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## Effectiveness of Educational intervention on Infant and Young Child feeding Practices among Pregnant women attending Antenatal Clinics of Urban Health Centers of Mysore

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# Effectiveness of Educational intervention on Infant and Young Child feeding Practices among Pregnant women attending Antenatal Clinics of Urban Health Centers of Mysore

## Cover Page Footnote

I would like to express my deep gratitude to Dr. Prakash for his patient guidance, enthusiastic encouragement and useful critiques of this research work. I really appreciate his advice and assistance in keeping my progress on schedule. His willingness to give his time so generously has been very much appreciated. Finally, I wish to thank my parents for their support and encouragement throughout my study

## **“Effectiveness of Educational intervention on Infant and Young Child feeding Practices among Pregnant women attending Antenatal Clinics of Urban Health Centers of Mysore.”**

### ABSTRACT

#### Background

Social, Physical & Psychological problems contribute for the low feeding rates in India. Apart from this the lack of adequate information, awareness among the women regarding breastfeeding needs to be addressed at the grass root level. Keeping these factors in mind the study was planned with the objective of finding out if educational intervention brings any significant difference in the knowledge and attitude of pregnant women towards breastfeeding practices attending antenatal clinics of urban health center at Mysore.

#### Method

Type of Study: A Prospective Educational Interventional Study

Pregnant woman attending the antenatal clinics of PHC, Bannimatap and JSS Urban Health Centre, Mysore, both Centre's being the Field practice areas in urban Mysore under JSS Medical College, Mysore.

#### Result

According to the observations made in the study, demographic profile had influence on the knowledge levels of the mothers. In the present study both the methods of intervention were found to be effective in making a significant improvement in the knowledge levels - Video (91.5%) and Pamphlet (83%).

66.7% women changed their attitude towards breastfeeding in video group whereas in pamphlet group 47.1 % of women showed positive change in attitude after the intervention.

#### Conclusions

Educational intervention has shown a significant improvement in the knowledge status of pregnant women towards Infant and Young Child feeding Practices. Both the methods of intervention, Video and Pamphlet were effective in promoting the right information and correct techniques of breastfeeding as well as in developing a positive attitude towards exclusively breastfeeding of the infants among the pregnant women

## Keywords

DALY : Disability-Adjusted Life-Years

WHO : World Health Organization

NFHS : National Family Health Survey

## INTRODUCTION

Breast feeding is the unique source of nutrition, it provides adequate and essential nutrients for infant's growth and development, protects the infants against infections and ensures chances of Survival. The benefits of breastfeeding especially exclusive breastfeeding are well established. It provides numerous immunologic, psychological, social, economic and environmental benefits. Early initiation of breastfeeding, within 1 hour of birth, protects the newborn from acquiring infections and reduces newborn mortality.

Under nutrition is estimated to be associated with 2.7 million child deaths annually or 45% of all child deaths. Above two thirds of these deaths, often associated with inappropriate feeding practices, occur during the first year of life. Early and exclusive breastfeeding, is one of the most significant ways to improve infant survival rates and reduce infant mortality. Breastfeeding the child during the first two years of life decreases the risk of chronic disease and obesity.

Though breastfeeding is universal in India, despite its countless benefits to children, mothers and community at large, according to NFHS-4 Survey Report of India, it was observed that % of children aged <3years breastfed within one hour of birth is 41.6, whereas % of children under age of 6 months exclusively breast fed is 54.9 which remains below the desirable level.

Lack of confidence in mother's ability to breastfeed, problems with the infant latching or suckling, breast engorgement/soreness, perceptions of insufficient milk supply, and a lack of individualized counselling in the antenatal period and early postpartum period are some of the factors that result in reduced breastfeeding rate. Some of these problems can overcome by antenatal counselling. Existing antenatal counselling is inadequate to provide sufficient knowledge and awareness about breastfeeding practices. Social, Physical & Psychological problems contribute for the low feeding rates in India. Apart from this the lack of adequate

information, awareness among the women regarding breastfeeding needs to be addressed at the grass root level. Keeping these factors in mind the study was planned with the objective of finding out if educational intervention brings any significant difference in the knowledge and attitude of pregnant women towards breastfeeding practices attending antenatal clinics of urban health center at Mysore.

### INITIATION OF BREASTFEEDING

The WHO recommends to initiate breastfeeding within first hour of delivery. Neonatal mortality remains unacceptably high in developing countries despite significant reductions in post neonatal mortality. According to a cohort study conducted by Karen M Edmond et al there is an association between early breastfeeding and reduced infection-specific neonatal mortality in young human infants. So if breastfeeding is initiated within first hour of birth it can significantly reduce the infant mortality rate.

### EXCLUSIVE BREASTFEEDING

The infant must be exclusively breastfed for 6 months. Malnutrition has been responsible for around 10.9 million deaths annually among children under 5 years. The optimal breastfeed during the first two years of a child can significantly reduce the morbidity and mortality.

The study conducted by Prof Robert E Black, estimated the effects of the risks related to suboptimum breastfeeding practices on mortality and disease. According to their study, suboptimum breastfeeding was estimated to be responsible for 1.4 million child deaths and 44 million DALYs.

A study conducted from Pondicherry by Gunasekaran Dhandapany to assess whether antenatal visits were utilized for promotion of exclusive breastfeeding in addition to the routine obstetric services and it was found out that 79% of all the booked mothers had not received any such counseling regarding awareness about breastfeeding practices or with regard to correct breastfeeding technique.

The protection, promotion and support of breastfeeding has now become a major international priority as emphasized in the Global Strategy for Infant and Young Child Feeding. Health practitioners, such as midwives, nurses and doctors, have a key role to play in providing support to breastfeeding women.

**AIMS:**

Effectiveness of Educational intervention on Infant and Young Child feeding Practices among Pregnant women

**OBJECTIVES:**

1. To assess the effectiveness of educational intervention on knowledge and attitude regarding infant and young child feeding practices among pregnant women attending antenatal clinic.
2. To assess the socio demographic factors associated with knowledge and attitude regarding infant and young child feeding practices among pregnant women.

## MATERIAL AND METHODS:

This study was conducted in the field practice area of Urban Primary Health Centre, Bannimantap, Mysore covering a population of 53,000 and JSS Urban Health Centre covering a population of around 8,500.

Type of Study: A Prospective Interventional Study

Study subjects: Pregnant woman attending the antenatal clinics of PHC, Bannimatap and JSS Urban Health Centre, Mysore, both Centre's being the Field practice areas in urban Mysore under JSS Medical College, Mysore.

Sample size: All the women attending these two centers during study period and satisfying inclusion and exclusion criteria were included in the study.

Sampling technique: Purposive sampling

Inclusion criteria:

1. Pregnant women with gestational age of 28 weeks & above
2. Women willing to participate in the study

Exclusion criteria:

1. Pregnant women with complications
2. Study duration: six months

Method of Data Collection:

Once the eligibility criteria are met, the written informal consent were obtained from the participants. The study subjects were divided into two groups (Group A &B) based on the mode of educational intervention given.

## **OBSERVATIONS AND RESULTS**

### **1. Socio-demographic profile of participants**

#### 1.1. Distribution of participants based on socio-demographic profile

Table no 1: Distribution of study subjects based on Age

| AGE GROUPS | Frequency | Percentage (%) |
|------------|-----------|----------------|
| 15-20      | 24        | 24.0           |
| 21-25      | 57        | 57.0           |
| 26-30      | 15        | 15.0           |
| >30        | 4         | 4.0            |
| TOTAL      | 100       | 100.0          |

The above table shows the age groups of all the women enrolled in the study. Majority of the women belonged to the age group 21-25 years i.e. 57%, followed by 24% included under 15-20 age group. Only 4% of the women are above 30 years of age.

Table no 2: Distribution of study subjects based on Education

| Education                | Frequency | Percentage (%) |
|--------------------------|-----------|----------------|
| Illiterates              | 4         | 4.0            |
| Primary & Higher primary | 21        | 21.0           |
| High school              | 31        | 31.0           |
| PUC/diploma              | 33        | 33.0           |



|                |     |       |
|----------------|-----|-------|
| Degree & above | 11  | 11.0  |
| Total          | 100 | 100.0 |

Majority of the women enrolled are literate (96%). Among literates 33% were educated up to PUC/ Diploma, 31% of the women have studied up to high school, 21% were educated up to primary and higher primary and 11% were educated up to degree and above. However, 4% were illiterate.

Table no 3: Distribution of study subjects based on Occupation

| Occupation | Frequency | Percentage (%) |
|------------|-----------|----------------|
| Working    | 6         | 6              |
| Home maker | 94        | 94             |
| Total      | 100       | 100            |

The above table shows that only 6% of all the study participants are working whereas 94% of them are homemakers.

Table no. 4: Knowledge and Attitude among participants before intervention

|               | Good   |            | Poor   |            |
|---------------|--------|------------|--------|------------|
|               | Number | Percentage | Number | Percentage |
| Pre-knowledge | 6      | 6%         | 94     | 94%        |
| Pre-Attitude  | 68     | 68%        | 32     | 32%        |

Figure no 1: Knowledge on IYCF practice among participants before intervention

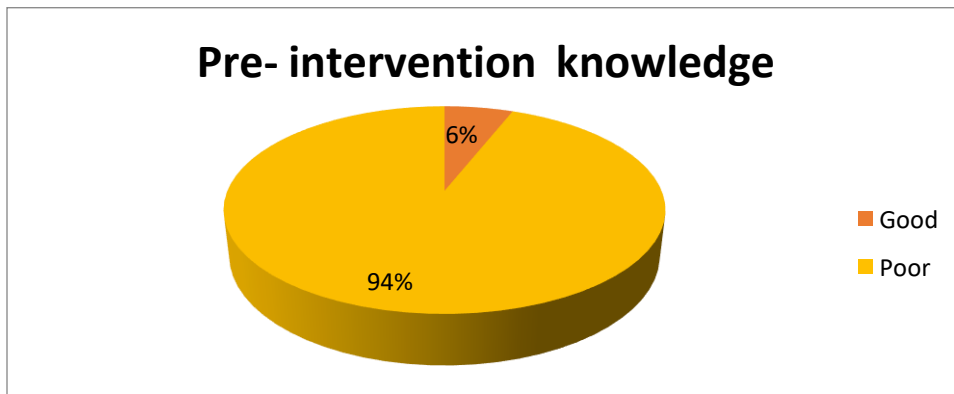
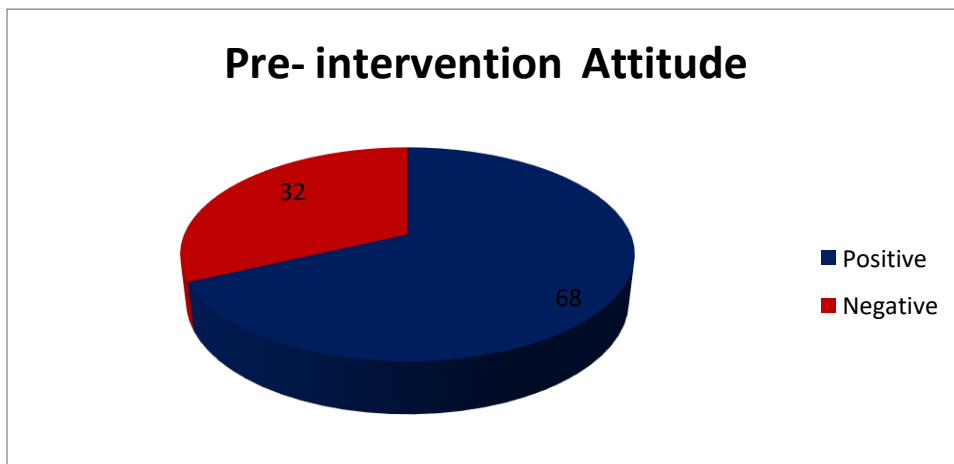


