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## A study on awareness levels of rural mothers on child nutritional care practices in Mahabubnagar District of Telangana

**P Sushma, Dr. P Sreedevi, Dr. M Sarada Devi, V Kavitha Kiran and Dr. R Geetha Reddy**

### Abstract

The present study was undertaken to assess the Level of Awareness among rural mother's with respect to Nutritional care Practices for children in Mahabubnagar district of Telangana state. A total sample of 60 rural mothers of children in the age range of 0-3 years were selected for the study. Ex-post facto research design was used for the study. A self-designed interview schedule was developed to study the socio-demographic characteristics and awareness levels on nutritional care practices. The data was analysed using frequencies and percentages. This study revealed that awareness levels on Nutritional care practices (minimum care recommended by WHO for proper growth and development) in terms of breast feeding, supplementary feeding and complementary feeding was poor among forty percent and nearly similar percent were aware to some extent and only few were well aware. The study recommends a great need to conduct awareness programmes on infant and toddler nutrition carepractices to the rural mothers.

**Keywords:** Awareness levels, Nutritional care practices, Rural mothers, 0-3 years children

### Introduction

The first 3 years of life is critical for child's brain growth and development, with the potential to impact on later social, economic, and health-related quality of life (Shonkoff and Garner, 2011) [25]. Children need good care. Their survival throughout their childhood depends on adults who notice when they are hungry or sick and are able to meet their needs. Good care also means keeping children safe from harm and providing with adequate food with love and attention. Brain develops most rapidly before birth and during the first two years of life. Good nutrition and good health are especially important during this time.

Infant and young child nutrition has its importance i.e., for increasing the growth rate in the life of human beings. Feeding practices comprising of both the breastfeeding as well as complementary feeding have major role in determining the nutritional status of the child. In case of absence of breastfeeding, supplementary feeding and complementary feeding determine the nutritional status of the child. Poor feeding practices in infancy and early childhood, resulting in malnutrition, contribute to impaired cognitive and social development (Government of India, 2003) [10]. Adequate nutrition during infancy and early childhood is essential to ensure the growth, health, and development of children to their full potential. Poor nutrition increases the risk of illness, and is responsible, directly or indirectly, for one third of the estimated 9.5 million deaths that occurred in 2006 in children less than 5 years of age (WHO, 2009) [31].

Urvashi *et al.*, (2018) [29] investigated the infant and young child feeding (IYCF) practices among mothers attending Pediatric OPD of a District Hospital in Gurugram and concluded that IYCF practices in India are extremely poor which maybe because of the lower literacy rates, lack of IYCF education among mothers and dearth of IYCF counseling and support. Mothers also bears wrong perceptions and false beliefs of towards the age for initiating the complementary feeding which exhibits lack of IYCF education. Community level campaigns should be organized so as to create mass level awareness amongst the caretakers.

Ministry of Health and Family Welfare Government of India (2016) [16] initiated MAA (Mothers' Absolute Affection); the breastfeeding educational programme for mothers whereas supplementary feeding and complementary is not much focused so far etc. From the NFHS-3 and NFHS-4, Infant and Young Child Feeding practices overall have remained sub optimal. Unfortunately, infant and young child feeding indicators have not shown a consistent rise over the years (National Nutrition Strategy, Government of India, 2017) [18].

Demilew (2017)<sup>[9]</sup> found that only 28.7% of mothers had sufficient knowledge on infant and young child feeding recommendation. Whereas in the study conducted by Guled *et al.* (2016)<sup>[11]</sup> concluded that rural mothers had less knowledge when compared with the urban mothers. Through the review of literature it is found that rural mothers are unaware of nutritional care practices. So, an attempt was made to study the awareness levels of child nutritional care practices in rural areas of Mahabubnagar District.

