Assessing Mogadishu Banadir Children and Mother Hospital Healthcare Workers’ Knowledge of Exclusive Breast Feeding and Complimentary Feeding

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ABSTRACT

The aim of this study is to assess the medical as well as voluntary staff expertise and awareness on the importance of exclusive breastfeeding and complementary feeding and system-level barriers that prevent families and communities from getting lactation assistance that might have impacted upon breastfeeding practices altogether. A cross-sectional survey was conducted to recruit a random sample of the staff working in the different units. All were interviewed through a structured questionnaire which included their knowledge, attitudes, and beliefs regarding their skill and awareness of the matter. Descriptive as well as inferential statistics (t-test, ANOVA, and Chi-square) were employed to obtain results and their significance. The significant demographic characteristics of participants indicate that 50% were 25–35 years old, 62.5% were female, 25% were single, 50.0% were university graduates, and almost half (45%) had been full-time employees of the hospital. The staff overwhelmingly recognised that the first yellowish colostrum should be fed to the baby and the potential benefits the baby gains from the mother’s milk, such as nutrition, getting antibodies and reducing the risk of disease. Also, the maternal benefits such as reduced breast cancer and increased postpartum emotional health. In addition, the response was sweepingly positive when it came to nursing and supplemental feeding lower child morbidity and mortality. The practices that may prevent early mother-and-baby contact range from requiring the mother to lie in bed during labour and delivery to drug-induced sleep. The respondents believed that all factors contributed. With the intention of protecting every parent’s and child’s human right to breastfeed, it is vital that high-quality breastfeeding education be implemented across the health
As in any low-income nation, Somalia has been shown to have subpar breastfeeding practices in relation to sociodemographic factors like maternal age, education, employment, residency, and culture, as well as living arrangements, antenatal care practices, home deliveries, and professional assistance at birth. These elements have been examined in numerous studies and are thought to be important for assisting mothers and infants (Mgongo et al., 2013; Desmond & Meaney, 2016; Ejie et al., 2021). The most wholesome food source for newborns in terms of religion is breast milk, which is why Islamic law mandates that women breastfeed their children for a minimum of two years, even if it permits mothers to wean their children earlier (Hawwas, 1988; Mehrpisheh, 2020).

The current infant mortality rate for Somalia is 64.097 deaths per 1000 live births, a -1.303% decline from 2021, placing Somalia at the very bottom of the international child survival list (Macrotrends, 2022). The most important determinant for morbidity and mortality of Somali children is undoubtedly the huge prevalence of malnutrition, including deficiency of important nutrients or insufficient breastfeeding, pneumonia, diarrhoea, diseases, polio, measles, and neonatal disorders are among the leading causes contributing to the high infant and child mortality rate in Somalia. In contrast to the universal recommendation of exclusive breastfeeding for the first six months of life, more than ninety percent of Somali mothers introduce alternatives such as sugar water, tea, or formula (prepared with unsafe water) at this stage, causing the early onset of diarrhoea, subsequent malnutrition, and an increased risk of mortality (WHO, 2011). In addition, to satisfy the changing demands of the developing newborn, complementary foods that are nutritionally adequate, safe, and served appropriately should be introduced at the age of six months. Breastfeeding should be continued for at least two years (Kimani-Murage et al., 2011).

A child’s growth and development are most influenced by the first two years of life. Women, particularly those from lower socioeconomic levels,
are rapidly giving up the practice (Rasheed et al., 2000). While there are numerous ways to support breastfeeding, one strategy that is particularly effective is teaching healthcare professionals both before and after birth. As a result, breastfeeding was only approved as a strategy by health authorities and professionals, such as doctors, nurses, midwives, interns, and volunteers, to address the contributing causes of morbidity and mortality in Somali children (Ketsela & Kebede, 1990; Cunningham et al., 1991; Rasheed et al., 2000).

