

# Awareness About the Impact of Food and Nutrition in the Growth and Development of Infants in Low Socioeconomic Families.

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**Background:** The first two years of a child's life are a time of rapid growth and transformation, where nutrition plays a vital role in shaping their future. During this critical window, a well-balanced diet supports brain development, builds a strong immune system, and lays the foundation for lifelong health. Yet, for many families living in poverty, access to nutritious food and trustworthy information remains out of reach. Without proper guidance, parents—particularly mothers—may unknowingly adopt feeding practices that contribute to malnutrition, stunted growth, and developmental delays. Bridging this gap through education and awareness is essential. Empowering caregivers with the knowledge of what, when, and how to feed their children can make a profound difference. By supporting mothers in making informed, affordable food choices, we take an important step toward securing a healthier, more promising future for children in vulnerable communities.

**Objective:** 1) To find out awareness about the impact of food and nutrition in the growth and development of infants in low socioeconomic families. 2) To examine awareness about the impact of food and nutrition in the growth and development of infants in low socioeconomic families

**Methods:** This was a survey-based observational study conducted over a period of three months in Karad, focusing on primigravida mothers with children aged up to 2 years. A total of 87 participants were selected using simple random sampling. The study aimed to assess maternal awareness regarding nutrition and its impact on early childhood development in low socioeconomic settings.

**Results:** This study showed that most mothers are giving enough breast milk to their babies in the early months. However, after six months, when solid food should be introduced, many children are not receiving the correct amount or type of food. This is especially seen around 8 months of age. So, there is a need to guide families on how and when to start healthy, solid foods along with milk for their baby's proper growth.

**Conclusion:** This study found that while breastfeeding awareness is good among low socioeconomic families in Karad, knowledge about proper complementary feeding is lacking. Many children are not receiving the right types or amounts of solid foods after six months,

which can affect their growth and development. There is a clear need for better nutrition education and support in these communities.

**Keywords:** Infant Nutrition, Breastfeeding, Complementary Feeding, Growth and Development, Low Socioeconomic Status, Ration Card, Rural Families, Feeding Practices, Nutrition Awareness, Postnatal Care.

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## INTRODUCTION

Nutrition during the early years of life—especially from birth to two years—is one of the most important

foundations for a child's healthy development. These early years represent a period of rapid physical growth and brain development, where proper nutrition has a

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lifelong impact on health, learning ability, and emotional well-being. Adequate nutrition during this time supports not only physical growth but also cognitive function and immunity, helping children grow into strong, capable individuals. Unfortunately, in low socioeconomic families, access to nutritious food is often limited, and awareness about what constitutes a healthy diet for infants and toddlers is lacking. Many caregivers, especially young or first-time mothers, may not have the knowledge or support needed to provide age-appropriate nutrition. This lack of guidance can result in poor feeding practices, leading to issues such as malnutrition, stunted growth, developmental delays, and frequent illnesses. These challenges affect not only a child's immediate health but also their future—impacting academic performance, job opportunities, and overall quality of life.

One of the most powerful influences on a child's nutrition is the mother's understanding of what and when to feed her child. Exclusive breastfeeding for the first six months is recommended globally, as it provides all the essential nutrients and antibodies an infant need. After six months, it is important to introduce complementary foods like soft fruits, cooked vegetables, pulses, and cereals, while continuing breastfeeding. Unfortunately, many mothers in low-income settings are not fully aware of these practices. With the right information and encouragement, even simple, affordable, and locally available foods can be used to provide children with a balanced and nourishing diet. The first 1,000 days of life—from conception until a child's second birthday—are considered a golden window of opportunity for shaping lifelong health. Proper nutrition during this period influences brain development, strengthens the immune system, and supports emotional stability. However, nutrition doesn't exist in isolation—it is connected to many other factors such as maternal education, family income, cultural traditions, and access to healthcare.

Many families are not aware of government schemes or community programs that offer free or low-cost nutrition support, such as Anganwadi centres and antenatal counselling services.

Among these various factors, maternal education stands out as a key determinant. Educated mothers are more likely to understand the importance of breastfeeding, hygiene, immunization, and balanced meals. They tend to seek medical care promptly and are better equipped to make informed decisions about their children's health.

Conversely, mothers with little or no education may rely on outdated beliefs or inconsistent advice, which can harm the child's nutritional status. To truly improve outcomes, we must focus on increasing awareness among mothers and caregivers—especially in

underprivileged areas. Simple educational efforts, such as group sessions in local health centres, home visits by community health workers, or nutrition demonstrations at Anganwadi centres, can make a lasting difference. Counselling during pregnancy and the postpartum period is also essential to build mothers' confidence and understanding. Ultimately, improving nutrition in early childhood is more than just a health measure—it is a social investment. A child who is well-nourished in their early years is more likely to attend school, perform well academically, and grow into a healthy, productive adult. On a larger scale, this contributes to reducing poverty, improving community health, and promoting national development.

