and control group with their demographic variables.

The assumptions of the study were

1. Toddlers receiving intramuscular injection may experience pain.
2. Play therapy may have an effect on level of pain perception among toddlers receiving intramuscular injection.

Extensive review of literature, investigator's professional experience and expert guidance from the field of child health nursing lead the investigator to design the methodology and develop the tool for data collection.

The conceptual framework of the study is based on Wiedenbach's Helping Art of Clinical Nursing Theory (1964) and it provides comprehensive framework for achieving the objectives of the study. The researcher adopted a quasi experimental post test only control group design. The study was conducted at K.C. Multispeciality Hospital, Avadi, Chennai.

The tool consisting of demographic variables and the Behavioral Pain Assessment Scale were validated by experts. Reliability of the tool was established by interrater reliability method which was assessed using Spearman Rank Correlation method.

The pilot study was done in the above stated setting and the finding revealed the feasibility and practicability of the tool and the study. The main study was done after getting formal permission from the director of K.C .Multispeciality Hospital, Avadi. Sixty toddlers allotted to a group by non-probability purposive sampling technique. The data collected was analyzed by using frequency and percentage distribution and inferential statistics.

The findings of the study reveals that the experimental group mean was 2.4 and standard deviation was 0.84, whereas in control group mean was 7.4 and standard deviation was 0.87. The mean difference was 5.00. The effect of play was examined by employing independent sample 't' test with 't' value of 20.83 which was highly significant at level of $p < 0.001$. It denotes that there was a significant difference in the level of pain perception among toddlers between experimental and control group.

The investigator recommends that play therapy is effective and feasible which can be applied in any pediatric wards and outpatient department.

There was no significance association of any of the demographic variables on level of pain perception among toddlers receiving intramuscular injection in both the groups.

NURSING IMPLICATIONS

The investigator has derived from the study the following implication which is of vital concern in the field of nursing practice, nursing administration, nursing education and nursing research.

Nursing Practice

1. The pediatric nurses have a vital role to play in enabling health promotion through administering play therapy to toddlers during minor invasive procedure which will motivate the nurse to implement in practice.
2. The nurse must learn about the importance of play therapy as a non-pharmacological measure.
3. Teach the parents about the importance of play therapy.
4. As direct care provider, understand the different pain controlling strategies to practice independently.

Nursing Education

1. The nurse educator should teach the student about the importance of play therapy.
2. The nurse should encourage the students to practice various non-pharmacological methods in clinical setting.
3. The nurse educator should prepare quick reference guide about non-pharmacological intervention and resources readily available to nurses, clinicians and parents.

Nursing Administration

1. The nurse administrator should collaborate with governing bodies in formulating policies to employ specially qualified nurses in pediatric units and periodically supervise their applications of non-pharmacological methods in painful procedures.

2. The nurse should conduct in service education program on various non-pharmacological measures which can be used in pediatric clients.
3. The nurse must provide opportunities for nurse to attend training program on non-pharmacological method for pain relief.
4. The nurse should provide opportunities for nurses to implement play therapy in clinical setting.

Nursing Research

1. A researcher should encourage further studies on the effectiveness of play therapy for various invasive procedures in children.
2. Disseminate the findings through conference, seminar, publication in professional, national, international journal and the World Wide Web.
3. As evident from the review of literature more research need to be conducted on the other non-pharmacological method for various painful procedures.

RECOMMENDATIONS

The following studies can strengthen pediatric nursing.

1. A similar study can be replicated on a large sample at state level.
2. A similar study can be conducted using various non-pharmacological methods.
3. A comparative study may be conducted using two different types of play therapy in various age groups.
4. A descriptive study can be done to assess the nurse's knowledge on various non-pharmacological measures in minor invasive procedure on reduction of pain in children.

LIMITATIONS

1. After the experiment most of the toddlers cried for want of sound producing dancing doll this was a main hypothetical situation the researcher faced.
2. The investigator found difficulty in getting the review of literature.

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APPENDIX – A

LIST OF EXPERTS FOR CONTENT VALIDITY

- 1. Dr. Lakshmi Priya, M.B.B.S., D.G.O.,**
K. C. Multi speciality Hospitals,
No. 138, 4th street,
Kamarajanagar,
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- 2. Dr. Sathyan, M.B.B.S., D.C.H.,**
Child specialist,
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Pattabiram,
Chennai.

- 3. Mrs. Anitha Rajendra babu, R.N, R.M., M.Sc(N).,**
Principal,
Rajalakshmi College of Nursing,
Thandalam.

- 4. Mrs. Umarani, R.N., R.M., M.Sc(N).,**
Associate Professor,
Sri Ramachandra College of Nursing,
Chennai.

- 5. Mrs. Susan R.N, R.M., M.Sc(N).,**
Head of the Department,
Child Health Nursing,
Omayal Aachi College of Nursing,
King Cross Road, S.M.Nagar,
Avadi, Chennai – 600 062.

LETTER SEEKING EXPERTS OPIONION FOR CONTENT VALIDITY

From

Ms.A. Rajalakshmi
M.Sc. (N) II Year,
Vel R.S Medical college-college of nursing
Avadi, Chennai-600 062

To

Respected madam/Sir,

Sub: Requisition for expert opinion on suggestion for content validity of the tools.

I am Ms. A. Rajalakshmi, a student of M.Sc.(Nursing)- II year at Vel R.S Medical College – College of Nursing, Avadi, Chennai – 62, affiliated to Dr.M.G.R.Medical University, Chennai.