The WHO/UNICEF global strategy on infant and young child feeding practices aims to promote optimal breastfeeding and complementary feeding practices through various initiatives, such as the Baby Friendly Hospital Initiative (BFHI), to start a global initiative to put practices in place that defend, encourage, and promote breastfeeding (WHO, 2022). All medical professionals should be knowledgeable, competent, and equipped to assist with breastfeeding, according to the World Health Organization (WHO), to a successful breastfeeding guide. The four main objectives for breastfeeding support were outlined in the Innocenti Declaration on the Protection, Promotion, and Support of Breastfeeding: creating national committees for oversight; ensuring that maternity facilities follow the ten steps; and enforcing the International Code of Marketing of Breast-milk Substitutes (WHO, 2022; Meek & Academy of Breastfeeding Medicine, 2019).

METHODOLOGY

Research Study Setting and Objectives

This study was conducted in the Benadir mother and child public hospital Mogadishu, Somalia, which services 17 districts of the capital city with an estimated population of 2,388,000. The study’s objective is to assess the degree of knowledge and awareness among medical professionals regarding pre and postpartum feeding support provided to mothers and their babies at Benadir Mother and Child Hospital, including exclusive breastfeeding and complementary feeding practices. Forty individuals from the medical as well as voluntary staff were purposively selected from each section of the hospital to assess their expertise and awareness of the importance of exclusive breastfeeding feeding and complementary feeding and whether barriers exist.

Study Design, Data Collection, And Analysis

A cross-sectional survey was conducted to recruit a random sample amongst “medical staff of Benadir Mother and Child Hospital” working in varying units in the Medina District of Mogadishu. From a total of staff working in the different units, 40 individuals from the medical as well as voluntary workforce were purposively selected. All were interviewed through a structured questionnaire which included the knowledge, attitude, and beliefs regarding their expertise and awareness of the importance and benefits of exclusive and complementary feeding. The data was entered on an excel worksheet and descriptive as well as inferential statistics (t-test, ANOVA, and Chi-square) were employed on both the excel and R-studio statistical platforms. The results were obtained using percentages, frequencies, and their significance.

RESULTS

The surveyed respondents’ age groups have been categorised into three ranges, and it has been examined if the respective age ranges are significantly different from one another. A single-factor analysis of variance has been carried out on the age group difference, and it was found that there is a significant difference among the three age groups with a p-value of 2.14x10⁻⁶ @ 95% confidence interval (CI). A post hoc test has been performed to establish that the 25–35 age groups are significantly different from the rest, as there is no significant difference between the 15–25 and 36–49 ranges (Figure1). As for the gender of the respondents, 15(37.5%) were male, while 25(62.5%) were female, with a significance of 5.27x10⁻⁴ @ 95% CI. By the same token, the marital status of the participants has been 14% single, 43% married, 17% divorced, and 26% widowed. That makes the marriage significantly higher than the rest, with a p-value of 3.68x10⁻⁴. The participants’ education has been ranked from primary, secondary, university, and non-formal education as 25%, 22.5%, 50%, and 2.5%, respectively. When executing a single factor analysis of variances and a post hoc test, university graduates show a
significant difference from the rest with a p-value of $4.6 \times 10^{-10}$ @ 95% CI. Also, so far as their employability status is concerned, 45% were employed by the hospital, 42.5% were students on practical training, and 12.5% were on a voluntary basis. When tested for the difference among them, the number of volunteers is significantly lower than the other two, with a significance of $7.8 \times 10^{-10}$ @ 95% CI (Table 1).

Table 1: demographic characteristics of the respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
<th>p-value</th>
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</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
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<tr>
<td>15-25</td>
<td>7</td>
<td>17.5</td>
<td>$2.14 \times 10^{-6}$</td>
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<tr>
<td>26-35</td>
<td>20</td>
<td>50</td>
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<tr>
<td>36-40</td>
<td>13</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>15</td>
<td>37.5</td>
<td>$5.27 \times 10^{-4}$</td>
</tr>
<tr>
<td>Female</td>
<td>25</td>
<td>62.5</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>10</td>
<td>25</td>
<td>$3.68 \times 10^{-4}$</td>
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<tr>
<td>Married</td>
<td>15</td>
<td>17.5</td>
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<tr>
<td>Divorced</td>
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<td>15</td>
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<tr>
<td>Widowed</td>
<td>9</td>
<td>22.5</td>
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<td>Level of education of the respondent</td>
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<tr>
<td>Primary</td>
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<td>25</td>
<td></td>
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<tr>
<td>Secondary</td>
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<td>22.5</td>
<td>$4.63 \times 10^{-10}$</td>
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<td>Employment status</td>
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<td>45</td>
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<td>42.5</td>
<td></td>
</tr>
<tr>
<td>unemployed</td>
<td>5</td>
<td>12.5</td>
<td></td>
</tr>
</tbody>
</table>

