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A Study To Evaluate The Effectiveness Of Structured Teaching Programme On Knowledge Regarding Prevention And Management Of Napkin Dermatitis In Infants Among Mothers.

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ABSTRACT

Background: Napkin dermatitis, also referred to as diaper rash, is a common ailment in infants, typically caused by extended exposure to moisture, friction, and irritants. As primary caregivers, mothers are vital in preventing and managing this condition. It is imperative to educate mothers on evidence-based practices to mitigate its occurrence and intensity.

Objective: The study aimed to evaluate the effectiveness of a structured teaching programme on the knowledge of mothers regarding the prevention and management of napkin dermatitis in infants.

Methods: A pre-experimental one-group pre-test and post-test design was used. The study was conducted among [number] mothers of infants attending [location, e.g., pediatric outpatient department] using purposive sampling. Data were analyzed using descriptive and inferential statistics.

Results: The findings revealed a significant increase in the post-test knowledge scores compared to the pre-test scores, indicating that the structured teaching programme was effective in enhancing maternal knowledge regarding napkin dermatitis prevention and management.

Conclusion: The study concludes that structured teaching programmes are effective in improving mothers' knowledge, which can lead to better infant care practices and a reduction in the incidence of napkin dermatitis.

Keywords: Napkin dermatitis, diaper rash, maternal knowledge, infant care.

INTRODUCTION

Diseases can be devastating for anyone, but it seems particularly unfair when they attack children. Unfortunately, many diseases seem to take a special interest in the young, infecting them more frequently and vigorously than they do adults. Infants are more susceptible to diseases for a number of reasons. The major reason for Infants' increased susceptibility is that they have had limited exposure to diseases and therefore haven't yet built the immunologic defences required to fend off certain diseases.[1]

The skin of the human body is not only complex, but also serve as the primary parts of the body that experiences the outside world first-hand. It means to protect the rest of the body from irritants and damage, as well as send signals to the brain concerning sensations and possible danger. Skin is meant to protect the rest of the body underneath it from damage, and it is the largest organ in the human body. It is also the body's primary means of storing water, fat and vitamin D, as well as the main way the body absorbs vitamin D from the sun. Outside of these functions, the human skin also allows for the sense of touch, and sends this information back to the brain for processing, allowing the body to determine what action needs to be taken for protection or stimulation.[2]

Diapers has been used for care of babies since decades to prevent soiling and for social convenience.The use of diaper poses a risk of developing diaper dermatitis. Recent innovations in diaper technology have led to development of super absorbent disposable diapers, emollient delivering diapers and breathable diapers. These newer types of diapers reduce the incidence of diaper dermatitis. [3]

Diaper dermatitis is one of the most common skin disorders of infants and children. Diaper dermatitis is a general term used to describe any inflammatory skin eruption that develops in the diaper-covered region. It is synonymous with diaper rash, napkin dermatitis, and nappy rash. Diaper dermatitis usually affects infants and toddlers, although it can affect any individual who wears a diaper. . The reported incidence and age of onset vary worldwide, related to differences in diaper use, hygiene, and child-rearing practices in different countries[4]

The primary cause of a diaper rash is constant exposure to wetness .Candida; Staphylococcus& Streptococcus are the common cause of secondary infection. The most common sign of napkin dermatitis are irritation, inflammation and redness in the genital region. Diagnosis of diaper dermatitis is based largely on the physical examination. The pertinent physical examination focuses on the skin in the diaper area. Findings vary depending on which subset of diaper rash is most prominent.[5]

Approximately 10% to 20% of the world's population develops napkin dermatitis. An estimated 65% develop napkin dermatitis during their first year of life, and 90% develop the condition before age 5. While rare, napkin dermatitis can begin at puberty or later. While napkin dermatitis resolves in many children by age 2, 50% continue to experience signs and symptoms into adulthood, usually as hand eczema. It occurs in all races and skin types.

Treatment of diaper rash includes a combination of measures, which are most effective when used together. When the child wears a diaper, frequent diaper changes are recommended; a suggested interval might be every two to three hours and immediately after every bowel movement. Skin ointments or pastes also can help to treat or prevent irritant diaper rash. If the child develops signs or symptoms of a skin infection, a healthcare provider should evaluate the child. If needed, he or she may prescribe an antibiotic ointment or oral antibiotic egNeosporin[6]

RESEARCH STATEMENT

A study to evaluate the effectiveness of structured teaching programme on knowledge regarding prevention and management of napkin dermatitis in infants among mothers.

