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To study of age at commencement, kind, and mode of supplemental feeding in urban and rural 6-12-month-olds

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Abstract

Background and Objectives: Ensuring that babies and young kids get enough food is very important for their health, growth, and development. One goal of the study was to look at when, what kind, and how babies aged 6 to 12 months started getting extra food in urban and country areas.

Materials and Methods: This cross-sectional study was conducted at the Department of Paediatrics, Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry, India, between June 2019 and May 2020. There were no patients admitted. The study included 500 literate mothers and guardians of infants aged 6 to 12 months from both urban and rural locations. For vaccinations, well-baby clinics to monitor their infants' growth and development, or minor ailments, they visited the outpatient department.

Results: Breastfeeding and other forms of complementary feeding are strongly linked to better nutrition in babies. These practices are also important for children's health. 43.12% of the babies in this study started complementary eating before they were supposed to, while 56.88% started it at the right age. Compared to babies in cities, babies in rural areas were much better prepared to start complementary eating at a much earlier age (70.18%). Supplemental feeding didn't start for 17.5% of moms at the right time. A national Family Health Survey in Karnataka, India, agreed with our research. It found that 72.5% of babies aged 6 to 9 months received both breast milk and complementary feeding. At 6 months, 69.3% of mothers in rural areas and 30.6% of mothers in urban areas started complementary feeding.

Conclusions: We can conclude that women should receive CF education during their visits to the clinic, particularly when their infants are vaccinated.

Keywords: Age, feeds, infants, urban, rural, population

Introduction

In order for children to grow, maintain their health, and develop in the appropriate manner, it is essential for them to consume an adequate amount of food when they are infants and young children. When administered in conjunction with breastfeeding, complementary feeds (CF) are foods that are both safe and healthy, and they can be introduced to infants as early as six months of age [1-3]. In accordance with the recommendations of the World Health Organization (WHO), infants should only consume breast milk for the first six months of their living existence [2-4]. Beginning at the age of six months, you should begin to introduce your infant to other meals, and you should continue to breastfeed your child until they are at least two years old. The failure to adequately treat cystic fibrosis can result in a number of complications, including diarrhea, long-term growth retardation, kwashiorkor, marasmus, and a lack of immunity, which can lead to recurrent infections that endure for a long time and carry the potential to be fatal [3-5].

The World Health Organization recommends that CF be administered in a timely manner, in the correct manner, and in sufficient quantities. Despite the fact that cystic fibrosis is a major contributor to hunger in developing nations, not enough people are aware of the disease [4-6]. For the reason that malnutrition might occur if therapy is started too early or too late, the age at which symptoms of cystic fibrosis first appear is of utmost importance. Foods that are prepared by hand or meals that are already prepared and packaged in boxes could be included in CF. Examples of handcrafted supplemental foods include rice dal water, khichadi, dairy products, mashed potatoes, kheer, fruits such as mashed bananas and apples, vegetable soup, and a variety of other dishes [5-7].

In addition to this, it is essential to administer CF by filling a bottle or a katori/Wati with a spoon. Bottle feeding presents a number of challenges, one of the most significant of which is that children do not always wash their hands correctly, which can lead to infections that persist for an extended period of time and prevent them from growing [6-8]. These infections also lead to a significantly increased risk of death for children under the age of five. Mothers who are aware of the condition of newborn malnutrition are able to prevent it and improve the way they feed their children by employing various approaches. When compared to people living in metropolitan regions, those living in rural areas eat differently for a variety of reasons. Since there wasn't a lot of research done on this subject in the region [7-9], the purpose of this study was to determine the best age, kind, and method for giving supplemental foods to infants between the ages of six and twelve months in both urban and rural settings.

Materials and Methods

We did this cross-sectional study at the Department of Paediatrics, Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry, India, from June 2019 to May 2020. It took place in the outpatient area of the pediatrics division. The study was approved by the Institutional Ethics Committee. Also, the mother or the baby's caretaker gave their permission after being told about it. 500 literate mothers and guardians of babies 6 to 12 months old from cities and rural areas took part in the study. They went to the outpatient department for immunizations, well-baby clinics to check on their babies' growth and development, or for minor illnesses.

Results

The memory method was used to talk to 500 educated mothers and caregivers of babies aged 6 to 12 months, with 300 from cities and 200 from rural areas. There were 260 male infants and 240 female infants in the country population, and 242 male infants and 222 female infants in the urban population. Age spread of babies in cities vs. rural areas.

Table 1: Infant age distribution in urban and rural areas

Sr. No.	Age (Month)	Urban	Rural	Total
1	>6-9 months	200	115	315
2	>9-12 months	100	85	185
3.	Total	300	200	500

Table 1 presents the age-wise distribution of infants in urban and rural populations, with 300 infants in urban areas and 200 in rural areas, totaling 500 infants. The maximum duration was 6 to 9 months.