By prioritising maternal education and early-life nutrition, we can break the cycle of malnutrition and give every child, regardless of background, the chance to grow, learn, and thrive. Ensuring that mothers have the knowledge, support, and access to healthy food is not just beneficial—it is essential for building a stronger, healthier future for all.

### MATERIAL AND METHODOLOGY

An observational cross-sectional survey was conducted in Karad over a three-month period to evaluate maternal awareness of nutrition and infant feeding practices among primigravida mothers with children aged up to two years. A total of 87 participants were recruited using a simple random sampling technique. Data were collected using a structured questionnaire developed in Google Forms, which included demographic information and questions assessing maternal knowledge regarding nutrition and feeding practices. Informed consent was obtained from all participants prior to data collection. The questionnaire was distributed both online and in person, and responses were compiled into a master chart for analysis.

The study included primigravida mothers of children aged up to two years, with both male and female infants, belonging to various socioeconomic backgrounds as identified through ration card classification. Participants were residents of rural, slum, or underserved areas experiencing food insecurity, and their children exhibited signs of undernutrition or micronutrient deficiencies. Mothers of children above two years, those with chronic or genetic disorders affecting growth or cognition, households with dietary restrictions unrelated to poverty, children already enrolled in malnutrition treatment programs, and multiparous mothers were excluded from the study. Statistical analysis was performed with the assistance of a statistician to interpret the collected data.

### Ethical Committee Approval

The approval for this study is gained from the Institutional Ethics Committee of Krishna Vishwa Vidyapeeth (Deemed to be University), Karad. Respondents were given a detailed explanation about the

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study which is to be conducted and informed consent was collected from each and every participant participating in this study. There was a volunteer involvement of all the respondents in this study whose confidentiality was thoroughly maintained

### RESULTS

This study assessed feeding practices among parents of infants aged 1 to 12 months in a rural setting. The results show that most caregivers adhere to recommended breastfeeding volumes during the first six months of life. Notably, over 60% of caregivers reported giving the ideal quantity of milk to their 1- to 3-month-old babies. However, the fourth month marks a slight decline in compliance, with more than half not meeting the required feeding volume. Similarly, complementary feeding awareness seems inconsistent — less than half reported introducing adequate cereals, fruits, or proteins between the 6th and 8th months. By the 9th month onward, awareness improves again, as over 50% of respondents reported offering appropriate quantities of both milk and solid food. The trend continues into the 12th month, where most parents provide both milk and nutritious complementary meals, showing improvement in understanding mixed feeding strategies. Overall, while early infant feeding is largely followed, gaps in complementary feeding between the 6th and 8th months suggest the need for targeted education during this critical weaning period to ensure optimal child nutrition

Q. No	Survey Question	Yes (%)	No (%)	Interpretation
1	Does your 1-month-old baby consume 3–4 ounces (90–120 ml) of breast milk per feed?	60.9%	39.1%	Most infants are meeting the expected milk intake at 1 month.
2	Does your 2-month-old baby consume 4–5 ounces (120–150 ml) of breast	55.2%	44.8%	Majority follow appropriate feeding quantity for 2-month-olds.

3	Does your 3-month-old baby consume 4–5 ounces (120–150 ml) of breast milk per feed?	59.8%	40.2%	Feeding norms are generally followed for 3-month-olds.
4	Does your 4-month-old baby consume 4–6 ounces (120–180 ml) of breast milk per feed?	48.3%	51.7%	Many babies are not meeting ideal milk intake by 4 months.
5	Does your 5-month-old baby consume 6–7 ounces (180–210 ml) of breast milk per feed?	56.3%	43.7%	Feeding quantity is appropriate in most 5-month-old infants.
6	Does your 6-month-old baby consume 7–8 ounces (210–240 ml) of breast milk per feed?	56.3%	43.7%	Feeding patterns for 6-month-olds are mostly aligned with recommendations.
7	Are you offering cereals, fruits, or vegetables (1–9 tbsps daily) to your 6-	47.1%	52.9%	Complementary feeding is not well established at 6 months.

