

Effectiveness of planned teaching programme on play needs and its impact of child development in terms of knowledge and attitude among mothers living in selected urban areas of Ahmedabad city: A Pre experimental study

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Abstract

Background: This study aimed to assess the effectiveness of planned teaching programme on play needs and its impact of child development in terms of knowledge and attitude among mothers in selected urban areas of Ahmedabad city.

Materials and Methods: A quantitative, pre-experimental one group pre-test and post-test design was adopted for the study. The study was conducted in selected urban areas of Ahmedabad city. A total of 60 mothers were selected using non probability convenience sampling technique. Data were collected using a structured knowledge questionnaire and five-point Likert's rating scale to assess the knowledge and attitude among mothers on play needs and its impact of child development. Content validity was established through expert opinion, and reliability was assessed using Karl Pearson's split-half method. Data analysis was done using descriptive statistics and inferential statistics.

Results: The findings reveal that the mean knowledge score increased from 11.47 to 20.63 ($t = 31.471$, $p < 0.001$), while the mean attitude score increased from 49.98 to 86.30 ($t = 24.94$, $p < 0.001$).

Conclusion: The study concluded that mothers had inadequate knowledge regarding play needs and their impact on child development before the intervention. The planned teaching programme significantly improved both knowledge and attitude, with post-test scores being significantly higher than pre-test scores ($p < 0.001$).

Keywords: Play Needs, Impact, Child Development, Knowledge, Attitude, Mothers

1. Introduction

Play is a fundamental component of childhood and is essential for the overall growth and development of children. It is a pleasurable, voluntary, and child-directed activity that promotes physical, cognitive, emotional, social, and language development. Through play, children develop problem-solving abilities, creativity, self-regulation, communication skills, and fine and gross motor skills, making it an indispensable aspect of healthy child development (Yogman et al., 2018).

The importance of play has been recognized globally. Article 31 of the United Nations Convention on the Rights of the Child (UNCRC) recognizes every child's right to rest, leisure, play, and participation in recreational activities appropriate to their age (United Nations, 1989). Recent evidence also highlights that play supports early brain development, strengthens parent–child relationships, enhances learning, and contributes to children's physical, cognitive, emotional, and social well-being (UNICEF, 2018).

Despite its well-established benefits, opportunities for play have declined because of increased screen time, excessive use of mobile phones, television, and digital devices, reduced outdoor activities, busy family lifestyles, and increasing academic pressure (UNICEF, 2018; Yogman et al., 2018). These factors have limited children's opportunities for free and active play, which may negatively affect their holistic development. Therefore, educating parents, particularly mothers, about the importance of play is essential to promote healthy child development (UNICEF, 2018).

Mothers play a vital role in providing a supportive environment that encourages play and fosters healthy child development. Improving their knowledge and attitude regarding play needs can positively influence children's developmental outcomes. Therefore, the present study was undertaken to assess the effectiveness of a planned teaching programme on play needs and their impact on child development in terms of knowledge and attitude among mothers living in selected urban areas of Ahmedabad city.

2. Materials and Methods:

A pre-experimental one-group pre-test and post-test design was used in a quantitative study to assess the efficacy of a planned teaching program on play needs and its impact of child development in terms of knowledge and attitude among mothers in selected urban areas of Ahmedabad city. This took place over the course of two months, from January 2026 to February 2026. The target population consisted of mothers living in selected urban areas of Ahmedabad city. A non-probability convenience sampling method was used to choose 60 mothers in total and who were available and willing to participate during the data collection period. Prior to data collection, administrative authorization was acquired from the relevant authorities. Every participant provided written informed permission. Throughout the study, participant anonymity and confidentiality were upheld.

Data were collected using three tools: a structured demographic questionnaire, a 30-item multiple-choice knowledge questionnaire, and a 20-item Likert's attitude rating scale assessing play needs and their impact on child development.

