

Uncovering Feeding Practices of Garment Workers' Children Under Two in Bangladesh

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Cite: Palma, K. (2026). Uncovering feeding practices of garment workers' children under two in bangladesh. Crystal Journal of Public Health and Epidemiology, 2(1), 01-06.

Received: April 18, 2026; **Accepted:** May 29, 2026; **Published:** June 12, 2026

Abstract

The study aimed to assess the feeding practices of under 2-year-old children of female garment workers in Ashulia, Bangladesh, and to identify the relationship between feeding patterns and the socio-economic condition of the workers. A cross-sectional study was conducted on 155 respondents using a pretested semi-structured data collection sheet. The study found that inappropriate feeding practices were prevalent, with only 16% of respondents exclusively breastfeeding their children, and 84% practicing pre-lacteal feeding. The most common pre-lacteal feeds were honey and sugar water. The study highlights the need for awareness among medical professionals to encourage appropriate feeding practices to reduce child morbidity and mortality.

Method: A cross-sectional study was conducted from November 2016 to April 2017 in selected garment factories in Ashulia, Bangladesh. A non-random convenience sampling method was used to select 155 respondents who had children under two years of age. Data were collected from the mothers/caregivers of the children using a pretested semi-structured data collection sheet. The data were analyzed using SPSS version 22, and appropriate statistical tests were conducted. Statistical significance was considered if the p-value was <0.05 .

Results: The results of the study showed that most respondents (96%) fed their child colostrum, and 80% of mothers gave honey as pre-lacteal feeding. Only 16% of the respondents exclusively breastfed their children, while 84% of them fed their children pre-lacteal feeding. Among the children who received family food, only 10.87% were fed fish, meat, or egg.

Conclusion: The study highlights the need for appropriate feeding practices for children under two years of age, especially for those whose mothers work in the garment industry. The findings of the study can be used to develop awareness among medical professionals, policymakers, and the public to encourage appropriate feeding practices and reduce child mortality and morbidity.

Keywords

Female Garment Workers, Socioeconomic Conditions, Feeding Practices, Child Mortality, Breastfeeding

Introduction

Worldwide, ten and a half million children of age under-two die every year, with 98% of these deaths reported to occur in developing countries [1]. Malnutrition among under-five children is a chronic problem in developing countries like Bangladesh. One fifth of all under-five year old children in the developing world

are malnourished and it is associated with more than one-third of all under-five deaths globally [2]. A serious public health issue in Bangladesh is child malnutrition. The Bangladesh Demographic and Health Survey (BDHS) 2017–18 found that 14% of wasted and 22% of underweight children under the age of five have stunted growth [3]. Children from low-income families, those

living in rural areas, and those living in urban slums are more likely to be malnourished. Children of garment workers in Bangladesh are a vulnerable group because their parents frequently struggle with financial and social issues, such as long hours and low pay [4]. The garment sector employs around 4.2 million workers and 90% of garment workers are female, and they face additional difficulties in balancing their work and family responsibilities [5]. Most of them faces difficulties in balancing their work and family responsibilities [6]. As a result, their children may be at increased risk of malnutrition due to suboptimal feeding practices.

For a child to grow and develop properly, feeding habits throughout the first two years of life are crucial [7]. It is possible to prevent malnutrition and promote ideal growth and development by breastfeeding exclusively for the first six months of life and continuing with complementary feeding for an additional two years [8]. Children who are undernourished in the first two years of life and who put on weight rapidly later in childhood and in adolescence are at high risk of chronic diseases related to nutrition [9]. Before/within this period, nutrition interventions are most needed and have the greatest impact on child survival, health and development [10]. Hunger and malnutrition is the one of the heart broken hurdles in the growth and development of the children. Regarding hunger and malnutrition problem it was reported that over 780million people of the world are undernourished and about 13 million under the age of five die each year due to malnutrition and other disease in the world, the great majority of whom in developing countries [11]. Feeding practices have long been recognized as one potentially important determinant of infant malnutrition [12, 13]. Pre-lacteal liquids are harmful to a new born mainly due to two reasons. Firstly, being of poor quality, it increases the risk of introducing early infections to a new born and secondly, as a simple consequence, it reduces the practice of exclusive breastfeeding. Thus, this feeding process can be dangerous to the child and may even results in death [14]. Some studies found that the practice of giving water, honey, sugar water, misry (crystalline sugar), and even cooking oil is universal in rural as well as urban areas [15-17]. It was observed that incidence of diarrhoea was higher among infants given pre-lacteal liquid compared to the exclusively breast fed infants [18].

