ORIGINAL ARTICLE

A Study to Evaluate the Effectiveness of Self-Instructional Module on Knowledge and Practices Regarding Complementary Feeding of Infants From 6 Months to 12 Months among Mothers of Selected Rural Areas of Gulbarga

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Abstract

A study was conducted to assess the effectiveness of self-instructional module(SIM) on knowledge and practices regarding complementary feeding of infants from 6 months to 12 months among mothers of selected rural areas. An infant is the term used to refer to the very young offspring of human beings. The term 'infant' derives from the Latin word 'infants' meaning 'unable to speak'. Typically this is applied to children between the age group of 1 month and 12 months. Complementary Feeding is the process of gradually introducing supplementary foods along with the breast milk to what will be its adult diet .Complementary Feeding is not sudden withdrawal of child from the breast feed but is a gradual process starting at the age of 6 months as mother's milk alone is not sufficient to sustain growth beyond 6 months. The purpose of Complementary Feeding is not only to introduce the baby to regular food, but also help the infant to develop a wide range of tastes. A descriptive statistics was carried out in order to present the findings related to evaluate the effectiveness of self-instructional module on knowledge and practices regarding complementary feeding of infants among mothers of selected rural areas of Gulbarga.

Objectives: To assess the pretest and posttest knowledge of mothers of infants regarding complementary feeding. To assess the pretest and posttest practice of mothers of infants regarding complementary feeding. To determine the effectiveness of self-instructional module regarding complementary feeding among mothers of infants. To identify the correlation between knowledge and practice regarding complementary feeding among mothers of infants and To identify the significant association between pre test knowledge and practice scores with selected demographic variables.

Conclusion: The Mean and SD of knowledge of mothers was 17.71 and 2.54. The Mean and SD of practice of mothers was 19.71 and 3.44. The correlation co-efficient value of knowledge and practice of mothers was + 0.92, that shows that there was positive correlation exists between knowledge and practice of mothers regarding complementary feeding. The study was conducted regarding the complementary feeding among mothers with selected socio-demographic variables, chi-square test was vise& there was no significant association was found between practice scores of mothers with any of selected socio-demographic variables at 0.05 level of significance hence null hypothesis was rejected.

Keywords: *Feeding, Infants, Mothers, Knowledge, Self-instructional module (SIM), and Rural area.*

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Introduction

Complementary feeding period is the most crucial period in the child development. During this process children are particularly exposed to the deleterious interaction of malnutrition and infections. Knowledge of complementary foods and practices is an important aspect of preventive and social pediatrics.[1]

The average weight of an infant at birth is 2.5 to 3.5 kg, Baby's weight doubles almost at the end of 6 months. In fact from birth to 1 year is the time of fastest growth for the baby. Milk alone cannot fully meet the baby's needs and sustain this rapid rate of growth. Many mothers in this country rely on rice or mashed fruits. While these contain nutritive elements, they do not supply all the needs of a growing baby in the correct proportion and so is wise to give the baby a specially prepared supplementary food, mixed with fruits, vegetables, pulses in variety.

Objectives

1. To assess the pretest and posttest knowledge of mothers of infants regarding complementary feeding.
2. To assess the pretest and posttest practice of mothers of infants regarding complementary feeding.
3. To determine the effectiveness of self-instructional module regarding complementary feeding among mothers of infants.
4. To identify the correlation between knowledge and practice regarding complementary feeding among mothers of infants.
5. To identify the significant association between pre test knowledge and practice scores with selected demographic variables.

Organization and Presentation of the Data:

- **Section I:** Socio -demographic characteristics of sample.
- **Section II:** Assessment of pretest and posttest knowledge score of mothers about complementary feeding.
- **Section III:** Assessment of pretest and posttest score practice of mothers about complementary feeding.
- **Section IV:** Effectiveness of self instructional module regarding complementary feeding
- **Section V:** Correlation between knowledge and practice about complementary feeding.
- **Section VI:** Association between socio-demographic variables and knowledge and practice about complementary feeding.