Knowledge Scoring and Categorization:

A structured questionnaire consisting of 30 items was used to assess knowledge regarding play needs and their impact on child development. Each correct response was assigned a score of 1, and an incorrect

response received 0, with a maximum possible score of 30. Knowledge levels were categorized as poor (<10), average (11–15), good (16–20), and excellent (21–30).

Attitude Scoring and Categorization

The attitude scale comprised of 20 statements scored from 1 to 5 (strongly disagree to strongly agree) for positive items, and reversed for negative items. Total attitude scores were categorized as unfavorable (<50%) or favorable (>50%).

Descriptive statistics, including frequencies, percentages, and mean $\pm$ standard deviation, were used to summarize demographic data, knowledge, and attitude scores. Inferential statistics, specifically Paired t test and Chi square test, was utilized to examine the effectiveness of planned teaching programme and association between demographic variables and the participants' knowledge and attitude levels respectively.

3. Results

The findings are presented under the following sections: demographic characteristics of the participants, assessment of effectiveness of planned teaching programme on knowledge and attitude regarding play needs and its impact of child development and determination of association between demographic variables and pretest knowledge and attitude scores on play needs and its impact on child development among mothers living in selected urban areas of Ahmedabad city.

4. Analysis and Interpretation of Demographic Variables of the Samples

Table 1: Frequency and percentage wise distribution of samples based on demographic variables.

(n=60)

Sr. No.	Demographic variables	Variables	Frequency (f)	Percentage (%)
1	Age of mothers	21–25years	8	13.3
		26 –35years	45	75.0
		36–45years	7	11.7
		>45years	0	
2	Gender of child	Boy	25	41.7
		Girl	22	36.7
		Boy and Girl both	13	21.7
		Transgender	0	0
3	Educational of Mother	Illiterate	1	1.7
		Primary	34	56.7
		Secondary	10	16.7
		Higher secondary	6	10.0
		Graduated and above	9	15.0

Sr. No.	Demographic variables	Variables	Frequency (f)	Percentage (%)
4	Occupation of Mother	Private job	1	1.7
		House wife	58	96.7
		Government Job	1	1.7
		Other (specify)	0	
5	Monthly income of family	<20000rps	55	91.7
		20000rps-40000rps	4	6.7
		40000rps-60000rps	1	1.7
		60000rps-Above..	0	
6	Type of family	Joint family	23	38.3
		Nuclear family	36	60.0
		Single	1	1.7
		Extended	0	
7	No. of Children	1	34	56.7
		2	22	36.7
		3	1	1.7
		More than 3	3	5.0
8	Sources of information	family/friend	6	10.0
		Health Worker	17	28.3
		Internet/Social media	34	56.7
		Books/magazines	3	5.0
		Others, Specify	0	

Table 1 describes the socio-demographic characteristics of the study participants. The majority of mothers (75.0%) were aged 25–35 years. Regarding child gender, 41.7% had boys, 36.7% had girls, and 21.7% had both. More than half of the mothers (56.7%) had primary education, while the majority (96.7%) were housewives. Most participants (91.7%) reported a monthly family income of less than ₹20,000. Nuclear families were predominant (60.0%), and 56.7% of mothers had one child. The primary source of information was internet/social media (56.7%), followed by health workers (28.3%).