Colostrum also contains a high concentration of immunoglobulins, especially immunoglobulin A (IgA) which has a protective role against viral and bacterial pathogens in the gut. The global recommendation was modified and exclusive breastfeeding is now recommended for the first 6mo of life with the introduction of CF thereafter and continued breastfeeding for the first 2 years [19]. From birth to the age of six months, exclusive breast feeding is recommended, and constitutes appropriate feeding for the infant [20]. Exclusive breast feeding, which means that the baby should be given only breast milk and nothing else, not even water, is virtually non-existent in the country [21]. The composition of breast milk undergoes changes in quality to meet the nutritional and immunological needs of the baby at different stages of child growth [22]. Nutritionally unbalanced complementary food may cause nutrition deficiency disease. Timely initiation of complementary feeding practices among young children helps to promote their Nutritional status minimizing the chances of

nutrition deficiency disease [23]. Some workers, however, believe that food should be introduced even earlier since it has been observed in some instances that growth faltering occurs by 3 months of age [24, 25]. After six months, the frequency of feeding as well as the quality of complementary feeding is significant [26].

Observational studies support the finding that early introduction of solid foods may result in a heavier child [27]. Some researchers have suggested the introduction before 2 to 3 months or later than 6 months, both of which have more risks than benefits [28]. Recent evidences show that the young children of Bangladesh are typically breast-fed for as long as two years or even more [13, 29, 30]. Although this incidence of breast-feeding in Bangladesh is satisfactory, the high rate of child malnutrition signifies the operation of other important factors, such as, inadequate supplementation. Many governments in developing countries implement programs that aim to address nutritional failures in early childhood, raise survival rates, and improve human capital formation [31].

A study conducted at Dhaka medical college hospital were showed that nearly 45.8% were nourished, 1.8% was over nourished and 2.2% were 3rd degree malnourished of under 2 children [32]. In our country The national nutrition program (NNP) of Population and Nutrition Sector Program (HNPS) in collaboration with NGOs and development partners have been implementing nutrition service and intervention in 109 upazilla of 34 district from 6 divisions since 2004 [33]. The design and formulation of NNP intervention was led by the earlier intervention of Bangladesh integrated nutrition program (BINP) completed by 1995-2002 [34]. After the program it was found that nutrition intervention can improve the nutritional status in vulnerable groups like under 2 children [35].

A significant proportion of the workforce in our country comprises of garment workers, yet the health needs of these workers and their families are often overlooked. Limited research has been conducted on the feeding practices and socioeconomic status of female garment workers who have children under the age of two. Therefore, this study endeavors to explore the association between feeding patterns and socioeconomic conditions of female garment workers with young children, as well as to identify the specific types of food that are provided to these children.

Methodology

Study Design

A descriptive cross-sectional study was conducted to investigate the relationship between feeding patterns and socio-economic conditions of female garment workers with children under 2 years old, and to identify the types of food given to these children.

Study Setting and Population

The study was conducted in a selected garment factory in Dhaka city and included all parents who were willing to participate and worked in the selected factory. The study was carried out between November 2016 and April 2017.

Sample Size Calculation and Sampling Technique

The sample size was calculated using the formula $n = z^2pq/d^2$, with a 95% confidence level, expected proportion of event or

prevalence of the event ($p=0.5$), allowable error ($d=0.05$), and a 10% addition for sample size. The calculated sample size was 422, but for convenience and time constraints, a sample size of 155 was chosen using purposive sampling.

Selection of Participants

Participants were included if they were mentally stable, working in the selected garment factory, and had children less than 2 years of age. Participants were excluded if they were not willing to participate, were mentally ill, physically extremely ill, or not working in the garment factory.

Data Collection and Research Instrument

Data was collected through face-to-face interviews using a semi-structured questionnaire with both open-ended and closed-ended questions. The questionnaire was pre-tested with 5% of the total sample size for comprehensibility, appropriateness of language, sensitivity of questions, and average duration of administration. Observation checklists were used to record the feedback of the respondents.

Data Processing and Analysis

Data were checked for completeness and consistency at the end of each day of data collection, then stored in Microsoft Excel. Data cleaning and editing were conducted, and missed values were statistically handled using SPSS statistical package. Data were analyzed using frequency and percentage ratios, Chi-square (χ^2), logistic regression analyses, and visual aids such as tables, graphs, and figures. A significance level of 0.05 was used for all testing.

