Mother’s knowledge and practice of breastfeeding and complementary feeding in Enugu State, Nigeria


Department of Human Nutrition, Faculty of Public Health, University of Ibadan
*Corresponding Author’s E-mail: ttlesh@gmail.com

Abstract
This study assessed the breastfeeding knowledge and complementary feeding knowledge as well as their practices among mothers in Enugu state, Nigeria. A multi-stage sampling technique was used to select 419 mothers with children between 6-24 months from 9 randomly selected communities. A semi-structured interviewer administered questionnaire which included socio-demographic characteristics, 8-point knowledge scale and 5-point practice scale of both breastfeeding and complementary feeding. The data collected was analyzed using SPSS version 20.0 and presented using descriptive and inferential statistics. The mean age of the respondents was 28.4±6 years and 67% had secondary school education. The knowledge of the respondents indicated that 66.6% were aware of breastfeeding initiation within one hour of birth, 44.5% reported the introduction of water and herbal drinks while 62.8% agreed that breastfeeding should be continued until the child is 24 months. Seven out of every 10 agreed with the commencement of complementary feeding at 6 month and also agreed that local foods should be used as the main complementary foods for the infants. Nearly all the responded were in agreement with the inclusion of foods such as staples, legumes as well as eggs and other animal protein as the main complementary diet to the infants from 6 months up until 24 months. The feeding practice revealed that only 14.5% of the mothers introduced breastmilk within 1 hour of birth and 75% had introduced prelacteal feeds. Exclusive breastfeeding was practiced by 24.3% and a quarter of the respondents reported to have been discouraged on the practice of EBF. In all, 68.7% of the respondents had good knowledge towards infant feeding while the eventual practice of the mothers revealed that only 22.4% had adequate practice of infant feeding. No significant association was found between knowledge of mothers and infant feeding practice. This study found suboptimal breastfeeding and complementary feeding despite their high level of adequate knowledge. There is the need to further explore the factors responsible for suboptimum feeding practice of mothers.

Keywords: Breastfeeding, Complementary feeding, Knowledge and Practice

INTRODUCTION
Optimal infant- and young child-feeding (IYCF) practices are fundamental in ensuring appropriate growth and development, and ultimately the survival of infants and young children (Bhutta et al., 2008; Black et al., 2003; Saha et al., 2008). Inappropriate breastfeeding and complementary feeding practices, coupled with high rates of infectious diseases have however been identified as the major immediate causes of malnutrition during the first two years of life. 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 children less than 5 years of age (Black et al., 2008).

In the Global Strategy for Infant and Young Child, exclusive breast feeding (EBF) for the first 6 months of life, and continued breastfeeding through the second year of life in addition to safe as well as adequate and age-appropriate complementary feeding from 6 to 24 months were recommended (WHO, 2003). Worldwide, it is estimated that only 34.8% of infants are exclusively breastfed for the first 6 months of life, the majority
receiving some other food or fluid in the early months, complementary foods are often introduced too early or too late and are often nutritionally inadequate and unsafe (WHO, 2009). Poor breastfeeding and complementary feeding practices are widespread, particularly in developing countries, leading to early nutritional deficits which are also linked to long-term impairment in growth and health (Magawa, 2012; WHO, 2009; Ekambaram et al., 2010). In Nigeria, despite the fact that 98% of under five children were ever breastfed at some time, 17% of children below 6 months are breastfed exclusively and complementary foods are introduced early in life while only 10% of children are fed appropriately based on recommended infant and young child feeding practices (Macros and ICF, 2013).

The knowledge and practice of breastfeeding in different communities are greatly influenced by demographic, biophysical, social, cultural and psychological factors. (Thulier and Mercer, 2009; Zhou et al., 2010). Previous studies have reported that mothers’ knowledge of infant feeding especially breastfeeding does not translate to optimum infant feeding practice (Mallik et al., 2013, Adebayo et al., 2014; Adhikari, 2014). There is the need to explore these findings if it is also applicable among mothers in a South-eastern state of Nigeria. The aim of this study was therefore to assess the knowledge and practice of mothers about breastfeeding and complementary feeding of infants in Enugu state, Nigeria.

