Effectiveness of art therapy on pain and anxiety level among postoperative children

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ABSTRACT

As children grow, they learn each day, of how to live tomorrow watching the grace and disgrace that surround them. The utilization of imaginative strategies to treat mental issues and upgrade emotional well-being is known as art treatment. Art treatment is a strategy established in the possibility that inventive articulation can cultivate recuperating and mental prosperity. Craftsmanship, either making it or survey others’ specialty, is utilized to assist individuals with investigating feelings, create mindfulness, adapt to pressure, help confidence, and work on social abilities. Postoperative care may be an emotional and developmental set back to the child. It causes anxiety and pain due to imbalance between environmental and societal demands and child’s coping abilities. The present study aims to assess the effectiveness of art therapy on anxiety and pain level among postoperative children. A quantitative true experimental research design was conducted among 30 postoperative children by using a simple random sampling technique and 15 were divided in control and experimental group. The demographic data were collected using structured interview questionnaire. The pre-test was done to assess level of anxiety by five facial anxiety scale and pain by numerical pain scale for both the experimental and control group. The experimental group was given art therapy, the control group was given a routine care and then the post test was done. The study results show that the level of pain and anxiety was considerably reduced in the experimental group than the control group in the post test at p<0.005. This indicates SART therapy is effective non-pharmacological method and cost effective method to treat pain and anxiety among postoperative children. The result of the study is it was concluded that art therapy as no side effects and it is an easy and comfortable method which can be practiced to treat pain and anxiety.

INTRODUCTION

Children are a blessing from the Lord. They are like clay in the potter’s hand. Blend them with godly love and care, they become a vessel that stays strong and perfect, purge them with toil and dust they may break and crumble. They build the nation sound and strong, because today’s children are responsible citizens of tomorrow. Today’s society is complex and ever changing. As children grow, they learn each day, of how to live tomorrow watching the grace and disgrace that surround them. The more you blend
your child with confidence the lesser he tumbles and
the better he becomes. (Marlow and Redding, 2010; Hockenberry and Wilson, 2008)

The pediatric populace in emergency clinic today has changed significantly in the course of the most recent twenty years. Even though there is a developing pattern towards abbreviated emergency clinic stays and outpatient medical procedure, a more noteworthy level of kids' medical clinic today have more genuine and complex issues than those emergency clinics remaining the past. (McInerny et al., 2009)

Art treatment coordinates psychotherapeutic strategies with the imaginative cycle to improve emotional wellness and prosperity. The American Art Therapy Association describes craftsmanship treatment as a way to deal with psychological well-being that uses the way toward making Art to improve mental, physical, and enthusiastic health. Customers who have encountered passionate injury, physical brutality, residential maltreatment, uneasiness, gloom, and other mental issues can profit by communicating innovatively. (Elkis-Abuhoff et al., 2010)

American library association (1945) spearheaded the focus on services to hospitalized children. Library standards were created that were endorsed by the American Hospital Association. The use of books and drawing materials for therapeutic purposes is known as 'Art therapy'. (Mercer et al., 2010)

William et al. (2007) estimates in India approximately 3 million of children admitted in hospital, in Tamil Nadu. 18000 children admitted annually, among them young men are more than young ladies and the proportion is 7:46 up to 25% of kids have been noted to require physical limitation. Loss of opportunity can deliver pressure and uneasiness in youngsters.

Mather and Mackie (1983) led an investigation on "Frequency of postoperative pain in kids" and examined the occurrence of pain among 170 youngsters recuperating from medical procedure was over viewed in two significant showing emergency clinics alongside an examination of analgesics medicine organization. A significant number of the youngsters studied got pulled back and this was deciphered as adapting to torment. Others communicated a fear of the needle as a method of regulating analgesics and wanted to endure torment to an infusion.

We have presumed that there is an extensive degree to improve torment the executives in youngsters after medical procedure.

Nisha and Umarani (2013) hospital can be a compromising encounter for everybody, particularly for youngsters. Hospitalized kids may encounter elevated level of tension because of a wide range of variables both physical and mental. It isn't amazing that up to 65% of kids experience critical tension related with the preoperative period.

Lazarus (1991) depict tension as an exceptional, horrendous enthusiastic state there are two primary manifestations of nervousness. Physical and mental manifestations are palpitation, quakes, unsteadiness, queasiness, exhaustion and a sleeping disorder. Psychological manifestations are pressure, apprehension, dread, irritability, agitation, eagerness and trouble in focus. The lack of appropriate information provided about treatment and other hospitalization-related aspects increases anxiety and uncertainty.