OBJECTIVES OF THE STUDY

- To assess the pre-test knowledge of mothers regarding prevention and management of napkin dermatitis in infant by pre-test scores.
- To find out the effectiveness of Structured Teaching Programme on prevention and management of napkin dermatitis in infant among mothers in selected hospital at Jaipur, Rajasthan.
- To find out the association between pre-test knowledge scores and selected demographic variable among mothers in selected hospital at Jaipur, Rajasthan.

RESEARCH METHODOLOGY

RESEARCH APPROACH: The selection of research approach is the basic procedure for conducting a research enquiry. It tells the researcher what data to collect and how to analyze it and also suggests possible conclusions to be drawn from the data. An evaluative research approach using pre-experimental design pre-test (O_1) and post-test (O_2) was adopted for this study in order to accomplish the objectives.

RESEARCH DESIGN: The research design selected for present study was pre-experimental in nature i.e., one group pre-test post-test design. This study was intended to find out the gain in knowledge by the mothers after administering structured teaching programme, who was subjected for the study. Thus, experimental group is observed twice. The effect of treatment would be equal to the level of phenomenon after the treatment minus the level of the phenomena before treatment.

In the present study a pretest was administered by the means of a structured knowledge questionnaire. The structured teaching programme on prevention and management of napkin dermatitis in Infants was planned and implemented for 30 minutes with the help of chart as AV aids. After seven days a post test was conducted by using a same structured knowledge questionnaire. The collected data were analyzed by using descriptive and inferential statistics.

RESULT

SECTION-I

Section A: Data on Demographic variables of mothers

Table 1.1: Frequency and percentage distribution of mothers by age, educational status, occupation, per capita monthly income of the family, source of information ,type of family and Any Family history of napkin dermatitis.

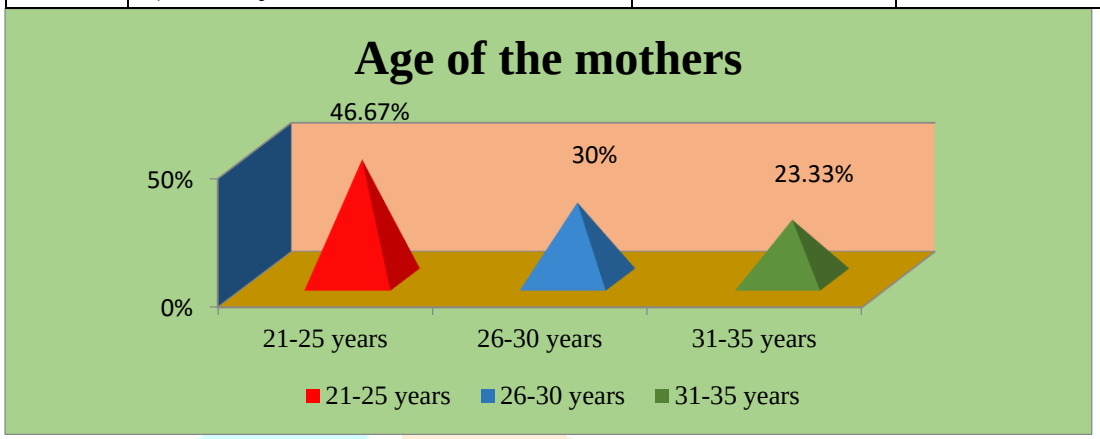
n=60

Sl. No	Demographic variables	Frequency(f)	Percentage (%)
1	**Age of the mothers**		
	a) 21-25 years	28	46.67%
	b)26-30 years	18	30%
	c) 31-35 years	14	23.33%
2	**Educational Status**		
	a)Non Formal education	14	23.4%
	b)Primary	20	33.3%
	c)Secondary/PUC	20	33.3%
	d)Graduate and above	6	10%
3	**Occupation**		
	a)Un employed or housewife	30	50%
	b)Health professionals	12	20%
	c)other professionals	18	30%
4	**Per capita monthly Income (Rs)**		
	a)Below 5000	35	58%
	b)5001-10,000	23	38.68%
	c)10,001-15000	1	1.66%
	d)15001 and above	1	1.66%
5	**Source of information**		
	a)Mass media or printed media	25	41.67%
	b)Health professionals	12	20%
	c)Family/Friends/Relatives	15	25%
	d)No source of information	8	13.33%.
6	**Type of Family**		
	a)Nuclear	40	66.67%
	b)Joint	20	33.33%
7	**Any Family history of napkin dermatitis**		
	a) Present	5	8.3%
	b)Absent	55	91.7%