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	month-old?			
8	Does your 7–8-month-old baby consume 24–36 ounces (720–1080 ml) of breast milk daily?	52.9%	47.1%	Most are maintaining adequate breast milk intake alongside solids.
9	Are you offering cereals, fruits, or vegetables (4–9 tbsp daily) to your 7–8-month-old baby?	41.4%	58.6%	Complementary food quantity is insufficient in most cases.
10	Are you offering 1–6 tbsp of meat or protein daily to your 7–8-month-old baby?	44.89%	55.2%	Protein-rich complementary foods are often underutilized.
11	Does your 9–10-month-old baby consume 24–30 ounces (710–900 ml) of breast milk daily?	52.9%	47.1%	Breastfeeding remains consistent in most infants at this age.
12	Are you giving ¼–½ cup of grains, fruits, veggies, dairy, or protein to your 9–10-month-old?	50.6%	49.4%	Complementary diet diversity is just about adequate at this stage.

13	Does your 11-month-old baby consume 16–24 ounces (473–710 ml) of breast milk daily?	51.7%	48.3%	Most infants maintain adequate milk consumption at 11 months.
14	Are you giving ¼–½ cup of grains, fruits, veggies, dairy, or protein to your 11-month-old?	44.8%	55.2%	Complementary feeding quantity may be lacking in many infants.
15	Does your 12-month-old baby consume 24 ounces (710 ml) of breast or cow’s milk daily?	54.0%	46.0%	Transition to milk-based feeding is mostly on track.
16	Are you offering ¼–½ cup of grains, fruits, veggies, dairy, or protein to your 12-month-old?	51.7%	48.3%	Solid food intake meets minimum guidelines in over half of infants.

**DISCUSSION**

This is a survey-based study conducted to assess the awareness about the impact of food and nutrition on the growth and development of infants and young children in low socioeconomic families in Karad. The purpose of this study was to identify feeding practices, particularly the intake of breast milk and the introduction of complementary foods, during the critical early months of child development. In this study, the proportion of female children was 60.9%, while male children constituted 39.1%. The majority of respondents (58.6%)

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were from yellow ration card holders, indicating a lower socioeconomic background. The study revealed that breast milk intake practices in the first 6 months were fairly adequate, with over 50% of infants receiving the recommended amount of milk. However, at 4 months, only 48.3% reported adequate milk intake, suggesting a gap in knowledge or a potential feeding issue. As the age of the child increased, awareness about complementary feeding (grains, fruits, vegetables, proteins) showed a notable decline. For instance, only 41.4% of 7–8-month-old infants were given solid foods like cereals and vegetables in the recommended quantity, and just 44.89% were offered protein sources like meat or pulses. At 11 months, only 44.8% of children received recommended portions of solid foods, highlighting a critical lack of awareness or resources to support a balanced diet. Similar studies have shown that malnutrition and growth delay in infants are closely associated with inadequate knowledge about complementary feeding, especially among economically weaker families [1]. A WHO-based community study reported that only 45–55% of children in underprivileged families receive adequate complementary feeding by age one, which aligns with our findings [2]. The critical period from 6 to 12 months is often marked by rapid growth and increased nutrient requirements. Inadequate complementary feeding during this time can lead to stunted growth, weakened immunity, and long-term developmental issues. This study supports the need for targeted nutritional education and intervention programs, especially for mothers in low-income groups. Though similar research exists in urban or hospital-based settings, very few studies have been conducted in rural parts of Maharashtra like Karad. This makes our study a valuable baseline for future public health planning. Another significant observation is the potential influence of maternal education and literacy on feeding decisions. Many mothers in low socioeconomic groups may not have completed formal schooling, limiting their access to scientifically accurate information about child nutrition. This gap is often filled by traditional beliefs, outdated practices, or misinformation from non-medical sources. As a result, critical feeding milestones—such as the timely introduction of iron-rich and energy-dense foods—are either delayed or skipped altogether. This not only compromises the infant’s immediate health but also has long-term consequences on growth and brain development. Furthermore, the role of health services in influencing feeding awareness cannot be overlooked. Despite the availability of government schemes like the Integrated Child Development Services (ICDS), their reach and effectiveness in rural areas like Karad remain limited. Many families may not regularly engage with Anganwadi centres or may not fully understand the nutritional benefits offered through supplementary food programs. Regular health education sessions, personalized counselling during immunization visits, and mother support groups can bridge this gap and enhance feeding practices at the grassroots level. Lastly, cultural

and societal norms surrounding gender may also subtly affect feeding practices. In some communities, male children might be given preferential feeding or early introduction to solid foods, while female children may be deprioritized. Though not overtly stated by respondents, such biases can influence the nutritional status of female infants. Addressing these deep-rooted issues requires both community sensitization and gender-inclusive policy implementation. Ensuring equitable nutrition for all children, regardless of gender or economic status, is essential to achieving broader public health goals

### CONCLUSION:

This study found that while breastfeeding awareness is good among low socioeconomic families in Karad, knowledge about proper complementary feeding is lacking. Many children are not receiving the right types or amounts of solid foods after six months, which can affect their growth and development. There is a clear need for better nutrition education and support in these communities.

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