The purpose of the study is [1] To assess the level of anxiety and pain among postoperative children before Art Therapy. [2] To assess the effectiveness of art therapy on anxiety and pain level among postoperative children. [3] Associate the level of anxiety and pain with selected demographic variables.

MATERIALS AND METHODS

A quantitative approach with true experimental research design with pre-test and post-test was used to conduct the study in postoperative children of Saveetha college of nursing. 60 samples were selected by using a simple random sampling technique. The criteria for sample selection are both male and female 7-12 year children, willingness of the parents and the child, children who have undergone surgery in the hospital. The exclusion criteria for the samples are children who are mentally retarded, children with hearing impairment, children who are under strict isolation. The data collection period was done with prior permission from the HOD of Paediatric department and ethical clearance was obtained from the institution. The purpose of the study was explained to the samples and written informed consent was obtained from them. The demographic data were collected using a semi-structured interview questionnaire. Numerical pain scale was used to assess the pain and anxiety was used to assess the five facial anxiety scale.

The pain and anxiety were assessed before art therapy among both control and experimental group. The experimental group was given art therapy by using dot drawing therapy. Then postoperative children in experimental group were re-assessed for the pain and anxiety after an hour. The data were analyzed using descriptive and inferential statistics.
The sample characteristics were described using frequency and percentage. Pearson’s co-relation coefficient was used to assess the effectiveness of aromatherapy in the experimental group. Chi-square was used to associate the post-test level of pain and anxiety of the selected demographic variables.

RESULTS AND DISCUSSION

Sample characteristics

In the experimental group, most of them 14(46.7%) of the children were in the age group of 7 – 8 years, 19(63.3%) were male, 22(73.4%) were Hindus, 14(46.7%) of children were studying 3rd – 4th standard, 19(63.3%) belonged to nuclear family, 14(46.6%) of fathers were UG & PG, 17(56.7%) had a family income of Rs.15,000 and above, 14(46.7%) were on 2nd post operative day and 29(96.7%) of caregivers were mothers.

Whereas in the control group, most of them 17(56.7%) of children were in the age group of 9 – 10 years, 16(53.3%) were male, 17(56.7%) were Hindus, 17(56.7%) of children were studying 5th – 6th standard, 23(76.7%) belonged to nuclear family, 23(76.7%) of fathers were UG & PG, 30(100%) had a family income of Rs.15,000 and above, 12(40%) were on 2nd and 3rd post operative day and 25(83.3%) of caregivers were mothers.

Level of pain and anxiety among postoperative children

In the pretest of experimental group, 16(53.3%) had anxiety hurting whole lot and 14(46.7%) had anxiety hurting worst. Whereas in the post test, 21(70%) had anxiety hurting little more and 9(30%) had anxiety hurting a little bit. It also depicts that in the pretest of control group, 18(60%) had anxiety hurts a whole lot and 12(40%) had anxiety hurting worst. Whereas in the post test, 25(83.3%) had anxiety hurting, 4(13.3%) had anxiety hurts more and 2(6.7%) had anxiety hurts even more. (Table 1)

Garcia supports the present study (2017) conducted a study on “Commonness and variables related with post-operative anxiety in youngsters matured 5-12 years.” An imminent companion study was done among 210 kids, which were met in the preoperative holding territory of an overall medical clinic at Brazil. The outcomes are 42 percent (42.0%) of youngsters introduced post-employable nervousness (CI95%: 35.7%-48.6%), with mean scores equivalent to 30.1 (SD=8.4). Variables related with preoperative tension were: age gathering of 5-6 years (OR=2.28; p=0.007) and financial status delegated class C (OR=2.39; p=0.016). (Garcia et al., 2017)

In the pretest of experimental group, 18(60%) had very severe pain and 12(40%) had worst pain possible. Whereas in the post test, 16(53.3%) had mild pain, 9(30%) had moderate pain and 5(16.7%) had no pain, the pretest of control group, 17(56.7%) had very severe pain and 13(43.3%) had worst pain possible. Whereas in the post test, 25(83.3%) had very severe pain and 5(16.7%) had worst pain possible. (Table 2)

Figure 1: Percentage distribution of level of anxiety among postnatal mothers in the experimental and control group

The study is supported by Avian et al. (2016) conducted a study on “Postoperative Paediatric Pain Prevalence”. The retrospective study was conducted among 815 children. The results are 36% of 815 analysed kids and youths experienced pain ≥4 during their whole emergency clinic remain. Contrasted with the day of medical procedure, the quantity of patients with pain ≥4 was somewhat higher on day 1 after medical procedure (21% versus 25%, separately). In self-revealed pain power rating (accomplished for patients age ≥4 years) the sort of medical procedure (p<.001) was the main noteworthy variable impacting pain force. In observational pain evaluation (age<4 years) pain scores expanded with patient’s age (p=.004). In this patient gathering, pain power evaluations didn’t vary between kinds of medical procedure (p=.276).

