A study to assess the effectiveness of structured teaching programme on knowledge, attitude and practice regarding baby bottle tooth decay Among mothers of infants, in a selected Community area, Tirupati

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Abstract: *Baby bottle tooth decay (BBTD), a term endorsed by the Healthy Mothers-Healthy Babies Coalition, is a disease (also called nursing caries or early childhood caries) young children, characterized by a distinctive pattern of tooth decay in the primary dentition. The four maxillary incisors are most frequently affected. Baby bottle tooth decay (BBTD), is the most common chronic disease in young children and may develop as soon as teeth erupt. It is a multi-factorial disease that affects infants and toddlers, affecting their general health and growth pattern. BBTD affects the quality of life of families and their affected children due to dental pain and subsequent tooth loss resulting in difficulty in eating, speaking, sleeping and socializing. It is a significant public health problem and certain segments of society. This paper presents findings of a study in which 100 mothers in Regional health centre, Chandragiri, Tirupati. This study deals with discussion based on the objectives of the study. It reveals the fact about knowledge, attitude and practice on Baby bottle tooth decay in pre-test and post-test. The aim the present study was to assess the knowledge, attitude and knowledge regarding Baby bottle tooth decay, among mothers of infants before and after structured teaching programme. In this study 60 sample of mothers of infants were selected. The sample is chosen by convenient sampling technique. The study findings revealed that among 60 mothers of infant mothers were had 51% inadequate knowledge, 35% had moderate knowledge and 14 %) had adequate knowledge. With regards to attitude had high positive attitude. With regards to practice had moderate practices regarding baby bottle tooth decay among mothers of infants in pre-test. Out of 60 mothers of infants had adequate knowledge. With regards to attitude had moderate positive attitude. Adequate practices regarding baby bottle tooth decay among mothers of infants in post-test. There is a significant knowledge, attitude and practice improvement in baby bottle tooth decay among mothers of infants at P<0.05 level after structured teaching programme. This study was successful in presenting a better understanding of the issues associated with introduction of baby bottle tooth decay in infants. Public health programmes and policies should address issues concerning infant oral hygiene, clear and specific guidelines.*
Key words: *Baby bottle tooth decay, chronic disease, infants mothers*

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I. Introduction

God created the earth and this is the only planet, where one can experience faith, touch, affection, emotion, caring relationship, sacrifice, endurance and dedication. Earth is the only planet where one can find the mother and all the above mentioned aspect are inculcated and hence the life survived on earth. A woman becomes mother when she gives birth to a child who is most precious to her and she whole heartedly shares all the inculcated qualities for holistic development of the child.

Breast feeding is known to be the best way to feed infant by providing the psychological and health benefit to both the mother and child. It is therefore considered physiologically, biochemically, immunologically and psychologically suited for this. However; there has been a general decline in the practice of breastfeeding both in terms of prevalence and duration in the past few decades.

Death rates in the third world countries are lower among breast fed babies and breastfed babies are having fewer infection than formula fed babies, says Ruth Lawrence, MD, a spokesman for the American Academy of pediatrics. "And every day between 3000 and 4000 infants die from diarrhea and acute respiratory infection because of inadequate breast milk given to them2. UNICEF and WHO recommends that should exclusively breast feed for first 4 to 6 month of Life and continue breast feeding together with weaning food up to and beyond second year of life.

II.   Need For The Study:

Despite the decline in the prevalence of dental caries in children in the western countries, caries in preschool children remains a problem in both developed and developing countries.7 ECC has been considered at epidemic proportions in the developing countries. Numerous studies have been conducted to find the prevalence of ECC. In England and USA the prevalence is reported to be 6.8 – 12% and 11-53.1% respectively. A comprehensive review of the occurrence of the caries on maxillary anterior teeth in children including numerous studies from Europe, Africa, Asia, the Middle East, and North America found the highest caries prevalence in Africa and South-East Asia. While in India a prevalence of 44% has been reported for caries in 8 to 48 month olds, very few prevalence studies have been done in India. WHO reported a DMFT score of 3.94 for India. In India, data from the National Oral Health Survey (2014-2016) states that in children aged below 12 years, the caries prevalence was 53.8% and the mean DMFT was 1.8. A recent study among children in Andhra Pradesh found the prevalence of dental caries among below 12 years old children to be 55.3% and 57.3%

The following expressions are used interchangeably: Baby bottle tooth decay, Early childhood caries, Early childhood dental decay, Early childhood tooth decay, Comforter caries, Nursing caries, Maxillary anterior caries, Rampant caries, and many more.