Percentage distribution of mothers according to age group

Table-4.1 Distribution of Mothers According To Age

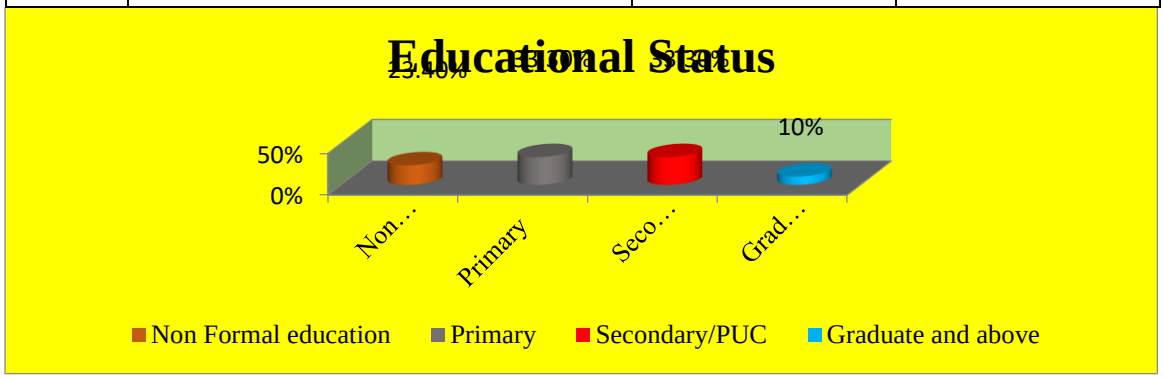
Sl. No	Demographic variables	Frequency(f)	Percentage (%)
1	**Age of the mothers**		
	a) 21-25 years	28	46.67%
	b)26-30 years	18	30%
	c) 31-35 years	14	23.33%



Distributions of Mothers According To Age

4.2 Distribution of Mothers According To Educational Status

Sl. No	Demographic variables	Frequency(f)	Percentage (%)
2	**Educational Status**		
	a)Non Formal education	14	23.4%
	b)Primary	20	33.3%
	c)Secondary/PUC	20	33.3%
	d)Graduate and above	6	10%