Data Quality Management and Ethical Considerations

The content validity of the research tool was ensured through a literature review and consultation with the concerned advisor and subject teachers. Pre-testing of the research tool was conducted in two other garments in Ashulia. Formal approval was obtained from the concerned authority, and informed consent was taken from the respondents prior to data collection. Respondents' dignity and respect were maintained, and interviews were conducted with strict privacy. The study did not cost additional expenses for the study subjects, and there were no potential risks that might cause any harm to the study subjects. Participants were ensured that their personal identity would be kept

confidential, and the data would be used only for study purposes. Participants were also allowed to withdraw themselves at any stage of the study.

Results

Sample Characteristics

The study involved 155 participants, with 67% of respondents being between the ages of 23 and 25, 22% between 18 and 22, and 11% between 27 and 32. The majority of respondents, 83%, identified as Muslim, while 8% were Hindu and 6% were Christian. Only just over 40% of respondents had completed primary level schooling, and less than 20% were illiterate. Additionally, 66% of respondents' fathers were illiterate.

More than 80% of respondents had one to two children, and over 90% received an ANC checkup. 64% of respondents received a PNC checkup within 7 days. Regarding the respondents' mothers, 73% were illiterate, and only 26% had completed primary level schooling. Furthermore, about 60% of the respondents' fathers were farmers, while 20% were day laborers, and 90% of respondents' mothers were housewives. About 60% of respondents had four family members.

Out of 125 mothers who participated in the study, 120 (96%) fed their children colostrum, while only 5 (4%) did not. The majority of mothers (45.0%) began breastfeeding their children within one hour of birth, and most of the mothers (84%) fed their children before lactation, while 31 (29.5%) fed their children honey and sugar water separately. Figure-2 shows the most common types of feeding, while Figure-12 displays data on prelacteal feeding.

oxygen requirement, the more likely they were to be prescribed a higher dose of corticosteroids. However, there did not seem to be a significant trend, or at least a constant trend. Patients were denoted one of the following oxygen requirements (ascending order of required oxygen): room air (RA), nasal canal (NC), high-flow nasal canal (HFNC), BiPap, or intubation.

In a one-dimensional assessment of decision to prescribe based on oxygen device (Figure 1 and 2) the sicklier patients were more likely to be denied treatment; intubated patients (17 of 18) and those receiving BiPap (12 of 17), Figure 1.