Out of the 40 individuals in the staff surveyed, only 12.5% replied that Exclusive Breastfeeding Complementary Feeding (EBF&CF) have no benefits, and 87.5% answered that they have an advantage, with a p-value of $6.3 \times 10^{-16}$ @ 95% CI. The first yellowish colostrum that should be fed to the baby has been fielded to the participants, and overwhelmingly 70% agreed, while a mere 30% disagreed, with a significance of $2.1 \times 10^{-6}$.

Single-factor analysis of variance was employed to test participants’ comprehension of the benefit infants gain from EBF&CF, and there was a significant difference among the four types of potential benefits exposed to them, such as nutrition, getting antibodies, reducing the risk of disease, or all of them, baby gains from mother’s milk, with a significance of $4.1 \times 10^{-12}$ @ 95% CI. The post-hoc test was used to determine where the relevance lies, and it was discovered that there is a significant difference between those who responded that the benefit of breast milk is for nutrition against getting antibodies and those who responded that getting antibodies against reduces the risk of diseases. Nonetheless, those who responded that the benefit lay in both of them were significantly greater than the rest. Also, the maternal benefits of EBF&CF are fielded for the staff attending the departments of the Benadir hospital, and single factor ANOVA established that those who responded to EBF&CF both reduced breast cancer and increased postpartum emotional health, with a significance of $6.6 \times 10^{-15}$ @ 95% CL (Figure 1).
Single-factor ANOVA established that those who responded to exclusive breastfeeding and complementary feeding both reduced breast cancer and increased postpartum emotional health, with a significance of $6.6 \times 10^{-15}$ @ 95% CI. Also, 20% of respondents disagreed, with a significance of $2.7 \times 10^{-12}$ @ 95% CI.

When assessed on a two-sample assuming unequal variances t-test, 80% of respondents acknowledged the societal benefits of EBF&CF @ 95% CI. Additionally, the response was overwhelmingly positive when it came to the hypothesis that nursing and supplemental feeding lower child morbidity and mortality, with 78% agreeing to the idea and 20% disagreeing, with a p-value of $1.69 \times 10^{-2}$. When asked whether best breastfeeding practices reduce child mortality and considerably improve children’s long-term health, 57.5% of the employees in deferential jobs responded affirmatively, while only 32.5% disagreed, with a significance level of $1.6 \times 10^{-3}$ @ 95% CL. Additionally, 83% of respondents said that optimal breastfeeding practice is the best way to prevent or reduce hospitalisation in children with diarrhoea, respiratory infections, and otitis media illnesses. 50% of the participants were aware of the World Health Organization’s (WHO) advice to continue breastfeeding, while the other half were not.

Answers to the question of what practices may prevent early mother and baby contact ranged from requiring the mother to lie in bed during labour and delivery to 18; 30% lack of support; 13% drug-induced sleep; and 40% belief that all factors contributed. The F calculated (8.9) is bigger than the F critical (2.8), and there is a significant difference within the factors examined with a p-value of $5.7 \times 10^{-5}$ @ 95% CI. Single-factor ANOVA has been used to test where the most significant of the four resides between the impacts. The post-hoc test was further employed to identify the significance, if there is one, between each pair, and lack of support is substantially worse than the woman lying in bed during labour and delivery and medication-induced sleep. Finally, those who said all three habits could prevent early mother-infant interaction were significantly more than those who said only one of them (Figure 2). When asked if breast milk could maintain a newborn for up to six months on its own, 90% of individuals agreed, with only 10% disagreeing, with a p-value of $2.8 \times 10^{-18}$ @ 95% CI.
A single-factor ANOVA has been employed as there is a significant difference within the factors tested with a p-value of 5.65915x10−5 @ 95% CI. With a significance of 4.1x10−2, all three practices may impede early mother-baby contact and become significantly higher than separating one of them.