**METHODOLOGY**

**Study design**

This study was descriptive cross-section in design; it assessed the mother’s knowledge and practice of breastfeeding and complementary feeding in three Local Government Areas of Enugu state in the Southeast of Nigeria.

**Sampling procedure and study population**

A multi stage sampling technique was used to select study participants. Three Local Government Areas (LGAs), one from each of the three senatorial districts of Enugu State were selected by simple random technique. Nkanu East was selected from the six LGA’s that make up Enugu East Senatorial District, Nsukka was selected from the six LGA’s that make up Enugu North and Ani-nri was selected from the five LGA’s that make up Enugu West. A sampling frame of all the wards in the communities of the 3 selected LGAs was obtained. Three wards Amaigbo, Amaokoro and Mburubu were selected from the fourteen wards that make up Nkanu East, three wards Edemani, Akpa/Ozzi and Ihe were selected from the twenty wards that make up Nsukka and three wards Emudo, Agbada and Mpu were selected from the ten wards that make up Ani-nri through a simple random sampling making a total of nine wards. A total of 419 mothers with infant between 6-24 months were then selected from 9 randomly selected communities.

**Instrument for data collection**

A pretested, semi-structured interviewer administered questionnaire was used as the instrument for data collection to elicit information from the study participants. The sections of the questionnaire were divided into: sociodemographic characteristics, knowledge of mothers on breastfeeding and complementary feeding as well as the breastfeeding and complementary feeding practice of mothers.

**Data analysis**

The knowledge of the respondents was assessed by assigning one mark to each of the correctly answered question and zero to a wrong answer from the respondents. This was used to generate an 8 point knowledge score. The knowledge level of the respondents was categorized into adequate (>5) and inadequate (≤5). Five point breastfeeding and complementary feeding practices were scored and categorized into poor practice (<3) and good practice (≥3). The data collected was analyzed using SPSS version 20.0 and presented using descriptive and inferential statistics such as chi-square with the level of significance set at 5%.

**Ethical Consideration**

Ethical approval was obtained from the UI/UCH Ethics Review Committee. Permission to carry out the study was obtained from the local government Areas and community leaders. Informed consent was also obtained from study participants in their indigenous language (Igbo) explaining the purpose of the study and their right to withdraw from the study at any time. The confidentiality of the respondents were also ensured as only questionnaire codes were assigned to each questionnaire and no name was required on the questionnaire.

**RESULTS**

Table 1 indicates that most of the respondents were of Igbo ethnicity and were of Christian religion. Their mean age was 28±6 years with about two-third had secondary education while 12.9% and 2.9% had tertiary and no
Table 1: Socio-demographic Characteristics of the Mothers