The following clinical definition of early childhood caries (ECC) has been proposed. The presence of one or more decayed (non-cavitated or cavitated lesions), missing (due to caries) or filled tooth surfaces in any primary tooth in a preschool-age child between birth and 71 months of age.

An oral health problem article says that BBS occurs when a baby's teeth are infrequent contact with sugars from liquid carbohydrates, such as fruit juices, milk, and formula, fruit juice diluted with water, sugar water or any other sweet drink. Human breast milk can cause tooth decay as well. As these liquids break down in the mouth in to simple sugars and are allowed to sit in the mouth, bacteria start feeding on the sugars, causing tooth decay.

If left untreated, decayed teeth can cause pain and make it difficult to chew and eat. Also, baby teeth serve as "space savers" for adult teeth. If baby teeth are damaged or destroyed, they can't help guide permanent teeth into their proper position, possibly resulting in crowded or crooked permanent teeth. Badly decayed baby teeth could lead to an abscessed tooth, with the possibility of infection spreading elsewhere.

III.   Literature Of Study Area

Literature is a key step in research process. It refers to an extensive and systematic examination of publication relevant in the research project. Review of literature helps the investigator to develop deeper insight into problem and gain information on the problem and what has been done before.

Srikanth Koya et.al., (2016) conducted a descriptive survey design to assess the prevalence of early childhood caries in children of west Godavari district, Andra Pradesh, South India. The aim of present study to determine the prevalence of early childhood caries (ECC) and its risk factors in children of west Godavari district, Andra Pradesh. A sample of 1,897 children between 24 and 71 months of age had taken. The parents/caregivers of each child were interviewed with a structured questionnaire. The result of the study that out of the total 1,897 children, 796 were affected with ECC showing an overall prevalence of 41.9%, with boys showing a higher prevalence rate of 44.8% compared to girls (39.9%). Statistically significant correlations were found between ECC and consumption of sugary snacks (p 0.0001) and mouth rinsing habit (p 0.001).

Shilpashree et.al., (2016), conducted a cross-sectional descriptive study on risk factors for predicting early childhood caries in Anganwadi children in Bangalore city. The aim of this study to predict the risk factors for occurrence of ECC in children aged 3-6 years of Anganwadi centers. A cross-sectional descriptive study consisting of 3009 children aged 3–6 years attending Anganwadi centers of Bangalore South. The results of this study revealed that the prevalence of ECC was 31.4% with mean decayed, missing, and filled teeth (DMFT) of study population is 1.15 ± 2.28. Mean DMFT among males and females were 1.31 ± 2.48 and 1.01 ± 2.07, respectively. Habit of bottle feeding in the night ($P < 0.001$ and odds ratio [OR] of 1.32), in between meal, snacks ($P < 0.001$ and OR of 1.24) were the risk factors for caries in this study.

Manal Mohamed Almoudia et.al., (2016) conducted a cross-sectional quantitative survey study on Expectant mothers' readiness to initiate preventive oral health care for their children. The objective of the present study was to assess the readiness and barriers faced by expectant mothers in Libya to initiate preventive oral health care for their children. A cross-sectional quantitative survey was conducted based on a structured questionnaire in a face-to-face interview. Four hundred and thirty seven expectant women who attended three main public maternal centers in three different districts in Libya were invited to participate. The results of the study revealed that the response rate was 89.0% (389/437). In terms of knowledge readiness, less than half of the participants had adequate knowledge regarding healthy dietary habits, oral hygiene care, and preventive dental attendance (44.7%, 35.7% and 56.8% respectively) with fewer than one-third (27.5%) of mothers ready in terms of overall

knowledge readiness. The majority demonstrated readiness in terms of their attitude toward the importance of their children's oral health (89.9%) and their willingness to initiate preventive oral health care for their children (98.7%). Only 17.7% of participants demonstrated an overall readiness to initiate preventive oral health for their children. Overall readiness significantly differed based on maternal age and number of children (p = 0.001 and p = 0.04, respectively). Most mothers (84.6%) faced barriers that prevented them from initiating preventive oral health for their children. Barriers included busy schedules at work/home (34.7%), insufficient information (29.3%), and insufficient skills (13.7%).