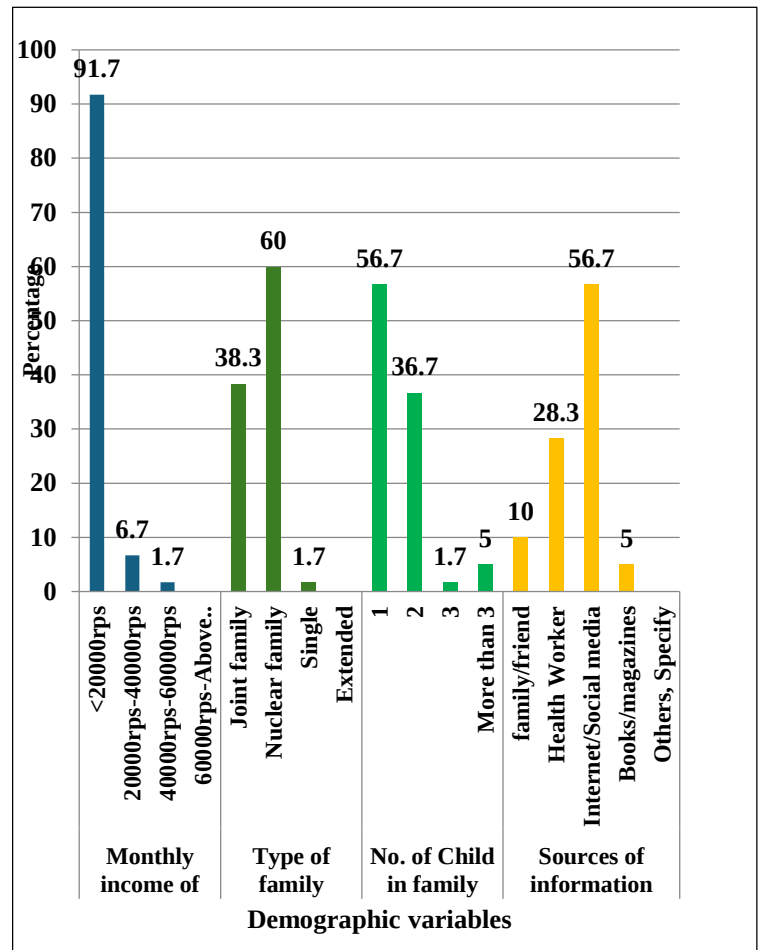
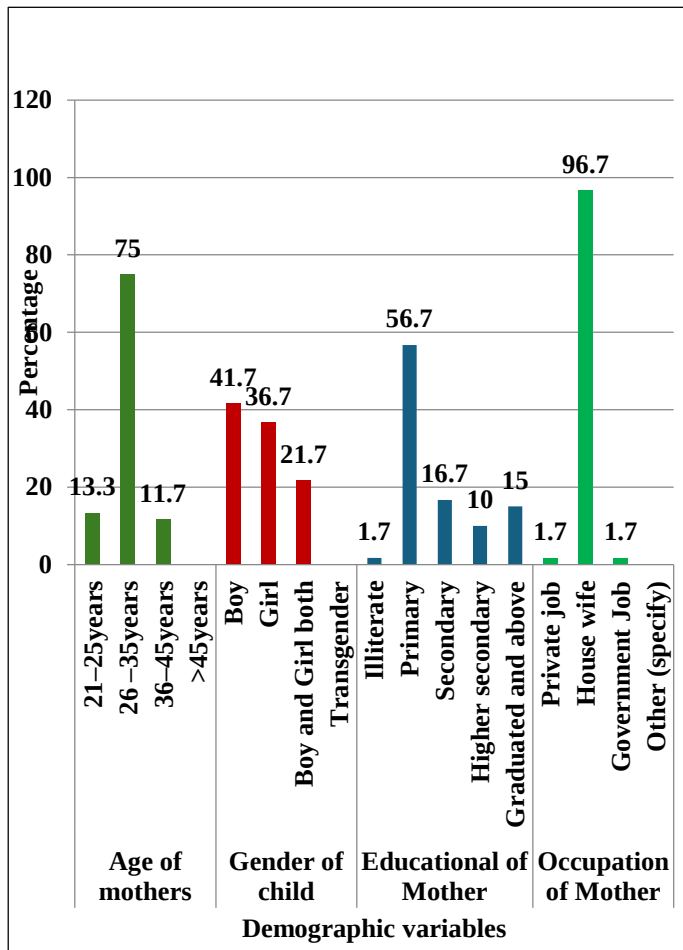


FIGURE: 1 and 2 Percentage wise distribution of samples based on demographic variables

5. Analysis and Interpretation of the Effectiveness of Planned Teaching Programme On Knowledge Regarding Play Needs and Its Impact of Child Development Among Mothers Living In Selected Urban Areas Of Ahmedabad City.