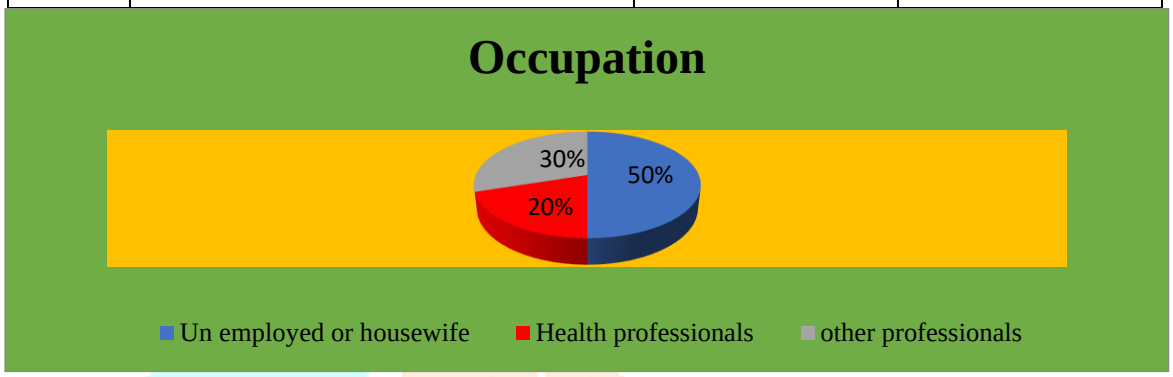


Distribution of Mothers According To Educational Status

Percentage distribution of mothers according to occupation

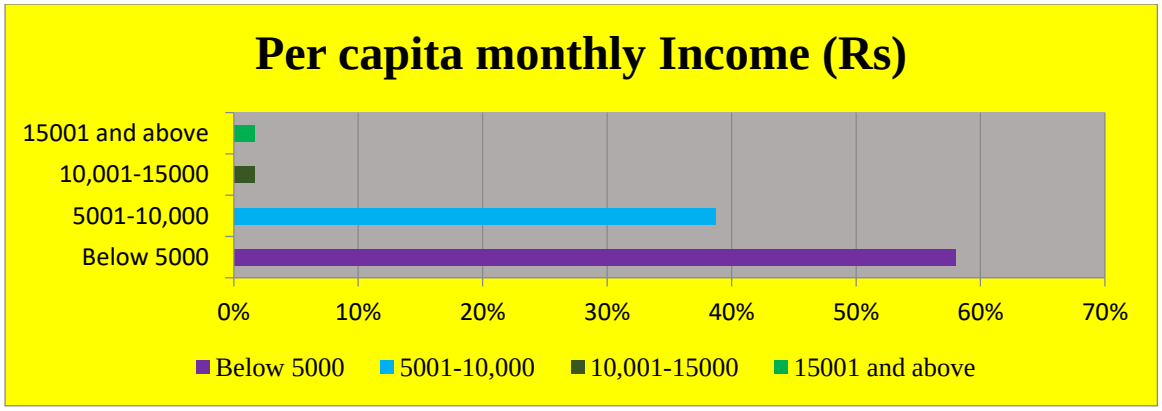
4.3 Distribution of Mothers According To Occupation

Sl. No	Demographic variables	Frequency(f)	Percentage (%)
3	**Occupation**		
	a)Un employed or housewife	30	50%
	b)Health professionals	12	20%
	c)other professionals	18	30%



4.4 Distribution of Mothers According To Income

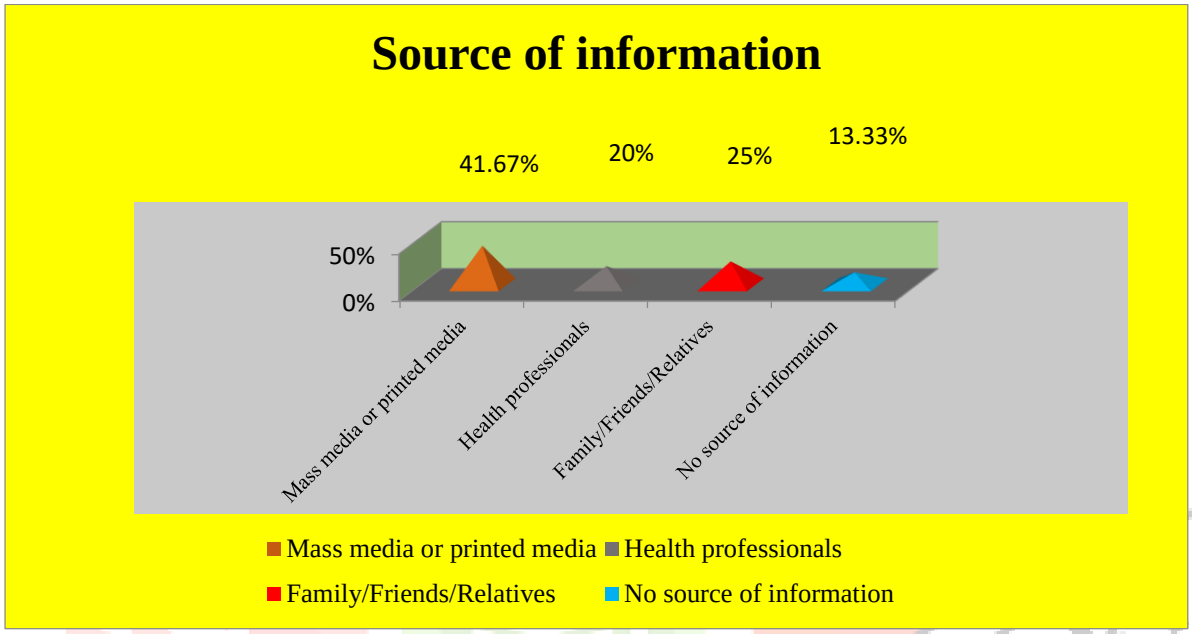
Sl. No	Demographic variables	Frequency(f)	Percentage (%)
4	**Per capita monthly Income (Rs)**		
	a)Below 5000	35	58%
	b)5001-10,000	23	38.68%
	c)10,001-15000	1	1.66%
	d)15001 and above	1	1.66%



