

Effectiveness of Structured Teaching Programme Regarding Post Operative Care on Knowledge and Practice among Caregivers of the Children with Anorectal Malformation at Department of Paediatric

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ABSTRACT

Background: Anorectal malformations are a complex group of congenital anomalies involving the distal anus and rectum, as well as the urinary and genital tracts in a significant number of cases. Most anorectal malformations result are malfunction of the urorectal septum in early fetal life. **Objectives:** 1. To assess the knowledge and practice score regarding post operative care among caregivers of the children with anorectal malformation before and after administration of structured teaching programme. 2. To compare the knowledge and practice score regarding post operative care among caregivers of the children with anorectal malformation before and after administration of structure teaching programme. 3. To find out the association in knowledge and practice scores regarding post operative care among caregivers of the children with anorectal malformation and their selected demographic variables before the administration of structured teaching programme. **Method:** In this study the research approach was quasi experimental one group pre-test post-test design was applied. Total 60 samples selected by purposive sampling technique. The intervention Structured Teaching Programme was introduced to the group after the pre test. Knowledge was assessed by self structured questionnaire and practice assessed by observation checklist tool before and after the intervention. **Results:** The result revealed that mean pre test score of knowledge was 11.02 ± 2.53 which was increased to 18.87 ± 3.55 . The mean difference was 7.85. The obtained 7.85 ± 2.23 't' value 27.256 was statistically highly significant at ($p < 0.001$) level. And mean pre test score of practice was 4.32 ± 0.97 which was increased to 8.73 ± 1.15 . The mean difference was 4.42. The obtained 4.42 ± 0.85 't' value 40.270 was statistically highly significant at ($p < 0.001$) level. The null hypothesis H_0 is rejected and research hypothesis is accepted. **Conclusion:** The study concluded that, structured teaching programme about the post operative care of anorectal malformation should be implemented to improve the knowledge and practice among the caregivers of the children with anorectal malformation and prevents complication.

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KEYWORDS: Effectiveness, Structured Teaching Programme, Post operative Care, Knowledge, Practice.

1. INTRODUCTION

Anorectal malformations are common anomalies in neonates. When the anus is totally blocked, the condition is known as imperforate anus. The children with anorectal malformations when the anus may be missing, blocked by a thin layer or thick layer of tissue, or more narrow than normal. In some cases, the anus may be normal while the rectum is blocked or narrowed. [1]

Almost, this means being able to actively participate in their social environment without significant limitations from bowel function, for which fecal continence is an extensive determinant. Posterior sagittal anorectoplasty (PSARP), first introduced by De Vries and Pena and followed later by limited alteration anterior sagittal anorectoplasty (ASARP),

represents the basis of the modern surgical approach to Anorectal malformation with ending of the anal canal outside the voluntary sphincter complex. [2]

The incidence of anorectal malformations is reported as 2.0-2.5 per 10,000 live births. However, there are significant variations in the prevalence between regions throughout the world (2019). In North America the Birth Defects Registry reported 542 cases during the period of 1999-2001. [3] In Indian a high prevalence rate with anorectal malformation accounting for 15% of admissions to one unit. In the East Asia, the prevalence is reported as 3.5, 5.04 and 3.38 per 10,000 for Japan, China and South Korea. The incidence rate in the population of Singapore is reported as 0.86 per 1000 live births. [4]

Currently survival rate of Anorectal malformations is much improved because of advancement in surgical techniques and improvement in neonatal perioperative intensive care facilities. The conventional approach to surgical repair of most anorectal malformation involves a multi-stage repair, the initial creation of colostomy followed by definitive pull through and eventual colostomy closure. The surgical approach to repairing anorectal defects has changed dramatically since 1980s with the introduction of the PSARP. PSARP (Posterior Sagittal Anorectoplasty) is currently the most commonly utilized procedure for repairing anorectal malformation. However, in low-income countries due to lack of trained paediatric surgeons and equipment in most of the centres, this procedure is performed only in specialized centres. [5]

