

# **DETERMINANTS OF TIMELY INITIATION OF COMPLEMENTARY FEEDING AMONG MOTHERS WITH CHILDREN AGES 6 TO 24 MONTHS AT BANADIR HOSPITAL IN WADAJIR DISTRICT, SOMALIA**

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## **Abstract**

*Inadequate and inappropriate complementary feeding contribute to excess morbidity and mortality in young children living in low-income households. Before the age of six months, the early or late introduction of complementary feeds can cause displacement of breast milk and an increased risk of infections such as diarrhoea, which contributes to weight loss and malnutrition. As a result, the objective of this study is to identify the determinants that influence the timely initiation of complementary feeding among mothers with children aged 6 to 24 months who visit Banadir hospital.*

*A descriptive cross-sectional study was conducted in Banadir hospital. The study was conducted on 92 mothers and caregivers with young children aged six months to 2 years, using a non-probability convenient sampling method and a questionnaire to collect data. SPSS statistical software version 20 was used to conduct the analysis. 97.8% of the participants had a normal delivery during childbirth, while 2.2% of the participants had a cesarian section (C-section). The majority of those who took part in the study had regular deliveries. The researchers recommend that all visitors, mothers, and parents to MCHs and other antenatal care (ANC) service centres be counselled on infant and young child feeding practices in order to increase their awareness of feeding issues.*

## **Keywords**

*Complementary, Semisolid, Weaning, Determinants, Timely initiation*

## **Introduction**

The stage of life when meals and liquid milk are fed to newborns and young children in addition to breast milk is referred to as the complementary feeding phase. The non-breast milk food products ingested at this time are referred to as complementary foods (Agedew and Demissie, 2014). Within the first two years of life, the timing of the introduction of nutritionally adequate, safe, and age-appropriate supplemental feeding is critical for the child's optimal growth, development, and health. Despite several interventions aimed at improving infant and young child feeding patterns and nutritional status, acceptable feeding practices remain far below the recommendation (Agedew, 2014).

At six months of age, complementary feeding consists of giving young children extra foods or fluids in addition to breast milk (WHO, 2002). Around the age of 6 months, a baby's energy and micronutrients begin to surpass what breast milk can provide. They are formatively prepared to start eating more (reciprocal) food, which is

necessary to meet their increased energy and nutritional requirements (WHO, 2010). In addition, the transition period of 6 months to 2 years is a critical window of opportunity to enhance the survival and optimal growth of the child (Khanal, 2011).

Poor complementary feeding practices mean that many children continue to be vulnerable to irreversible outcomes of stunting, poor cognitive development, and a significantly increased risk of infectious diseases such as gastroenteritis, diarrhoea, and acute respiratory infections (Shumey, Demissie, and Berhane, 2013). Undernutrition results in 3 million child deaths annually, accounting for 45% of all causes of mortality (Shumey, Demissie, and Berhane, 2013). Over two-thirds of these deaths are often correlated with inappropriate feeding practices and occur within the first year of life (WHO and UNICEF, 2003).

The World Health Organization (WHO) has highlighted the characteristics of complementary feeding to include a timely introduction, availability, sufficiency, and security. According to the WHO, supplementary feeding should begin at the age of 6 months, with the frequency of non-milk feeding gradually increasing until the child reaches the age of 24 months. It is critical to understand which aspect of complementary feeding is most essential in the

development of malnutrition in children. Global complementary feeding practice has been suboptimal (Ogunlesi et al., 2014).

The rate of timely initiation of complementary feeding in South Asian countries is as per the WHO recommendation for lifelong practice (80% - 94%). In this regard, about 71%, 70%, 55%, and 39% of newborns in Bangladesh, Nepal, India, and Pakistan, respectively, are reported to have had timely initiation of complementary feeding (Shumey, Demissie, and Berhane, 2013).

#### General Objective

The general objective of the study is to identify determinants that influence the timely initiation of complementary feeding among mothers with children aged 6 to 24 months who frequent Banadir hospital in Wadajir district, Somalia.

