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Effectiveness of Planned Teaching Programme on Knowledge Regarding Reduction of Procedural Pain of Children with Play Intervention among Parents in a Selected Hospital, Lucknow

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Abstract: ***Assessment and treatment of pain in children is challenging. The presence of parents and the distraction of the children from pain perception during the procedure can help the nurse to achieve adequate pain management for children. The present study evaluated the planned teaching program's effectiveness on knowledge regarding reducing procedural pain of children with play intervention among parents in a selected hospital, Lucknow. A convenient sampling technique was used to collect data from sixty parents. The Pre experimental, one group pre and post test design was used. The result showed that 54 (90%) parents had inadequate knowledge, 06 (10%) had moderately adequate knowledge, and no one had adequate knowledge during pre test. In post test, 23 (38.33%) had moderately adequate knowledge, 37 (61.67%) had adequate knowledge, and no one had inadequate knowledge. While comparing the total level of knowledge between the pre - test and post - test, the difference mean value was 10.10 with a standard deviation of 2.96, and the calculated t - value was 26.41. The standard error of the mean was 0.38. It was statistically significant at the P<0.05 level. This shows that the planned teaching programme on knowledge regarding the reduction of children's procedural pain with play intervention among parents was very effective in increasing parents' knowledge.***

Keywords: Planned teaching programme, Knowledge, Procedural pain, Children, Play intervention

1. Introduction

Pain is a complex and multifaceted phenomenon that has been defined by the International Association for the Study of Pain as “an unpleasant sensory and emotional experience with actual or potential tissue damage or described in terms of such damage” [1]. It is a crucial aspect of patient care, and healthcare professionals consider it the "fifth vital sign" that requires appropriate monitoring and management [2]. In hospitals, children frequently experience capricious and severe procedure - related pain that requires attention as vital signs. Pain perception in children is a complex phenomenon that involves physiological, psychological, behavioral, and developmental factors. Untreated acute pain can cause short and long - term physical, physiological, and psychological effects on children, which can lead to respiratory, cardiac, and endocrine complications, delay healing, and increase the risk of chronic pain [3]. Managing pain is considered a cornerstone of high - quality patient care, and nurses play a vital role in pain management. Along with nurses, parents are also must involve to achieve the aim of effective procedural pain management of children. Because, exposure to pain during medical procedures can also increase the anxiety, distress, stress, and other somatic symptoms of parents, which, in turn, increases the perception of pain by children. Moreover, the occurrence of pain in pediatric patients during their inpatient stay can lead to short and long - term functional and emotional problems not only for themselves but also for their families. Therefore, it is essential to consider pain management as a fundamental aspect of patient care and provide appropriate monitoring and management to alleviate the suffering caused by pain in children [4].

Traditionally, pain was treated with pharmacological agents through injections or oral medication, causing discomfort for children. However, pain is influenced by both physical and psychosocial factors, and patients respond differently to various types of pain and analgesics. Therefore, it is important to explore non - pharmacological therapies that can effectively manage children's pain without causing unpleasant experiences [5]. One such therapy is distraction, which involves various techniques to divert attention away from the procedure. Distraction techniques can reduce the time and personnel required for the procedure [6]. Among these techniques, play intervention is considered an essential strategy in children's pain management as it helps to mitigate the adverse psychosocial effects of disease and hospitalization [7]. So, the investigator conducted a planned teaching program to educate parents on how to reduce procedural pain in children using play intervention.

2. Literature Survey

A study was conducted by Vasey, J., 2019 to investigate how parents can be involved in their child's acute pain care and how nurses can identify and enhance parental preferences for involvement. The study used a qualitative approach with non - participant observation and follow - up semi - structured interviews. A total of 14 nurses, 41 parents, 2 grandparents, 1 other relative, and 30 children participated in the study. Data analysis was conducted using the framework approach, and the study was comprehensively

reported using the Consolidated Criteria for Reporting Qualitative Research (COREQ). The study identified three concepts that emerged from the data: "parents as advocates for their child, " "nurses promoting involvement and partnership, " and "nurses unintentionally preventing involvement and partnership. " The study also identified variations in the way parents were involved in their child's pain care, and despite family - centered care being the dominant model, evidence of its implementation was limited. Parents attempted to advocate for effective pain care for their child, whether or not they were supported by nurses. The study concluded that parental involvement in their child's acute pain care can improve the child's pain experience, reduce parental anxiety, and increase parents' satisfaction with care. Nurses aimed to involve parents in pain care but did not always do so in practice (8).