Family support, home care and long term follow up is important for children with high malformations. After the defective full through procedure, toilet training is delayed and complete continence is achieved at the usual age of 2 to 3 years. Prevention of constipation is crucial and encouraged for breastfeeding postoperatively. If a formula based cow's milk is used, a laxative may be prescribed. Diet modification, Bowel habit training, and administration of fiber are important aspects of bowel management. Parents are instructed in perineal and wound care or care of the colostomy is essential. Anal dilations also necessary for some infants. Parents are advised to observe stooling patterns of child and notify physician if there are any signs of anal stricture or complications. [6] Postoperative complications after PSARP have focused mainly on damage to the urinary tract and recurrent fistulas. Use of antibiotic prophylaxis and postoperative fasting are factors reported to influence the risk of overall complications after PSARP. [7]

Pediatric nurse plays an important role for educating, supporting, and empowering mothers to cope with their child's disease conditions and to care for their children at home. Currently, technological advances provide many different educational aids such as health education, booklets and video clips and which can facilitate the expansion of mother's knowledge and practice. [8]

Statement of the Problem

Effectiveness of Structured Teaching Programme regarding post operative care on knowledge and practice among caregivers of the children with anorectal malformation at Department of Paediatric.

2. Objectives of the Study

1. To assess the knowledge and practice score regarding post operative care among caregivers of the children with anorectal malformation before and after administration of structured teaching programme.
2. To compare the knowledge and practice score regarding post operative care among caregivers of the children with anorectal malformation before and after administration of structure teaching programme.
3. To find out the association in knowledge and practice scores regarding post operative care among caregivers of the children with anorectal malformation and their selected demographic variables before the administration of structured teaching programme.

Hypothesis:-

- H0** : There will be no significant difference between pre-test and post-test knowledge and practice scores regarding post operative care among caregivers of the children with anorectal malformation after the intervention.
- H1** : There will be significant differences between pre-test and post-test knowledge and practices scores regarding post operative care among caregivers of the children with anorectal malformation after the intervention.

3. Methodology

Research approach: An evaluative research approach

Research design: Was Quasi experimental i.e. One group pre-test post-test design.

Setting of the study: This study was conducted in selected Pediatric Surgery ward at KGMU Hospital, Lucknow.

Research variables:

1. Independent variables: In this study the Structured Teaching Programme was independent variable.
2. Dependent Variables: Knowledge and Practice.

Demographic variables: This includes age of caregivers, relation, religion, educational qualification, Occupation, type of family, Family Income, Marital Status, Gender, Age of Child.

Target population: The target population for the study is caregivers of the children (0-5 years) with anorectal malformation.

Accessible population:

The Caregivers of the children (0-5 years) with anorectal malformation who are present during the study in pediatric surgery ward KGMU Lucknow.

Sample size: The sample size of the present study was 60 Caregivers of the children (0 -5 years) undergone the surgery of anorectal malformation. Samples were selected from Pediatric Surgery ward KGMU Lucknow.

Sampling Technique

In this study a purposive sampling was used. Purposive sampling is a type of non -probability sampling method in which the researcher used his or her own judgment in the selection of sample members. It is sometimes called a judgmental sample. 60 caregivers were selected by non-probability purposive sampling technique from Pediatric Surgery ward KGMU Lucknow.

Criteria for Samples Selection:

A. Inclusion criteria

- Anorectal Malformation children are admitted in Pediatric Surgery Ward.
- Who are willing to participate in the study.
- Those who can understand and read Hindi language.

B. Exclusion Criteria

- Caregivers of children who have any other surgery instead of Anorectal malformation.
- The children who are more than 5 years.

Description of Tool**Part I: -Socio demographic variables**

Information on socio demographic variable of the subjects containing ten items, which included age of caregivers, relation, religion, educational qualification, Occupation, type of family, Family Income, Marital Status, Gender, Age of Child.