#### Specific objectives

1. To determine socio-demographic factors that influence the timely initiation of complementary feeding in children aged 6 to 24 months who attend Banadir hospital in Wadajir district, Somalia.
2. To identify the physiological parameters that influence the timely initiation of complementary feeding among children aged 6 to 24 months who attend Banadir hospital in Wadajir district, Somalia.
3. To evaluate the parental factors that influence the timely initiation of complementary feeding among children aged 6 to 24 months who attend Banadir hospital in Wadajir district, Somalia.

#### Methods and Materials Research design

This study was descriptive in design because it was intended to describe the determinants of the timely initiation of complementary feeding among children aged 6 to

24 months who attended Banadir hospital in Wadajir district, Somalia. The study was also designed in a cross-sectional manner because the research data was collected in one location. The study

was also quantitative in design, which enabled the researchers to obtain the numeric value of specific characteristics.

#### Study area

Banadir Hospital is a public multidisciplinary facility located at the centre of Mogadishu along Banadir Street. Banadir hospital offers a vast range of maternal and pediatric medical services in order to serve the population within its reach adequately.

#### Research population

Mothers and caregivers with children aged between 6 to 24 months will be the target population of this study.

#### Sample size

Mothers and caregivers with children aged between 6 and 24 months who are willing to participate in this study during the data collection period.

#### Sampling procedure

In order to determine sample size, the Slovenes formula is the most suitable method for determining sample size. After calculating, we got 92 participants for the sample size.

#### Research instruments

In order to acquire research data from the target demographic, a questionnaire was used as a data collection tool.

#### Validity and Reliability

Validity refers to the relevance of the research instruments to the objective of this study. To establish validity, the questionnaire will be presented to five experts who will rate the relevance of the questions. The content validity of the questionnaire will then be calculated in order for it to be accepted as legitimate.

On the other hand, reliability refers to the respondents' consistency when answering the questionnaire questions. In other words, the instrument can only be reliable if it produces the same results whenever it is repeatedly used to measure the same phenomena with the

same participants by other researchers. Reliability was measured using test-retest and stability reliability. Therefore, reliability is the extent to which the same individuals' scores on the same test are consistent over time.

#### Data gathering procedures

The significant data collection instrument used in this study was primary data, which included a questionnaire and data as study documents. During data collection, the selection of these instruments was guided by the data requirements and the objectives of the study questionnaire. The researchers were determined to gather reliable and valid data.

#### Data analysis

Data were analysed using the statistical package for social science (SPSS) version 20. A descriptive analysis was conducted, and the results were presented using frequency tables and charts.

#### Ethical considerations

**Respect:** The researchers respected respondents' privacy when entering their private sphere and asking questions.

**Confidentiality:** The researchers guaranteed maximum confidentiality to the participants. Their information will only be used for the purpose of the study.

**Freedom to participate:** Participants were informed that they were free to participate. They were also informed that they had the right to withdraw from the research.

**Informed consent:** Consent was secured from the participants after fully informing them of the nature, potential risks, and benefits of the study.

#### Result

As shown in Table 4.1 above, 37 (40.2%) children were between 11 and 15 months, followed by 32 (34.8%) children who were between 6 and 10 months. Children between the ages of 16 and 20 months were 14 (15.2%), and 9 (9.8%) children were between 21 and

24 months.

45 (48.9%) mothers and caregivers were between 18 and 27 years old. Interesting enough, a similar number of 45 mothers and caregivers were between 28 and 37 years old. Only 2 (2.2%) participants were between 38 and 47 years old. The gender of the children was 53 (57.6%) male and 39 (42.4%) female.

The majority of the respondents, 73 (79.3%), had no formal education, while 17 (18.5%) had primary level education, and 2 (2.2%) had attained a secondary level of education. 80 (87%) participants were unemployed, 12 (13%) were employed, while 78 (84.8%) were

married, and 14 (15.2%) were divorced.