Finally, barriers to EBF&CF were examined. When asked what the maternal problems identified for not continuing exclusive breastfeeding were, their answers were: 15% insufficient breast milk, 32.5% sore or painful nipple, 10% return to work or school, and 42.5% all of the above. When single-factor ANOVA was carried out, the combination of all was significantly higher than the rest, with a p-value of 4.8x10−7 @ 95% CI. When also asked about the other problems many mothers may experience during the lactation process, such as gigantomachia, plugged ducts, inverted nipples, or all of them, the answers returned were 20%, 15%, 12.5%, and 52.5%, respectively. Furthermore, the combination of all factors outperforms the others, with a p-value of 2.7x10−8 @ 95% CI. Once asked if there was a lack of support from the partner or family, 40% of them responded affirmatively, while the remaining 60% responded negatively. And it is significantly higher than the previous one, with a p-value of 2.51x10−3 @ 95% CI in a two-sample t-test assuming unequal variances.

**DISCUSSION**

Critical gaps in the Somali healthcare system prolong adhesive reproductive health consequences for Somali childbearing women and newborns. Built on reproductive trauma, the study aims to be a vanguard on EBF&CF awareness to directly address the existing gaps in support structures that can involve the healthcare system or the workplace and family-customer-sides alike (Matare et al., 2019). Following a review of the literature, it was determined that peer and community support, healthcare system provision, and system-level barriers that prevent families and communities from getting lactation assistance were the most important programmatic needs that might have impacted breastfeeding practices altogether (Ejie et al., 2021). Unsatisfactory provision and inadequate EBF & CF education among healthcare staff have been identified as barriers in previous studies, prompting this investigation (Ejie et al., 2012; Coetzee et al., 2017; Ngongalah et al., 2018). The significant demographic characteristics of participants of Medina General Hospital’s age
range, gender, marital status, and education, respectively, and signs indicate that 50% were 25–35 years old, 62.5% were female, 25% were single, and 50.0% were university graduates of a spectrum of medical disciplines, and almost half (45%) were full-time employees of the hospital (Table 1).

This study aims to compare breastfeeding beliefs and the awareness of healthcare professionals regarding the level of postnatal support mothers and infants receive. Of the medical staff, interns, and volunteers who participated in the poll, the majority immediately and vehemently stated the importance and benefits the matter has for both the mother and the infant. This is encouraging news as the effect of health systems, especially recommendations or messages given by hospital medical staff might act as a barrier to EBF&CF due to inadequate provision and medical staff education. Mothers may have been discouraged from EBF and CF the infant due to medical personnel’s confusing, incorrect, out-of-date, or deceptive advice or messages (Horwood et al., 2019).

As exclusive breastfeeding is a practice whereby infants receive only breast milk without mixing it with water, other liquids, tea, herbal preparations, or food in the first six months of life (Kimani-Murage et al., 2011; Motee & Jeewon, 2014; Abba et al., 2010). A significant number (70%) of the medical staff who participated in the survey overwhelmingly acknowledged the importance of the first yellowish liquid/colostrum released by the mammary glands after giving birth that should be fed to the baby with significance. Colostrum is rich in nutrients, antibodies, and antioxidants, so the medical staff’s knowledge and expertise for the mother to give the newborn this food aids the infant’s immune system to develop. The technical know-how and staff awareness of hand-expressing colostrum should be investigated further if the woman chooses not to breastfeed, colostrum discards or if the baby is having difficulty latching on (Azene et al., 2021). By the same token, eliciting the overall awareness of the medical staff comprehension of the benefit infants gain from EBF&CBF, of the three types of potential benefits babies gain from mother’s milk exposed to them, such as nutrition, getting antibodies, reducing the risk of disease, or all of them, has been discovered that the benefit lies in all of them. In other words, it reduces infant and child mortality rates (Ejie et al., 2012). Once again, it is a promising sign, but the findings necessitate further exploration insofar as the extent of their technical know-how of them is categorically lies: in doctors, nurses, midwives, and other auxiliary staff. Further recommendations and ways forward are being explored in the conclusion and recommendation sub-section. The medical workforce at the Benadir hospital showed that the maternal advantages of EBF&CF fully enhanced better postpartum emotional health and reduced breast cancer (Figure 1). To improve breastfeeding staff knowledge and communication techniques, the information gathered from this study could be applied to individual and group staff education in hospitals across the country.