### Objective of the study

1. To study the awareness levels of rural mothers on nutrition care practices for children below three years.

### Materials and methods

Based upon the nature of the research problem and objective of the present study, Ex-post facto research design was used for the study. 60 rural mothers of 0-3 year's children were purposively selected for the study. Interview schedule was designed by the investigator for the study which includes demographic profile and awareness levels of rural mothers on infant and toddler nutritional care practices. Schedule on Awareness levels on nutritional care practices has 61 items under breastfeeding, supplementary feeding and complementary feeding. The response options were taken on 3 point rating such as Good awareness, Partial awareness and Poor awareness and scores assigned are 3, 2 and 1 respectively. The breastfeeding practices, early initiation of breastfeeding, avoidance of pre-lacteal feeds, exclusive breastfeeding practice up to first 6 months and techniques of breastfeeding were covered. Under the Supplementary feeding practices time of initiation and techniques of supplementary feeding was covered. The Complementary feeding practices includes introduction of weaning foods, quantity and consistency of complementary foods, minimum dietary diversity, minimum meal frequency and techniques of complementary feeding.

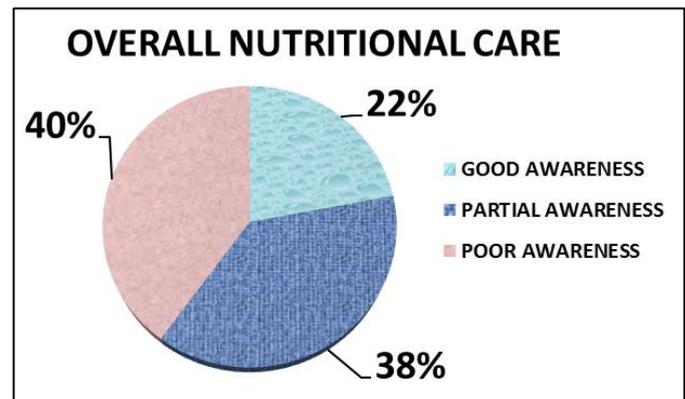
### Results

According to the demographic data of the rural mothers; majority of them were under the age group of 18-25 years, followed by 26-30 years and 31-35 years. With regard to educational qualification, fifty percent of them were illiterates whereas few of them were completed intermediate (12%) and graduation (12%) followed by post-graduation (10%).

Out of total sample, more than half (56%) of the respondents were working in the agricultural field in their own farms followed by wage labourers and involved in caste related occupations like pot making, Weaving and Basket making. Few of them (7%) working in government sector (like primary school teachers, Municipal Sweepers, Anganwadi ayah, Asha worker) and Private sector (like working in general store, Nursery) and other 7% of them were housewives, vegetable shop and tiffin centres.

Considering the Monthly income levels of rural mothers, nearly half (45%) of the rural mothers were earning below RS. 5000, nearly thirty percent of them were earning the amount between RS.5000-10000 (28%) and more than RS. 10000 (27%). When it comes to the type of family of the respondents, more than half (65%) of them had nuclear families followed by joint families and meagre percent of them had extended families.

With regard to support systems available for child care, half of them had more than one support systems like Husband and In-laws/ Anganwadi teacher/Asha worker. Few of them had more than 2 support systems i.e. like Husband, inlaws and Anganwadi teacher/Ashaworker followed by only one support system. With respect to number of children, more than half of the respondents had 2 children, followed by 3, 4, 5 children respectively. About age of the children of respondents, nearly forty percent (38%) were below 1 year, followed by 1-2 years whereas one fourth of them were had children between 2-3 years.



**Fig 1:** Awareness levels of rural mothers on nutritional care practices for children below 3 years. (N=60)

The above fig.1 depicts the awareness level of rural mothers on nutritional care practices for children below three years. This study revealed that, forty percent of the respondents had poor awareness and nearly similar percentage (38%) of them aware to some extent (partial awareness) and nearly one fifth (22%) of them had good awareness. The reason behind good awareness on nutritional care practices might be due to higher education, right perceptions and attitudes of nutritional care, good affordability of food items, personal experience and training and guidance received from support systems. Whereas in the study conducted by Demilew (2017)<sup>[9]</sup> found that only 28.7% of mothers had sufficient knowledge on infant and young child feeding recommendation.