Breast problems play a significant influence on the timely initiation of

complementary feeding

Strongly disagree	8	8.7
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Disagree	18	19.6
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Neutral	4	4.3
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Agree	52	56.5
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Strongly agree	10	10.9
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Total	92	100
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Over letdown has not played any role in the timely initiation of

complementary feeding		
Strongly disagree	16	17.4
Disagree	36	39.1
Neutral	8	8.7
Agree	24	26.1
Strongly agree	8	8.7
Total	92	100

To rate the determinants of physiological factors in table 4.2, the Likert scale was used to measure the level of agreement from strongly disagree to strongly agree.

Table 4.2 shows that 90 (97.8%) of the participants had normal childbirth, whereas the remaining 2 (2.2%) had C-sections.

47 (51.1%) participants agreed that postnatal care is a contributing factor to the timely initiation of complementary feeding. 18 (19.6%) participants disagreed, 13 (14.1%) strongly agreed, 11 (12%) strongly disagreed, and 3 (3.3%) were neutral.

A total of 52 (56.5%) participants agreed that breast problems have a substantial impact on the timely initiation of complementary feeding. 18 (19.6%) of them disagreed, 10 (10.9%) strongly agreed, 8 (8.7%) strongly disagreed, and 4 (4.3%) were neutral in their responses.

36 (39.1%) responders disagreed that over letdown had not played any role in the timely initiation of complementary feeding. 24 (26.1%) of the participants were in agreement, whereas 16 (17.4%) strongly disagreed. 8 (8.7%) strongly agreed, while the remaining 8 (8.7%) were neutral in their responses.

Table 4.3 Determinants of parental factors

Antenatal care visit	Frequency	Percent
Yes	72	78.3
No	20	21.7
Total	92	100

If you answered "yes," how many times have you visited?

1-3 times	49	53.3
4-5 times	19	20.7
6 and more times	4	4.3
Non	20	21.7
Total	92	100

Maternal frequency of feeding per day

1-2 times	36	39.1
3-4 times	50	54.3
5 and more times	6	6.5
Total	92	100

Place of delivery		
Health facility	62	67.4
Home	30	32.6
Total	92	100
Type of first weaning food		
Cow milk	9	9.8
Potatoes	21	22.8
Powder milk	22	23.9
Other	40	43.5
Total	92	100
Do you visit postnatal care?		
Yes	65	70.7
No	27	29.3
Total	92	100

How many times have you visited a postnatal care clinic?

One time visit	12	13
Two time visits	17	18.5
Three time visits	23	25
Four time visits	13	14.1
Non	27	29.3
Total	92	100

The data in table 4.3 above shows that the majority of respondents, 72 (78.3%), believed that antenatal care had an effect on the initiation of complementary feeding, whereas only 20 (21.7%) believed that there was no effect.

Those who visited the antenatal care clinic between 1 and 3 times were 49 (53.3%) respondents. 20 (21.7%) of the respondents were not visitors to the antenatal care clinic. Those who visited 4 to 5 times were 19 (20.7%), and 4 (4.3%) had visited six or more times.

50 (54.3%) of the participants stated that their maternal frequency of feeding per day was between 3 and 4 times. 36 (39.1%) of them did it once or twice per day, and 6 (6.5%) participants' maternal feeding frequency was five or more times per day. 62 (67.4%) of the respondents gave birth at a health facility, and 30 (32.6%) gave birth at home.

Other forms of weaning food that was not specified in the questionnaire were chosen by 40 (43.5%) participants. Powder milk was the first weaning food according to the 22 (23.9%) participants. 21 (22.8%) participants stated that potatoes were the first weaning food, while 9 (9.8%) had cow milk as the first weaning food. 65 (70.7%) participants reported that they had gone for postnatal care, whereas 27 (29.3%) had not yet gone.

Out of the 65 participants who had gone for postnatal care, 23 (25%) had visited postnatal care three times. 17 (18.5%) had gone twice, those who had visited four times were 13 (14.1%), and 12 (13%) had visited only once.