Luciana Reichert da Silva Assunçao et.al., (2015) conducted a cross-sectional descriptive study on Maternal intentions and knowledge in the postpartum regarding the feeding habits and oral health of children". The aim of the present study was to analyze the intentions and knowledge of mothers in the postpartum period regarding the feeding habits and oral health of their children. A cross-sectional study was conducted involving 286 mothers. The data was collected by using a semi-structured questionnaire. The results of the study revealed that most respondents were less than 25 years of age (55.6%), first-time mothers (56.4%) and demonstrated positive intentions regarding the majority of the aspects addressed. However, 65.4% of the sample demonstrated poor knowledge.

IV. Operational Definition:

➢ **Knowledge**: Refers to the correct responses from the mothers on knowledge regarding baby bottle tooth decay which is measured by questionnaire.
➢ **Attitude:** Refers to the concept of Baby bottle tooth decay among mothers of infants.
➢ **Practice:** Refers to the practice of mothers of infants regarding Baby bottle tooth decay.
➢ **Structured teaching programme:** Refers to a systematically developed instructional method for educating mothers on knowledge regarding prevention of baby bottle tooth decay which includes proper feeding, good diet, and oral care.
➢ **Baby bottle tooth decay:** It is the rapid decay of baby teeth in an infant from frequent exposure for long periods of time to liquids containing sugars.

OBJECTIVES:
➢ To assess the level of knowledge, attitude and practices regarding baby bottle tooth decay among mothers of infants.
➢ To evaluate the effectiveness of structured teaching programme on knowledge regarding baby bottle tooth decay among mothers of infants.
➢ To find out the relationship between knowledge, attitude and knowledge on practices regarding baby bottle tooth decay among mothers of infants and selected demographic variables.

HYPOTHESIS:
H1: There will be significant gain in knowledge of mother of infants regarding Baby bottle tooth decay after attending STP.
H2: There will be significant association between selected demographic variables and the knowledge scores.

V. Methodology

Research design
The research design selected for the present study was a quasi-experimental research design. The study was conducted in RHC Center, Chandragiri, Tirupati. The population of this study includes all infant mothers in RHC Center, Chandragiri, Tirupati   Sample size consisted of 60 infant mothers with convenient sampling was adopted.

Inclusion Criteria:
➢ Mothers who are available at the time of data collection.
➢ Mothers who can understand Telugu.
➢ Mothers who are curious and having sound mind.
➢ Mothers who are not having previous medical knowledge.

VI. Data Analysis

After giving a score for each mother, both pre-test and post-test results were tabulated. Descriptive and inferential statistics were used for the analysis of the pre-test and post-test.

VII. Results and discussion

Table :1 (Annexure –I) The data shows that out of 60 infant mothers selected from the RHC Center, Chandragiri 11(18.3%) of infant mothers belonged to the age group of below 21 years, 30(50%) were 21 to 25 years, 18(30%) were 26 to 30 years and 1(1.7%) were above 30 years and above.

With regard to religion of infant mothers Hindu were 51(85%), Muslim were 5(8.3%), Christian were 4(6.7%). When education of infant mother was taken in to consideration majority were with primary education 19(31.7%), followed by mothers with collegiate 17(28.3%), secondary education 12(20%), illiterate 12(20%), and no infant mothers were technical education. In accordance with occupation of the mother 53(88.3%) were home makers, followed by 5(8.3%) being daily wages, 1(1.7%) being agriculture and 1(1.7%) employee. Regarding the family income, majority 31(51.7%) Rs.5001 to 10000, 15(25%)

Rs.15000 and above, fall between 7(11.7%) below Rs.5000 and 7(11.7%) Rs.10001 to 15000.