Table: 2 Frequency and percentage distribution of samples according to pretest and posttest level of knowledge

[n=60]

Level of knowledge	Score	Pre-test		Post-test	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Poor Knowledge	≤ 10	22	36.7	0	0
Average Knowledge	11 – 15	33	55.0	9	15.0
Good Knowledge	16 – 20	5	8.3	22	36.7
Excellent knowledge	21 - 30	0	0	29	48.3
Total		60	100%	60	100%

Table 2 presents the pre-test and post-test knowledge levels of mothers. In the pre-test, the majority of mothers (55.0%) had average knowledge, while 36.7% had poor knowledge and only 8.3% had good knowledge. Following the planned teaching programme, knowledge levels improved significantly, with 48.3% of mothers achieving excellent knowledge and 36.7% demonstrating good knowledge. No participants remained in the poor knowledge category, indicating the effectiveness of the teaching programme.

FIGURE: 3 Percentage distribution of pretest and posttest level of knowledge

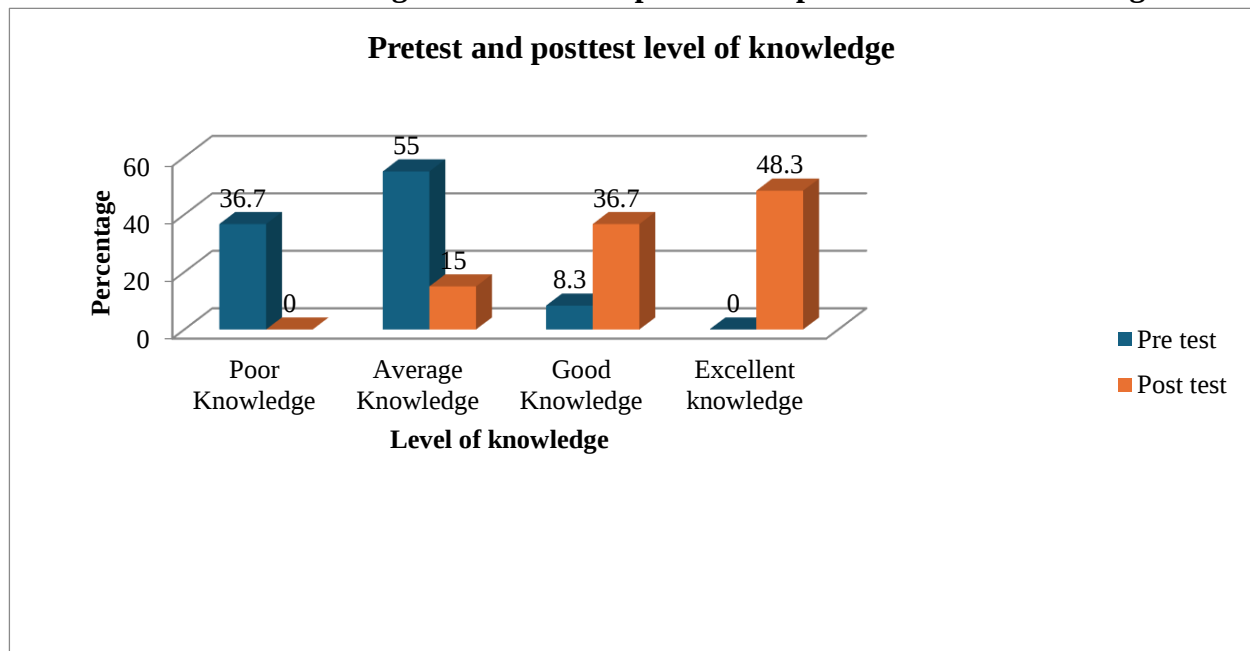


Table: 3 Mean, mean %, SD and percentage gain of knowledge score

[n=60]

Knowledge Score	Mean	Mean %	SD	Percentage of knowledge gain
Pre test	11.47	38.23	8.9	17
Post test	20.63	68.75	10.55	30.56%)

Table 3 presents the pre-test and post-test knowledge scores of mothers. The mean knowledge score increased from 11.47 (38.23%) in the pre-test to 20.63 (68.75%) in the post-test, with a mean knowledge gain of 9.17 (30.56%), indicating a significant improvement in knowledge after the planned teaching programme.