### Awareness about Breastfeeding practices:

With respect to awareness on breastfeeding practices (fig 2) in terms of initiation of breast feeding immediately after birth, feeding colostrum, avoiding pre-lacteal feeds, exclusive breast feeding upto six months, appropriate techniques of breast feeding. Above forty percent (43%) of the respondents had poor awareness and forty percent of them know to some extent and few (17%) of them had good awareness about these.

This might be due to the reason that nearly half of them were not aware or lack of appropriate attitude about significance of timely initiation of breastfeeding, ill effects of prelacteal feeds, exclusive breastfeeding for first six months and right techniques of breastfeeding or traditional practices and beliefs and their negative attitudes and perceptions. The present finding is supported by the study conducted by Kishore *et al.* (2009)<sup>[13]</sup> who found that knowledge on breastfeeding is sub-optimal and misperception on breastfeeding was reported as a barrier for the mother's awareness levels.

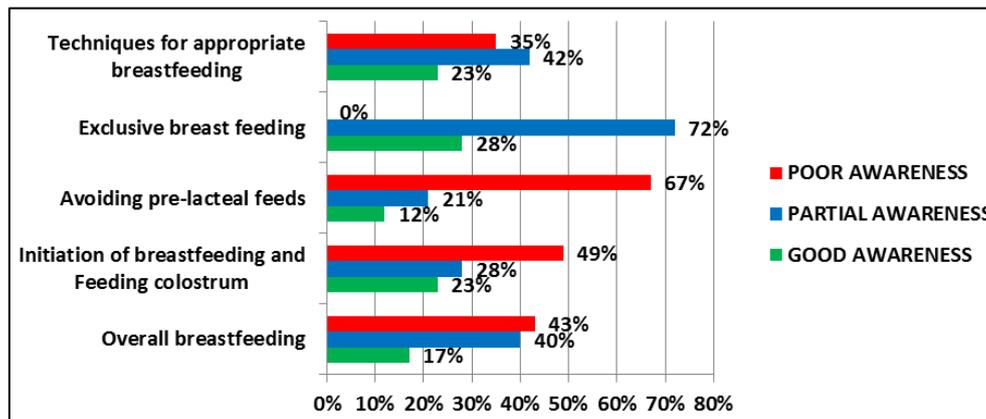


Fig 2: Awareness levels of rural mothers on breastfeeding practices

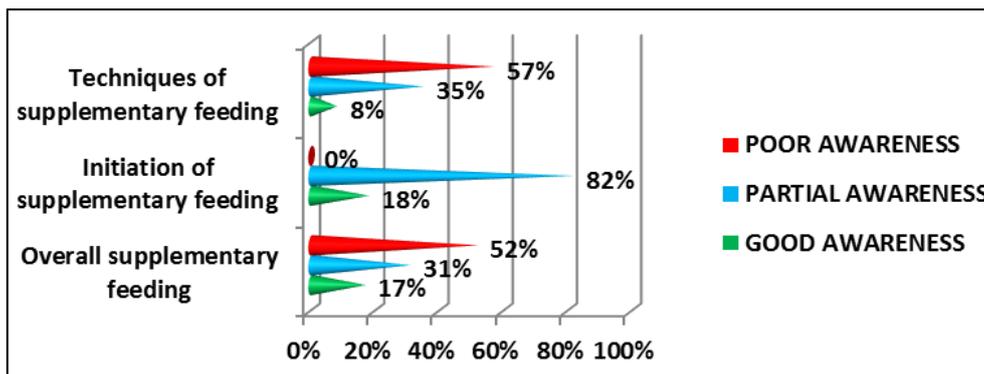
From the above figure it can be depicted that awareness about early initiation of breast feeding and feeding colostrum, nearly half (49%) of the respondents had poor awareness, around twenty percent (28%) of them know partially and above one fifth (23%) of them were know it very well. This is because rural mothers were unaware about the importance of initiation of breastfeeding within 1 hour of the birth and importance of feeding colostrum to the baby. Or due to strong cultural beliefs and traditional practice that colostrum should not be feed as it is not be digested or they believe that child get sick because of evil eye if mothers fed the breast milk on first day of the child's birth is the negative perception of the respondents. They were initiating breastfeeding after 1 hour from the time of child birth and few of them still discarding the colostrum, due to the beliefs such as colostrum is very hard to digest for newborns and lead to complications. Their negative attitude towards early initiation of the breastfeeding i.e early initiation of breast feeding is not so important and colostrum is not required for the baby. Similar results were found in the studies by Karnawat *et al.* (2015)<sup>[12]</sup> and Madhu *et al.* (2009)<sup>[14]</sup>. Whereas Sreeja, M, (2016)<sup>[26]</sup>, found that about 65.2% of mothers were initiated breast milk after 24 hours. They adhered to this practice based on previous experiences of others, most frequently the grandmother or mother in-law or fear of blame from the family members (Raven *et al.*, 2007).