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yoruba</td>
<td>7</td>
<td>1.7</td>
</tr>
<tr>
<td>Hausa</td>
<td>9</td>
<td>2.1</td>
</tr>
<tr>
<td>Igbo</td>
<td>403</td>
<td>96.2</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christianity</td>
<td>408</td>
<td>97.4</td>
</tr>
<tr>
<td>Islam</td>
<td>6</td>
<td>1.4</td>
</tr>
<tr>
<td>Traditional</td>
<td>5</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Educational Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No formal education</td>
<td>12</td>
<td>2.9</td>
</tr>
<tr>
<td>Primary education</td>
<td>72</td>
<td>17.2</td>
</tr>
<tr>
<td>Secondary education</td>
<td>280</td>
<td>67.0</td>
</tr>
<tr>
<td>Tertiary education</td>
<td>55</td>
<td>12.9</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 20</td>
<td>45</td>
<td>10.7</td>
</tr>
<tr>
<td>21-30</td>
<td>223</td>
<td>53.2</td>
</tr>
<tr>
<td>31-40</td>
<td>144</td>
<td>34.4</td>
</tr>
<tr>
<td>Above 40</td>
<td>7</td>
<td>1.7</td>
</tr>
<tr>
<td>Mean±SD= 28.41±6 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation of Mother</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farming</td>
<td>58</td>
<td>13.9</td>
</tr>
<tr>
<td>Trading</td>
<td>161</td>
<td>38.6</td>
</tr>
<tr>
<td>Civil service</td>
<td>48</td>
<td>11.5</td>
</tr>
<tr>
<td>Artisans</td>
<td>99</td>
<td>23.7</td>
</tr>
<tr>
<td>House wives</td>
<td>51</td>
<td>12.3</td>
</tr>
<tr>
<td><strong>Income level (Naira)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below ₦25,000</td>
<td>201</td>
<td>48.0</td>
</tr>
<tr>
<td>₦25000-50,000</td>
<td>182</td>
<td>43.4</td>
</tr>
<tr>
<td>Above ₦50,000</td>
<td>36</td>
<td>8.6</td>
</tr>
<tr>
<td><strong>Age of index child (months)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 6 months</td>
<td>245</td>
<td>58.5</td>
</tr>
<tr>
<td>7-12 months</td>
<td>52</td>
<td>12.4</td>
</tr>
<tr>
<td>13-18 months</td>
<td>58</td>
<td>13.8</td>
</tr>
<tr>
<td>19-24 months</td>
<td>64</td>
<td>15.3</td>
</tr>
<tr>
<td>Mean±SD= 8.1±6 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>419</td>
<td>100.0</td>
</tr>
</tbody>
</table>

formal education respectively. The occupation showed that about 14% were into farming, 39% were traders, 24% were artisans and 12% were housewives. Forty eight percent of the women earned below 25,000 naira monthly while 43.3% earned between ₦25,000-50,000 and only 8.6% earned more than ₦50,000. The mean age of the index child of the respondents was 8±6 months with about 60% within their first 6 months.

The knowledge of the respondents on breastfeeding is presented in Table 2. Three-quarter had received breastfeeding related talk and seminars. Although two-third were aware that breastfeeding should be introduced within one hour of birth, 44.5% reported the introduction of water and herbal drinks in the first 6 months. Nine out of 10 mothers agreed that breastfeeding should be done on demand and 62.8% reported that it should be continued until 24 months.

Complementary feeding knowledge of the respondents also presented in Table 2 indicated that 7 out of 10 mothers agreed that complementary feeding should commenced at sixth month and that local food should be used as the main complementary foods
Table 2: Breastfeeding knowledge of the Respondents

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency(n)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ever received talk/seminar on breastfeeding</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>406</td>
<td>74.7</td>
</tr>
<tr>
<td>No</td>
<td>13</td>
<td>25.3</td>
</tr>
<tr>
<td><strong>Breastfeeding should start within 1 hour of life</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>279</td>
<td>66.6</td>
</tr>
<tr>
<td>No</td>
<td>140</td>
<td>33.4</td>
</tr>
<tr>
<td><strong>Water and herbal drinks should be given between 0-6 months</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>232</td>
<td>55.5</td>
</tr>
<tr>
<td>No</td>
<td>186</td>
<td>44.5</td>
</tr>
<tr>
<td><strong>Breastfeeding should continue till 24months</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>263</td>
<td>62.8</td>
</tr>
<tr>
<td>No</td>
<td>156</td>
<td>37.2</td>
</tr>
<tr>
<td><strong>Breastfeeding should be on demand</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>378</td>
<td>90.2</td>
</tr>
<tr>
<td>No</td>
<td>41</td>
<td>9.8</td>
</tr>
<tr>
<td><strong>Complementary feeding should start at 6months</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>309</td>
<td>73.7</td>
</tr>
<tr>
<td>No</td>
<td>110</td>
<td>26.3</td>
</tr>
<tr>
<td><strong>Local foods should be used as</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complementary foods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>288</td>
<td>68.7</td>
</tr>
<tr>
<td>No</td>
<td>131</td>
<td>31.3</td>
</tr>
<tr>
<td><strong>Eggs and other animal protein should be given from 6-24 months</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>394</td>
<td>94.0</td>
</tr>
<tr>
<td>No</td>
<td>25</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Legumes should be given from 6-24 months</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>414</td>
<td>98.8</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Staples should be given from 6-24 months</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>410</td>
<td>97.9</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>419</td>
<td>100</td>
</tr>
</tbody>
</table>

