Comparative Study of Maternal Behaviour in Exclusive Breastfeeding in Two Work Area Health Centres of Jeneponto District, Indonesia

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Abstract

Babies who gain exclusive breastfeeding are less likely to suffer gastrointestinal, reducing the risk of infectious disease, protecting from exposure to infectious pathogens, strengthening the ability of the intestine and the immune system, preventing hypothermia, and lowering the risk of diarrhea, pneumonia and respiratory infection. 1 million of the 6.9 million children under five were reported killed globally could be saved by exclusive breastfeeding. The regulations have been established by the government to improve exclusive breastfeeding in Indonesia with national standard of 80%. In 2013, the scope of exclusive breastfeeding is 54.3%. In 2012, Jeneponto district had the lowest coverage of exclusive breastfeeding in South Sulawesi (20.57%) and in 2013 it increased to 67.66%.

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The objective of this research was to determine the differences of maternal behavior on exclusive breastfeeding in the working area of PKM Arungkeke and Binamu Kota at Jeneponto District. This research used a quantitative with comparative study approach. 104 mothers in Arungkeke and 106 in Binamu Kota were selected as sampling using simple random sampling. Data were analyzed by mc. Mann Whitney. More mothers did not give exclusive breastfeeding in Arungkeke (58.7%) than Binamu Kota (49.1%). This study found no differences of mothers’ attitudes with p value 0.132. Nevertheless there were differences in mothers’ knowledge, beliefs, family influence, and community participation between Arungkeke and Binamu Kota, where the prevalence was higher in the Binamu Kota than Arungkeke. The provision of in-depth informations and cultural understanding to mothers and families about exclusive breastfeeding, especially in coastal areas is required.

**Keywords:** Exclusive breastfeeding; knowledge; attitudes; beliefs; family; community participation.

1. Introduction

World Health Organization (WHO) revised its recommendation of exclusive breastfeeding from 4-6 months to 6 months [1]. According to WHO, approximately 6.9 million children under five were reported to have died globally in 2011, about 1 million lives could be saved by simple practices such as exclusive breastfeeding [2].

Exclusive breastfeeding could reduce the risk of neonatal death, immunity from colustrum, protect from exposure to infectious pathogens, to finalize the ability of the intestine and immune system, and prevent hypothermia [3]. Infants who are not exclusively breastfed had a 4 times risk of acute respiratory infections [4]. Exclusive breastfeeding could provide up to 99% survival [5]. In 2010, the target of the exclusive breastfeeding coverage in infants 0-6 months was 80% [6].

A survey conducted in 2007 showed exclusive breastfeeding coverage meaningful increase to 42% in 2012. From the report of the provincial health bureau in Indonesia in 2013, the distribution coverage of exclusive breastfeeding in infants was 54.3%. Of the 33 provinces, only 19 provinces with the percentage of exclusive breastfeeding were above the national average. Exclusive breastfeeding coverage in South Sulawesi Province, in 2013 was 66.5% [7].

In 2008-2012, exclusive breastfeeding coverage in Jeneponto district was very far from the national standard, even in 2012, Jeneponto district had the lowest coverage of exclusive breastfeeding in South Sulawesi, namely 20.57%. In 2013 data showed a rise to 67.66%. Although the regulations had been set by the government but the scope of exclusive breastfeeding was still below target.

The causes of the failure of the practice of exclusive breastfeeding were inadequate skill of breastfeeding, the slow response of health workers [8], smoking during pregnancy, caesarian birth, employment status of mothers [9], a plan to breastfeed, depression, finances [10], family and economic factors [4], marriage status, maternal employment status, example from their friends how they breastfeed their babies, social support and age of the baby [11], and cultural factor [12]. In Jeneponto district, lack of family understanding about breastfeeding and its benefits resulted in family not able to provide social support to the implementation of exclusive
breastfeeding.

Puskesmas Arungkeke is the lowest-lying coastal areas in exclusive breastfeeding in Jeneponto while Binamu Kota is a coastal area, but high exclusive breastfeeding. Comparison between these two locations is points in this study. This study aimed to determine the differences in maternal behavior in exclusive breastfeeding in the region of Puskesmas Arungkeke and Binamu Kota of Jeneponto district, Indonesia.

2. Materials and Methods

This type of research was a quantitative approach with comparative study. The respondents were mothers who have babies aged 6-12 months. Samples were 104 women in Arungkeke and 106 Binamu Kota obtained by simple random sampling. Data were analyzed using Mc test. Mann Whitney.

3. Results

The results of this study present the characteristics of breastfeeding mothers (Table 1), and exclusive breastfeeding, knowledge, attitude, family influences, values/beliefs, and the level of community participation (Table 2).

Table 1: Characteristics of breastfeeding mothers

<table>
<thead>
<tr>
<th>Characteristics of Breastfeeding Mothers</th>
<th>PKM Arungkeke</th>
<th>PKM Binamu Kota</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=104</td>
<td>%</td>
</tr>
<tr>
<td>Age Group (year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 20</td>
<td>5</td>
<td>4.8</td>
</tr>
<tr>
<td>20 -24</td>
<td>15</td>
<td>14.4</td>
</tr>
<tr>
<td>25 -29</td>
<td>31</td>
<td>29.8</td>
</tr>
<tr>
<td>30 – 34</td>
<td>40</td>
<td>38.5</td>
</tr>
<tr>
<td>35 -39</td>
<td>11</td>
<td>10.6</td>
</tr>
<tr>
<td>≥ 40</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>Mother Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No School</td>
<td>8</td>
<td>7.7</td>
</tr>
<tr>
<td>Not completed elementary school</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Elementary School</td>
<td>48</td>
<td>46.2</td>
</tr>
<tr>
<td>Junior High School</td>
<td>31</td>
<td>29.8</td>
</tr>
<tr>
<td>Senior High School</td>
<td>11</td>
<td>10.6</td>
</tr>
<tr>
<td>Diploma II/III</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>Bachelor</td>
<td>3</td>
<td>2.9</td>
</tr>
<tr>
<td>Master</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 1 shows that the age group most of the mothers were between 30-40 years both in the working area of PKM Arungkeke and Binamu Kota respectively 40 (38.5%) and 45 (42.5%). Generally they only received primary school education level mainly on mothers in the working area of PKM Arungkeke (46.2%), while for the PKM Binamu Kota generally they obtained a higher education. They were mostly high school education/equivalent (43.4%).

Table 2: Characteristics of respondents by exclusive breastfeeding, knowledge, attitude, family influences, values/beliefs, and the level of community participation

<table>
<thead>
<tr>
<th>Exclusive Breastfeeding</th>
<th>PKM Arungkeke</th>
<th>PKM Binamu Kota</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=104</td>
<td>N=106</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>61</td>
<td>52</td>
<td>0.164</td>
</tr>
<tr>
<td>Yes</td>
<td>43</td>
<td>54</td>
<td>0.9</td>
</tr>
<tr>
<td>Knowledge level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less</td>
<td>12</td>
<td>4</td>
<td>0.000</td>
</tr>
<tr>
<td>Enough</td>
<td>92</td>
<td>102</td>
<td>0.962</td>
</tr>
<tr>
<td>Attitude</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>33</td>
<td>25</td>
<td>0.132</td>
</tr>
<tr>
<td>Positive</td>
<td>71</td>
<td>81</td>
<td>0.764</td>
</tr>
<tr>
<td>Family influences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less support</td>
<td>45</td>
<td>14</td>
<td>0.000</td>
</tr>
<tr>
<td>Support</td>
<td>59</td>
<td>92</td>
<td>0.868</td>
</tr>
<tr>
<td>Values/beliefs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>74</td>
<td>98</td>
<td>0.000</td>
</tr>
<tr>
<td>Yes</td>
<td>30</td>
<td>8</td>
<td>0.75</td>
</tr>
<tr>
<td>Level of community participation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>55</td>
<td>0</td>
<td>0.007</td>
</tr>
<tr>
<td>Moderate</td>
<td>45</td>
<td>76</td>
<td>0.717</td>
</tr>
<tr>
<td>High</td>
<td>4</td>
<td>30</td>
<td>0.283</td>
</tr>
</tbody>
</table>

Table 2 shows that most babies did not gain exclusive breastfeeding (61 babies or 58.7%) in the working area of PKM Arungkeke while in the working area of Binamu Kota they were almost equally between those who are given exclusive breastfeeding and who are not exclusively breast-fed, respectively 50.9% and 49.1%.