When the type of family of infant mother"s was taken into consideration majority were from joint family 37(61.7%), nuclear family 20(33.3%) and remaining were extended family 3(5%). Regarding place of residence majority were urban 26(43.3%), rural 21(35%) and semi urban 13(21.7%). When the availability of health facilities are 33(55%) and unavailability of health facilities are 27(45%). Pertaining to source of information 48(80%) mother's acquired information through health care team,6 (10%) from family members,6(10%) from mass media and none from peer group. Regarding the number of children, majority of infant mother's have single child 29(48.3%), remaining two children 25(41.7%), three children 6(10%), none from four children.

Table 2 (Annexure –I) **Respondents infant mother's knowledge, attitude and practice on baby bottle tooth decay pre and post-test.**

Out of 60 pre-test infant mothers 31 (51.7%) had inadequate knowledge, 21(35.0%) had moderate knowledge and 8 (13.3%) had adequate knowledge. Out of 60 post-test infant mothers 15 (25.0%) had inadequate knowledge, 25 (41.7%) had moderate knowledge and 20 (33.3%) had adequate knowledge.

Out of 60 pre-test infant mothers 27 (45.0%) had low positive attitude, 21 (35.0%) had moderate positive attitude and 12 (20.0%) had high positive attitude. Out of 60 post-test infant mothers 13 (21.7%) had low positive attitude, 30 (50.0%) had moderate positive attitude and 17 (28.2%) had high positive attitude.

Out of 60 pre-test infant mothers 27 (45.0%) had low positive attitude, 21 (35.0%) had moderate positive attitude and 12 (20.0%) had high positive attitude. Out of 60 post-test infant mothers 13 (21.7%) had low positive attitude, 30 (50.0%) had moderate positive attitude and 17 (28.2%) had high positive attitude.

Table–3 (Annexure –I) explains that pre-test among infant mothers, mean of knowledge was 1.62 and standard deviation was 0.715; mean of attitude was 1.75 and standard deviation was 0.773 and mean of practice was 1.67 and standard deviation was 0.705. Among post-test infant mothers, mean of knowledge was 2.08 and standard deviation was 0.766; mean of attitude was 2.07 and standard deviation was 0.710 and mean of practice was 2.25 and standard deviation was 0.704. t- value for knowledge was 14.553, attitude 13.021 and practice 21.350. p-value for knowledge, attitude and practice was 0.001. Knowledge, attitude and practice were significant at $p < 0.01$ level.

TABLE-4 (Annexure –I) reveals that in pre-test, level of knowledge in association with demographic variables shows age of the mother, education of the mother, family income and availability of health facilities are significant at $P < 0.05$ level. In post-test, education of the mother, occupation of the mother, family income, availability of health facilities and number of children are significant at $P < 0.05$ level.

TABLE-5 (Annexure –I) reveals that in pre-test, level of attitude in association with demographic variables shows family income is significant at $P < 0.05$ level and education of mother is significant at $P < 0.01$ level. In post-test, education of mother is significant at $P < 0.05$ level.

TABLE-6 (Annexure –I) reveals that in pre-test, level of practice in association with demographic variables shows education of the mother is significant at$p < 0.01$ level. In post-test, family income and place of residence are significant at $P < 0.05$ level and education of mother is significant at $p < 0.01$ level.

This study was supported by a study was conducted on effectiveness of structured comprehensive pediatric oral health education for parents of children less than two years of age in Germany. Structured comprehensive oral health education supported by written information. Was performed by 36 clinicians in all pediatric specialties parental knowledge, attitudes and behavior relevant to decreasing the risk of early childhood caries development. The study was found that the response rate was 88% on average, control group patricians provided 2.1 information items at each child examination whereas the intervention group provided 3.8 items. Parental knowledge increased.

VIII.   Conclusion

Primary care providers can be trained to perform structured comprehensive oral health education which improves the parental oral health knowledge. Another study was supported to this study conducted to assess the effectiveness of STP on minor disorders of pregnancy and it has management among antenatal mothers in

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selected area, Raichur among 40 samples selected by convenient sampling technique. The findings reveal that in pre-test majority of antenatal mothers had knowledge of adequate knowledge30%, moderate knowledge 50% and inadequate knowledge 20%, wherein post-test 20% was adequate knowledge, 70% was moderate knowledge and 10%inadequate knowledge. This supports the structured teaching programme was effective method in improving knowledge on management of minor disorders.