Figure no 2: Attitude on IYCF practice among participants before intervention



**1.2 Association of socio demographic factors with knowledge regarding infant and youngchild feeding practices among pregnant women**

**1.2.1 Association of Pre-knowledge with Age -**

Table no 5: Association of age with knowledge among all the pregnant women enrolled.

| Pre- knowledge |       |       |       |       |        |                  |         |
|----------------|-------|-------|-------|-------|--------|------------------|---------|
|                |       | Good  |       | Poor  |        | Chi square value | P value |
|                |       | Count | %     | Count | %      |                  |         |
| Age            | 15-20 | 0     | 0.0%  | 24    | 100.0% | 8.436            | 0.028*  |
|                | 21-25 | 2     | 3.5%  | 55    | 96.5%  |                  |         |
|                | 26-30 | 3     | 20.0% | 12    | 80.0%  |                  |         |
|                | >30   | 1     | 25.0% | 3     | 75.0%  |                  |         |
| * Fisher exact |       |       |       |       |        |                  |         |

The above table shows a statistically significant association between age and knowledge. None of the mothers belonging to age group 15-20 had good pre-knowledge status whereas 25% of the women above 30 years had adequate knowledge. The p value was found to be 0.028.

## 1.2.2. Association of Pre-knowledge with Education

Table no 6: Association of Pre-knowledge with Education

|                |                          | Pre-knowledge |         |       |         |        | chi square value | P value |
|----------------|--------------------------|---------------|---------|-------|---------|--------|------------------|---------|
|                |                          | Good          |         | Poor  |         | Total  |                  |         |
|                |                          | Count         | Row N % | Count | Row N % | Count  |                  |         |
| EDUCATION      | Illiterates              | 0             | 0.0%    | 4     | 4       | 100.0% | 51.644           | <0.001* |
|                | Primary & Higher primary | 0             | 0.0%    | 4     | 21      | 100.0% |                  |         |
|                | High school              | 0             | 0.0%    | 17    | 31      | 100.0% |                  |         |
|                | PUC/diploma              | 0             | 0.0%    | 31    | 33      | 100.0% |                  |         |
|                | Degree & above           | 6             | 54.5%   | 26    | 5       | 45.5%  |                  |         |
| * Fisher exact |                          |               |         |       |         |        |                  |         |

Among the study participants Good knowledge on IYCF practices were seen in those who were educated above degree (54.5%) which was statistically significant (P <0.001).

### 1.2.3. Association of Pre-knowledge with Occupation

Table no 7: Association of occupation with knowledge

| Occupation    | Pre-knowledge |       |       |       |       | chi square value | p value |
|---------------|---------------|-------|-------|-------|-------|------------------|---------|
|               | Good          |       | Poor  |       | Total |                  |         |
|               | Count         | %     | Count | %     | Count |                  |         |
| Working       | 1             | 20.0% | 4     | 80.0% | 5     | 8.455            | 0.04*   |
| Homemaker     | 5             | 5.3%  | 90    | 94.7% | 95    |                  |         |
| *Fisher exact |               |       |       |       |       |                  |         |

The above table shows a statistically significant association between occupation and knowledge. Of all the working women 33.3% had good pre-knowledge as compared to home maker which was found to be only 4.30%. The p value was found to be 0.041

**2. Comparison of knowledge and attitude regarding infant and young child feeding practices among pregnant women before and after intervention.**