provided for the infants. Nearly all the responded were in agreement with the inclusion of foods such as staples, legumes as well as eggs and other animal protein as the main complementary diet to the infants from 6 months until 24 months. The infant feeding practice of our respondents in the current study is presented in Table 3. Only 14.5% of the mothers introduced breast milk within one hour of birth, although 56.3% initiated breastfeeding beyond one hour but within the 24 hour of delivery, more than one-quarter (29.2%) initiated breastfeeding after the first day of delivery. Introduction of prelacteal feeds such as water, glucose/sugar solution, infant formula and herbal drinks were reported by three quarter of the mothers. Exclusive breastfeeding was practiced by 24.3% of the mothers. It is worthy of note that one quarter of the mothers were discouraged on the practice of EBF and this is mainly by the respondents’ mother and or mother-in-law. Other people identified by the mothers to have discouraged the practice of exclusive breastfeeding were their husbands (7.2%) and other relatives (9.4%). About seven out of 10 mothers had good knowledge towards infant feeding both before and after 6 months of
Table 3: Feeding practice of the respondents in the first 6 months

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency(n)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initiation of breastfeeding</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within 1 hour of birth</td>
<td>61</td>
<td>14.5</td>
</tr>
<tr>
<td>Beyond 1 hour on day 1</td>
<td>335</td>
<td>56.3</td>
</tr>
<tr>
<td>After first day of delivery</td>
<td>12.2</td>
<td>29.2</td>
</tr>
<tr>
<td><strong>Introduction of pre-lacteals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>315</td>
<td>75.2</td>
</tr>
<tr>
<td>No</td>
<td>104</td>
<td>24.8</td>
</tr>
<tr>
<td><strong>Types of pre-lacteals introduced (n=315)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>253</td>
<td>60.9</td>
</tr>
<tr>
<td>Sugar/glucose solution</td>
<td>12</td>
<td>2.8</td>
</tr>
<tr>
<td>Infant formula</td>
<td>21</td>
<td>4.9</td>
</tr>
<tr>
<td>Herb drinks</td>
<td>29</td>
<td>6.9</td>
</tr>
<tr>
<td><strong>Practice of exclusive Breastfeeding</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>102</td>
<td>24.3</td>
</tr>
<tr>
<td>No</td>
<td>317</td>
<td>75.7</td>
</tr>
<tr>
<td><strong>Ever discouraged on EBF practice</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>139</td>
<td>33.2</td>
</tr>
<tr>
<td>No</td>
<td>280</td>
<td>66.8</td>
</tr>
<tr>
<td><strong>Source of discouragement (n=139)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother/Mother-in-law</td>
<td>113</td>
<td>81.2</td>
</tr>
<tr>
<td>Husband</td>
<td>10</td>
<td>7.2</td>
</tr>
<tr>
<td>Other relatives</td>
<td>13</td>
<td>9.4</td>
</tr>
<tr>
<td>Neighbours</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Introduced complementary foods</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>227</td>
<td>54.2</td>
</tr>
<tr>
<td>No</td>
<td>192</td>
<td>45.8</td>
</tr>
<tr>
<td><strong>Appropriate Introduction of complementary food (n=227)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>86</td>
<td>37.9</td>
</tr>
<tr>
<td>No</td>
<td>141</td>
<td>62.1</td>
</tr>
<tr>
<td><strong>Currently still breastfeeding</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>321</td>
<td>76.6</td>
</tr>
<tr>
<td>No</td>
<td>98</td>
<td>23.4</td>
</tr>
<tr>
<td><strong>Breastfeeding cessation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before age 12 months</td>
<td>96</td>
<td>22.9</td>
</tr>
<tr>
<td>After age 12 months</td>
<td>323</td>
<td>77.1</td>
</tr>
<tr>
<td><strong>Continued breastfeeding at 2 years (n=323)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>26</td>
<td>8.0</td>
</tr>
<tr>
<td>No</td>
<td>297</td>
<td>92.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>139</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Birth while the eventual practice of the mothers revealed that only 22.4% had adequate practice of infant feeding. According to Table 4, no significant association was found between knowledge of mothers and infant feeding practice.
DISCUSSION