NURSING IMPLICATIONS:
In order to improve the efficiency of infant mothers to promote optimum child development, there is a need of structured teaching programme. Findings of the study have implications in various areas of nursing services, nursing education, nursing administration, and nursing research.

NURSING SERVICES:
➢ The study results would help the nurse to enlighten their knowledge care of infants in community
➢ Help the nurses to improve their knowledge on importance of health education is essential part of nursing service. Nurses can be instrumental in preventing baby bottle tooth decay and helping the infant mothers by teaching about causes, pathophysioligy, signs and symptoms, prevention and complications.
➢ Provide family centred nursing care and involve the parents in the health programmes in hospitals and community settings.
➢ Provide anticipatory guidance to mothers regarding prevention of baby bottle tooth decay and its complications.
➢ In paediatric wards, Outpatient departments, Well baby clinics, Primary health centres, Sub-centres, Anganwadi centres, and schools health education is planned and implemented using various teaching audio visual aids like charts, flip cards, pamphlets and black board.

NURSING RESEARCH:
The study reveals that there arises a need for extensive research to find out behavioural modifications after teaching programme to find out their effectiveness
□□Nursing research on newer method of teaching focusing on interest, quality and cost effectiveness.
□□There is a great need for nursing research in the areas of mother‟s education, particularly about baby bottle tooth decay.
□□The finding of the study serves as a basis for professional and student nurses to conduct for the studies on baby bottle tooth decay and its prevention.
□□College or university must make compulsory clause/clue/requirement of conduct for research study.

Recommendations :
Based on the study findings, the following suggestions are proposed.
✓ A study could be conducted using the post-test after one month, six months and one year to see the relation of knowledge.
✓ The study could be conducted with large samples.
✓ The study could be replicated in different settings, such as rural areas to strengthen the findings.
✓ A similar study could be conducted using experimental and control group.
✓ A comparative study could be done in rural and urban settings.
✓ A similar study conducted by administering self-instructional material on baby bottle tooth decay which could also serve as reference material for the mothers.
✓ A descriptive study to assess the knowledge attitude and practice of infant mothers on baby bottle tooth decay could be undertaken.

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Annexure – I
Table 1: Distribution of demographic variables among infant mothers in RHC, Center, Chandragiri, Tirupati.

(n=60)

S.No	Demographic variables	Frequency	percentage		Demographic variables	Freq	percentage
1.	**Age of the mother**			6.	**Type of family**		
	Below 21 years	11	18.3		Nuclear family	20	33.3
	21 – 25 years	30	50		Joint family	37	61.7
	26 – 30 years	18	30		Extended family	3	5
	Above 30 years	1	1.7	7.	**Place of residence**		
2.	**Religion**				Rural	21	**35**
	Hindu	51	85		Urban	26	43.3
	Muslim	5	8.3		Semi-urban	13	21.7
	Christian	4	6.7	8.	**Availability of health facilities**		
3.	**Education**				Yes	33	55
	Illiterate	12	20		No	27	45
	Primary edu.	19	31.7	9.	**Source of information**		
	Secondary edu	12	20		Health care team	48	80
	Collegiate	17	28.3		Family members	6	10
4.	**Occupation of mother**				Mass media	6	10
	Home maker	53	88.3	10	**No. of children**		
	Daily wage	5	8.3		Single child	29	48.3
	Agriculture	1	1.7		Two children	25	41.7
	Employee	1	1.7		Three children	6	10
5.	**Family income**						
	Below 5000	7	11.7				
	5001-10000	31	51.7				
	10001-15000	7	11.7				
	Above 15000	15	25				

Table 2: Distribution of knowledge scores among infant mothers regarding baby bottle tooth decay in RHC Center, Chandragiri, Tirupati.