It is important to note that, majority of the mothers (67%) were had poor awareness and only twenty one percent of them partially know and very few (12%) them had good awareness in terms of avoiding pre-lacteal feeds. This might be due to the reason that, they were following their traditional practice of giving honey and sugar syrup immediately after birth and pre-lacteal feeding as compared to those with good knowledge. They were not aware about the risks and consequences of pre-lacteal feeds on child's health hence still feeding sugar, water and honey. Their negative perception is also one of the reason for poor awareness i.e., giving pre-lacteal feeds to new born will help her to speak earlier than the usual and their negative attitude towards the pre-lacteal feeds i.e., giving pre-lacteal feeds make the child healthy. Almost similar results were found in the study conducted by Chea and Asefa (2018)<sup>[8]</sup> in which mothers who had poor knowledge on breastfeeding were nine times more likely to practice.

Exclusive breast feeding practice up to six months was aware fairly among seventy two percent and remaining had good awareness and none of them had poor awareness. The reason behind the fair knowledge could be they might think thought that breast milk alone may insufficient for child's growth after 3-4 months and children need to be given additional food along with breastfeeding hence weaning need to be initiated early after 3-4 months. This indicates that most of the mothers were aware that breast feeding is essential and sufficient up to six months and it should not be prolonged after 6 months but they were still ignorant about additional foods like pre-lacteal feeds are not required. Almost all of the respondents had right attitude towards exclusive breastfeeding i.e., should not continue exclusive breastfeeding after 6 months and they had negative attitude towards exclusive breastfeeding i.e., exclusive breastfeeding is not sufficient for the child. So, they were still early initiating the weaning foods before 6 months. Whereas Sholeye *et al.* (2016)<sup>[24]</sup> and Sreeja (2016)<sup>[26]</sup> found that most of the mothers aware about excusive breast feeding upto six months.

With regard to awareness about appropriate techniques of breast feeding baby, above forty percent (42%) of the respondents know to some extent, above thirty percent (35%) were poorly aware and only one fourth (23%) of them were well aware. The reason behind the partial awareness about the techniques might be due to lack of sufficient training and guidance. Their negative attitudes towards techniques of breastfeeding i.e., giving breastfeeding is more important than using different methods and also their support systems (in-laws and grandparents) were also not aware about the techniques. It was observed that most of the respondents were much aware about feeding both sides as one side feeding may lead to tumours in breast, keeping the baby's head and body alignment while feeding and burping after feeding. But nearly half of them were not aware about feeding should not be less than 10 minutes, do not stop feeding during child's sleep, supporting the baby's arm with pillow while feeding in cradle position, pulling the nipple by keeping child's jaw down, poisoning of the baby while burping and continuing breast feeding during sickness. So, they were not encouraged to follow the techniques of breastfeeding. Similarly Chaudhary *et al.* (2019)<sup>[7]</sup> and Bharani *et al.* (2017)<sup>[2]</sup> found that mothers know only few techniques while breast feeding.