Table 2: Between urban and rural infants, CF began at 6-12 months

Sr. No.	Age (Month)	Urban	Rural	Total
1	<3	60	40	100
2	>3-6	40	60	100
3.	6	200	100	300
4.	Total	300	200	500

Table 2 presents the age at which cystic fibrosis (CF) was diagnosed in infants aged 6-12 months, comparing urban and rural populations. Out of 500 newborns, 60 were from

urban areas and 40 from rural areas. The maximum was observed in the preceding six months in both urban and rural categories.

Table 3: Infants 6-12 months old with CF in urban and rural areas

Sr. No.	Type of complementary Food	Urban	Rural	Total
1	Homemade	90	120	210
2	Commercial	110	30	140
3.	Mixed	100	50	150
4.	Total	300	200	500

Table 3 presents the types of complementary feeding (CF) in infants aged 6-12 months within urban and rural populations, elucidating the distribution based on the availability of food types.

Discussion

The best nutrition for newborns is highly linked to breastfeeding and other forms of complementary feeding, which are also important for kids' health. In this study, complementary feeding was given to 43.12% of newborns before the recommended age and to 56.88% of newborns at the suggested age. Babies in rural areas were much more likely to be ready to start complementary eating at a much earlier age (70.18%) than babies in cities (44.4%) [9-11]. Just 17.5% of women started complementary feeding at the right time. In line with our study, a nationwide Family Health Survey for Karnataka, India, found that 72.5% of babies aged 6 to 9 months were given breast milk along with other foods. Of these, 69.3% of mothers in rural areas and 30.6% of mothers in urban areas started CF at 6 months [10-12].

In cities, 17.7% of mothers with CF started having babies before they were six months old, while in rural places, 13.10% did so. Early weaning is done because women think their breast milk isn't enough, either because they're worried about their child's growth or because they think it makes their child cry too much. Introducing complementary foods before six months of age makes weight loss and malnutrition worse, which can cause breast milk to be lost and increase the risk of illnesses like diarrhea [12-14].

Additionally, it is thought that babies younger than six months are not physically ready to handle CF because their kidneys, digestive system, and brains are not fully developed yet. Studies show that starting complementary feeding early does not speed up growth or make it easier for babies to accept food. Although our study did not find a delayed onset of cystic fibrosis, earlier research suggested that inadequate feeding attempts were most likely to blame. In our study, babies were prepared at home in 19.83% of cases in cities and 56.65% of cases in rural areas. In cities, 40.94% of cases were prepared at home and 12.84% of cases were prepared at home in rural areas [15-17].

The percentage of Indian studies that used commercial preparation as CF ranged from 5.9% to 80%. Making complementary foods at home reduces the need to import pricey professionally prepared weaning foods, which is why WHO and UNICEF recommend them as a better way for families and communities to save money. WHO and UNICEF both encourage moms to feed their babies home-cooked meals that are full of calories, fats, vitamins, and minerals [16-18]. Commercial CF may be chosen by mothers because they think it is easier, saves time, and looks better. Of the babies we surveyed, 33.88% were fed formula in a bottle. In cities, 43.53% were fed formula, while in rural

areas, 23.62% were fed formula. Bottles shouldn't be used because they can cause infections, shorten the time a baby is breastfed, stop on-demand eating, and change how oral feeding works. The rise in bottle feeding may have been helped by the commercialization of infant nutrition and marketing tactics [19-21].

Most mothers in cities may not practice CF as well as mothers in rural areas because they live alone in nuclear families and don't have aunts or other extended family members to help them. On the other hand, most rural moms live in large families with extra family members who help with childcare. Second, most women in rural areas stay at home while most moms in cities work [20-22]. It was found that housewives were 9.5 times more likely than working women to use good CF practices. When mothers take their babies to the doctor, especially for immunizations, they should learn about cystic fibrosis. There were some problems with this study. At first, there may be bias in the data gathered from mothers' memories and questions, which would make the results less reliable. And secondly, it makes it harder for this study to find any direct links, just like other cross-sectional studies. Third, moms who couldn't read or write and children older than 12 months were left out of our study [23-25].

Conclusion

A sufficient number of supplemental feeding habits were not present among infants in either urban or rural settings. The use of commercial formula and bottle feeding as a source of additional nourishment was significantly more prevalent among infants living in urban areas compared to infants living in rural regions, and the practice began at a younger age, less than six months. It is important for moms to discuss cystic fibrosis with their paediatricians whenever they see the doctor, particularly while their children are receiving vaccinations.

Conflict of Interest

None

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