pre test=60, post test=60

Variables	PRE TEST						POST TEST					
	Inadequate		Moderate		Adequate		Inadequate		Moderate		Adequate	
	N	%	N	%	N	%	N	%	N	%	N	%
Knowledge	31	51.7	21	35.0	8	13.3	15	25.0	25	41.7	20	33.3
Variables	Low positive		Moderately positive		Highly positive		Low positive		Moderately positive		Highly positive	
Attitude	27	45.0	21	35.0	12	20.0	13	21.7	30	50.0	17	28.2
Variables	Inadequate		Moderate		Adequate		Inadequate		Moderate		Adequate	
Practice	28	46.7	24	40	8	13.3	9	15	27	45	24	40

Table- 3 : The effectiveness structured teaching programme on knowledge, attitude and practice of infant mothers, regarding baby bottle tooth decay in a selected community area.

pre test=60, post test=60

Score	Pre-test			Post-test			t-value	P-value	Significance
	Mean	N	SD	Mean	N	SD			

Knowledge	1.62	60	0.715	2.08	60	0.766	14.553	0.01	**
Attitude	1.75	60	0.773	2.07	60	0.710	13.021	0.01	**
Practice	1.67	60	0.705	2.25	60	0.704	21.350	0.01	**

Table -4 : Association between demographic variables and level of knowledge pre-post test scores among infant mothers regarding baby bottle tooth decay in a selected community area.

(n=60 pre-test(n)=60, post-test(n)=60)

DEMOGRAPHIC VARIABLES		PRE-TEST						POST-TEST						Chi-square			
		Inadequate		Moderate		Adequate		Inadequate		Moderate		Adequate		Pre-test		Post-test	
														Value	Significance	Value	Significance
		N	%	N	%	N	%	N	%	N	%	N	%				
Age	<21yrs	9	29	2	10	0	0	4	27	6	24	1	5	0.017	*	0.241	NS
	21-25yrs	14	45	12	57	1	13	7	47	12	48	8	40				
	26-30yrs	7	23	7	33	7	87	4	27	6	24	11	55				
	>30yrs	1	3	0	0	0	0	0	0	1	4	0	0				
Religion	Hindu	26	84	80	86	7	88	13	87	19	76	19	95	0.559	NS	0.392	NS
	Muslim	4	13	1	5	0	0	1	7	4	16	0	0				
	Christian	1	3	2	10	1	13	1	7	2	8	1	5				
Education Of Mother	Illiterate	8	26	2	10	2	13	6	40	4	16	1	5	0.026	*	0.000	*
	Primary	13	42	6	29	0	0	8	53	11	44	0	0				
	Secondary	5	16	6	29	1	13	1	7	8	32	3	15				
	Collegiate	5	16	7	33	6	75	0	0	2	8	16	80				
Occupation Of Mother	Homemaker	25	81	16	76	3	38	13	87	21	84	10	50	0.041	NS	0.021	*
	Daily wage	4	13	0	0	1	13	2	13	2	8	1	5				
	Agriculture	1	3	3	14	2	25	0	0	1	4	5	25				
	Employee	1	3	2	10	2	25	0	0	1	4	4	20				
Family income	<5000	5	16	2	10	0	0	2	13	5	20	0	0	0.022	*	0.002	*
	5001-10000	17	55	12	57	1	13	11	73	13	52	6	30				
	10001-15000	5	16	0	0	2	25	1	7	4	16	2	10				
	>15000	4	13	7	33	5	63	1	7	3	12	12	60				
Type Of Family	Nuclear	8	26	11	52	1	13	6	40	7	28	7	35	0.156	NS	0.701	NS
	Joint	21	68	9	43	7	88	8	53	16	64	13	65				
	Extended	2	7	1	5	0	0	1	7	2	8	0	0				
	Single parent	0	0	0	0	0	0	0	0	0	0	0	0				
Place Of residence	Rural	11	36	6	29	4	50	3	20	9	36	9	45	0.791	NS	0.392	NS
	Urban	14	45	9	43	3	36	8	53	9	36	9	45				
	Semi-urban	6	19	6	29	1	13	4	27	7	28	2	10				
Health facilities	Yes	22	71	8	38	3	38	7	47	19	76	7	35	0.037	*	0.017	*
	No	9	29	13	62	5	63	8	53	6	24	13	65				
Source of information	Health care Team	25	81	16	76	7	88	12	80	21	84	15	75	0.738	NS	0.887	NS
	Family Members	2	7	3	14	1	13	1	7	2	8	3	15				
	Mass media	4	13	2	10	0	0	2	13	2	8	2	10				
	Peer group	0	0	0	0	0	0	0	0	0	0	0	0				
No. Of Children	Single	18	58	9	43	2	25	6	40	18	72	5	25	0.250	NS	0.020	*
	Two	10	32	11	52	4	50	8	53	6	24	11	55				
	Three	3	10	1	5	2	25	1	7	1	4	4	20				