**Awareness about Supplementary feeding practices**

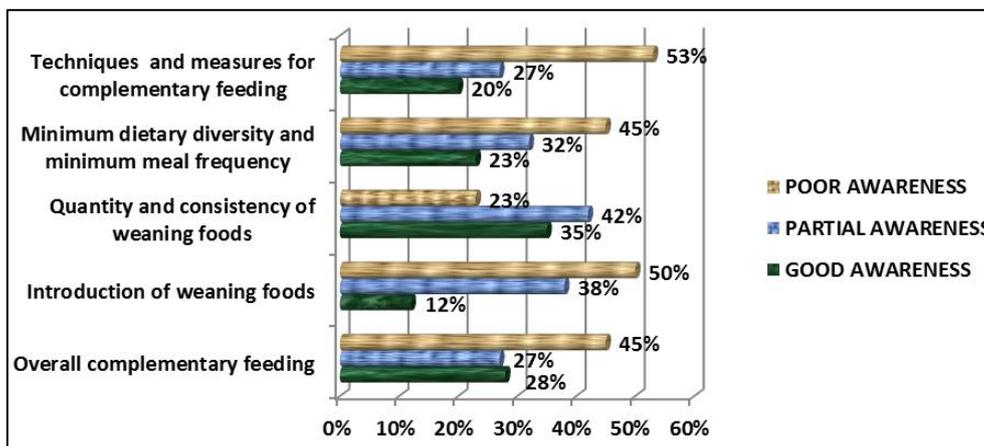


**Fig 3:** Awareness levels of rural mothers on supplementary feeding practices.

From the fig 3, it can be inferred that with regard to awareness on supplementary feeding practices was poor among more than half (52%) of the respondents and fair among thirty one percent and well aware by only 17 percent. With regard to when to initiate bottle feeding majority of (82%) the respondents were partially aware and remaining percent was well aware on this. None of them had poor awareness. All of them well aware that supplementary feeding is necessary in absence or insufficient of breast milk. It was also observed that nearly sixty per cent of them preferred to give pre-lacteal feeds like sugar water and honey before initiation of cow milk or buffalo milk. This might be due to information may be shared by health workers and AWC workers. Similar results was found by Ram *et al.* (2000) [20] who found that 61.9% of mothers discontinued feeding breast milk as it was insufficient for the child and initiated bottle

milk. About techniques of bottle feeding like positioning of the bottle while feeding, feeding with right temperature, right flow of milk, sterilization of bottles, discarding the left over milk, burping after each feed, nearly sixty percent (57%) of the respondents were not aware about these techniques, whereas above thirty percent (35%) of them were aware to some extent and very meagre percent (8%) of them were had complete awareness about this. Whereas Sharma and Khadka (2019) [23] found that knowledge on bottle feeding and maintenance of hygiene, 50% knew only about washing used bottles with tap water, while 34% did not even know about the sterilization process.

**Awareness on Complementary feeding practices**



**Fig 4:** Awareness levels of rural mothers on complementary feeding practices.

Awareness on Complementary feeding practices (fig 4) includes introduction of weaning foods in right time, quantity and consistency of weaning food, inclusion of minimum dietary diversity and minimum meal frequency and techniques of complementary feeding. Nearly half of the respondents (45%) had poor awareness about complementary feeding practices whereas nearly thirty percent (28%) of them had both good awareness and partial awareness (27%). The reasons might be negative attitudes and perceptions towards the minimum dietary diversity, minimum meal frequency, quantity and consistency of complementary foods and its techniques. Similar results were found in the study conducted by Olatona *et al.* (2017) [19]. In contrast to the present study, Sholeye *et al.* (2016) [24] found that Awareness

of complementary feeding was 85.1% among the respondents. With regard to right time to introduce weaning foods neither too early not late, half of the respondents were not aware about the ideal age for introducing weaning foods to the infant, they were introducing weaning foods either at 3-4 months or after 7 months. Whereas nearly forty percent (38%) of them were aware this to some extent either knowing one or two facts about weaning. Only few (12%) of them were good awareness about this because of their higher education and support systems. All of them were aware about that, weaning foods should not introduce after 9 months. Similar results were found by Chand *et al.* 2018 [4], Uppiretla *et al.* (2019) [28] and Olatona *et al.* (2017) [19]. In contrast to the present study, Chapagain (2012) [6] Found that 87% of the respondents were

aware when to start complementary feeding.

