A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF EDUCATIONAL PACKAGE ON KNOWLEDGE REGARDING BREASTFEEDING AMONG PRIMIGRAVIDAE MOTHERS: A STUDY FROM SOUTHERN INDIA

E Premila Thamizhvanan 1, Ganesh K 2 and B Laxmi Chaitanya 3

1Chief Nursing Officer, Mother Theresa Post Graduate and Research Institute of Health Sciences, Puducherry, India
2Ph.D. Scholar, Indira Gandhi Medical College and Research Institute, Puducherry
3Assistant Lecturer, Mother Theresa Post Graduate and Research Institute of Health Sciences, Puducherry, India

ABSTRACT

Introduction: Globally, there is decline trend of breastfeeding, reasons for declining breastfeeding includes lack of knowledge and confidence regarding breastfeeding techniques. The current study is designed to determine the effectiveness of educational package on knowledge regarding breastfeeding.

Methods: A quasi experimental one group pre-test and post-test research design was used for this study. The study was carried out among 100 primi mothers in community health centre, Mettupalayam, Puducherry selected by convenient sampling method using structured questionnaire.

Results: The overall pre-test knowledge mean score was found to be 13.86 ± 3.75 whereas in the post test after health education, the total mean knowledge score was 23.06 ± 2.05. The present study revealed that the calculated “t” value was 20.21 which was significant at p < 0.005 level of significance. Conclusion: Educational package on breastfeeding among primigravidae mothers was found effective to improve the knowledge regarding breast feeding.

KEYWORDS: Primigravidae mothers, effectiveness, knowledge, educational package, breastfeeding.

Introduction:

"The nature has designed the provision that infants be fed upon their Mother's milk. They find their food and mother at the same time. It is complete nourishment for them, both for their body and soul." - Rabindra Nath Tagore. Breast Milk is a dream product to feed and immunize every human born on earth. No manufactured food can match with the content of Breast Milk and there is no such entity as
Breast Milk Substitute. Thus it is a best gift a mother can give her baby. Breast Milk is perfect food for neonate. Only Breast Milk offers complete nutrition, early protection against illness and safe healthy food at once. The unique characteristic of Breast Milk is that it is baby specific composition. (WHO, 2012, July)

Breastfeeding has been accepted as the most vital intervention for reducing infant mortality and ensuring optimal growth and development of children. More than 15% of 24 lakh child death could be averted in India by optimal breastfeeding practices. Breastfeeding is the ideal method suited for the physiological and psychological needs of an infant. Poor breastfeeding practices are wide spread. It is estimated that sub-optimal breastfeeding especially non-exclusive breastfeeding in the first 6 months of life results in 1.4 million deaths and 10% of the disease burden in children younger than 5 years of age. Review of studies from developing countries show that infants who are not breastfeed are 6 to 10 times more likely to die in the first months of life than infants who breastfed. (Kambaram M, 2014)

The WHO Global data bank on breastfeeding presently covers 94 countries and 65% of the world’s Infant population (<12months), it is estimated that 35% of these infants are exclusively breastfeed between 0-4 months of age. (Vijayalaksmi S, 2012, Aug). The total percentage of children under 3 years who are getting the breast milk within one hour of birth is 46.4% and 48.4% in rural and urban areas respectively. Breastfeeding practices of children among 0-5 months who are exclusively breastfed for at least 6 months is 69.8% and 63.3% respectively in rural and urban areas (Government of India. District level household and facility survey-3 Fact sheet of Karnataka. Ministry of Health and Family Welfare; 2007/08)

Breast Fed babies are less likely to develop infection, have lower risk of developing allergy, ear and orthodontic problems a lower risk of diabetes, heart disease, obesity and lymphoma in later life. Breast Fed babies have higher IQ than those who are given other forms of milk. (Ghai OP, 2004). Breast feeding is one of the first bonding experiences between the mother and the child. Breast milk is constantly available and it is the safest and the most secure source of nourishment for the babies. It protects the baby against illness and ensures warmth and comfort of the baby that is held close to the nursing mother. (Kalia R. 2004)

Breast Feeding benefits mothers too. It helps in uterine involution, reduces chances of postpartum haemorrhage, protects against pregnancy, reduces risk of ovarian and breast carcinoma. (Ip, S., Chung, 2007) In modern times till recently the commitment to Breast Feeding has further flattered in Indian society and there have been major changes in belief and practices about Breast Feeding. This sound ancient wisdom appears to have been adversely masked by occidental trends in women towards artificial feeding. (Garg R’ 2010, Oct)

Most of the mothers don't know the correct technique of breast feeding. This leads to many unnoticed and biased problems in babies and lactating mothers. These include improper nutrition to baby, altered growth, Oral thrush, low secretion of milk, inadequate feeds, nipple problems etc. There are few simple ways to practice the art of breast feeding techniques like starting breast feeding immediately after birth, proper positions, latchimg up and burping up the baby. Minor problems may occur during breast-feeding. But with proper planning, knowledge, and support, mothers can overcome these challenges and continue breast-feeding, and watching videos that demonstrate breast-feeding techniques will help the mothers in promoting breast feeding practices. (http://www.revolutionhealth.com/healthy-living/pregnancy/breast-feeding-techniques)