2.1. Comparison of knowledge on IYCF practices before and after intervention

2.1.1. Pamphlet Intervention

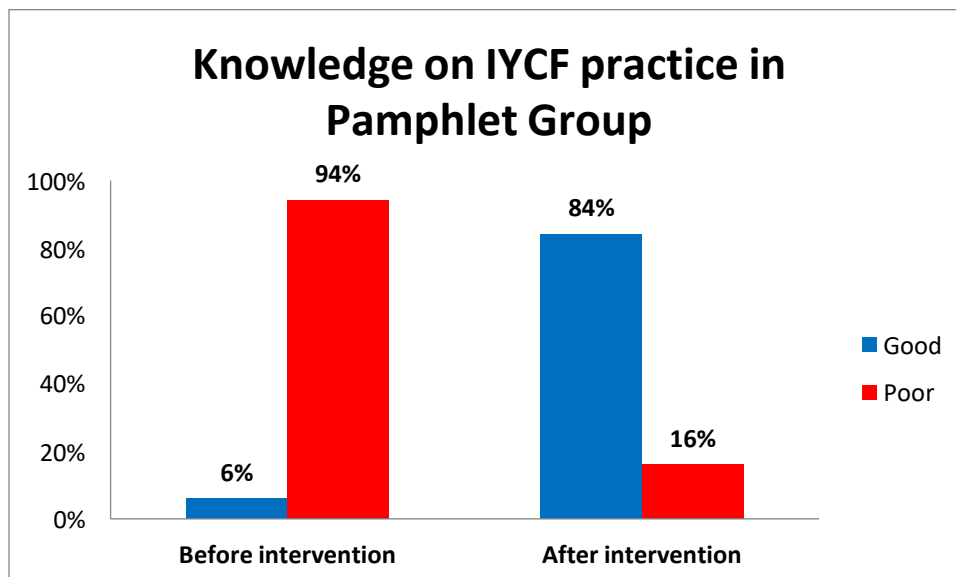
Table 9: Comparison of pre and post knowledge status among the pamphlet group.

|               |       | Post-knowledge |        |       |       |       | P value |
|---------------|-------|----------------|--------|-------|-------|-------|---------|
|               |       | Good           |        | Poor  |       | Total |         |
|               |       | Count          | %      | Count | %     | Count |         |
| Pre-knowledge | Good  | 3              | 100.0% | 0     | 0.0%  | 3     | <0.001  |
|               | Poor  | 39             | 83.0%  | 8     | 17.0% | 47    |         |
|               | Total | 42             | 84%    | 8     | 16%   | 50    |         |

\*McNemar test of significance

The above table shows a statistically significant increase in the knowledge status of pregnant women after the intervention. It was seen that among the 47 women who had poor knowledge on IYCF practices 39 (83%) women gained good Knowledge after the intervention.

Figure no 1: Difference in knowledge before and after intervention by Pamphlets



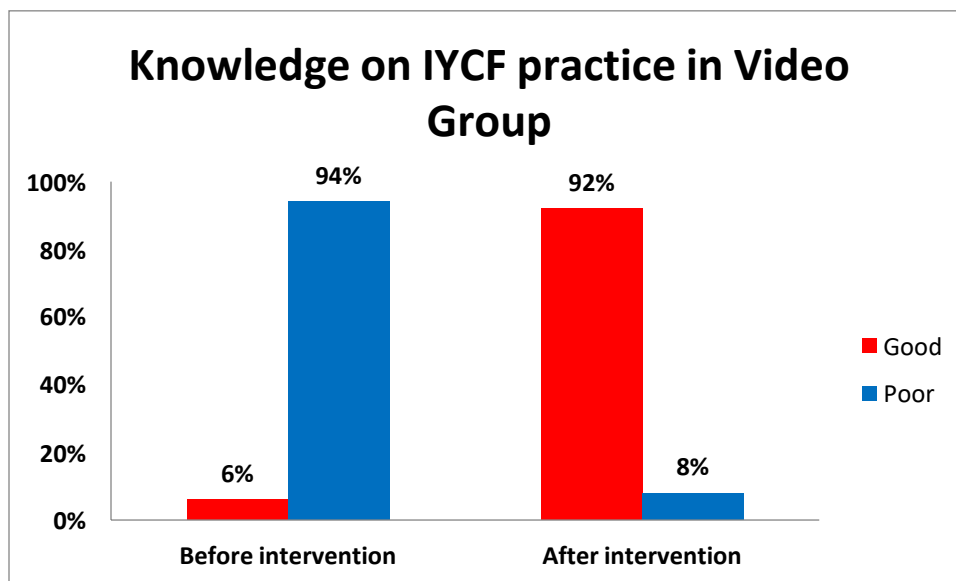
### 2.1.2. VIDEO INTERVENTION

Table 10: Comparison of pre and post intervention knowledge status among the videogroup.