Part II: - Structured teaching programme

It consists of 30 self structured questionnaire related to knowledge regarding post operative care of children with anorectal malformation. It is containing

4 aspects:-Introduction, Wound care after anorectoplasty, anal dilation, management of constipation and fecal incontinence.

Scoring mode: -

Each correct answer was a score of 1 and incorrect was score of 0. Maximum scoring possible was 30 in knowledge questionnaire and minimum was 0.

Part III: - observational Check list: -

It consists of 12 Steps of observation checklist related to anal dilation.

Scoring mode

In Practice each correct answer carries 'one' mark and wrong answer carried 'zero' mark. The total maximum score is '12' and minimum score is '0'.

Reliability

The reliability of the tool was estimated by using Split Half analysis method of reliability for self structured knowledge questionnaire after pilot testing was 0.73 and reliability for observation checklist after pilot testing was 0.70, this value of Split Half means, the variables have a positive correlation & it is acceptable and this indicate that the questionnaire and observation checklist used for the data collection was found to be reliable. The range of the correlation coefficient is from -1 to +1.

$r = 0.73$ for self structured knowledge questionnaire

$r = 0.70$ for observation checklist

This means the variables have a positive correlation.

Data collection procedure

The study conducted after obtaining permission from the Head of Department of Pediatric Surgery. Informed consent was taken from the samples with self-introduction and purpose of the study was explained to the participants.

Day 1: A pre test will be administered to caregivers to assess their knowledge by using a Self Structured Questionnaire and practice by using observation checklist on post operative care of children with anorectal malformation.

Day 1: A structured teaching programme on knowledge and practice regarding post operative care of children with anorectal malformation will be conducted for about 20 minutes on the same day after pre test.

Day 7: After an interval of 7 days a post test will be conducted for the sample using self structured questionnaire and observation checklist for evaluating the effectiveness of structured teaching programme. Thereafter the collected raw data coded and entered master sheet of the analysis.

Plan for data analysis

Statistical analysis is the organization and analysis of quantities data using statistical procedures including both descriptive and inferential statistics.

Ethical consideration

Institutional ethical approval obtained from the Ethics Committee of King George's Medical University. After that permission was taken from the departmental HOD's. Informed consent was taken from the subjects. Confidentiality and anonymity of information was maintained.

4. Result

Section I: - Description of demographic variables of caregivers of the children with anorectal malformation.

Table 1: Frequency and percentage distribution of caregivers according to their demographic variables

n=60

Variable	f	%
Age of Caregivers		
<20 yrs	2	3.3
21-25 yrs	31	51.7
26-30 yrs	20	33.3
>30 yrs	7	11.7
Relation with child		
Mother	29	48.3
Father	23	38.3
Grand mother	1	1.7
Other	7	11.7
Religion		
Hindu	50	83.3
Muslim	10	16.7
Education		
Primary	34	56.7
Secondary	14	23.3
Graduation & above	12	20.0
Occupation		
Housewife	30	50.0
Self employed	10	16.7
Govt. Job	7	11.7
Private Job	13	21.7
Family		
Nuclear	19	31.7
Joint	41	68.3
Annual Income		
<10,000	35	58.3
10,000-50,000	25	41.7
Marital Status		
Married	56	93.3
Unmarried	3	5.0
Separated	1	1.7
Gender		
Male	27	45.0
Female	33	55.0
Age of child		
0-1 yrs	19	31.7
1-2 yrs	22	36.7
2-3 yrs	13	21.7
3-5 yrs	6	10.0

Section II:- Findings on knowledge regarding post operative care of children with anorectal malformation.