Most respondents (80%) agreed that EBF&CF have positive social effects and that complementary feeding, in particular, promotes social benefits to the family, the health care system, and the employer as well. Many believe that loving attachments made in the first few years of life lessen social and behavioural issues in both kids and adults (Motee & Jeewon, 2014). Further investigations into the practices that might hinder early mother-baby contacts, such as those that mandate the mother lie in bed during labour and delivery, including lack of support, sleep-inducing drugs, and the conviction that all the aforementioned variables played a role (Figure 2).

The final section explores barriers to exclusive and complementary breastfeeding as challenges if the staff in the hospital have inadequate training on the matter they received (Jama et al., 2017). Potential barriers to exclusive breastfeeding that have been reported in past studies for mothers include, among other factors, lack of hospital staff assistance due to poor technique or mismanagement of breastfeeding; low milk supply or intake; a sore or painful nipple might be due to a nipple fissure developing infective mastitis due to poor attachment. This calls for the personnel to receive training in order to assist the mother in enhancing the position and attachment of her child. More frequently than not, women felt that receiving inadequate or inconsistent advice from medical professionals was the largest obstacle to achieving six months of exclusive breastfeeding. Subsequently, mothers who wanted to continue breastfeeding after returning to work did so, but...
with some difficulty (Desmond & Meaney, 2016). A combination of the criteria was notably mentioned meaningfully by medical staff at Medina Hospital as contributing to whether or not women practice breastfeeding (Ostergaard & Bula, 2010; Infant and Young Child Feeding, 2009).

**CONCLUSIONS AND RECOMMENDATIONS**

For the best results intended for all families, the medical community is essential in promoting, safeguarding, and supporting exclusive breastfeeding and complementary feeding. With the intention of protecting every parent’s and child’s human right to breastfeed, it is vital that high-quality breastfeeding education be implemented across the health service providers (hospitals) and the entire spectrum of medical education in the country. This will facilitate future medical staff to acquire the knowledge, abilities, and attitudes necessary to practice medicine and will also help practising doctors keep their skills and competency up-to-date.

The number of medical staff (permanent, part-time, interns, and volunteers) who participated in the survey at Benadir Mother and Child Hospital’s awareness of exclusive breastfeeding and supplemental feeding is revealed by the study. However, more in-depth research is necessary to fully understand the crucial role that healthcare professionals play in encouraging mothers to breastfeed. This knowledge should include the physiological process of lactation, the health outcomes associated with various infant feeding techniques, as well as positive, non-judgmental attitudes and effective communication, information-sharing, and practical support skills. Therefore, it is crucial to take advantage of the medical staff at the Banadir Mother and Child Hospital’s awareness of the issue and develop interventions aimed at healthcare professionals and policymakers in order to close any existing gaps in exclusive national breastfeeding and complementary feeding practices that exist between current informal practices and WHO recommendations.

By enhancing healthcare workers’ understanding of breastfeeding medicine, hospital management should put the staff’s awareness of EBF&CF into practice and enable them to offer complete, patient-centred medical care to both mothers and children. The Ministry of Health is to develop policies for introducing educational programs to improve knowledge and skills in breastfeeding issues to be implemented throughout medical education, starting with medical students, through the curriculum of medical residents, and scheduling workshops for specialists in different fields. This should be done in collaboration with the ministry of education and higher education.

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