|                               |       | Post-knowledge |        |       |      |       | P value |
|-------------------------------|-------|----------------|--------|-------|------|-------|---------|
|                               |       | Good           |        | Poor  |      | Total |         |
|                               |       | Count          | %      | Count | %    | Count |         |
| Pre-knowledge                 | Good  | 3              | 100.0% | 0     | 0.0% | 3     | <0.001  |
|                               | Poor  | 43             | 91.5%  | 4     | 8.5% | 47    |         |
|                               | Total | 46             | 92%    | 4     | 8%   | 50    |         |
| *McNemar test of significance |       |                |        |       |      |       |         |

The above table shows a statistically significant increase in the knowledge status of pregnant women after the intervention. It was seen that among the 47 women who had poor knowledge on IYCF practices 43 (91.5%) women gained good Knowledge after the intervention.

Figure no 2: Difference in knowledge before and after intervention by Video



2.2.Comparison of Attitude on IYCF practices before and after intervention

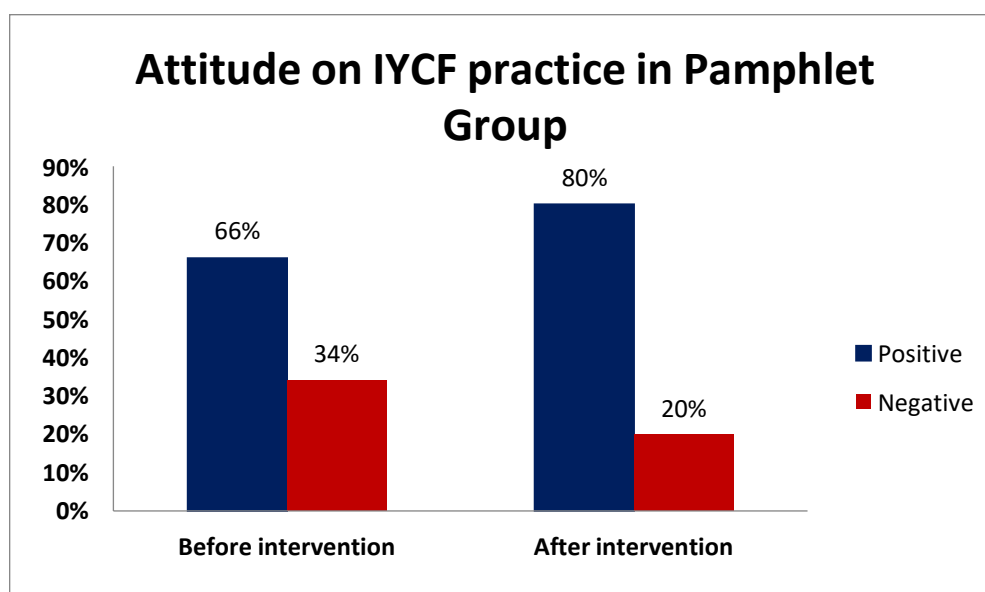
2.2.1. Pamphlet Intervention

Table 11: Comparison of pre and post intervention attitude status among the pamphletgroup.

|                               |          | Post-attitude |       |          |       |       | P value |
|-------------------------------|----------|---------------|-------|----------|-------|-------|---------|
|                               |          | Positive      |       | Negative |       | Total |         |
|                               |          | Count         | %     | Count    | %     | Count |         |
| Pre-attitude                  | Positive | 32            | 97.0% | 1        | 3.0%  | 33    | 0.004*  |
|                               | Negative | 8             | 47.1% | 9        | 52.9% | 17    |         |
|                               | TOTAL    | 40            | 80%   | 10       | 20%   | 50    |         |
| *McNemar test of significance |          |               |       |          |       |       |         |

On analysis it was seen that among the 17 women with negative attitude 8 (47.1%) women changed to positive attitude after pamphlet intervention which was statistically significant (P 0.004).