Section II: Assessment of pretest knowledge of respondents

Table No: 02 Frequency & percentage distribution of respondents according to their pretest knowledge score N=100

Level of knowledge	Scoring criteria	Frequency (f)	Percentage (%)
Inadequate knowledge	<50%	10	10
Moderately adequate knowledge	50-75%	87	87
Adequate knowledge	>75%	03	03
Total	100	100	100

The above table depicts that pretest knowledge of mothers majority of the mothers i.e., 87% had moderate adequate knowledge. And 10% of mothers had inadequate knowledge. Only 3% of them had adequate knowledge.
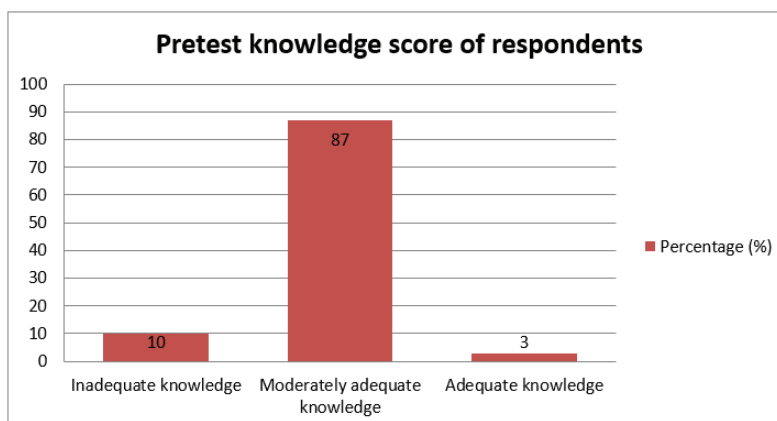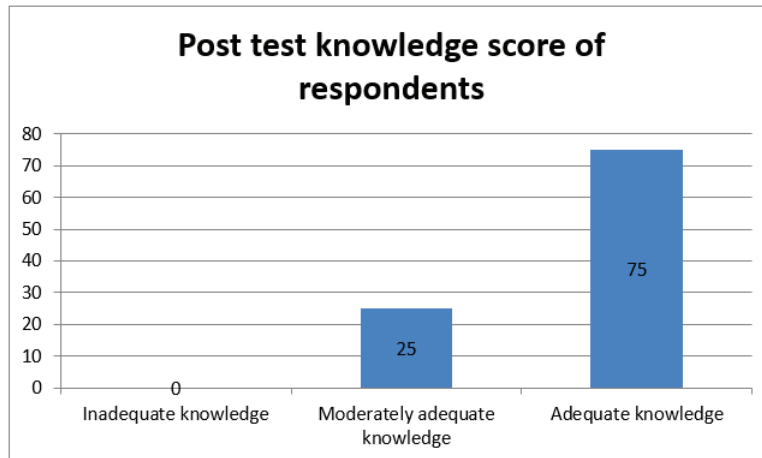

Figure-1: Assessment of posttest knowledgeof respondents

Table No: 02 Frequency & percentage distribution of respondents according to their post test knowledge score N=100

Level of knowledge	Scoring criteria	Frequency (f)	Percentage (%)
Inadequate knowledge	<50%	00	00
Moderately adequate knowledge	50-75%	25	25
Adequate knowledge	>75%	75	75
Total	100	100	100

The above table depicts that post test knowledge of mothers majority of the mothers i.e., 75% had adequate knowledge. And 25% of mothers had moderately adequate knowledge regarding complementary feeding.
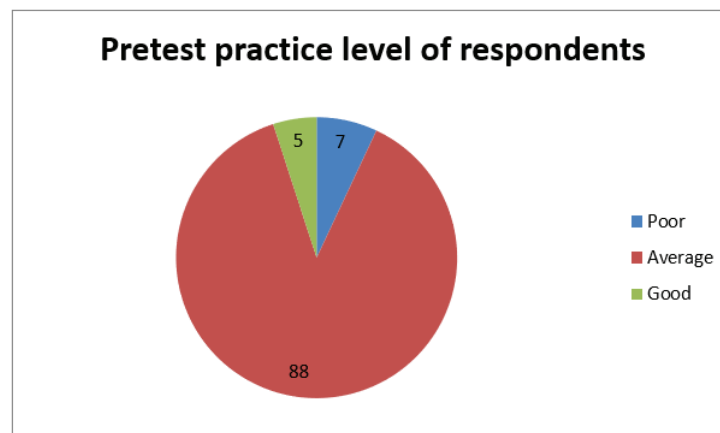

Figure-02: Assessment of posttest knowledge score of respondents

Section III: Assessment of pretest practice of respondents

Table No: 03 Frequency & percentage distribution of respondents according to their pretest practice level N=100

| Level of knowledge	Scoring criteria	Frequency (f)	Percentage (%)
Poor	<50%	07	07
Average	50-75%	88	88
Good	>75%	05	05
Total	100	100	100

The above table reveals that regarding the pretest practice level of mothers, majority 88% mothers had average practice, 7% mothers had poor and only 5% mothers had good practice regarding supplementary feeding.