In terms of awareness about right quantity and consistency of weaning, above forty percent (42%) of the respondents were had partial awareness, whereas more than thirty percent (35%) of them were well aware and nearly one fifth of them (23%) were poorly aware about this. It was observed that mothers were well aware about offering weaning foods in smooth consistency but not much aware about gradual increase of quantity as per the adequacy of the child. They had a traditional practice passing from one generation to another generation i.e., introducing rice puree at 4 months to the infants. Because it is a traditional practice, they were blindly following and introducing rice puree but they actually not aware of weaning should be start with cereals. Similar results were also found in the study conducted by Rao *et al.* (2011) [21] who found that only 32% of mothers were giving an adequate quantity of complementary feeds. Nearly half of them (47%) were well aware of starting the weaning with the cereals, offering weaning in small quantities and increasing quantity as per the child's age, starting the weaning foods in semisolid form and then move to solid form. Whereas nearly one third of them were not much aware about these and very few were undecided. But every one aware about introducing the weaning foods with smooth consistency to avoid choking. In contrast to the present study Maximum under nutrition (83%) was found in weanlings who started weaning on fruits and vegetables, followed by those on cereals, pulses (Vyas *et al.* 2014) [30]. Only one third of them (34%) were well aware about weaning should be given in sufficient quantity as per the appetite or child's individual needs, similar percentage were aware to some extent and not at all aware and offering weaning as per the child's individual needs they are either forcing or depriving. The reasons might be the lack of right information about the age appropriate quantity and consistency should be given to the child and negative attitude i.e., feeding the child is important and need to be bothered about consistency and quantity of food and their negative perception i.e., quantity need not be adjusted as per the child's appetite were the cause for poor awareness among rural mothers.

With regard to awareness about minimum meal diversity and minimum meal frequency, more than forty percent (45%) of the respondents were not at all aware about the including minimum of four food groups in child's diet in minimum intervals of 2-3 times a day. They were offering only one or two food groups like rice or dhal and not including fruits at least once in a day. They were feeding much quantity at a time without following minimum intervals in a day. Nearly half of them were not aware about including 4 + food groups in weaning, introduction of animal foods in puried form only after 9 months, providing healthy snacks like fruits, introducing family diet after 1 year. They were providing only one or two food groups in child's diet like cereals and pulses (rice and dhal) and not including fruit as snack at least one time. Whereas above thirty percent (32%) of them know this to some extent. Only one fifth of them (23%) were had complete awareness about this. The reason behind the lack of awareness might be lack of orientation and training. Most of them were agricultural labourers and not available for children to feed in intervals. This might be due to reason that they have an attitude that giving rice with dhal is more important and sufficient for child's growth and need not to

give fruits at all. They are feeding fish and family diet before 9 months and mutton, chicken not in puried form which is not healthy for the child and had faulty perception that child can digest family diet, chicken mutton by 9 months without any difficulty and negative attitude towards minimum meal frequency i.e., there is no need to follow it, foods can be offered based on convenience of mother. It is not so important to give different food groups for young children, one or two is enough to be healthy is the negative attitude of the mothers towards minimum dietary diversity. The present study was on par with the studies of Tegegne *et al.* (2017) [27]; Agize *et al.* (2017) [11]; Chand *et al.* (2018) [4] and Uppiretla *et al.* (2019) [28].