Figure no 3: Difference in Attitude before and after intervention by Pamphlet





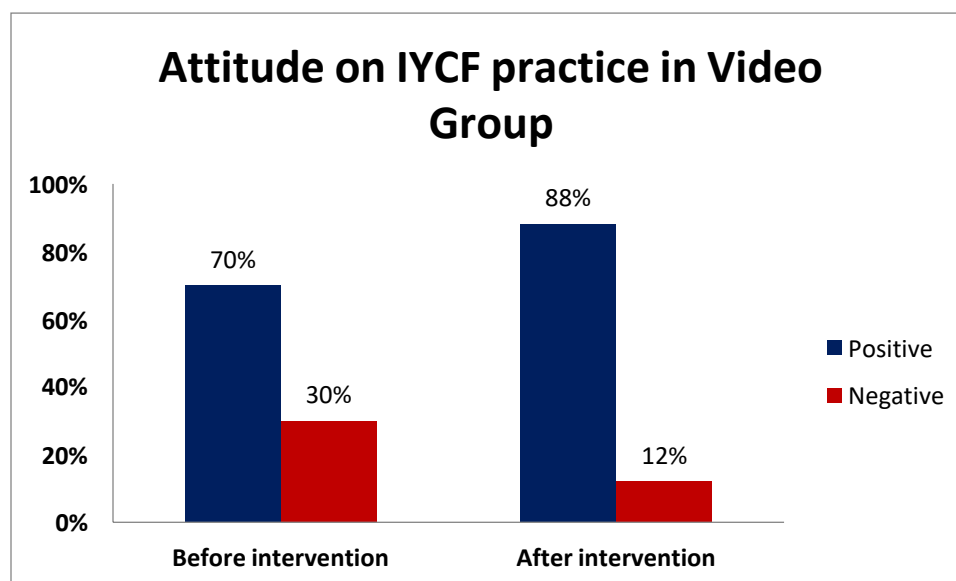
### 2.2.2. VIDEO INTERVENTION

Table 12: Comparison of pre and post intervention attitude status among the video group.

|                               |          | Post-attitude |       |          |       |       | P value |
|-------------------------------|----------|---------------|-------|----------|-------|-------|---------|
|                               |          | Positive      |       | Negative |       | Total |         |
|                               |          | Count         | %     | Count    | %     | Count |         |
| Pre-attitude                  | Positive | 34            | 97.1% | 1        | 2.9%  | 35    | 0.001*  |
|                               | Negative | 10            | 66.7% | 5        | 33.3% | 15    |         |
|                               | Total    | 44            | 88%   | 6        | 12%   | 50    |         |
| *McNemar test of significance |          |               |       |          |       |       |         |

On analysis it was seen that among 15 women with negative attitude before, 10 (66.7%) women changed to positive attitude after video intervention which was statistically significant (P 0.001).

Figure no 4: Difference in Attitude before and after intervention by Video



### 3. Comparison of post intervention knowledge and Attitude between groups with video and pamphlet interventions

#### 3.1. Comparison of post intervention knowledge between groups with video and pamphlet interventions

Table 13: Comparison of knowledge status among the two groups after the intervention.

| Intervention type | Post-knowledge |       |       |       | Chi square value | P value |
|-------------------|----------------|-------|-------|-------|------------------|---------|
|                   | Good           |       | Poor  |       |                  |         |
|                   | Count          | %     | Count | %     |                  |         |
| Pamphlet          | 42             | 84.0% | 8     | 16.0% | 1.515            | 0.218   |
| Video             | 46             | 92.0% | 4     | 8.0%  |                  |         |

It was seen that post knowledge in video intervention group (92%) was higher as compared to pamphlet intervention (84%). But the difference was not statistically significant.

#### 3.2. Comparison of post intervention attitude status between groups with video and pamphlet interventions.

Table 14: Comparison of Attitude among the two groups after the intervention

| Intervention type | Post-attitude |       |       |       | Chi square value | P value |
|-------------------|---------------|-------|-------|-------|------------------|---------|
|                   | Good          |       | Poor  |       |                  |         |
|                   | Count         | %     | Count | %     |                  |         |
| Pamphlet          | 40            | 80.0% | 10    | 20.0% | 1.190            | 0.275   |
| Video             | 44            | 88.0% | 6     | 12.0% |                  |         |

It was seen that post Attitude in video intervention group (88.0%) was higher compared to pamphlet intervention (80%). But the finding was not statistically significant.