Distribution of Mothers According To Income

4.5 Distribution of Mothers According To Source of Information

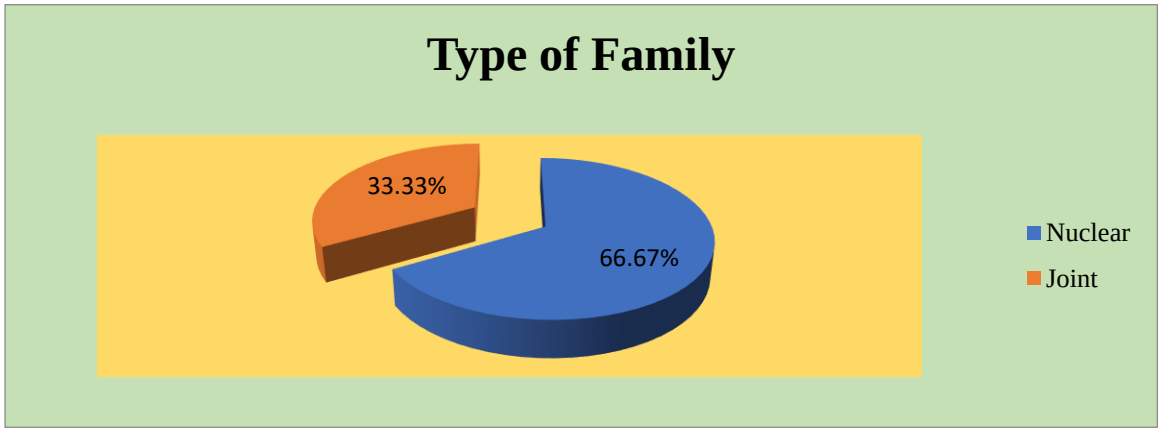
Sl. No	Demographic variables	Frequency(f)	Percentage (%)
5	**Source of information**		
	a)Mass media or printed media	25	41.67%
	b)Health professionals	12	20%
	c)Family/Friends/Relatives	15	25%
	d)No source of information	8	13.33%.



Distributions of Mothers According To Source of Information

4.6 Distribution of Mothers According To Type of Family

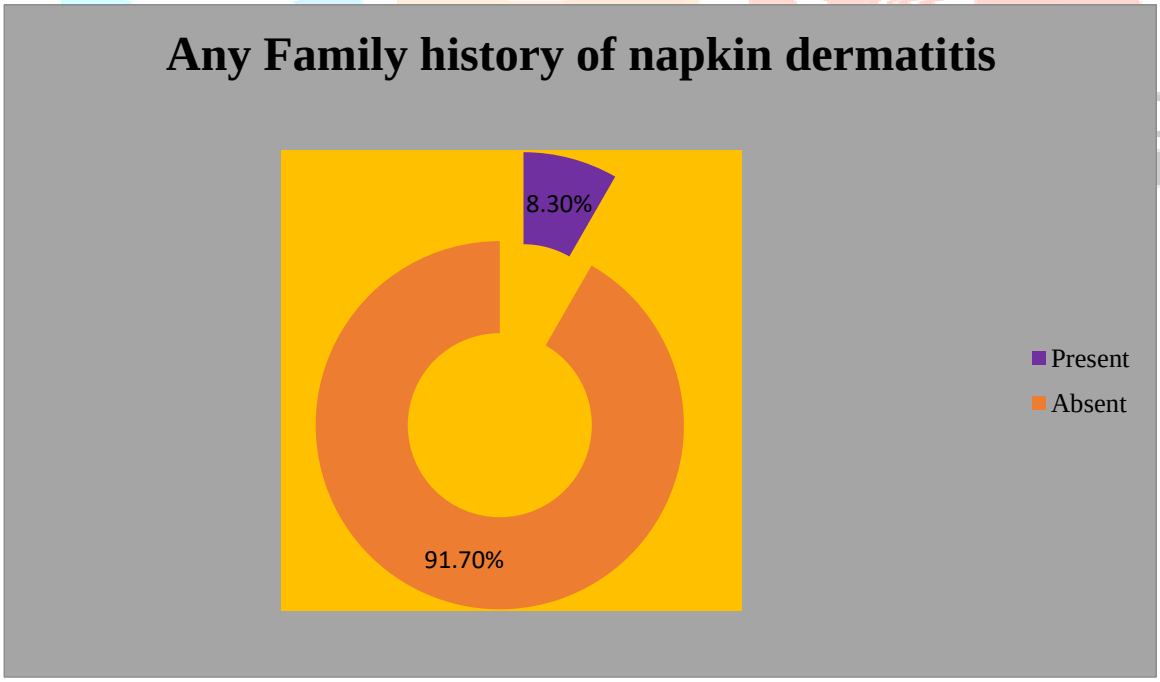
Sl. No	Demographic variables	Frequency(f)	Percentage (%)
6	**Type of Family**		
	a)Nuclear	40	66.67%
	b)Joint	20	33.33%