Effectiveness of aromatherapy on pain and anxiety among postoperative children

The pretest of experimental group, 16(53.3%) had anxiety hurting whole lot and 14(46.7%) had anxiety hurting worst. Whereas in the post test, 21(70%) had anxiety hurting little more and 9(30%) had anxiety hurting a little bit. It also depicts that in the pretest of control group, 18(60%) had anxiety hurts a whole lot and 12(40%) had anxiety hurting worst. Whereas in the post test, 24(80%) had anxiety hurting, 4(13.3%) had anxiety hurts even more.
Table 1: Frequency and percentage distribution of level of anxiety among postnatal mothers in the experimental and control group N = 60 (30+30)

| Group          | Test        | No Hurt (0) | Hurts Little Bit (1) | Hurts Little More (2) | Hurts Even More (3) | Hurts Whole Lot (4) | Hurts Worst (5) |
|----------------|-------------|-------------|-----------------------|------------------------|---------------------|---------------------|-----------------|
|                |             | No %        | %                     | %                      | %                   | %                   | %               |
| Experimental   | Pretest     | 0 0         | 0 0                   | 0 0                    | 0 0                 | 16 53.3             | 14 46.7         |
| Group          | Post Test   | 0 0         | 9 30.0                | 21 70.0                | 0 0                 | 0 0                 | 0 0             |
| Control Group  | Pretest     | 0 0         | 0 0                   | 0 0                    | 0 0                 | 18 60.0             | 12 40.0         |
|                | Post Test   | 0 0         | 0 0                   | 0 0                    | 2 6.7               | 24 80.0             | 4 13.3          |

Table 2: Frequency and percentage distribution of level of pain among postoperative children in the experimental and control group N = 60 (30+30)

| Group          | Test        | No Pain (0) | Mild (1–3) | Moderate / Severe (4–6) | Very Severe (4) | Worst Pain Possible (5) |
|----------------|-------------|-------------|------------|-------------------------|----------------|-------------------------|
|                |             | No %        | %          | No %                    | No %           | No %                   |
| Experimental   | Pretest     | 0 0         | 0 0        | 0 0                     | 0 0            | 18 60.0                |
| Group          | Post Test   | 5 16.7      | 16 53.3    | 9 30.0                  | 0 0            | 0 0                    |
| Control Group  | Pretest     | 0 0         | 0 0        | 0 0                     | 17 56.7        | 13 43.3                |
|                | Post Test   | 0 0         | 0 0        | 0 0                     | 25 83.3        | 5 16.7                 |

Table 3: Comparison of pre test and post test level of anxiety among postoperative children between the experimental and control group n = 60

| Test    | Group       | Mean  | S.D  | Student Independent ‘t’ Test Value |
|---------|-------------|-------|------|-----------------------------------|
| Pretest | Experimental| 4.47  | 0.51 | t = 0.513 p = 0.610 N.S            |
|         | Control     | 4.40  | 0.49 |                                   |
| Post Test| Experimental| 1.70  | 0.47 | t = 20.013 p = 0.0001 S***         |
|         | Control     | 4.07  | 0.45 |                                   |

Table 4: Comparison of pre test and post-test level of pain among postnatal mothers between the experimental and control group n = 30

| Test    | Group       | Mean  | S.D  | Student Independent ‘t’ Test Value |
|---------|-------------|-------|------|-----------------------------------|
| Pretest | Experimental| 8.63  | 1.24 | t = 0.204 p = 0.839 N.S            |
|         | Control     | 8.70  | 1.29 |                                   |
| Post Test| Experimental| 2.47  | 1.85 | t = 15.104 p = 0.0001 S***         |
|         | Control     | 8.30  | 1.02 |                                   |
worst and 2(6.7%) had anxiety hurts even more. (Figure 1)

The pretest of experimental group, 18(60%) had very severe pain and 12(40%) had worst pain possible. Whereas in the post test, 16(53.3%) had mild pain, 9(30%) had moderate pain and 5(16.7%) had no pain. It also depicts that in the pretest of control group, 17(56.7%) had very severe pain and 13(43.3%) had worst pain possible. Whereas in the post test 25(83.3%) had very severe pain and 5(16.7%) had worst pain possible. (Figure 2)

The study is supported by (Feen-Calligan et al., 2018) an experimental study was directed to analyze the impact of gathering art treatment on the tensions of kids in grades one, two, and three. The complete example contained 295 understudies. Medicines were haphazardly allocated to the gatherings. Control Group II got non-Art restorative treatment and also experimental Group got Art restorative treatment. All youngsters partaking in the investigation ere controlled a pretest. The instrument utilized was Sara child’s General Anxiety Scale for Children. Each gathering was perused three suitable books by the specialist every meeting for ten meetings. Promptly following the five-week test period, a post test was regulated to all the kids. The study concluded that reading Art therapeutic drawing lessen their anxieties.

Comparison of pretest and post test level of pain & anxiety among postoperative children between the experimental and control group.

The pretest mean score of anxiety among post operative children in the experimental group was 4.47±0.51 and the mean score in the control group was 4.40±0.49. The calculated student independent ‘t’ test value of t = 0.513 was not found to be statistically significant. It also portrays that the post test mean score of anxiety among post operative children was 1.70±0.47 and the post test mean score was 4.07±0.45. The calculated student independent ‘t’ test value of t = 20.013 was found to be statistically significant at p<0.001 level. (Tables 3 and 4)

The study finding is supported by Ugurlu et al. (2016) conducted a study on ”An art treatment intercession for manifestations of post-traumatic stress, depression and nervousness among Syrian exile kids”. The outcome shows the examination demonstrated that 60.3% (N = 35) of Syrian youngsters who partook had high hazard to create post-awful pressure issue (PTSD) as indicated by the SLE scale. The 23.4% of the youngsters had PTSD side effects while 17.6% demonstrated serious discouragement indications. Additionally, 14.4% of the youngsters demonstrated extreme degrees of state uneasiness manifestations and 31.1% indicated serious degrees of quality tension side effects. Discoveries of the investigation showed that injury, gloom and attribute tension side effects of youngsters were essentially diminished at the post-appraisal.

Association of the effect of aromatherapy on after pain and fatigue with selected demographic variables in the experimental group.

The present study states that none of the demographic variables had shown statistically significant association with post test level of pain among post operative children in the experimental group.

CONCLUSIONS

This investigation featured the adequacy of art treatment in diminishing the torment and uneasiness among postoperative kids, and subsequently improves the quality consideration during clinic remain. Study discoveries indicated that after the organization of Dot Drawing Art Therapy among postoperative youngsters there was a noteworthy decrease in the degree of torment and uneasiness and along these lines advanced the participation of kids with Nurses.

Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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REFERENCES

Avian, A., Messerer, B., Wünsch, G., Weinberg, A., Kiesling, A. S., Berghold, A. 2016. Postoperative paediatric pain prevalence: A retrospective analysis in a university teaching hospital. International Journal of Nursing Studies, 62:36–43.
Elkis-Abuhoff, D. L., Gaydos, M., Rose, S., Goldblatt, R. 2010. The Impact of Education and Exposure on Art Therapist Identity and Perception. Art Therapy, 27(3):119–126.

Feen-Calligan, H., Moreno, J., Buzzard, E. 2018. Art Therapy, Community Building, Activism, and Outcomes. Frontiers in Psychology, 9:1548.

Garcia, J. B. S., et al. 2017. Optimizing post-operative pain management in Latin America. Brazilian Journal of Anesthesiology (English Edition), 67(4):395–403.

Hockenberry, M. J., Wilson, D. 2008. Wong’s Essentials of Pediatric Nursing Hardcover. page 1280. Mosby Elsevier publications.

Lazarus, R. S. 1991. Progress on a cognitive-motivational-relational theory of emotion. American Psychologist, 46(8):819–834.

Marlow, D. R., Redding, B. A. 2010. Textbook Of Pediatric Nursing (Old Edition) Paperback. page 1360. Elsevier.

Mather, L., Mackie, J. 1983. The incidence of postoperative pain in children. Pain, 15(1):271–282.

Mcinerney, T. K., et al. 2009. American Academy of Pediatrics Textbook of Pediatric Care. Pediatric Care Online.

Mercer, A., Warson, E., Zhao, J. 2010. Visual journaling: An intervention to influence stress, anxiety and affect levels in medical students. The Arts in Psychotherapy, 37(2):143–148.

Nisha, K., Umarani, J. 2013. Effect of play intervention in the reduction of anxiety among preoperative children. International Journal of Current Research and Review, 5(11):104–112.

Ugurlu, N., Akca, L., Acarturk, C. 2016. An art therapy intervention for symptoms of post-traumatic stress, depression and anxiety among Syrian refugee children. Vulnerable Children and Youth Studies, 11:89–102.

William, L. I., et al. 2007. Effects of preoperative therapeutic play on outcomes of school-age children undergoing day surgery. Research in Nursing & Health, 30(3):320–332.