Note : **significant at 0.01 level; *significant at 0.05 level; NS -Not significant.

Table -5: Association between demographic variables and level of attitude of pre and post test scores among infant mothers regarding baby bottle tooth decay in a selected community area.

pre-test(n)=60, post-test(n)=60

DEMOGRAPHIC VARIABLES	PRE-TEST						POST-TEST						Chi-square			
	Inadequate		Moderate		Adequate		Inadequate		Moderate		Adequate		Pre-test		Post-test	
													value	Sig.	Value	Sig.
	N	%	N	%	N	%	N	%	N	%	N	%				

Demographic Variable		N	%	N	%	N	%	N	%	N	%	N	%	Pre-test value	Pre-test Sig.	Post-test value	Post-test Sig.
Age	<21yrs	10	37	1	5	0	0	2	15	7	23	2	12	0.025	NS	0.695	NS
	21-25yrs	10	37	11	52	9	75	7	54	12	40	11	65				
	26-30yrs	7	26	8	38	3	25	4	31	10	33	4	24				
	>30yrs	0	0	1	5	0	0	0	0	1	3	0	0				
Religion	Hindu	23	85	17	81	11	92	12	92	24	18	15	88	0.726	NS	0.222	NS
	Muslim	3	11	2	10	0	0	1	8	2	7	2	12				
	Christian	1	4	2	10	1	8	0	0	4	13	0	0				
Education Of Mother	Illiterate	8	30	2	10	2	17	4	31	6	20	2	12	0.000	**	0.301	*
	Primary	14	52	5	24	0	0	7	54	9	30	3	18				
	Secondary	5	19	5	24	2	17	2	16	7	23	3	18				
	Collegiate	0	0	9	43	8	67	0	0	8	27	9	53				
Occupation Of Mother	Homemaker	23	85	20	95	10	83	0	0	0	0	0	0	0.426	NS	0.108	NS
	Daily wage	3	11	1	5	1	8	1	8	3	10	1	6				
	Agriculture	1	4	0	0	0	0	1	8	0	0	0	0				
	Employee	0	0	0	0	1	8	0	0	1	3	0	0				
Family income	<5000	5	19	2	10	0	0	3	23	4	13	0	0	0.035	*	0.530	NS
	5001-10000	17	63	9	43	5	42	7	54	16	53	8	47				
	10001-15000	4	15	2	10	1	8	1	8	5	17	1	6				
	>15000	1	4	8	38	6	50	2	15	5	17	8	47				
Type Of Family	Nuclear	9	33	7	33	4	33	4	31	12	40	4	24	0.983	NS	0.258	NS
	Joint	17	63	13	62	7	58	9	69	15	50	13	77				
	Extended	1	4	1	5	1	8	0	0	3	10	0	0				
Place Of residence	Rural	7	26	9	43	5	42	3	23	13	43	5	29	0.531	NS	0.413	NS
	Urban	13	48	7	33	6	50	5	39	12	40	9	53				
	Semi-urban	7	26	5	24	1	8	5	39	5	17	3	18				
Health facilities	Yes	14	52	13	62	6	50	8	62	18	60	7	41	0.728	NS	0.398	NS
	No	13	48	8	38	6	50	5	39	12	40	10	59				
Source of information	Health care Team	22	82	17	81	9	75	10	77	25	83	13	77	0.275	NS	0.914	NS
	Family Members	2	7	1	5	3	25	1	8	3	10	2	12				
	Mass media	3	11	3	14	0	0	2	15	2	7	2	12				
	Peer group	0	0	0	0	0	0	0	0	0	0	0	0				
No.of Children	Single	13	48	10	48	6	50	5	39	14	47	10	59	0.999	NS	0.531	NS
	Two	11	41	9	43	5	42	6	46	12	40	7	41				
	Three	3	11	2	10	1	8	2	15	4	13	0	0				

Note : **significant at 0.01 level; *significant at 0.05 level; NS -Not significant.