Table: 4 Comparison of pretest and posttest knowledge score to find out the effectiveness of planned teaching programme on knowledge play needs and its impact of child development

[n=60]

Knowledge Score	Mean	Mean difference	SE	SD	df	Calculated Paired 't' test value	p value
Pre test	11.47	9.17	0.29	8.9	59	31.471	<0.001

Post test	.63			5			
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Table 4 reveals that the mean knowledge score increased from 11.47 to 20.63, with a mean difference of 9.17. The paired t-test value was 31.471 with $p < 0.001$, indicating a statistically significant improvement in knowledge after the planned teaching programme. Therefore, the null hypothesis was rejected and the research hypothesis was accepted.

Table: 5 Area wise Comparison of pretest and posttest knowledge scores

Sub Areas	Max score	Pre test		Post test		Mean difference	't' test value	p value
		mean	SD	mean	SD			
Concept of Play	4	1.60	0.85	2.79	0.11	1.18	8.131	<0.001*
Types and Importance of Play	4	1.47	0.83	2.62	1.11	1.15	9.012	<0.001*
Parental Role in Play	4	1.62	1.01	2.72	0.97	1.11	7.745	<0.001*
Impact of Play on Child Development	16	6.78	0.23	12.97	2.33	6.18	23.222	<0.001*

Table 5 indicates significant improvement was observed in all areas after the planned teaching programme, including concept of play, types and importance of play, parental role in play, and impact of play on child development ($p < 0.001$). The findings indicate that the planned teaching programme was effective in improving mothers' knowledge regarding play and child development.

6. Analysis and Interpretation of the Effectiveness of Planned Teaching Programme On Attitude Regarding Play Needs and Its Impact of Child Development Among Mothers Living in Selected Urban Areas.

Table: 8 Frequency and percentage distribution of pretest and posttest level of attitude
[n=60]

Level of attitude	Score	Pre-test		Post-test	
		frequency	Percentage (%)	frequency	Percentage (%)
Negative attitude	20-60	43	71.7	0	0
Positive attitude	61-100	17	28.3	60	100.0
Total		60	100%	60	100%

Table: 8 presents in the pre-test, the majority of mothers, 43 (71.7%), exhibited a negative attitude, while only 17 (28.3%) demonstrated a positive attitude toward play needs and child development.

Following the implementation of the planned teaching programme, a substantial improvement was observed in the post-test results. All participants, 60 (100.0%), demonstrated a positive attitude, and notably, none of the mothers remained in the negative attitude category. The comparison of pre-test and post-test findings clearly indicates a marked enhancement in mothers' attitudes after the intervention.

Table: 9 Mean, mean %, SD and percentage gain of attitude score

[n=60]

Attitude level	Mean	Mean %	SD	Percentage of attitude score gain
Pre test	49.98	49.98	10.50	36.32
Post test	86.30	86.30	3.70	36.32%)

Table 9 shows that the mean attitude score increased from 49.98 ± 10.50 (pre-test) to 86.30 ± 3.70 (post-test), with a mean gain of 36.32 (36.32%), indicating a substantial improvement in participants' attitude following the planned teaching programme.