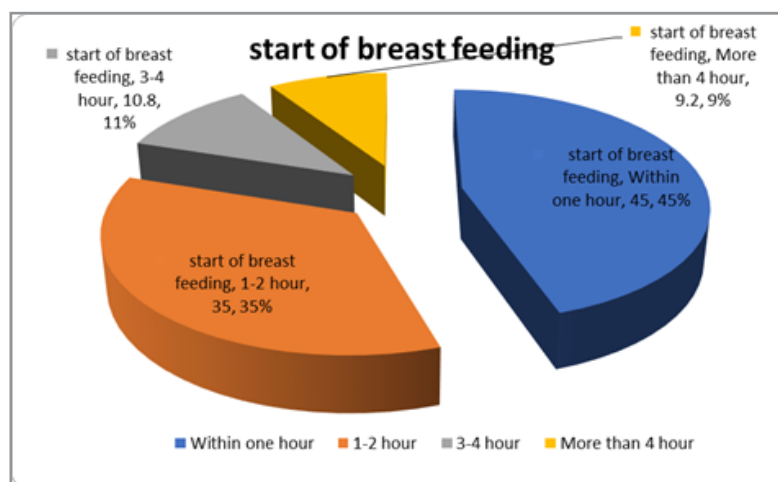


Figure 1: Start of Breast Feeding

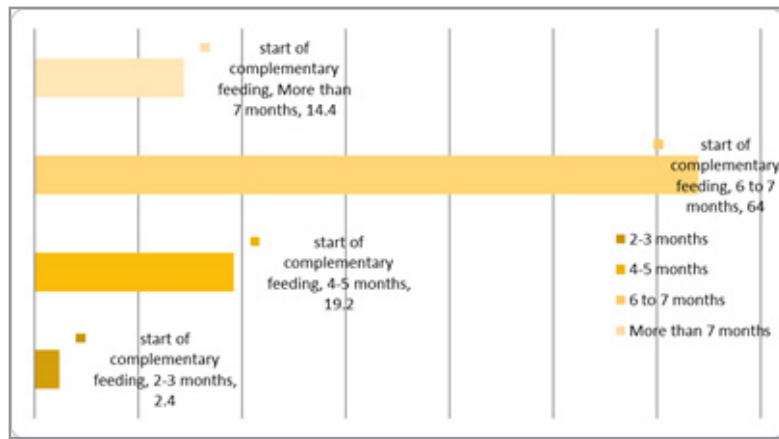


Figure 2: Type of pre lacteal feeding and time to start complementary feeding

Regarding exclusive breastfeeding, only 20 (16%) mothers exclusively breastfed their children, while most mothers (84%) did not exclusively breastfeed their child, as shown in Figure-2. The majority of mothers (64%) began complementary feeding at 6-7 months, while 24 (19.2%) started at 4-5 months, with other data shown in Figure-16. In terms of types of complementary feeding, the maximum number of mothers (36.8%) fed their children family food, followed by rice powder with milk (33.6%), and 25 (20.0%) respondents fed their child khichuri, with other types shown in Figure-17.

Finally, the study collected complete and plausible anthropometric data for 115 children aged 6-23 months to assess their overall nutritional status.

Discussion

This paper provides valuable insights into the feeding practices and nutritional status of children under two years of age in urban slums. The age distribution of respondents indicates that the majority are between 23 to 25 years old and 83% of them are Muslim. A significant proportion of respondents have completed primary-level schooling, and over 80% have one to two children. Most mothers received ANC checkups and nearly two-thirds of them received PNC checkups within 7 days. However, the education level of the fathers and mothers is low, with the majority being illiterate or only completing primary-level schooling.

The study examines colostrum feeding practices, specifically breastfeeding patterns, and discovers that 96% of moms gave their infant colostrum, which is greater than the national survey in 2007. Similar research was done on the breastfeeding practices of women in Bangladesh, which found the variables that affected those mothers' decisions to breastfeed. According to the survey, 96% of women gave their baby colostrum during the first hour after birth and 99% started nursing. This percentage was greater than the 65% recorded in the 2011 national survey on colostrum feeding. The study came to the conclusion that while there was a general need for improvement in exclusive breastfeeding rates, breastfeeding habits in Bangladesh were generally good [36]. The likelihood of a child receiving colostrum increases with the mother's education level, indicating the importance of raising awareness about colostrum feeding. Most mothers initiate breastfeeding within the first two hours after delivery, with 45.0% initiating within the first hour. Another similar study

found that 87% of the mothers initiated breastfeeding within the first two hours after delivery, with 45% initiating within the first hour. The likelihood of a child receiving colostrum increased with the mother's education level, indicating the importance of raising awareness about colostrum feeding among less educated mothers. The study suggested that interventions aimed at promoting early initiation of breastfeeding should also target mothers with lower education levels [37].

However, the prevalence of exclusive breastfeeding was low, with only 16% of mothers exclusively breastfeeding their children. Most mothers fed their children pre-lacteal feeding, with 84% giving their children such feed. The prevalence of exclusive breastfeeding until six months of age was only 12.8%, according to the NNP baseline survey. The study also highlights that the prevalence of undernutrition among children under two years of age is high, with over half being underweight and 42.6% being stunted.

In terms of complementary feeding practices, most respondents introduced complementary feeding between 6-7 months, and the majority fed their child with family food, such as rice, lentils, and vegetables. The prevalence of undernutrition was also noted to be high, with many children experiencing severe undernutrition.

The study highlights the urgent need to address the nutritional problems of the urban poor for the overall development of the country. The findings suggest that education and awareness programs should focus on promoting exclusive breastfeeding and discouraging the practice of pre-lacteal feeding. Furthermore, interventions to improve the dietary diversity of complementary feeding practices may help improve the nutritional status of children under two years of age. Overall, this research provides valuable information for policymakers and stakeholders to develop effective interventions to address the nutritional needs of children living in urban slums.

Conclusion

To promote the well-being of children, it is important to ensure that mothers and caregivers are knowledgeable about the nutritional value of foods and how to provide adequate nutrition. Health sections within garment factories can play a vital role

in educating workers about disease prevention, pregnancy, and infant feeding practices. To support infant health, it is essential that exclusive breastfeeding for the first 6 months is encouraged, and steps are taken to ensure that all babies receive it. Additionally, since garment workers often come from low socioeconomic backgrounds and provide for their families, it is recommended that their pay scale be increased to help alleviate their financial burden.

Funding Statement

This research not received supported by any funding source.

Acknowledgments

Author Contributions: Komol Palma conceived the study, oversaw fieldwork, analyzed data, and drafted and revised the manuscript.

Data Availability

De-identified data are available from the corresponding author upon reasonable request.

Conflicts of Interest

The author declares no competing interests.

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