#### Discussion

Using several variables, this study investigated the determinants influencing the timely initiation of complementary feeding among mothers with children aged 6 to 24 months. According to the data analysis, the educational level of the mothers is a contributing factor that impacts the initiation of complementary feeding. The inappropriate introduction of supplemental feeding by illiterate mothers will cause their children to complain.

In this study, postnatal care visits determined that higher postnatal visits, as well as antenatal attendance, were positively associated with the infant's prompt introduction of complementary feeding. The frequency with which mothers visit antenatal care is also important because it greatly supports the timely initiation of complementary feeding. The more mothers visit antenatal care, the more they get information related to complementary feeding. Also noted is that over letdown has not played any role in the initiation of complementary feeding as the more the mother's production, the more timely initiation starts because this is related to her knowledge.

This study shows that the type of food initiated first for the infants as complementary feeding food varied and depended upon what they could get or afford to buy. The researchers received the most feedback from participants who had children aged 11 to 15 months. They played a big role in analysing the data collected and summarising the results.

The results with higher rankings were as follows: 37 (40.2%) children were between 11 and 15 months. A total of 90 (97.8%) mothers and caregivers were between 18 and 37 years old, and the gender of male children was 53 (57.6%). The majority of the respondents, 73 (79.3%), had no formal education, and 80 (87%) of the participants

were unemployed. 78 (84.8%) were married, and 90 (97.8%) of the participants had normal childbirth.

47 (51.1%) participants agreed that postnatal care is a contributing factor to the timely initiation of complementary feeding. A total of 52 (56.5%) participants agreed that breast problems have a substantial impact on the timely initiation of complementary feeding. 36 (39.1%) responders disagreed that over letdown had not played any role in the timely initiation of complementary feeding. 72 (78.3%) participants believed that antenatal care had an effect on the initiation of complementary feeding. Other forms of weaning food that was not specified in the questionnaire were chosen by 40 (43.5%) participants, and 27 (29.3%) of the participants mentioned that they had not visited the postnatal care clinics.

## Conclusion

The main objective of the study is to identify determinants influencing the timely initiation of complementary feeding among mothers with children aged 6 to 24 months. The research specifically focused on determining socio-demographic factors, identifying physiological factors, and parental factors influencing the timely initiation of complementary feeding among children aged 6 to 24 months. As a result, the evidence in this study reveals that level of education, occupation, mother's age, style of delivery, breast problems, excessive letdown, antenatal care visits, venue of delivery, and postnatal care are all factors to consider.

According to the study's results, as summarised by some of the participants' feedback, the majority of them had an informal educational level. This component, which reduces the optimal commencement of complementary feeding, can be empowered with important health information. This underlines the importance of improving information, education, and communication (IEC) systems and procedures.

45 (48.9%) of the participants were between the ages of 18 and 27. Similarly, 45 (48.9%) of the same group were between the ages of 28 and 37. The majority of the respondents, 47 (51.1 %), agreed that postnatal care is a contributing factor to the timely initiation of complementary feeding. The majority of the respondents, 52 (56.5%), agreed that breast problems play a significant influence on the timely initiation of complementary feeding.

## Recommendations

Depending on the finding of this paper, the principal study recommends the following: -

1. Health professionals should focus on providing advice and counselling sessions to mothers and caregivers on the timely initiation of complementary feeding during prenatal, delivery, and postnatal periods.

2. Special emphasis should be given to mothers with low educational status, including those over 30 years of age, by giving them continued health education to change their wrong attitudes and perception.

3. Creating motivators for mothers, such as a prize in the media for those who begin complementary feeding at six months, to create awareness and promote the timely initiation of complementary feeding.

4. In government institutions, establishing a baby centre is an alternative solution to improve the timely initiation of complementary feeding for government employees.

5. Furthermore, additional research should be conducted using a qualitative study design to deeply understand socio-cultural and behavioural factors related to complementary feeding in order to develop and implement a better complementary feeding strategy.

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