In 2014, Vijaya M. conducted a study on the effectiveness of play therapy for reducing postoperative pain in children aged 2 - 5 years in selected pediatric hospitals in Madurai. The study used a qualitative research approach and involved a tool with two parts. The first part included socio - demographic variables, while the second part included the FLACC behavioral pain assessment scale, which stands for five categories: face, leg, activity, cry, and consolability. The pain was assessed through observation, with responses in each category scored between 0 and 2, for a maximum total score of 10. The study collected data from 30 children, and the majority of them experienced moderate levels of pain before play therapy and mild pain after play therapy. No significant association was found between postoperative pain and demographic variables. The findings concluded that the majority of children experienced mild pain after play therapy, indicating that play therapy is effective in reducing postoperative pain [9].

In 2015, Sahiner & Bal conducted a study to examine the effects of three different distraction techniques on reducing pain and anxiety in children during phlebotomy. The techniques included distraction cards, listening to cartoon music, and balloon inflation. The study used a prospective, randomized, and controlled trial on children aged 6 to 12 who required blood testing. The children were randomly assigned to one of four groups: control, music, distraction cards, or balloon inflation. Data was collected through interviews with the children, their parents, and observers before and after the procedure. Pain levels were measured using the Wong - Baker FACES scale and self - reports from the children, parents, and observers. Anxiety levels were measured using the Children Anxiety Scale and reports from parents and observers. The study included 120 children with an average age of 9.1 ± 1.6 years. The results showed that there were significant differences between the groups in self - reported pain levels (p=.040). The distraction card group (2.33 ± 3.24) experienced significantly less pain than the control group (4.53 ± 3.23) (p=.057). Additionally, there was a significant difference in observer - reported child anxiety levels (p=.032) between the study groups. All three distraction techniques were effective in reducing pain and anxiety in children during phlebotomy [10].

Statement of the problem

A study to assess the effectiveness of planned teaching programme on knowledge regarding reduction of procedural pain of children with play intervention among parents in a selected hospital, Lucknow.

Objectives of the study

- To assess the level of knowledge regarding reduction of procedural pain of children with play intervention among parents before planned teaching programme.
- To assess the level of knowledge regarding reduction of procedural pain of children with play intervention among parents after planned teaching programme.
- To find out the effectiveness of planned teaching programme on reduction of procedural pain of children with play intervention among parents.

3. Methodology

Research approach

An evaluative approach was adopted for the study to assess the effectiveness of planned teaching programme on knowledge regarding reduction of procedural pain of children with play intervention among parents in a selected hospital, Lucknow. The main goal was to evaluate the success of Planned Teaching Programme.

Research design

In this study, pre experimental "one group pre and post test design" was used to evaluate the effectiveness of planned teaching programme on knowledge regarding reduction of procedural pain of children with play intervention among parents.

Setting

This study was conducted in Baba Hospital, Lucknow, U. P. It is 300 bedded and multispecialty hospital, has various departments like OPD, Emergency, ICU, Medical and surgical ward, Operation theatre, Obstetrical and gynecology ward and Pediatric ward.

Population

The population of the present study consisted of parents of children admitted in pediatric medical and surgical wards.

Sample and sample size

The sample of this study consists of parents of children admitted in pediatric medical and surgical wards of Baba Hospital, Lucknow, U. P. and the sample size was sixty.

Sampling technique

For this study, the samples were selected by using a convenient sampling technique.

Criteria for sample selection

Inclusion criteria

- The parents who were willing to participate in the study.
- The parents who were available at the data collection time.
- Both male and female parent were included.

Exclusion criteria

- The parent who were not willing to participate in the study.
- The parent who were not available during the study.
- The parent who were not able to read and write in Hindi.

Description of the tool

The tool consists of two parts.

Part -I

Part - I describes the demographic variables including age of parents, gender, educational status, occupation, monthly income, number of children, type of family and source of information regarding reduction of procedural pain of children with play intervention. The investigator developed this part by referring various textbooks, internet, journals and experts' opinion from nursing professionals.

Part II

The structured questionnaires were developed on based on the review of literature, discussion with the experts and personal experience of the investigator. This part had25 questions regarding reduction of procedural pain of children with play intervention which include meanings, type of play articles, methods of application of play intervention during time of procedure and benefits of children.

Scoring procedure of structured questionnaires

Total score was 25. The possible score for this tool were 0 and 1. That was 'score 1' for the right answer and 'score 0' for the wrong answer. The scores were interpreted as 0 - 50 % (0 - 13) Inadequate knowledge, 51 - 75 % (14 - 19) Moderately adequate knowledge and Above 75 % (20 - 25) Adequate knowledge.