This study assessed the knowledge and practice of 419 mothers with children below two years of age towards breastfeeding and complementary feeding in Enugu state. Studies have shown that mothers age is a determinant of infant feeding especially breastfeeding as older women have the tendency of knowing more on the benefit of optimum feeding practice (Gijsbers et al., 2008; Scott et al., 2001; Lawson and Tulloch, 1995). The mean age and age distribution of the participants in the current study is similar to other studies carried out in Nigeria (Adebayo et al., 2014; Oliemen et al., 2013; Ukegbu et al., 2010; Ijarotimi, 2010, Oche et al., 2011) as well as that of countries like Ethiopia (Bayissa et al., 2015), Nepal (Adhikari, 2014), India (Mondal et al., 2014). The occupation in this study is in contrast to a similar study among breastfeeding mothers attending tertiary health institution in Enugu where the participants were mainly civil servants (Okolie, 2012) however, mothers in our study who were selected from each of the three regions of the state were either traders or artisan with only a few as civil servants.

Breastfeeding awareness was generally high among the respondents in this study. This is similar to the findings from other states and regions of Nigeria such as Anambra (Ukegbu et al, 2011), Owerri (Maduforo et al, 2013), Plateau, North-central (Ogbonna and Daboer, 2007; Agbo et al, 2013) and western Nigeria (Agunbiade and Ogunleye, 2012; Mbada et al, 2013, Sholeye et al., 2014; Adebayo et al., 2014). Although the source of information or education on breastfeeding of mothers were not reported, it is our belief that the high level of awareness reported by these studies may be as a result of health talk usually given to the women during antenatal clinics. It is necessary to report that our findings is in contrast to the results from Sokoto state where lower levels of awareness was reported (Oche et al., 2011).

It is recommended that breastfeeding should be initiated within the one hour of delivery (WHO,2003). Studies have established the significance of mother's breastfeeding knowledge (Mitra et al., 2004; Gijsbers et al., 2008). Even though a good number of the mothers were adequately aware of initiation of breastfeeding within one hour after birth, this proportion is far less than the proportion reported byAdhikari, (2014). This implies that, there is still the need to intensify breastfeeding education among women prior to their deliveries especially the benefits of the early initiation of breastfeeding. The knowledge of the mothers towards the continuation of breastfeeding until the child becomes two years of age is in contrast with what was reported in Lagos, southwest Nigeria (Adebayo et al., 2014). This could be attributed to the fact that Lagos being a commercial headquarter of the country where lack of time to adequately care for young children is a major
mothers in this region. In a study by Okolie (2012) on
al., 2010). This however may be a result to high level of
was found to be higher than the rate earlier reported from the state (Ukegbu et
was infant formula.
finding however, the main prealacteal feed in their study
water. Adebayo et al. (2014) also reported a similar
percentage of the respondents (75.2%) which was mainly
Prelacteal feed was found to be given by a high
were reported for Enugu state (NPC and ICF, 2014).
According to the recent NDHS, the initiation of
breastfeeding within one hour of birth was 24.6% (NPC
and ICF, 2014), however, a much lower percentage was
reported in this study. Contrast to this findings, majority
of mothers were reported to have initiated breastfeeding
early in Lagos (Adebayo et al., 2014), Sokoto (Oche et
al., 2011), Osun (Agunbiade and Ogunleye, 2012),
Anambra (Ukegbu et al., 2011). WHO and UNICEF
recommend the initiation of breastfeeding within one hour
of birth (WHO, 2003). In a multi-center prospective study
by Nishimura and colleagues, It is was further affirmed
that mothers should desire early initiation of
breastfeeding especially exclusive breastfeeding,
According to Penders et al. (2006), Pre-lacteal feeds
are not recommended for the infants because of their
resulting effect on the onset of lactation, and on perinatal
morbidity and mortality. From the NDHS, 58.6% of
children received prelacteal feed nationally while 63.3%
were reported for Enugu state (NPC and ICF, 2014).
Prelacteal feed was found to be given by a high
percentage of the respondents (75.2%) which was mainly
water. Adebayo et al. (2014) also reported a similar
finding however, the main prelacteal feed in their study
was infant formula.