Table 2: Mean, standard deviation, mean difference and 't' value of overall pre test and post test level of knowledge among caregivers

n=60

Overall	Total Score			Paired 't' test	
	Mean	SD	Mean Difference	T value	p value
Pre test	11.2	2.53	7.85	27.256	<0.001
Post test	18.87	3.55			

Table No.2 Reveals that the mean pre test score of knowledge was 11.02 ± 2.53 which was increased to 18.87 ± 3.55 after post test. The mean difference was 7.85. The obtained 7.85 ± 2.23 't' value '27.256' was statistically highly significant at ($p < 0.001$) level which rejects the null hypothesis and accepts the research hypothesis that there will be significant difference in knowledge score regarding post-operative care of children with anorectal malformation.

Section III:- Comparison of pre test and post test knowledge scores among caregivers of the children with anorectal malformations.

Table 3: Categories wise pre and post test comparison of knowledge score among caregivers.

n=60

Knowledge	Poor Knowledge (Score 0-10)		Average Knowledge (Score 11-20)		Good Knowledge (Score 21-30)	
	f	%	f	%	f	%
Pre-test	22	36.7	38	63.3	0	0.0
Post-test	0	0.0	29	48.3	31	51.7

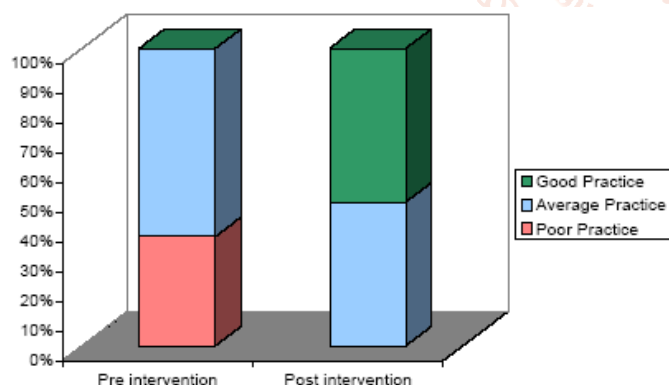


Table 3: Reveals that before intervention none of the caregiver had Good level of knowledge, 36.7% had average level of knowledge and majority 63.3% had Poor level of knowledge. After intervention none of the caregiver had Poor level of knowledge, 48.3% had Average level of knowledge and majority 51.7% had Good level of knowledge.

Table 4: Mean, standard deviation, mean difference and 't' value of overall pre test and post test level of practice among caregivers

n=60

Overall	Total Score			Paired 't' test	
	Mean	SD	Mean difference	T value	p value
Pre test	4.32	0.97	4.42	40.270	<0.001
Post test	8.73	1.15			

Table 4: Reveals that mean pre test score of practice was 4.32 ± 0.97 which was increased to 8.73 ± 1.15 after post test. The mean difference was 4.42. The obtained 4.42 ± 0.85 't' value '40.270' was statistically highly significant at ($p < 0.001$) level which rejects the null hypothesis and accepts the research hypothesis that there will be significant difference in practice score regarding post-operative care of children with anorectal malformation.

Section IV:- Comparison of pre test and post test practice scores among caregivers of the children with anorectal malformations.

Table 5: Categories wise pre and post test comparison of practice score among caregivers.

SN.	Practice	Poor Practice (Score 0-4)		Average Practice (Score 5-8)		Good Practice (Score 9-12)	
		f	%	f	%	f	%
1-	Pre-test	38	63.3	22	36.7	0	0.0
2-	Post test	0	0.0	25	41.7	35	58.3

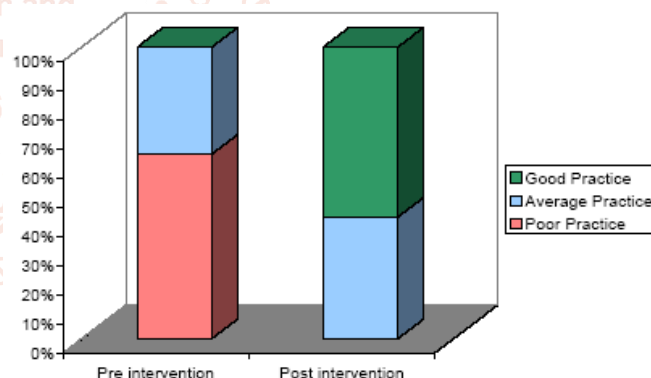


Table 5: Reveals that none of the caregiver had good pre-intervention practice level, majority of them had poor practice level (63.3%) and rest 36.7% had average practice level. After intervention, none of the caregiver was poorly practicing the post-operative care, 41.7% had average practice level and majority 58.3% had good level of practice of post-operative care.