Figure: 5 Percentage distribution of pretest and posttest level of attitude

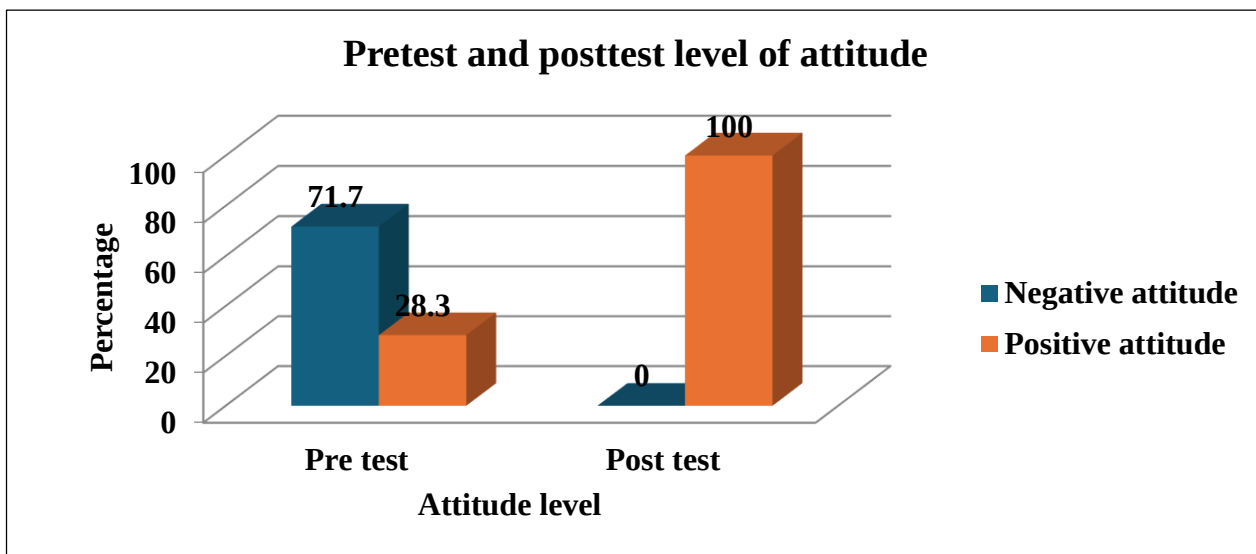


Table: 10 Comparison of pretest and posttest attitude score to find out the effectiveness of planned teaching programme on knowledge play needs and its impact of child development.

[n=60]

Attitude score	Mean	Mean difference	SE	SD	df	Calculated Paired 't' test value	p value
Pre test	49.98	36.32	1.46	10.50	59	24.94	<0.001
Post test	86.30			3.70			

Table 10 shows a significant increase in the mean attitude score from 49.98 (pre-test) to 86.30 (post-test), with a mean difference of 36.32. The improvement was statistically highly significant (paired t = 24.94,

df = 59, $p < 0.001$), indicating that the planned teaching programme effectively improved participants' attitude.

7. Analysis and Interpretation of the Analysis and Interpretation of Data Related to Association Between Pre-Test Knowledge and Attitude Score with Selected Demographic Variables

Table: 11 Association between pre-test knowledge score with selected demographic variables [n=60]

Sr. No.	Demographic Variables	Knowledge			χ ² value	df	p value	Remarks
		Poor	Average	Good				
1	Age of Mother (years)							
	21–25years	1	7	0	7.883	4	.096	Non-Significant
	26 –35years	19	23	3				
	36–45years	2	3	2				
2	Gender of child							
	Boy	10	12	3	4.242	4	.374	Non-Significant
	Girl	9	13	0				
	Boy and Girl both	3	8	2				
3	Education of Mother							
	Illiterate	0	1	0	5.434	8	.710	Non-Significant
	Primary	13	17	4				
	Secondary	5	4	1				
	Higher secondary	1	5	0				
	Graduated and above	3	6	0				
4	Occupation of Mother							
	Private job	1	0	0	2.555	4	.635	Non-Significant
	House wife	21	32	5				
	Government Job	0	1	0				
5	Monthly income of family							
	<20000rps	20	31	4	11.640	4	.020	Significant
	20000rps-40000rps	2	2	0				
	40000rps-60000rps	0	0	1				
6	Family Type							
	Joint family	7	14	2	1.619	4	.805	Non-Significant
	Nuclear family	15	18	3				
	Single	0	1	0				
7	No. of Child in family							
	1	13	18	3	17.524	6	.008	Significant
	2	8	14	0				