Description of structured teaching programme

The PTP covered the following areas: meanings, type of play articles, methods of application of play intervention, benefits of children and role of parents.

Data collection procedure

The main study was conducted in Baba Hospital, Lucknow, U. P. Formal approval was obtained from the concerned authority prior to the study. The data collection period was 01.12.2020 to 31.12.2020. The sixty parents were selected by using a convenient sampling technique. The willingness of the parents was obtained with a consent form. After the self - introduction, the investigator explained the purpose of the study and requested to give frank and honest replies. The investigators collected the demographic variables and monitored parents existing level of knowledge regarding reduction of procedural pain of children with play intervention using structured questionnaires (pretest). After that, a structured teaching programme was conducted to the parents regarding reduction of procedural pain of children with play intervention. After 7 days, the post test was conducted by distributing the same questionnaires to the same samples. The data were analyzed by using a statistical method and the result was interpreted.

4. Results

Demographic variables of parents

Table 1 shows the distribution of demographic variables of parents. In the age of parents, 25 (41.67%) were in 18 to 24 years, 19 (31.67%) in 25 to 30 years, 9 (15.00%) in 30 to 35 years and 07 (11.66%) in 36 and above. About gender, 14 (23.33%) were male and 46 (76.67%) were female. With regards to educational status, most of the parents were in secondary and higher secondary 31 (51.67%), 15 (25%) had primary school education, 10 (16.67%) had education of graduation and above and four (06.66%) parents were illiterate. Out of 60 selected parents, most of them 23 (38.33%) doing their own vegetable business. Ten (16.67%) were unemployed, 20 (33.33%) were employee and 07 (11.67%) were cooley. The monthly income of 3 (5%) parents were less than Rs.1500, 13 (21.67%) had income of Rs.1501 to Rs.3000, 21 (35%) had income of Rs.3001 to Rs.5000, 23 (38.33%) had income of above Rs.5000. Out of 60 selected parents, 25 (41.67%) parents had only 1 child. Twenty three (38.33%) parents had 2 children, 10 (16.67%) parents had 3 children and 02 (03.33%) parents had more than 3 children. Most of the parents belongs to joint family 30 (50%), 24 (40%) parents were in nuclear family and 06 (10%) parents were in extended family. Considering the source of information regarding reduction of procedural pain of children with play intervention, 4 (6.67%) parentsgot from family members, 16 (26.66%) parents got information from mass - media, 36 (60%) from hospital staff and 4 (6.67%) from relatives.

Table 1: Distribution of demographic variables of parents

S. No.	Demographic Variables	N=60	
		Frequency	Percentage
1	Age of parents		
	a. 18 to 24 years	25	41.67
	b. 25 to 30 years	19	31.67
	c. 30 to 35 years	9	15
	d. 36 and above	7	11.66
2	Gender		
	a. Male	14	23.33
	b. Female	46	76.67
3	Educational status		
	a. Illiterate	4	6.66
	b. Primary	15	25
	c. Secondary and higher secondary	31	51.67
	d. Graduation and above	10	16.67
4	Occupation		
	a. Unemployed	10	16.67
	b. Business	23	38.33
	c. Employee	20	33.33
	d. Cooley	7	11.67
5	Monthly income		
	a. Less than Rs.1500	3	5
	b. Rs.1501 to Rs.3000	13	21.67
	c. Rs.3001 to Rs.5000	21	35
	d. Above Rs.5000	23	38.33
6	Number of children		
	a. 1	25	41.67
	b. 2	23	38.33
	c. 3	10	16.67
	d. More than 3	2	3.33
7	Type of family		
	a. Nuclear	24	40

	b. Joint	30	50
	c. Extended	6	10
8	Source of information regarding reduction of procedural pain of children with play intervention		
	a. Family members	4	6.67
	b. Relatives and friends	4	6.67
	c. Hospital staff	36	60
	d. Mass - media	16	26.66

The level of knowledge on reduction of procedural pain of children with play intervention among parents during pre and posttest

The pre - test result revealed that 54 (90%) parents had inadequate knowledge, 06 (10%) had moderately adequate knowledge and no one had adequate knowledge. In post - test, out of 60parents, 23 (38.33%) had moderately adequate knowledge, 37 (61.67%) had adequate knowledge and no one had inadequate knowledge. Table 2 and Figure 1 show the distribution of the level of knowledge regarding reduction of procedural pain of children with play intervention among parents during pre and post test.