Ironically Breast Feeding has been threatened in Indian in the name of modernization and urbanization. Feeding bottles and infant foods, the so called Breast Milk substitute are being
misconception as superior and better to Breast Milk and are undermining Breast Feeding, leading to increase infants malnutrition, morbidity and mortality. (Chaturvedi P et al, 2010)

Breast Feeding practices in India are far from optimal also it continues to fall prey to defaulters, to ignorance, illiteracy belief and cultural practices, lack of access to ante natal and postnatal care, inadequate training knowledge and skills of Breast Feeding. (Gupta A et al, 2014)

The above literatures depicts that there is still lack of knowledge regarding breastfeeding, expression, and storage of breast milk, correct attachment, etc. This indicates the need to promote awareness of the breast feeding. Creating an awareness of the advantages of exclusive breastfeeding will further strengthen and support this common practice in rural communities and avoid an early introduction to complementary foods for sociocultural reasons. Equipping mothers with the information regarding ideal breastfeeding will aid in increasing the proper practice of breastfeeding which helps in reduction of neonatal morbidity and mortality and further help in gaining MDG 4. This study was aimed to identify the effectiveness of planned health education regarding breast feeding.

Material and Methods:

The study was carried out at in the Primary health centre, Mettupalayam, Puducherry. A Quasi experimental, one group pre-test and post-test design was adopted for the study. Primi mothers attending the antenatal clinic were selected by convenient sampling method. Study comprises of 100 primi mothers.

A structured interview schedule was developed as a tool for data collection. The structured questionnaire consisted of section A with demographic Performa of primi mothers and section B consisted knowledge 30 items which was categorized under five areas, namely, breast milk, basics of breast feeding, techniques of breast feeding, benefits of breastfeeding and expression and storage of breast milk. Level of knowledge was classified as Poor (0 – 10), Average (11 – 20) and Good (21 – 30) based on the score get by responses to knowledge questionnaire. A lesson plan and visual aids for planned health education was developed which covers areas like breast milk, basics of breast feeding, techniques of breast feeding, benefits of breastfeeding and expression and storage of breast milk.

The content validity of the tool and contents of planned health education was established with the help of experts form related field. In order to establish the reliability of the tool, it was administered to 10 subjects and calculated using test retest method. The calculated reliability (r) was 0.86 which indicated that the tool was highly reliable. Pilot study was conducted on 10 sample and found that the study was feasible and researchable.

Prior to the data collection, permission was obtained from the Department of Health and Family Welfare Services, Puducherry. The study was approved by the institute ethics committee. Informed consent from the participants also was obtained. Pre-test of knowledge was assessed by using the validated questionnaire and structured interview schedule. Planned health education on breastfeeding was administered in one session following the pre-test. A post-test on knowledge regarding breast feeding was conducted one week after the pre-test. The total time duration taken by respondents to complete the questionnaire was forty five minutes.

Data were analysed using the SPSS software package for windows, version 14.0. Data was analysed using descriptive and inferential statistics. Frequency and percentage were calculated for the demographic characteristics of primi mothers and percentage, mean, standard deviation, mean
percentage were calculated for knowledge level. To see the effectiveness of planned health education, “t” test was used. Level of significance was set as p<0.05.

Results:

Socio-demographic characteristics; Out of 100 subjects interviewed, with regards to age showed that most of the subjects 50 (50%) were in between the age group of 22 – 25 years. Majority of the subjects 76 (76%) belonged to Hindu community, most of the subjects 68 (68%) belonged to joint family, 48 (48%) had high school level education, 65 (65%) were homemakers and most of the subjects family income 48 (48%) ranged between Rs. 3001-6000. (Table. No.1)