Most mothers had enough knowledge, positive attitudes and the influence of family support on exclusive breastfeeding in the both working area of health centers. Nonetheless, aspects of trust/beliefs to the majority of mothers were not sure of some statements for both the health center working area of exclusive breastfeeding ie 71.2% in PKM Arungkeke and 92.5% in Binamu Kota. Community participation level on exclusive
breastfeeding was very low, especially in the working area of PKM Arungkeke (52.9%), while in the PKM Binamu Kota mostly they included medium category ie 76 mothers (71.7%).

Table 2 also shows that there were differences in the level of mother's knowledge, beliefs mother, the influence of family and community participation and exclusive breastfeeding with p values are respectively 0.000; 0.000; 0.000; 0.007, while for exclusive breastfeeding and mother's attitude did not find a difference between the two regions of the PKM with a value of p = 0.16 and 0.132.

4. Discussion

Exclusive breastfeeding

Exclusive breastfeeding means that the infant receives only breast milk, no other liquids or solids that given even water with the exception of oral rehydration solution, or drops/syrup vitamins, minerals or medicines [13]. Breast milk is the best food for babies. Animal milk, infant formula (even the most expensive price), milk powder, tea, beverages containing sugar, water, bananas and grains do not contain as good as breast milk [14]. Exclusive breastfeeding is breastfeeding without other additional food and drink in infants aged 0-6 months. Even water is not provided in this phase of exclusive breastfeeding [15].

The research found many mothers that give exclusive breastfeeding to their babies in the working area of PKM Arungkeke compared with mothers in PKM Binamu Kota. However the difference is not so big, because the rates are nearly the same. The coverage of exclusive breastfeeding in the both working area of PKMs was still below the minimum standard of 80%.

Giving milk to babies other than exclusive breastfeeding happens because they have given other liquids or foods other than breast milk. For example in the working area of PKM Arungkeke this research showed 25% of mothers give extra food to their babies, 26.9% of mothers give formula and 37.5% of mothers give their babies water before reaching the age of 6 months. Similarly, in Binamu Kota, this study described 28.3% of the mothers had been given extra food, provide milk formula 20.8% and water 16.9% to the babies. The results of this study also showed that the formula feeding and water are more prevalent in PKM Arungkeke compared to the PKM Binamu Kota. Additional food that has been given among others includes biscuits, porridge sun/rice, and bananas and papayas.

Breastfeeding is done predominantly and partially to infants aged 6 months but occasionally giving water or liquid coffee and honey. Predominant breastfeeding is feeding the baby but never give a little water or tea-based beverages such as water, as food/beverage prelacteal before ASI out. While partial breastfeeding is feeding the baby and given artificial food other than breast milk, whether formula milk porridge or other food before six months old of the babies, both supplied continuously, and given as food prelacteal. Therefore, in addition to breast-fed infants, babies have also been given other foods such as porridge and fruit sum [7].

Exclusive breastfeeding in this area is still higher than the research conducted in Gorontalo. But the difference is smaller than the two areas in Gorontalo: 30.4% in PKM Telaga Biru and 69.6% in PKM Mongolato [16].
Level of Mothers Knowledge

This study describes most breastfeeding mothers in both these locations had enough knowledge of exclusive breastfeeding. Nonetheless, this study shows there were still a lot of mothers did not exclusively breastfed their children. Several factors might be contributing factors eg values/beliefs mother, the influence of families and communities that would be described in each of these variables.

Furthermore, the test results of mc. Mann Whitney found no difference between the level of knowledge between Arungkeke and Binamu Kota with p = 0.000. Most of the mothers in the two regions answered correctly to the negative question that milk production is not quite up to 6 months and that the cow's milk protein is higher than breast milk. Mother replied that it was wrong.

In addition, most of the mothers answered correctly, that breast milk contains immune substances with the percentage of> 90% in both regions. For more questions, there are differences in the answers by the respondents in both regions, for example about Colostrum is the first milk out. Approximately 59.6% of women in Arungkeke answered it correctly while 89.6% of women answered correctly in Binamu Kota. Most babies only breast-fed up to 6 months. There are different answers in both regions regarding the statement that Feeding can cause diarrhea. Most mothers in Arungkeke answered correctly (48.1%) while only 25.5% of women in Binamu answered correctly that diarrhea may occur due to PMT of 0-6 months.

Knowledge is the result of a process carried out by the human senses. When the sensing process, it is strongly influenced by the perception of the intensity of attention to the object. One's knowledge of an object contains two aspects: positive and negative aspects. Both of these aspects define a person's attitude [17]. The more positive aspects and objects are known it will cause a positive attitude toward the object. Furthermore, this attitude becomes a predisposition and a tendency towards the occurrence of acts of behavior. Knowledge of a series of objects associated with exclusive breastfeeding at this location is quite diverse. Although generally it indicates sufficient level of knowledge in this area, this can contribute to an attitude which subsequently became a major predisposing to the actions of exclusive breastfeeding to their babies.