Table 2: Distribution of the level of knowledge regarding reduction of procedural pain of children with play intervention among parents during pre and post test

S. No.	Level of knowledge	Pre - test (N=60)		Post - test (N=60)	
		Frequency	Percentage	Frequency	Percentage
1.	Inadequate knowledge (0 – 50%)	54	90	00	00
2.	Moderately adequate knowledge (51 – 75%)	6	10	23	38.33
3.	Adequate knowledge (above 75%)	00	00	37	61.67

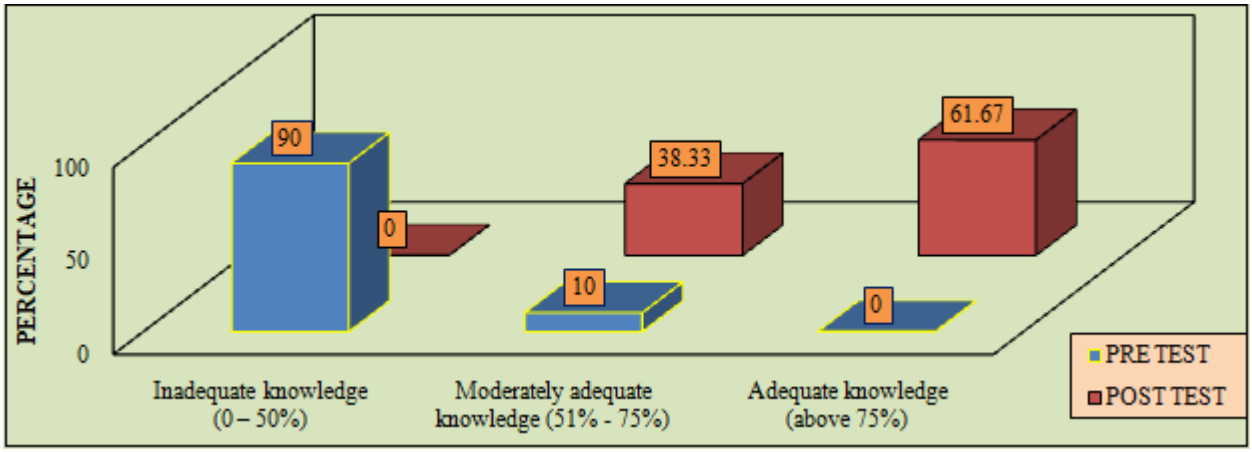

Figure 1: Distribution of level of knowledge regarding reduction of procedural pain of children with play intervention among parents between pre - test and post - test.

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Table 3 shows the total distribution of difference in level of knowledge regarding reduction of procedural pain of children with play intervention among parents between pre and post test. While comparing the total level of knowledge between pre - test and post - test, the difference mean value was 10.10 with a standard deviation of 2.96 and calculated t value was 26.41. Standard error of the mean was 0.38. It was statistically significant at P<0.05 level.

Table 3: Total distribution of difference in level of knowledge regarding reduction of procedural pain of children with play intervention among parents between pre and post test

Sl. No.	Classification of knowledge	Difference mean (đ)	Standard deviation (s)	Standard error of the mean	't' test value & p - value
1.	Total	10.10	2.96	0.38	t = 26.41 P<0.05 (S)

Note: S – Significant

5. Discussion

The findings of this study, the pre - test result, 54 (90%) parents had inadequate knowledge, 06 (10%) had moderately adequate knowledge and no one had adequate knowledge and post - test result 23 (38.33%) had moderately adequate knowledge, 37 (61.67%) had adequate knowledge and no one had inadequate knowledge shows that, massive knowledge difference between pre test and post test.

While comparing the total level of knowledge between pre - test and post - test, the difference mean value was 10.10 with a standard deviation of 2.96 and calculated t value was 26.41. Standard error of the mean was 0.38. It was statistically significant at P<0.05 level. This shows the planned teaching programme on knowledge regarding reduction of procedural pain of children with play intervention among parents was very effective to increase the knowledge of parents.

6. Conclusion

Exposure to pain during the procedure by children increases parents' anxiety, distress, stress, and other somatic symptoms, leading to an increased perception of pain by children. The occurrence of pain in pediatric patients during their inpatient stay can also lead to short and long - term functional and emotional problems for themselves and their families. So, play intervention can reduce the pain perception of children during procedure and eases the mind of both children and parents.

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Conflict of interest
The authors have no conflict of interest to declare.

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