Table.No.1. Socio Demographic Characteristics

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Demographic Variables</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age (in years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 18 – 21</td>
<td></td>
<td>15</td>
<td>15%</td>
</tr>
<tr>
<td>b. 22-25</td>
<td></td>
<td>50</td>
<td>50%</td>
</tr>
<tr>
<td>c. 26-29</td>
<td></td>
<td>25</td>
<td>25%</td>
</tr>
<tr>
<td>d. &gt; 30</td>
<td></td>
<td>10</td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Hindu</td>
<td></td>
<td>76</td>
<td>76%</td>
</tr>
<tr>
<td>b. Muslim</td>
<td></td>
<td>15</td>
<td>15%</td>
</tr>
<tr>
<td>c. Christian</td>
<td></td>
<td>9</td>
<td>9%</td>
</tr>
<tr>
<td>d. Others</td>
<td></td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3</td>
<td>Type of family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Nuclear</td>
<td></td>
<td>29</td>
<td>29%</td>
</tr>
<tr>
<td>b. Joint</td>
<td></td>
<td>68</td>
<td>68%</td>
</tr>
<tr>
<td>c. Extended</td>
<td></td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>4</td>
<td>Educational Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. No formal education</td>
<td></td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>b. Primary</td>
<td></td>
<td>25</td>
<td>25%</td>
</tr>
<tr>
<td>c. High school</td>
<td></td>
<td>48</td>
<td>48%</td>
</tr>
<tr>
<td>d. Others</td>
<td></td>
<td>22</td>
<td>22%</td>
</tr>
<tr>
<td>5</td>
<td>Occupation of mother</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Home maker</td>
<td></td>
<td>65</td>
<td>65%</td>
</tr>
<tr>
<td>b. Unskilled worker</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Level of knowledge regarding breast feeding among primi mothers; the study reveals that in the most of the subjects 53 (53%) had poor knowledge, remaining 47 (47%) had average knowledge and none of them had good level of knowledge in the post test whereas 58 (58%) of them had good knowledge and 28 (28%) had average knowledge regarding breast feeding in the post test.

Table 2: Distribution of subjects according to pre-test and post-test level of knowledge

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>Pre-test</th>
<th>Post test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency (f)</td>
<td>Percentage (%)</td>
</tr>
<tr>
<td>Poor</td>
<td>53</td>
<td>53%</td>
</tr>
<tr>
<td>Average</td>
<td>47</td>
<td>47%</td>
</tr>
<tr>
<td>Good</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

As shown in the Table. No.3, the total pre-test knowledge mean score was found to be 13.86 ± 3.75 whereas in the post test after health education, the total mean knowledge score was 23.06 ± 2.05. Inferential analysis revealed that the calculated “t” value was 20.21 with p < 0.005 which indicated the significant difference in the level of knowledge before and after the implementation of planned health education program.

Table. No.3 Difference between the pre-test and post-test level of knowledge among the study subjects.

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>Mean ± SD</th>
<th>Mean percentage</th>
<th>‘t’ value</th>
<th>n -100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>13.86 ± 3.75</td>
<td>47.79</td>
<td>20.21</td>
<td>0.0055*</td>
</tr>
<tr>
<td>Post test</td>
<td>23.06 ± 2.05</td>
<td>80.55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion:

In the present study, the pre-test level of knowledge shows that most of the subjects 53 (53%) had poor knowledge, Whereas in the post-test 58 (58%) had good knowledge. The findings of the study were consistent with another study conducted by Rojana Dhakal, 2015, Jan showed 56.67% of mothers had poor knowledge in the pre-test as well as the post-test 68.33% of the mothers had average knowledge. The findings of the study reported that the total pre-test mean score was found to be 13.86 ± 3.75 which was consistent with a study conducted in Karnataka to assess the knowledge and confidence of primipara mothers regarding Exclusive Breast Feeding. (Shilaja KG. 2008, Mar)

After implementation of planned health education, in the post-test, the total mean knowledge score was 23.06 ± 2.05. This displayed that there is increase in the knowledge score after the implementation of educational package which was similar to the study findings conducted by Santhi MD et el, 2014. The findings of the present study shows that calculated t” value for knowledge is (t = 20.21) at 0.005 level of significance which shows that there is significant difference between the pre-test and post-test level of knowledge regarding breast feeding. This shows that planned educational package was effective to improve the knowledge level of primi mothers regarding breast feeding. The findings of this study were also supported by another study carried out in Mangalore by Santhakumari et al, 2014. March.

Conclusion

The findings of the study illustrated that in the pre-test majority of primi mothers had poor knowledge which indicates that there was lack of adequate knowledge regarding breastfeeding. In the post-test, after the intervention of planned health education, the knowledge score was increased dramatically. It also divulged that there is significant difference in the level of knowledge before and after the implementation of planned health education program. Hence, it is concluded that the planned health education was effective to increase the knowledge regarding breastfeeding among primigravidae.

Education regarding breastfeeding should be given to all pregnant mothers to improve their knowledge and practice of breastfeeding which may aid in reducing infant and child morbidity and mortality rates which further can help to achieve millennium development goal 4. Nursing students, peer groups can be mobilized to conduct these educational programs. All women and their husbands should be educated on the topic and motivated to adopt healthy and exclusive breastfeeding practices. In addition to this, further researches should be conducted to cover other areas and different part of the country in terms of knowledge, attitudes and practice on breastfeeding.

Acknowledgement

We owe a great deal of gratitude to the Director, Department of Health and Family Welfare Services, Puducherry, for giving us permission to conduct the study. We extend our gratitude to all the participants of the study for their enthusiasm and cooperation. We are grateful to those who have supported and motivated for the study and publication.

Author for Correspondence:

E Premila Thamizhvanan, Chief Nursing Officer, Mother Theresa Post Graduate and Research Institute of Health Sciences, Puducherry, India. Email.premila2004@yahoo.uk
References: