North Asian International Research Journal of Pharmaceutical & Medical Sciences

ISSN: 2456-8287 Vol. 1, Issue-10 October-2017

# A PRE-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF CLAY THERAPY ON THE ANXIETY OF CHILDREN ADMITTED IN PAEDIATRIC WARD OF GGSMCH, FARIDKOT PUNJAB

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***ABSTRACT***

***A pre-experimental study was conducted on 45 children of 4-5 years of age to assess the effectiveness of clay therapy on the anxiety level of the children admitted in pediatric ward of GGSMCH, Faridkot Punjab. Anxiety was assessed with the help of modified Spence Preschool Anxiety Scale (Parent Report). Pre experimental research design was used and one group pretest posttest was performed. Sampling technique was convenient sampling. Statistical analysis was performed using Smith Statistical Package (SSP) version 2.80 and Statistical Package for the Social Sciences (SPSS) version 20.0. The study had revealed that out of 45, 26 children suffered from severe anxiety and 19 suffered from moderate anxiety and none suffered from mild anxiety during pretest and 26 suffered from moderate anxiety, 19 suffered from mild anxiety and none suffered from severe anxiety during posttest. The mean of pretest anxiety scores came out be 59.31±11.13 and mean of posttest anxiety scores came out be 30.35±12.14. Paired t test was applied and t value came out be 20.33 at degree of freedom 44. p value came out be <0.00001 which is highly significant at p value <0.05. Association of level of anxiety was also found with socio demographic variables, no demographic variable came out to be significant in association with level of anxiety.***

***KEYWORDS:*** ***Effectiveness, clay therapy, anxiety, children.***

## INTRODUCTION

Children as well as adults experience feelings of anxiousness, worry and fear when facing different situations, especially those involving a new experience. When children suffer from a severe anxiety disorder their thinking, decision-making ability, perceptions of the environment, learning and concentration get affected. They not only experience fear, nervousness, and shyness but also start avoiding places and activities.[1]

Children and adolescents in low-income families, with parents and cares with lower levels of education and with higher levels of unemployment had higher rates of mental disorders in the previous 12 months. There was also a strong relationship with where they lived with higher rates of mental disorders in non-metropolitan areas. This was particularly evident in males.[2]

An article reports that clay therapy has many advantages. This therapy should be effective in very anger, anxious child and child with attention deficit hyperactive disorder. Clay therapy helps the child to express his anger through rolling, folding and pounding the clay. Clay therapy helps the children to move from crippling emotional experiences to flourishing opportunity for inner growth and healing. In current scenario, clay therapy acts as a version of play therapy and is employed as a therapeutic tool. Clay therapy is an adjunct to play therapy. Clay helps in sensory, motor and intellectual development. It also improve socialization and self awareness.[3]

## OBJECTIVES

- To assess the anxiety of children 4-7 years of age admitted in paediatric ward.
- To assess the effectiveness of clay therapy on anxiety of children of 4-7 years of age admitted in paediatric ward.
- To determine the association of anxiety of children with their selected socio demographic variables.

## VARIABLES UNDER STUDY

### INDEPENDENT VARIABLE:

Clay therapy

### DEPENDENT VARIABLE:

Anxiety

### Demographic variables

Age, gender, type of family, birth order of child and number of siblings.

### RESEARCH APPROACH:

Quantitative research approach

**RESEARCH DESIGN:**

A pre-experimental research design

**RESEARCH SETTING**

Study was conducted in Paediatric ward of GGSMCH, Faridkot

**TARGET POPULATION**

The target population of the study were children of 4-7 years of age admitted in paediatric ward at G.G.S Medical Hospital, Faridkot.

**SAMPLE AND SAMPLING TECHNIQUE**

The sample for present study were 45 children of 4-7 years of age admitted in pediatric ward of GGSMCH, Faridkot. The sample was selected by convenient sampling technique.

**SELECTION AND DEVELOPMENT OF THE TOOL**

To accomplish the objectives of the study, the research tool was constructed in following two sections:

Section A: Demographic variables
SectionB: Modified Spence preschool anxiety scale (parent report)

**Section A: Demographic variables:**

This section consist of 5 items for obtaining personal information about children i.e. Age of child, Gender of child, Type of family, Birth order of child and number of siblings.

**Section B: Modified spence preschool anxiety scale (parent report)**

In this scale, there is a list of 21 items that describe children. Parents will circle the response that best describes their child. The scale includes the criteria i.e. **4 if the item is very often true, 3 if the item is quite often true, 2 if the item is sometimes true, 1 if the item is seldom true or if it is not true at all circle the 0. This yields a maximum possible score of 84.**

## CRITERION MEASURES

Criterion measures to analyze the tool was as follow:-

- 0-28 …… MILD ANXIETY
- 29-56…….. MODERATE ANXIETY
- 57-84…… SEVERE ANXIETY

## CONTENT VALIDITY OF THE TOOL

Content validity of the socio demographic data sheet was determined by expert‟s opinion. The socio demographic data sheet was given to the Medical and Nursing experts in the field of Maternal and Child Health & Paediatrics and language experts in English and Punjabi (participant information sheet, consent form and socio demographic data sheet). As per the guidance and suggestions from the experts, the suggested amendments were made in the tool.