Section V:- Association of knowledge score among caregivers of the children with anorectal malformations and their selected demographic variables before the administration of structured teaching programme.

Table 6: Distribution of association of knowledge with selected demographic variable before administration of structured teaching programme

Variables	Poor Knowledge (Score 0-10)		Average Knowledge (Score 11-20)		Significance of difference	
	<i>f</i>	%	<i>f</i>	%	x ²	'p'
Age of caregivers						
<20 yrs	1	50.0	1	50.0	1.814	0.612
21-25 yrs	12	38.7	19	61.3		
26-30 yrs	8	40.0	12	60.0		
>30 yrs	1	14.3	6	85.7		
Relation with child						
Mother	9	31.0	20	69.0	2.29	0.513
Father	9	39.1	14	60.9		
Grand mother	0	0.0	1	100.0		
Other	4	57.1	3	42.9		
Religion						
Hindu	20	40.0	30	60.0	1.435	0.231
Muslim	2	20.0	8	80.0		
Education						
Primary	13	38.2	21	61.8	2.355	0.308
Secondary	3	21.4	11	78.6		
Graduation	6	50.0	6	50.0		
Occupation						
Housewife	12	40.0	18	60.0	0.645	0.886
Self employed	3	30.0	7	70.0		
Govt. Job	3	42.9	4	57.1		
Private Job	4	30.8	9	69.2		
Family						
Nuclear	8	42.1	11	57.9	0.354	0.552
Joint	14	34.1	27	65.9		
Annual Income						
<10,000	17	48.6	18	51.4	5.126	0.024
10,000-50,000	5	20.0	20	80.0		
Marital Status						
Married	20	35.7	36	64.3	1.763	0.414
Unmarried	2	66.7	1	33.3		
Separated	0	0.0	1	100.0		
Gender						
Male	11	40.7	16	59.3	0.351	0.554
Female	11	33.3	22	66.7		
Age of child						
0-1 Yrs	8	42.1	11	57.9	1.736	0.629
1-2 yrs	8	36.4	14	63.6		
2-3 yrs	3	23.1	10	76.9		
3-5 yrs	3	50.0	3	50.0		

Table 6: Reveals that no significant association of pre-intervention knowledge with none of the components of socio-demographic variable of respondents except family income was observed. Before intervention, proportion of respondents with Average knowledge was found to be significantly higher among families with annual income 10,000-50,000 (80.0%) as compared to those with <10,000/- (51.4%).

Section:-VI Association of practice score among caregivers of the children with anorectal malformations and their selected demographic variables before the administration of structure teaching programme.

Table 7: Distribution of association of practice with selected demographic variable before administration of structured teaching programme