As a partial fulfillment of the requirement in the M.Sc. Nursing Programme, I have to complete a dissertation the topic I have selected is **“A study to assess the effectiveness of play therapy on level of pain perception among toddlers receiving intramuscular injection at K. C. Multispeciality Hospital, Avadi, Chennai. 2010 - 2011.”**

Herewith I am sending the developed tools for content validity and for your expert opinion and valuable suggestions.

Thanking you,

Yours Sincerely,

(A.RAJALAKSHMI)

Enclosures:

1. Statement and objectives of the study
2. Blue print of the tools
3. Content validity certificate

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tools developed by **Ms. A. Rajalakshmi, M.Sc.** Nursing student Vel R.S. Medical College – College of Nursing, Chennai on the topic, **“A study to the assess the effectiveness of play therapy on level of pain perception among toddlers receiving intramuscular injection at K.C.Multispeciality Hospital, Avadi, Chennai. 2010 – 2011”** is validated by the undersigned and she can proceed with this tool to conduct the main study.

Place : Chennai

Date :

Signature

APPENDIX – B

INTRODUCTION

Dear Participants,

I **Ms.A.Rajalakshmi, M.Sc(N)**, II year student from Vel R.S.Medical College - College of Nursing, Avadi, Chennai. I would like to assess the effectiveness of play therapy on level of pain perception among toddlers receiving intramuscular injection. I assure that the responses given by you will be used only for my study purpose and strict confidentiality will be maintained. So please feel free in answering the questions. This will be promoting your welfare. So, I request you to kindly give your full co-operation and willingness.

Thanking you.

SECTION – A
DEMOGRAPHIC VARIABLES

RELATED TO CHILDREN

- 1) Age
 - a) 1 to 2 years
 - b) 2 to 3 years

- 2) Sex
 - a) Male
 - b) Female

- 3) Birth order in the family
 - a) 1
 - b) 2
 - c) 3 and above

- 4) Treatment plan
 - a) Vaccine
 - b) Antibiotics
 - c) Others

- 5) Religion:
 - a) Hindu
 - b) Muslim
 - c) Christian
 - d) Others

RELATED TO CAREGIVERS

- 6) Presence of care givers
 - a) Mother
 - b) Father
 - c) Grand parents
 - d) Other relatives

7) Education

- a) Non literate
- b) Primary education
- c) Secondary education
- d) Graduates

8) Occupation

- a) Unemployed
- b) Labor
- c) Business
- d) Professional

9) Family monthly income

- a) Below ` 5000
- b) ` 5000 to 10000
- c) Above ` 10000

10) Area of living

- a) Urban
- b) Semi urban
- c) Rural

SECTION B

FLACC PAIN SCALE

Items	0	1	2	Score
FACE	No particular expression or smile	Occasional grimace or frown, withdrawn or disinterested	Frequent to constant quivering chin, clenched jaw	
LEGS	Normal position or relaxed	Uneasy, restless, tense	Kicking or legs drawn up	
ACTIVITY	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid or jerking	
CRY	No cry	Moans, or whimpers occasional complaint	Crying steadily, screams or sobs, frequent complaints	
CONSOLABILITY	Content, relaxed, does not require consoling	Reassured by occasional touching, hugging, or being' talked to'. Distractible	Unable to console, or comfort	

Scores:

Mild - 0 to 3
Moderate - 4 to 6
Severe - 7 to 10



VEL R.S. Medical College

(College of Nursing)



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(Approved by Govt. of Tamil Nadu,
Indian Nursing Council, New Delhi, Tamil Nadu Nurses & Midwives Council &
Affiliated to The Tamil Nadu Dr. M.G.R. Medical University)
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Website : WWW.vel-tech.org
Phone : 26841093 Fax : 26841601

14/05/2010

To

DR. LAKSHMI PRIYA M.B.B.S, DGO,
K.C. HOSPITALS. (MULTI SPECIALITY),
NO. 138, 4TH STREET, KAMARAJ NAGAR,
AVADI, CHENNAI - 600071.

Sub: Seeking permission for conducting main study.

Respected Sir/Madam,

This is to introduce Ms.A.Rajalakshmi (Child Health Nursing) Master Degree Nursing student of this college. She has selected the following topic for her research study to be submitted to the Tamil Nadu Dr. MGR medical university as partial fulfillment of the master degree in nursing program.

The topic for the study is, "A Study to Assess the Effectiveness of Play Therapy on level of pain perception among toddlers receiving IM injection in a Selected Setting"

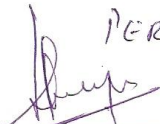
She is interested in conducting the study at your esteemed community.

I assure you that our student will abide by the rules and regulations of the setting. I request your at most help in regard to the same.

Thanking you,

Place: Chennai

Date: 15/05/10


K.C. MULTISPECIALITY HOSPITALS
NO.138, 4th STREET,
KAMARAJ NAGAR
AVADI, CHENNAI-600 071.


Mrs. M. Anuradha

PRINCIPAL
PRINCIPAL

VEL R. S. MEDICAL COLLEGE
(COLLEGE OF NURSING)
42, AVADI-ALAMATHI ROAD
VELLANUR (POST), AVADI, CHENNAI - 600 062

CERTIFICATE OF ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation work “**A study to assess the effectiveness of play therapy on level of pain perception among toddlers receiving intramuscular injection at K. C. Multispeciality Hospital, Avadi, Chennai. 2010-2011.**” was done by **Ms.A.Rajalakshmi**, II year M.Sc (N) student of Vel.R.S Medical College, College of Nursing, Avadi, Chennai, is edited for English Language appropriateness by

Name : **S. RAMALINGAM.**

Signature : 

S. RAMALINGAM, M.A., M.Phil., B.Ed.,
P.G. Asst. in English
Govt. G. Hr. Sec. School,
R.K.Pet, Thiruvallur Dt.,