According to Roesli [18], that the main obstacle to the achievement of exclusive breastfeeding is the lack of comprehensive knowledge of exclusive breastfeeding in mothers. A mother must have good knowledge in nursing. Loss of knowledge about breastfeeding mean serious loss of confidence a mother to be able to provide the best care for the baby and the baby will lose a vital source of food and the way of care.

The high level of knowledge in both locations is in line with the results of research conducted in Ethiopia found that some of the mothers (83.4%) have a broad knowledge of exclusive breastfeeding. This is backed up with the right answer by respondents include 83% of women answered correctly for the duration of that ideal in exclusive breastfeeding (0-6 months) baby's life [19]. However, these findings are still higher compared to studies conducted in Nigeria finding that about 71.3% of respondents have a good level of knowledge [20].

In addition, local research conducted in several places showing different results. In Merauke, for example, the majority of high knowledgeable mothers are equal (55%) [21]. In Manado also most of the respondents have a
good knowledge (63.9%) [22]. Unlike in Bone South Sulawesi, most of the mothers’ knowledge level was less
category (64.4%) [23] and in Surakarta respondents mostly were bad knowledgeable (65.3%) [24].

Attitudes

Mann Whitney test results showed the p value = 0.132, which means that there are no differences in attitudes
among respondents in Arungkeke and in Binamu Kota. Most of the mothers showed disagreement with the
statement "The content of infant formula is better than breast milk." Most of the mothers in both these areas
agree that breast milk can meet the nutritional needs of children, breastfeeding makes clever child and
breastfeeding makes the mothers are dearer to their babies. Breast milk and breastfeeding is considered very
good for their babies and this is one form of positive attitudes towards breastfeeding but no longer exclusively
breastfeeding, considering the mother is exposed to the local culture with the provision of water, coffee, and
honey in small amounts, even infant formula often as a distraction if the mother is not at home.

Still many women with a positive attitude, but they did not give exclusive breastfeeding. This indicates that the
attitude shown mothers are being supportive. Attitudes gained through experience will cause a direct influence
on behavior. The direct influence can be any behavior that would be realized if the conditions and circumstances
allow. Various factors influence the formation of attitudes eg internal factors (gender, age, education,
experience) and external (mass media, educational institutions/religion, people, facilities) [25]. Some mothers
are confronted with circumstances which they did not allow for the realization of exclusive breastfeeding. Such
condition, for example, occurs in the first days after delivery in which "the milk does not come out". It is a gap
for failure in exclusive breastfeeding by mothers with a positive attitude.

A similar study conducted in Ethiopia have also found a high prevalence of maternal attitude which
approximately 97.5% of women had a positive attitude towards exclusive breastfeeding [19]. It is said that a
mother with a positive attitude in the countryside 4.54 times likely to give exclusive breastfeeding than in urban
areas. It is also not in line with a recent study found the woman with a positive attitude in Binamu cities which
are urban areas nearly two-fold opportunity to give exclusive breastfeeding than in Arungkeke.

Family Influences

Family environment is an environment that greatly affects the success of breastfeeding. The influence of the
family can support the activities of the mother in the practice of breastfeeding for example to say to give only
breast milk, pay attention to the nutritional needs of the mother, advise to have no fear of physical changes, buy
vitamin/milk breastfeeding, provide literature on breastfeeding, call when the baby is crying, and husbands help
or accompanies their wives at midnight. The results showed more families support breastfeeding in Binamu
Kota (86.8%) compared to Arungkeke (56.7%). Mann Whitney test results showed p value = 0.000, which
means that there is a difference between family influence in Arungkeke and Binamu Kota. Such differences may
be caused, for example, mothers in Binamu Kota gained more encouragement to breastfeed than in Arungkeke,
the family suggested to not fear the more physical changes experienced by respondents in Binamu Kota (81.1%)
than in Arungkeke (26.0%). Mothers in Binamu Kota are also more advised to treat breast (51.9%) than in
In addition, aid in the form of direct action is also more obtained by the mother in Binamu, such as vitamins or milk breastfeeding. Differences caregiving and family support can be influenced by the level of education of respondents and their husbands.