Variables	Poor Practice (Score 0-4)		Average Practice (Score 5-8)		Significance of difference	
	<i>f</i>	%	<i>f</i>	%	x ²	'p'
Age of caregivers						
<20 yrs	1	50.0	1	50.0	1.818	0.611
21-25 yrs	20	64.5	11	35.5		
26-30 yrs	14	70.0	6	30.0		
>30 yrs	3	42.9	4	57.1		
Relation with child						
Mother	20	69.0	9	31.0	10.484	0.015
Father	17	73.9	6	26.1		
Grand mother	0	0.0	1	100.0		
Other	1	14.3	6	85.7		
Religion						
Hindu	31	62.0	19	38.0	0.230	0.632
Muslim	7	70.0	3	30.0		
Education						
Primary	22	64.7	12	35.3	1.803	0.406
Secondary	7	50.0	7	50.0		
Graduation	9	75.0	3	25.0		
Occupation						
Housewife	19	63.3	11	36.7	0.263	0.967
Self employed	6	60.0	4	40.0		
Govt. Job	5	71.4	2	28.6		
Private Job	8	61.5	5	38.5		
Family						
Nuclear	15	78.9	4	21.1	2.919	0.088
Joint	23	56.1	18	43.9		
Annual Income						
<10,000	19	54.3	16	45.7	2.961	0.085
10,000-50,000	19	76.0	6	24.0		
Marital Status						
Married	37	66.1	19	33.9	5.942	0.051
Unmarried	0	0.0	3	100.0		
Separated	1	100.0	0	0.0		
Gender						
Male	18	66.7	9	33.3	0.235	0.62 8
Female	20	60.6	13	39.4		
Age of child						
0-1 yrs	12	63.2	7	36.8	2.517	0.472
1-2 yrs	16	72.7	6	27.3		
2-3 yrs	6	46.2	7	53.8		
3-5 yrs	4	66.7	2	33.3		

Table 9: Reveals that no significant association of pre-intervention practice level with none of the components of socio-demographic variable of respondents except relationship with child. Before intervention, proportion of respondents with Average Practice as compared was found to be significantly higher among Grandmother (100.0%) and other relatives (85.7%) as compared to mother and father of child (31.0% & 26.1% respectively).

Nursing Implication

Post operative complication causes various problems and its extremely distressing condition for the post operative children such as constipation, fecal incontinence, and increased risk of infection. The finding studies imply that there is need for ensuring better post operative care and knowledge regarding prevention and management of complication. The findings of the study provide important implication and insights for nursing education, practice, administration and research.

Nursing Administration

- Nurse administrators should motivate the sub-ordinates to participate in various programs and improve their knowledge and practice regarding post operative care of the children with anorectal malformation.
- Nurse administrators can organize seminars to improve their knowledge and practice regarding post operative care of the children with anorectal malformation.
- Nurse administrators can motivate the nurses to organize health camps and quiz program regarding post operative care of the children with anorectal malformation.
- Nurse administrators can create awareness among caregivers regarding post operative care of the children with anorectal malformation.
- Nurse administrators can encourage the nurses to conduct the health awareness programs regarding post operative care of the children with anorectal malformation.

Nursing practice

The nurses should take an initiate and imparting knowledge regarding post operative of children with anorectal malformation among caregivers.

The nurses have major role in creating awareness about post operative care of children with anorectal malformation.

In- service education can be organized for the nurses for post operative care of the children with anorectal malformation.

Nursing Education

- Nursing educator can encourage the student's nurses to provide knowledge regarding post operative care of the children with anorectal malformation.
- The nurses should aware and knowledgeable about the post operative care and its complication.
- Health education should be imparted regularly based on evidenced based practice in all nursing curriculum. Nursing curriculum should prepare nurses to motivate the teachers to improve the student's knowledge, practice regarding post operative care of the children with anorectal malformation.

Limitations of the study:

- The study was limited to caregivers of children admitted in Pediatric surgery ward KGMU Lucknow.
- The study is limited to those who are willing to participate.

Future Recommendations:

- A similar study can be conducted with a larger sample for the purpose of generalization.
- The study can be conducted in different settings with similar intervention.

5. Conclusion

The study showed that structured teaching programme invented by the researcher was effective to increase the knowledge and practice regarding post operative care among caregivers of the children with anorectal malformation. So there is a need of providing proper information and demonstration and education regarding post operative care of children with anorectal malformation, its surgeries, anal dilation, complication and its prevention. So health care provider should provide health education and demonstration to improve their knowledge and practice

regarding post operative care of children with anorectal malformation.

(H₀) is rejected and alternative hypothesis (H₁) is accepted that structured teaching programme on knowledge and practices regarding post-operative care of children with anorectal malformation was effective.

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