Figure-03: Assessment of posttest practice of respondents

Table No: 04 Frequency & percentage distribution of respondents according to their post test practice level N=100

Level of knowledge	Scoring criteria	Frequency (f)	Percentage (%)
Poor	<50%	00	00
Average	50-75%	20	20
Good	>75%	80	80
Total	100	100	100

The above table revels that regarding the posttest practice level of mothers, majority 80% mothers had good practice and only 20% mothers had average practice regarding supplementary feeding.
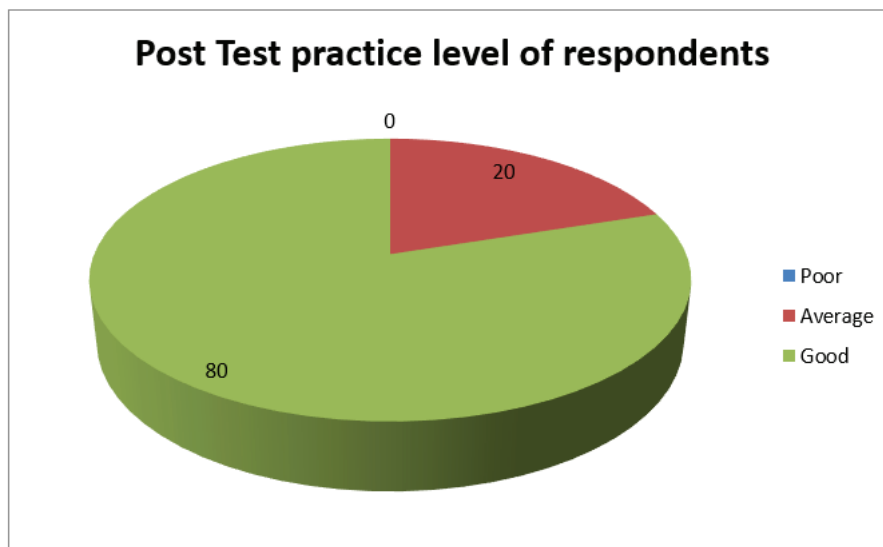
Figure-04: Assessment of posttest Practice level of respondents

Section IV: Effectiveness of Self instructional module

Table No: 05 Effectiveness of self instructional module

t-test	N	Mean	S.D	S.E	t-value
Pre test of knowledge	100	10.85	3.37	0.4356	3.04
Post test of knowledge	100	17.71	2.54	0.3277	

The above table revels that effectiveness of self instructional module on knowledge regarding complementary feeding among mothers pretest that is 10.85 and posttest that is 17.71. standard deviation of pretest and post test is 3.37. 2.54 respectively and calculated t value is higher than the tabulated t value at 0.05 level of significance it indicates that self instructional module is effective to increase the level of knowledge among mothers.

t-test	N	Mean	S.D	S.E	t-value
Pre test of practice	100	12.03	4.06	0.335	2.76
Post test of practice	100	19.71	3.44	0.254	

The above table revels that effectiveness of self instructional module on practice regarding complementary feeding among mothers mean of pretest that is 12.03 and posttest that is 19.71. standard deviation of pretest and post test is 4.06, 3.44 respectively and calculated t value is higher than the tabulated t value at 0.05 level of significance it indicates that self instructional module is effective to increase the level of practice among mothers.

Table-06: Area wise mean, SD, Median and mean percentage knowledge score of mothers regarding complementary feeding N=100

Knowledge area	Maximum possible score	Mean score	Standard deviation	Mean%
Complementary foods	9	3.63	0.36	40.3
Nutritional needs of infants	3	1.5	0.14	50
Preparation of complementary food	2	0.14	0.10	52
Process of complementary feeding	2	0.96	0.09	48
Feeding of complementary food	1	0.44	0.04	44
Types of complementary food	3	1.53	0.15	51
Weaning methods	1	0.44	0.04	44
Health effects	1	0.64	0.06	64

The above table shows, the highest mean percentage (64)and SD (0.06) was in the area of health effects of complementary feeding. Second highest mean percentage (52)and SD (0.10) as in the area of preparation of complementary food, which was followed by types of complementary food mean percentage (50)and SD (0.14), process of complementary feeding mean percentage (48)and SD (0.09), weaning methods mean percentage (44)and SD (0.04). feeding of complementary food mean percentage (44)and SD (0.04). complementary foods mean percentage (40.3) and SD (0.36) .