## DISCUSSION

In the study conducted, majority of the women belongs to the age group 21-25 years i.e. 57%. Majority of the women enrolled are literate (96%). Among literates 33% were educated up to PUC/Diploma. Women who were educated up to PUC/Diploma and above had good pre- knowledge (54.5%) as compared to the ones who were illiterate or just primary passed. This is similar to a cohort study done in Malaysia, according to which women with higher education level had a significantly more favorable knowledge towards breastfeeding. 25% of the women who were above 30 years of age had good pre-knowledge as compared to the young mothers. The present study shows statistically significant association between demographic variables and pre-knowledge among women. This is similar to a study done in Puducherry, where knowledge improved significantly with higher maternal age, better maternal education and higher socioeconomic status. However, it is in contrast to the study done by Dr. Rajesh K Chudasama et al, where there was no association between mother's education and employment with exclusive breastfeeding.

In the present study, many of the mothers did not know when to initiate breastfeeding, exclusive breastfeeding, about colostrum. This is in contrast to a study conducted in Kuala Lumpur, Malaysia to assess the knowledge and attitude on breastfeeding where 74.8% of women had knowledge about breastfeeding and 83.9% showed positive attitude. The women gained information from the ante natal class and mass media.

Now a days , mothers were not even counselled once about IYCF practices during their ante natal visits, suggesting that existing ante natal counselling is highly inadequate. This is similar to a study done in Pondicherry, to assess whether antenatal visits were utilized for promotion of breastfeeding. 79% of all the booked mothers had not received any such counseling regarding awareness about breastfeeding practices or with regard to correct breastfeeding technique.

After the intervention, 92% of the women acquired good knowledge regarding breastfeeding and 84% of the women showed positive attitude towards breastfeeding. A descriptive study done at

Pondicherry, stated women who had received antenatal counselling about breastfeeding had better awareness as compared to non- counselled mothers.

Though the knowledge gained and change in attitude was more in video intervention group as compared to pamphlet intervention group, it was not statically significant. However, in both the groups the knowledge after the intervention has increased as well as attitude towards breastfeeding has improved and the change is statistically significant.

## CONCLUSION:

Educational intervention has shown a significant improvement in the knowledge status of pregnant women towards Infant and Young Child feeding Practices.

Both the methods of intervention, Video and Pamphlet were effective in promoting the right information and correct techniques of breastfeeding as well as in developing a positive attitude towards exclusively breastfeeding of the infants among the pregnant women. Antenatal counselling on breastfeeding is likely to improve the rates of both early initiation of breastfeeding as well as exclusive breastfeeding.

In the study conducted, only 6% of the women had adequate pre-knowledge however, 68% of them had positive attitude towards breastfeeding. However, after the intervention the knowledge status among women increased to 92% and positive attitude was shown by 84% of women towards breastfeeding.

In the present study both the methods of intervention were found to be effective in making a significant improvement in the knowledge levels - Video (91.5%) and Pamphlet (83%). 66.7% women changed their attitude towards breastfeeding in video group whereas in pamphlet group 47.1 % of women showed positive change in attitude after the intervention.

According to the observations made in the study, demographic profile had influence on the knowledge levels of the mothers. Mothers who were educated and well experienced had better pre-knowledge as compared to the young mothers who were either illiterate or primary passed. Only when mothers have access to right information they can adequately breastfeed. Hence, health practitioners must be encouraged to conduct the antenatal counselling for the pregnant women.

## ACKNOWLEDGEMENT

I would like to express my deep gratitude to Dr. Prakash for his patient guidance, enthusiastic encouragement and useful critiques of this research work. I really appreciate his advice and assistance in keeping my progress on schedule. His willingness to give his time so generously has been very much appreciated.

Finally, I wish to thank my parents for their support and encouragement throughout my study.

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