## RELIABILITY OF TOOL

Reliability of tool was estimated by test retest reliability method. The reliability came out be 0.80. Thus, the tool was reliable.

## ETHICAL CONSIDERATIONS

Ethical clearance is taken form research and ethical committee of University College of nursing, and BFUHS, Faridkot for the study to be conducted. Apart from this, written informed consent is taken from each study subject's parents and permission is taken from authorities of the respected area to collect the data.

## DESCRIPTION ABOUT INTERVENTION

The study participants were the children belonging to the age group, i.e. 4-7 years of age. As the study contains the children who are admitted in hospital, so these children are supposed to be suffering from hospital anxiety. Before performing the intervention i.e. clay therapy, a pretest is performed. The tool as described earlier is modified Spence preschool anxiety scale (parent report). The pretest is performed on the parents. The anxiety scoring is done. On the same day, the intervention is applied on the child. Clay therapy is given to the child for two hours per day for three days. During these two hours, child is introduced about the clay, he is taught how to play with the clay, making various shapes of his desire, so that he can reduce his anxiety by molding the clay.

## PLAN AND PROCEDURE FOR DATA COLLECTION

The Data was planned to be collected from the children of 4-7 years of age admitted in pediatric ward of GGSMCH, Faridkot. Pretest was conducted on the children's parents on the first day, and then children were given clay therapy to play with for three days and on the third day, posttest was conducted and anxiety was assessed whether decreased or not.

## PLAN OF ANALYSIS

Data analysis was done as per the objectives of the study. The data was analyzed by using SPSS version 20, by descriptive statistics (frequency, percentage) and inferential statistics Chi-square value was used to find out association between variables .Data has been represented in the form of tables.

## DEMOGRAPHIC VARIABLES

**Table 1**
**Frequency and percentage distribution of demographic variables**

**N = 100**

| S. NO. | VARIABLES | FREQUENCY | PERCENTAGE |
|---|---|---|---|
| 1. | **AGE IN YEARS** | | |
| | 4-5 | 28 | 62.22 |
| | 6-7 | 17 | 37.77 |
| 2. | **GENDER** | | |
| | Male | 25 | 55.6 |
| | Female | 20 | 44.4 |
| 3. | **TYPE OF FAMILY** | | |
| | Joint | 21 | 46.7 |
| | Nuclear | 24 | 53.3 |
| | Broken | 0 | 0 |
| 4. | **BIRTH ORDER OF CHILD** | | |
| | First | 20 | 44.4 |
| | Second | 16 | 35.6 |
| | Third or more | 9 | 20 |

| | | | |
|---|---|---|---|
| 5. | **NUMBER OF SIBLINGS** | | |
| | □ Single child | 10 | 22.2 |
| | □ One | 3 | 6.7 |
| | □ Two | 20 | 44.4 |
| | □ More than two | 12 | 26.7 |

**Table 2(a)**

**Frequency and percentage distribution of study subjects according to the perceived level of anxiety in the pretest of the group.**

**N=45`**

| Level of Anxiety | f (%) | Mean±SD |
|---|---|---|
| 0-28 ( Mild anxiety ) | 0 (0) | 0 |
| 29-56( Moderate anxiety ) | 19 (42.22) | 48.26±6.15 |
| 57-84 ( Severe anxiety) | 26 (57.78) | 67.38±5.96 |

**Table 2 (b)**

**Distribution of study subjects according to the perceived level of anxiety in the posttest of the group**

**N=45**

| Level of anxiety | f (%) | Mean±SD |
|---|---|---|
| 0-28 ( Mild anxiety ) | 19 (42.22) | 19.57±7.47 |
| 29-56 ( Moderate anxiety ) | 26 (57.78) | 38.23±8.51 |
| 57-84 ( severe anxiety ) | 0 (0) | 0 |

**TABLE 3**

**Comparison of pretest and posttest level of anxiety scores of children in group**

**N=45**

| Anxiety score | Mean ± SD | Mean difference | SD difference | t value | df | p value |
|---|---|---|---|---|---|---|
| • Pretest score<br>• Posttest score | 59.31±11.13<br>30.35±12.14 | 28.96 | -1.01 | 20.33 | 44 | <.00001 |