With regard to awareness on techniques of complementary feeding like introducing new food in small quantities and checking for its allergies, introducing one after the other based on child's acceptability, avoiding seasoning, spices, commercial foods like chips, cool drinks an ice creams and animal foods (puried form) before 9 months and family diet after one year, not forcing child to eat and trying in different textures if child does not like, minimising the distractions during meal time and maintaining eye contact while feeding etc., above half (53%) of the respondents were not aware about these, whereas nearly thirty percent (27%) of them were had partial awareness. They were just giving the food and instructing the child to eat and attending their own works without paying attention to child. The reasons behind the poor awareness in techniques of complementary feeding are lack of training or guidance or lack of awareness about consequences, attitudes and perceptions, numbers of support systems and also the educational status of the mothers. Most of the respondents had the poor knowledge in terms of introducing salt, sugar and seasoning to the child's food only after 9 months, they were adding these before 9 months whereas few of them were knowing to some extent and very few were very well aware about these. With regard to the safety measure need to follow during complementary feeding like washing vessels, covering the food vessels with lid and feeding the left over foods after long hours; only twenty percent of them had complete awareness. Similar results were found in studies of Saleh *et al.* (2014) [22] and Megahed *et al.* (2016) [15]. This might be due to they were not aware about the consequences of feeding left over foods, not washing and covering food vessels properly. More than one third (35%) of the respondents had poor knowledge in terms of maintaining hygiene while preparing and handling the complementary food for infants and toddlers where as 33% is aware this to some extent and 32 percent were well aware on this. Majority (75%) of the respondents were had the poor knowledge in terms of feeding commercial foods to the infants is not safe. Most of the mothers were giving commercial foods like lays, chips, kurkure as snacks to the infants and young children. Their negative attitude towards the techniques of complementary feeding like, it is waste of time to pay attention in making alternatives if child dislikes food, commercial foods are more healthier for the child, It was alright if mother is not maintain Personal hygiene while feeding the child and it was waste of time to prepare separate food for the child are the major reasons for the poor awareness among rural mothers.

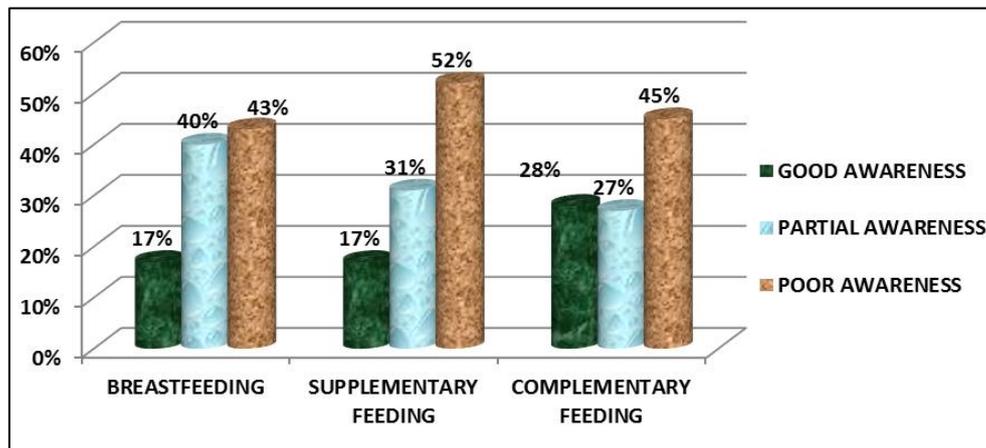


Fig 5: Comparison of total awareness on breastfeeding, supplementary feeding and complementary feeding.

From the above Fig.5 depicts that, when comparing the awareness levels on nutritional care practices, awareness of the rural mothers on supplementary feeding and breastfeeding are less than the complementary feeding. When it comes to the poor awareness levels, breastfeeding and complementary feeding are less than the supplementary feeding. So, there is a need to improve the awareness levels of rural mothers in terms of infant and young children feeding practices.

### Conclusion

From the study concluded that, Forty percent of the respondents were completely unaware about Nutritional care practices and the remaining 38% were only partially aware. Only few of them had complete awareness. Awareness on breast feeding practices and supplementary feeding care practises were found to be better when compare to complementary feeding practices. Hence it is recommended to conduct the awareness programmes to rural mothers about appropriate nutritional care of children below three years. Not only in the initial 6 months, mothers should continue to provide utmost care till 3 years for the child. Though lot of awareness programmes were taken up on importance of exclusive breast feeding, feeding of colostrum still some of the rural mothers were not following due to their traditional beliefs and practices. The media should sensitise on consequences of avoiding colostrum, ill effects of pre-lacteal foods on child's health up to 6 months, lack of minimum dietary diversity, minimum meal frequency and lack of hygiene and safety during feeding etc., in order to reduce misconceptions among rural mothers.

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