Table-07: Area wise mean, SD, Median and mean percentage practice score of mothers regarding complementary feeding N=100

Knowledge area	Maximum possible score	Mean score	Standard deviation	Mean%
Complementary foods	7	3.78	0.37	54
Nutritional needs of infants	3	1.37	0.13	45.7
Preparation of complementary food	3	1.08	0.10	36
Process of complementary feeding	3	2.14	0.21	71.3
Feeding of complementary food	1	0.6	0.05	60
Types of complementary food	4	2.25	0.22	56.2
Weaning methods	1	0.45	0.04	45
Health effects	1	0.71	0.07	71

The above table shows, the highest mean percentage (71.3) and SD (0.21) was in the area of process of complementary feeding. Second highest mean percentage (71)and SD (0.07) was in the area of health effects, which was followed by feeding of complementary food mean percentage (60)and SD (0.05). types of complementary food mean percentage (56.2)and SD (0.22). complementary foods mean percentage (54)and SD (0.37). nutritional needs of infants mean percentage (45.7) and SD (0.13), weaning methods mean percentage (45)and SD (0.04), preparation of complementary food mean percentage (36)and SD (0.10).

Section V: Correlation between knowledge and practice about complementary feeding

Table-08: Mean, SD and Mean percentage and Correlation between knowledge and practice about complementary feeding

Variables	Mean	SD	Correlation value	Significance
Knowledge score	17.71	2.54	0.92	Positive correlation
Practice score	19.71	3.44		

N.S- Not Significant at p<0.05 levels

The above table shows that, the Mean and SD of knowledge of mothers was 17.71 and 2.54. The Mean and SD of practice of mothers was 19.71 and 3.44. The correlation co-efficient value of knowledge and practice of mothers was

+ 0.92, that shows that there was positive correlation exists between knowledge and practice of mothers regarding complementary feeding.

Association between the knowledge and practice of mothers and selected socio demographic variables

Table No.09: Association between the knowledge level of mothers and selected socio-demographic variables

S.No.	Demographic variable	Inadequate knowledge	Moderate knowledge	Adequate knowledge	Chi square	df
1.	Age in years					
	20-24	04	25	00		
	25-29	02	35	02	21.543	6
	30-34	02	16	00		
	35-40	00	11	01		
2.	Religion					
	Hindu	00	58	02		
	Muslim	05	15	01	12.125	4
	Christian	05	10	00		
	Others	01	04	00		
3.	Type of family					
	Nuclear Joint	05 05	67 20	0 03	6.613	2
4.	Monthly income					
	<Rs.3000	02	57	01		
	Rs.3001 to Rs.5000	04	10	01		
	Rs.5001 to Rs.7000	02	10	00	16.438	6
	Rs.7001 and above	02	10	01		
5.	Education status					
	Primary school	05	50	01		
	High school	02	30	01	15.977	4
	Degree and above	03	07	01		
6.	Occupation					
	House wife	02	57	01		
	Self employees	00	20	01	13.562	6
	Professionals	06	10	00		
	Govt employees	02	00	01		
7.	Source of information					
	No information	03	60	00	14.266	2
	Mass media	07	27	03		

To associate knowledge about complementary feeding among mothers with selected socio-demographic variables, chi-square test was used.

The above table reveals that there was no significant association was found between knowledge scores of mothers with any of selected socio-demographic variables at 0.05 level of significance. Hence null hypothesis was rejected.

Table No 10: Association between the practice level of mothers & selected socio-demographic variables

S.No.	Demographic variable	Poor	Average	Good	Chi square	df
1.	Age in years					
	20-24	02	25	01		
	25-29	02	35	02	18.543	6
	30-34	01	16	01		
	35-40	02	12	01		
2.	Religion					
	Hindu	03	58	02		
	Muslim	03	15	01	16.125	4
	Christian	00	11	01		
	Others	01	04	01		
3.	Type of family					
	Nuclear	04	68	04	5.213	2
	Joint	03	20	03		
4.	Monthly income					
	< Rs.3000	02	57	01		
	Rs.3001 to Rs.5000	04	10	01	26.438	6
	Rs.5001 toRs.7000	01	11	03		
	Rs.700 and above	00	10	01	1	
5.	Education status					
	Primary school	05	50	02		
	High school	02	30	02	15.977	4
	Degree and above	00	08	01		
6.	Occupation					
	House wife	04	57	01		
	Self employees	01	20	01	43.562	6
	Professionals	01	10	02		
	Govt employees	01	01	01		
7.	Source of information					
	No information	06	61	02		
	Mass media	01	27	03	11.266	2

Conclusion

The Mean and SD of knowledge of mothers was 17.71 and 2.54. The Mean and SD of practice of mothers was 19.71 and 3.44. The correlation co-efficient value of knowledge and practice of mothers was + 0.92, that shows that there was positive correlation exists between knowledge and practice of mothers regarding complementary feeding. The study was conducted regarding the complementary feeding among mothers with selected socio-demographic variables, chi-square test was vise& there was no significant association was found between practice scores of mothers with any of selected socio-demographic variables at 0.05 level of significance hence null hypothesis was rejected.

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