Table -6 : Association between demographic variables and level of practice of pre and post test scores among infant mothers regarding baby bottle tooth decay in a selected community area.
(n=120 pre-test(n)=60, post-test(n)=60)

DEMOGRAPHIC VARIABLES		PRE-TEST						POST-TEST						Chi-square			
		Inadequate		Moderate		Adequate		Inadequate		Moderate		Adequate		Pre-test		Post-test	
		N	%	N	%	N	%	N	%	N	%	N	%	value	Sig.	Value	Sig.
Age	<21yrs	8	29	2	8	1	13	4	44	5	19	2	8	0.469	NS	0.321	NS
	21-25yrs	11	39	14	58	5	63	3	33	13	48	14	53				
	26-30yrs	8	29	8	33	2	25	2	22	8	30	8	33				
	>30yrs	1	4	0	0	0	0	0	0	1	4	0	0				
Religion	Hindu	23	82	21	88	7	88	8	89	21	78	22	92	0.506	NS	0.488	NS
	Muslim	4	14	1	4	0	0	0	0	4	15	1	4				
	Christian	1	4	2	8	1	13	1	11	2	7	1	4				
Education Of Mother	Illiterate	8	29	3	13	1	13	7	78	3	11	2	8	0.000	**	0.000	**
	primary	17	61	2	8	0	0	2	22	16	60	1	4				
	secondary	2	7	8	33	2	25	0	0	6	22	6	25				
	collegiate	1	4	11	46	5	63	0	0	2	7	15	83				
Occupation Of Mother	Homemaker	25	90	21	88	7	88	6	67	24	84	23	96	0.826	NS	0.119	NS
	Daily wage	2	7	2	8	1	13	2	22	2	7	1	4				
	Agriculture	1	4	0	0	0	0	0	0	1	4	0	0				
	Employee	0	0	1	4	0	0	1	11	0	0	0	0				

Family income	<5000	5	18	2	8	0	0	2	22	5	19	0	0	0.244	NS	0.014	*
	5001-10000	16	57	12	50	3	38	5	56	16	60	10	42				
	10001-15000	4	14	2	8	1	13	1	11	4	15	2	8				
	>15000	3	11	8	33	4	50	1	11	2	7	12	50				
Type Of Family	Nuclear	10	36	9	38	1	13	1	11	12	44	7	29	0.501	NS	0.188	NS
	joint	17	61	13	54	7	88	7	78	13	48	17	71				
	Extended	1	4	2	8	0	0	1	11	2	7	0	0				
	Single parent	0	0	0	0	0	0	1	11	12	44	7	29				
Place Of residence	Rural	8	29	11	46	2	25	3	33	8	30	10	42	0.538	NS	0.016	*
	Urban	13	46	8	33	5	63	6	67	9	34	11	46				
	Semi-urban	7	25	5	21	1	13	0	0	10	37	3	13				
Health facilities	Yes	14	50	15	63	4	50	3	33	17	63	13	54	0.635	NS	0.300	NS
	No	14	50	9	38	4	50	6	67	10	37	11	46				
Source of information	Health care team	23	82	19	79	2	75	6	67	24	89	18	75	0.312	NS	0.486	NS
	Family members	3	11	1	4	2	25	1	11	2	7	3	13				
	Mass media	2	7	4	17	0	0	2	22	1	4	3	13				
No. Of Children	single	10	36	14	58	5	63	4	44	12	44	13	54	0.131	NS	0.341	NS
	Two	16	57	6	25	3	38	5	56	10	37	10	42				
	Three	2	7	4	17	0	0	0	0	5	19	1	4				

Note : **significant at 0.01 level; *significant at 0.05 level; NS -Not significant.

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