***dependent t-test is significant at p value < 0.05 (2 tailed)**

**Table 4(a) reveals the frequency and percentage distribution of Pretest and Posttest groups and association of anxiety of children with their selected socio demographic variables.**

| Characteristics / variables | Experimental Group n=45 | Pretest | | | Posttest | | |
|---|---|---|---|---|---|---|---|
| | Frequency (percentage) f (%) | Chi square value ($\chi^2$) | df | p value | Chi square value ($\chi^2$) | df | p value |
| **Age (in Years)**<br>• 4-5<br>• 6-7 | <br>28(60)<br>17(40) | 1.8379 | 1 | 0.1751 | 0.2620 | 1 | 0.6087 |
| **Gender**<br>• Male<br>• Female | <br>25 (55.6)<br>20 (44.4) | 0.7697 | 1 | 0.3802 | 2.4094 | 1 | 0.1205 |
| **Type of family**<br>• Joint<br>• Nuclear<br>• Broken | <br>21(46.7)<br>24(53.3)<br>0(0) | 0.2749 | 1 | 0.6000 | 0.2749 | 1 | 0.6000 |
| **Birth order of child**<br>• First<br>• Second<br>• Third or more | <br>20(44.4)<br>16(35.6)<br>09(20) | 1.3038 | 2 | 0.5210 | 0.0740 | 2 | 0.9637 |
| **No. of siblings**<br>• Single child<br>• One<br>• Two<br>• More than two | <br>10(22.2)<br>3(6.7)<br>20(44.4)<br>12(26.7) | 1.8219 | 3 | 0.6101 | 0.7971 | 3 | 0.8501 |

## MAJOR FINDINGS:

- During pretest, about 19 (42.22%) of the study subjects perceived moderate level of anxiety, 26 (57.78%) perceived severe anxiety and none of the study subjects perceived mild anxiety
- During posttest, about 19 (42.22%) of the study subjects perceived mild level of anxiety, 26 (57.78%) perceived moderate anxiety and none of the study subjects perceived severe anxiety
- Mean anxiety score was 59.31±11.13 during pretest whereas 30.35±12.14 during posttest.
- Study subjects after receiving clay therapy experienced less anxiety. The t value came out to be 20.33 at degree of freedom 44 which was considered significant at 0.05 level of significance.
- Research hypothesis was accepted and clay therapy was found to be effective in reducing the anxiety among children admitted in paediatric ward.

## DISCUSSION

The findings of the present study revealed that clay therapy is effective in reducing the anxiety in children of 4-7 years of age. The mean of pretest anxiety scores came out be 59.31±11.13 and mean of posttest anxiety scores came out be 30.35±12.14. Paired t test was applied and t value came out be 20.33 at df 44 and p value came out be <0.00001 which is highly significant at p value <0.05. Hence, clay therapy is effective in reducing the anxiety level of children.

A similar research was conducted by Amran Hassan that a feeling of relief at being able to articulate suppressed emotions through clay therapy and an increased mental motivation to continue with studies even though it was held for a short period.[4]

Consistent findings were depicted in the study conducted by Naderi F,Bouron L, Asaguri P that clay therapy is effective in reducing the ADHD, social maturity and anxiety among children[5] and comparative study conducted by Paisa Rashmania, Naeimeh Moheb that the anxiety scores of control group is higher than that of experimental group.[6]

## IMPLICATIONS

### Nursing Education

Perception of anxiety in children admitted in the ward and the way of expression of their anxiety should be included in nursing curriculum, so that sufficient emphasis can be given to the relief which can be provided to the children suffering from anxiety.

### Nursing Research

Findings of the study will act as a catalyst to carry out more extensive research in a large sample and in other settings. Such research work enforces evidence based practice. Through the publication of research findings, the knowledge of nurses and parents can be improvised regarding the effect of clay therapy in reducing their child‟s anxiety level

## RECOMMENDATIONS

Based on the results of the study, following recommendation are made:

- Further researches can be conducted by taking other non pharmacological strategies (like play therapy, art therapy, narrative therapy) as an intervention.
- The study can be replicated on a large sample to validate and generalize its findings.
- A multi centre study could be done.
- A true experimental (RCT) study could be done

## CONFLICT OF INTEREST

There is no conflict of interest as researcher had not received any financial support from institute or individual. Project was self financed.

## CONCLUSION

On the basis of the findings of the study, it is concluded that majority of the study subjects had severe anxiety during the pretest and none had mild anxiety, whereas during posttest majority of the subjects had mild anxiety and none had severe anxiety. There was significant reduction in level of anxiety during the posttest. The intervention clay therapy has significantly reduced the anxiety level. Children admitted in paediatric ward played with the clay and molded the clay in order to express their anxiety, which helped them to reduce their anxiety level. Hence, such

strategies should be planned in order to initiate a play room in the hospital setting, in which the hospitalized children must be provided with clay of different colors in order to divert them from stressed hospital setting.

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