Distributions of Mothers According To Type of Family

4.7 Distribution of Mothers According To Any Family History of Napkin Dermatitis

Sl. No	Demographic variables	Frequency(f)	Percentage (%)
7	Any Family history of napkin dermatitis		
	a) Present	5	8.3%
	b)Absent	55	91.7%



Distributions of Mothers According To Any Family History of Napkin Dermatitis

SECTION-II

This section reveals the level of knowledge of mothers regarding prevention and management of napkin dermatitis in infants before and after conducting structured teaching programme

Table-2.1: Assessment of mothers' pretest level of knowledge regarding prevention and management napkin dermatitis in infants

n=60

Level of knowledge	Pretest	
	frequency	%
Adequate knowledge (> 75 %)	0	0%
Moderate knowledge (50-75%)	37	61.6%
Inadequate knowledge (<50 %)	23	38.4%

Table-2.1 indicates the frequency and percentage distribution of mothers' level of knowledge in pretest. Majority of 37(61.6%) had moderate knowledge regarding prevention and management of napkin dermatitis in infants. Of 23(38.3%) mothers had inadequate knowledge regarding prevention and management of napkin dermatitis in infants.

Table-2.2: Assessment of mothers' aspect wise knowledge scores regarding prevention and management of napkin dermatitis in infants in pretest n=60

No	Knowledge Variable	Maximum score	Mean	Mean%	SD
I	General awareness about napkin dermatitis	7	3.63	51.9%	1.36
II	Causes of napkin dermatitis	3	1.76	58.88%	.78
III	Clinical manifestations of napkin dermatitis	3	1.83	61.1%	.74
IV	Prevention of napkin dermatitis	8	4.23	52.9%	1.44
V	Management of	9	4.33	48.1%	1.74

	napkin dermatitis				
	Over all	**30**	**15.8**	**52.66%**	**3.68**

The above table-2.2 indicates assessment of mothers' aspect wise knowledge scores regarding prevention and management of napkin dermatitis in children in pretest. The overall mean percentage was 52.66%. The mean percentage of knowledge in the aspect of general awareness about napkin dermatitis was 51.9%. The mean percentage in the aspect of causes of napkin dermatitis was 58.88%. The mean percentage in the aspect of clinical manifestations of napkin dermatitis was 61.1%. The mean percentage in the aspect of prevention of napkin dermatitis was 52.9%. The mean percentage in the aspect of management of napkin dermatitis was 48.1%.

Fig-10: Aspect wise mothers' knowledge level in pretest

Table-2.3: Assessment of mothers' posttest level of knowledge regarding prevention and management napkin dermatitis in infants

n=60

Level of knowledge	**Post test**	
	Frequency	**%**
Adequate knowledge (> 75 %)	**39**	**65%**
Moderate knowledge (50-75%)	**21**	**35%**
Inadequate knowledge (<50 %)	**0**	**0%**

The above table 2.3 shows the frequency and percentage distribution of mothers' level of knowledge in posttest majority of them 39(65%%) had adequate knowledge regarding prevention and management of napkin dermatitis in infants, 21(35%) had moderates knowledge regarding prevention and management of napkin dermatitis in infants and no one had inadequate knowledge regarding prevention and management of napkin dermatitis in infants.