The current exclusive breastfeeding rate in Nigeria
stands at 17%, the EBF rate of 24.3% from this study
was found to be higher than the national rate but lower
than the rate earlier reported from the state (Ukegbu et
al., 2010). This however may be a result to high level of
enlightenment of EBF to both the pregnant and lactating
mothers in this region. In a study by Okolie (2012) onproblems encountered by breastfeeding mothers in their
practice of exclusive breast feeding in Enugu, various
socio-cultural problems such as interference by mother-
in-law to give water and cultural belief of supplementing
breastfeeding with water were identified as the hindrance
to the practice of EBF. In consistence with Okolie (2012),
most respondents from this study identified mothers and
mother-in-laws as the main source of discouragement in
their in ability to breastfeed exclusively. To ensure
improvement in the rate of optimum practice of infant
feeding especially exclusive breastfeeding, it is important
to extend intervention to the “respectable orders” such
as grandmothers and mother-in-laws as well the male
partners or spouses.

Complementary feeding is defined as the process
starting when breast milk alone is no longer sufficient
to meet the nutritional requirements of infants, and therefore
other foods and liquids are needed, along with breast
milk. It is recommended that complementary foods (solid
or semisolid foods fed to infants in addition to breast milk)
should be introduced at age 6 months (WHO, 2003). This
is necessary because breast milk alone is no longer
sufficient to meet the nutrient requirement for the infant
from 6months hence affect their optimum growth and
development. Inadequate knowledge about appropriate
complementary foods and feeding practices is often a
greater determinant of malnutrition than lack of food
(WHO, 2003).

The finding from the current study on appropriate
introduction of complementary food is in contrast to what
was obtained in a similar study by Aggarwal et al (2008).
A high percentage of children age 6-23 months in the
recent NDHS received solid or semisolid complementary
foods in addition to breast milk (NPC and ICF, 2014), this
is however in contrast to what we obtained from the
current study. Continued breastfeeding until 2 years was
found to be an uncommon practice among the
participants in the study. The prevalence of mothers in
our study who continued or intend to continue
breastfeeding till their children is 2years of age was far
from the national prevalence of 35% reported by the
NDHS (NPC and ICF, 2014)