Research in the United States proved, few mothers who did not do the early initiation of breastfeeding believed to family members and health care workers [26, 27]. Similarly, studies in Iran showed, fathers or husbands’ involvement in the training program can affect the behavior of constant feeding up to 6 months[28]. Family (husbands, parents, fathers and mothers in-laws, brothers and sisters in-laws) needs to be informed that a mother needs family support in breastfeeding. Husband had an important role in this case. Many husbands had mistaken opinion that states breastfeeding is the business of the mother and baby. Husband’s role will also determine the smoothness of ASI expenditure (let down reflex) because of an emotion or feelings of the mother [18].

**Values/Beliefs**

The number of values prevailing in the society and is believed to influence the behavior of health. There are values that support and the adverse behavior of exclusive breastfeeding. Some values are widely believed to be in Indonesian society and its influence on exclusive breastfeeding for example, stale milk may be discarded, the newborn should be given honey and coffee, small breasts cannot produce breast milk, and others.

The research found in these two areas that most respondents are not believe any negative values related to breast milk and breastfeeding both in Puskesmas Binamu Kota (92.5%) and Arungkeke (71.2%). Statistical test results showed the P value = 0.000, which means that there are differences in values/beliefs between the two regions. This difference occurs in the belief of some aspects, for example, small breasts cannot produce more milk believed to be true by the mothers in Binamu Kota (45.3%) and in Arungkeke (20.2%). Breastfeeding causes breast sagging, most mothers in Binamu Kota (84%) and Arungkeke (64.4%). Other values are breastfeeding ban while eating also occurs in both regions. This belief is influenced by the level of education. Mothers in urban areas are more exposed to "body image". It can be seen from some of the values he believes is about the shape of the breast. Breast itself is a part from the reproductive organs and also a sexual organ.

**Level of Community Participation**

Optimal breastfeeding by mothers is influenced by social factors, physical, and experience of the mother. It also requires the involvement of community leaders, social support networks, health, and community members in breastfeeding promotion and support in transferring knowledge of the culture, norms, and expectations [29]. In the Community-based strategies for breastfeeding promotion and support, it is not only based on breastfeeding behavior change that leads to improved survival of children, but also women's empowerment and community development [30].

In general, participation is the involvement of a person or group of community members in an activity. Community participation is a manifestation of consciousness and awareness as well as the responsibility of society to the importance of development in order to improve their quality of life, including the improvement of people's nutrition. Levels of participation itself can provide information, consultation, shared decision-making,
act together, and give support [31].

The level of participation in this study was divided into three categories: high, medium and low. Mann Whitney test showed there are differences level of public participation and Binamu Arungkeke City. High participation occurred in Arungkeke compare to Binamu Kota. Many Arungkeke communities participate in counseling, willingness to give their time, effort and opinion. This indicates that rural areas are still strong shared values among citizens. Whereas in urban areas it tends to lower the value of this is due to busy work and priority activities of citizens.

Environment becomes a determining factor for the readiness of mothers to breastfeed their babies. Everyone is always exposed to the habit in the environment as well as influences from society, either directly or indirectly. Currently, both the people in urban and rural areas, are accustomed to using formula milk with a more modern and practical considerations. Exclusive breastfeeding is influenced by the environment [32].

Women’s experiences as a child will affect the attitude and appearance of women in relation to breastfeed in the future. A woman in the family or neighborhood had a custom or often see women breastfeed their babies regularly then it would have a positive view of breastfeeding in accordance with everyday experience. Not surprisingly, adult women in this neighborhood only have little or no information at all; experience and confidence to breastfeed will be the ability to breastfeed. The experience thus encourages women to breastfeed in the future.

Research conducted in Sweden showed that the proportion of mothers who do not breastfeed for up to 4 months showed a significant trend in all groups (p = 0.00004) [33].

5. Conclusions and Recommendation

Exclusive breastfeeding is more given to Puskesmas Binamu Kota (50.9%) compared with Arungkeke health centers (41.3%). There is a difference in the level of mother's knowledge, the influence of Family, values/beliefs, and level of participation in the work area of both health centers and there is no difference in the attitude of the mother in exclusive breastfeeding in the both working area of health centers. This study suggests the importance of providing more detailed information as well as providing an understanding of the culture of exclusive breastfeeding for mothers and families. Provision of information could be provision of education on exclusive breastfeeding for society, especially in coastal areas.

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