Sr. No.	Demographic Variables	Knowledge			χ^2 value	df	p value	Remarks
		Poor	Average	Good				
	3	1	0	0				
	More than 3	0	1	2				
8	Sources of information							
	family/friend	2	3	1	4.285	6	.638	Non-Significant
	Health Worker	5	9	3				
	Internet/Social media	14	19	1				
	Books/magazines	1	2	0				

Table 11 shows a statistically significant association between pre-test knowledge scores and monthly family income ($\chi^2 = 11.640$, $p = 0.020$) and number of children in the family ($\chi^2 = 17.524$, $p = 0.008$). No significant association was found with the other selected demographic variables.

Table: 12 Association between pre-test attitude score with selected demographic variables [n=60]

Sr. No.	Demographic Variables	Attitude		χ^2 value	df	P value	Remarks
		Negative	Positive				
1	Age of Mother (years)						
	21–25years	6	2	3.240	2	.198	Non-Significant
	26 –35years	34	11				
	36–45years	3	4				
2	Gender of child						
	Boy	18	7	.310	2	.856	Non-Significant
	Girl	15	7				
	Boy and Girl both	10	3				
3	Education of Mother						
	Illiterate	1	0	1.363	4	.851	Non-Significant
	Primary	25	9				
	Secondary	6	4				
	Higher secondary	4	2				
	Graduated and above	7	2				
4	Occupation of Mother						
	Private job	1	0	.818	2	.664	Non-Significant
	House wife	41	17				
	Government Job	1	0				
5	Monthly income of family						
	<20000rps	40	15	2.582	2	.275	Non-

	20000rps-40000rps	3	1				Significant
	40000rps-60000rps	0	1				
6	Family Type						
	Joint family	19	4	2.824	2	.244	Non-Significant
	Nuclear family	23	13				
	Single	1	0				
7	No. of Child in family						
	1	23	11	1.043	3	.791	Non-Significant
	2	17	5				
	3	1	0				
	More than 3	2	1				
8	Sources of information						
	family/friend	4	2	1.724	3	.632	Non-Significant
	Health Worker	11	6				
	Internet/Social media	25	9				
	Books/magazines	3	0				

Table 12 shows no statistically significant association between pre-test attitude scores and any of the selected demographic variables ($p > 0.05$). This indicates that mothers' baseline attitude was not significantly influenced by the selected demographic variables.

8. Discussion

The present study demonstrated that the planned teaching programme effectively improved mothers' knowledge and attitude regarding play needs and their impact on child development among mothers of under-five children. The significant rise in post-test scores indicates that structured education can enhance mothers' understanding of the role of play in promoting children's physical, cognitive, language, social, and emotional development. These findings are supported by the World Health Organization (2019), which identifies responsive caregiving and play opportunities as essential for early childhood development, and UNICEF (2018), which emphasizes play-based learning as a foundation for lifelong learning and well-being.

The positive change in mothers' attitudes following the intervention highlights the role of educational programmes in shaping parental perceptions and child-rearing practices. This is consistent with the American Academy of Pediatrics, which recognizes play as a key contributor to brain development, parent-child bonding, emotional regulation, and resilience (Yogman et al., 2018).

The study further identified a significant association between pre-test knowledge scores and monthly family income and number of children in the family, whereas other demographic variables showed no significant relationship. Similarly, baseline attitudes were not significantly associated with any selected demographic characteristics.

Overall, the findings establish the effectiveness of the planned teaching programme in strengthening mothers' knowledge and attitude related to play needs and child development. The study recommends

incorporating structured parent education into maternal and child health services to promote appropriate play practices and support the overall development of under-five children.

9. Conclusion

The study concluded that the planned teaching programme was effective in significantly improving mothers' knowledge and attitude regarding play needs and their impact on child development. Significant associations were observed between pre-test knowledge scores and selected demographic variables, while no significant association was found with pre-test attitude scores. The findings support the use of structured educational interventions in enhancing parental awareness and promoting positive practices related to child development.

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Conflicts of Interest

None

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