Previous studies have reported the influential role
of maternal knowledge towards infant feeding practices
(Zhou et al., 2010; Scott and Shaker (2004); Scott et al.,
(2006). In this study, no significant association was found
between breastfeeding and complementary feeding
knowledge of mothers and their eventual infant feeding
practices. This findings from previous studies in Nigeria
have also indicated no significant relationship between
knowledge of breastfeeding and breastfeeding practice
(Adebayo et al., 2014; Peterside et al., 2013). Elsewhere
in Ireland, a strong association was reported between
feeding knowledge and practice. (Zhou et al., 2010). This
study by extension has shown that mothers have
adequate knowledge not only of breastfeeding but also
that of complementary feeding however, the practices of

challenge being faced most women. According to
Adhikari (2014), nearly half of the mothers were of the
view that feeding of infants should be on demand
whereas, this study found that majority of the women
were knowledgeable about breastfeeding based on
demand from the children. Findings from this study
revealed that a high proportion of the respondents were
knowledgeable on the introduction of complementary
feeding at 6 months meanwhile, a much higher proportion
was reported in a similar study in Nepal (Chapagain,
2012). Participants in the current study were generally
found to have adequate knowledge of both breastfeeding
and complementary feeding. This finding corroborates
with an earlier study by Adebayo and colleagues (2014),
although their study was focused on infant feeding in the
first six month of life.

Globally, 60% of infant and young child deaths occur
due to in appropriate infant feeding practices and
infectious disease (WHO, 2003). Studies have reported a
wide variation between the infant feeding knowledge and
practice (Adebayo et al., 2014; Uchendu et al., 2009;
Okolo et al., 1999). In conformity with other studies, infant
feeding knowledge of mothers in the current study did not
depict the practices as only 22.4% had optimum practice
of both breastfeeding and complementary feeding.

According to the recent NDHS, the initiation of
breastfeeding within one hour of birth was 24.6% (NPC
and ICF, 2014), however, a much lower percentage was
reported in this study. Contrast to this findings, majority
of mothers were reported to have initiated breastfeeding
early in Lagos (Adebayo et al., 2014), Sokoto (Oche et
al., 2011), Osun (Agunbiade and Ogunleye, 2012),
Anambra (Ukegbu et al., 2011). WHO and UNICEF
recommend the initiation of breastfeeding within one hour
of birth (WHO, 2003). In a multi-center prospective study
by Nishimura and colleagues, It is was further affirmed
that mothers should desire early initiation of
breastfeeding especially the first one hour of delivery
(Nishimura et al., 2009).

According to Penders et al. (2006), Pre-lacteal feeds
are not recommended for the infants because of their
resulting effect on the onset of lactation, and on perinatal
morbidity and mortality. From the NDHS, 58.6% of
children received prelacteal feed nationally while 63.3%
were reported for Enugu state (NPC and ICF, 2014).
Prelacteal feed was found to be given by a high
percentage of the respondents (75.2%) which was mainly
water. Adebayo et al. (2014) also reported a similar
finding however, the main prelacteal feed in their study
was infant formula.

The current exclusive breastfeeding rate in Nigeria
stands at 17%, the EBF rate of 24.3% from this study
was found to be higher than the national rate but lower
than the rate earlier reported from the state (Ukegbu et
al., 2010). This however may be a result to high level of
enlightenment of EBF to both the pregnant and lactating
mothers in this region. In a study by Okolie (2012) on

problems encountered by breastfeeding mothers in their
practice of exclusive breast feeding in Enugu, various
socio-cultural problems such as interference by mother-
in-law to give water and cultural belief of supplementing
breastfeeding with water were identified as the hindrance
to the practice of EBF. In consistence with Okolie (2012),
most respondents from this study identified mothers and
mother-in-laws as the main source of discouragement in
their in ability to breastfeed exclusively. To ensure
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adequate knowledge not only of breastfeeding but also
that of complementary feeding however, the practices of
are suboptimum. It therefore important to investigate the factors affecting the suboptimum infant feeding practices among mothers in Nigeria.

**CONCLUSION**

This study reported suboptimal practice of mothers towards breastfeeding and complementary feeding despite their high level of adequate knowledge. It also reported lack of significant association between the breastfeeding and complementary feeding knowledge and practice of mothers in Enugu. There is need to explore the factors that are responsible for suboptimum feeding practice of mothers and socio-cultural means of ensuring optimum practice.

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