Table-2.4: Aspect-wise comparison of posttest level of mothers' knowledge regarding prevention and management of napkin dermatitis in infants

n=60

No	Knowledge Variable	Maximum score	Mean	Mean%	SD
I	General awareness about napkin dermatitis	7	5.2	74%	1.18
II	Causes of napkin dermatitis	3	2.35	78.33%	.61
III	Clinical manifestations of napkin dermatitis	3	2.55	85%	.50
IV	Prevention of napkin dermatitis	8	5.97	74.6%	.97
V	Management of napkin dermatitis	9	6.26	69.63%	1.19
	Over all	30	22.55	75.16%	2.59

The above table-2.4 indicates assessment of mothers' aspect wise knowledge scores regarding prevention and management of napkin dermatitis in children in posttest. The overall mean percentage was 75.16%. The mean percentage of knowledge in the aspect of general awareness about napkin dermatitis was 74.28%. The mean percentage in the aspect of causes of napkin dermatitis was 78.33%. The mean percentage in the aspect of clinical manifestations of napkin dermatitis was 85%. The mean percentage in the aspect of prevention of napkin dermatitis was 74.58%. The mean percentage in the aspect of management of napkin dermatitis was 69.16%.

SECTION-III

This section deals with the comparison of pretest and posttest knowledge scores of mothers regarding prevention and management of napkin dermatitis in infants.

Table: 3.1: - Comparison of mothers' pretest and posttest knowledge scores regarding prevention and management of napkin dermatitis in infants.

n=60

No	Knowledge variable	Maximum score	Pre test	Post test	Mean %	Paired t value			
			Mean	SD	Mean	SD	Pretest	Post test	
I	General awareness about napkin dermatitis	7	3.63	1.36	5.2	1.18	51.9%	74%	7.45* df-59
II	Causes of napkin dermatitis	3	1.76	.78	2.35	.61	58.88%	78.33 %	4.131 * df-59
III	Clinical manifestations of napkin dermatitis	3	1.83	.74	2.55	.50	61.1%	85%	6.90* df-59
IV	Prevention of napkin dermatitis	8	4.23	1.44	5.97	.97	52.9%	74.6 %	8.43* df-59
V	Management of napkin dermatitis	9	4.33	1.74	6.26	1.19	48.1%	69.63 %	8.222 * df-59
	Over all	30	15.8	3.68	22.55	2.59	52.66%	75.16 %	15.06 * df-59

Note: Significant- *, Non-Significant-**

The table 3.1 shows that the comparison between pre and posttest knowledge scores of mothers regarding General awareness about napkin dermatitis (aspect 1) showed that ;Pretest knowledge score was (3.63),Posttest knowledge sore was (5.2),Paired 't' test value (7.45) indicates there is a significant difference between pre and posttest knowledge scores of mothers regarding General awareness about napkin dermatitis.

Comparison between pre and posttest knowledge scores of mothers regarding Causes of napkin dermatitis (aspect 2) showed that; Pretest knowledge score was (1.76), Posttest knowledge sore was (2.35), Paired't' test value (4.131) indicates there is a significant difference between pre and posttest knowledge scores of mothers regarding Causes of napkin dermatitis.

Comparison between pre and posttest knowledge scores of mothers regarding Clinical manifestations of napkin dermatitis (aspect 3) showed that; Pretest knowledge score was (1.83), Posttest knowledge sore was (2.55), Paired't' test value (6.90) indicates there is a significant difference between pre and posttest knowledge scores of mothers regarding Clinical manifestations of napkin dermatitis.

Comparison between pre and posttest knowledge scores of mothers regarding Prevention of napkin dermatitis (aspect 4) showed that; Pretest knowledge score was (4.23), Posttest knowledge sore was (5.97), Paired't' test value (8.43) indicates there is a significant difference between pre and posttest knowledge scores of mothers regarding Prevention of napkin dermatitis.

Comparison between pre and posttest knowledge scores of mothers regarding Management of napkin dermatitis (aspect 5) showed that; Pretest knowledge score was (4.33), Posttest knowledge sore was (6.26), Paired't' test value (8.222) indicates there is a significant difference between pre and posttest knowledge scores of mothers regarding Management of napkin dermatitis.

The overall pretest knowledge score of the respondents was identified as 15.33(52.66%),posttest knowledge scores is 22.55(75.16%);this difference was statistically analyzed with paired 't' test and calculated 't' value was 15.06.This was found on significant. Hence H1 is accepted.

SECTION-IV

Table-4.1: Association of post test level of knowledge of mothers with age, educational status, occupation, percapita monthly income, Source of information, type of family and family history

n=60

Sl. No	variable	category	Total No	%	Moderate	Adequate	□□ Value		
					No	%	No	%	
1	Age	a)21-25 years	28	47	12	43	16	57	3.52
		b) 26-30 years	18	30	7	38.8	11	61.2	df 2

		c)31-35 years	14	23.33	2	14.3	12	85.7	NS
2	Educational status	a)Non formal education	14	23.4	2	14.3	12	85.7	
		b)Primary	20	33.3	5	25	15	75	8.14
		c)PUC/Secondary	20	33.3	10	50	10	50	Df-3, S
		d)Graduate or above	6	10	4	66.7	2	33.3	
3	Occupation	a)Unemployed or House wife	30	50	13	43.3	17	56.7	2.71
		b)Health professionals	12	20	2	16.6	10	83.4	df 2
		c)Other professionals	18	30	6	33.3	12	66.7	NS
4	Percapita monthly Income	a)Below 5000	35	58	11	31.4	24	68.6	
		b)5001-10,000	23	38.33	10	43.5	13	56.5	1.99
		c)10,001-15,000	1	1.66	0	0	1	100	Df-3
		d)15,001 and above	1	1.66	0	0	1	100	NS
5	Source of information	a)Mass or printed media	25	41.67	15	60	10	40	
		b)Health professionals	12	20	2	16.7	10	83.3	13.40
		c)Family/friends/Relatives	15	25	4	26.6	11	73.4	Df-3
		d)No source of information	8	13.33	0	0	8	100	S
6	Type of Family	a)Nuclear	40	66.67	12	30	28	70	1.32
		b)Joined	20	33.33	9	45	11	55	df 1, NS

S. No	variable	category	Total No	%	Moderate	Adequate	□□ Value		
					No	%	No	%	
7	Family history of napkin dermatitis	a)Present	5	8.4	0	0%	5	100 %	2.93
		b) Absent	55	91.6	21	38.2%	34	61.8 %	df 1
									NS

Note: S-Significant, NS-Non significant at 5 % (P<0.05) level.

The table 4.1: Represents the chi-square value computed for association of posttest level of knowledge of mothers with age, educational status, occupation, percapita monthly income, Source of information, type of family and Family history of napkin dermatitis.

There exist a significant association between post-test knowledge level and educational status of the mothers (□□=8.14, p<0.05). There exist a significant association between post-test knowledge level and source of information (□□=13.40, P<0.05).

There exist no significant association between occupation and post-test level of the mothers (□□= 2.71, P>0.05).There is no significant association between post-test knowledge level and percapita monthly income of mothers (□□= 1.99, P>0.05). There exist no significant association between age and post-test knowledge level of the mothers (□□= 3.52, P>0.05).

There exist no significant association between post-test knowledge level and type of family (□□= 1.32, P>0.05) There exist no significant association between post-test knowledge level and Family history of napkin dermatitis (□□= 2.93, P>0.05).Hence H2 accepted among demographic variables such as Educational status and Source of information about napkin dermatitis.H2 was rejected among demographic variables such as age, occupation,percapita monthly income of the family, Type of family and Any family history of napkin dermatitis.

CONCLUSION

This chapter presents the conclusion drawn, implications, limitations, suggestion, scope of the study and recommendations. The focus of study was conducted to assess the effectiveness of structured teaching programme on prevention and management of napkin dermatitis in infants among mothers residing at Selected Hospital, Jaipur.The study involved selection of 60 mothers by the non-probability convenience

sampling technique and collection of data by structured knowledge questionnaire. One group pre-test post-test design and evaluative research approach was adopted to conduct the study. Data was analysed and interpreted by using descriptive and inferential statistics. The conclusions were drawn on the basis of the study findings.

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