Roles of Nurses in Promoting Exclusive Breastfeeding Perceived by Mothers’ and Staff Nurses’ in Bangladesh

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Abstract

Breastfeeding is best diet for baby and best practice for mother. Unfortunately breastfeeding rate was found to be quite low in Bangladesh. The objective of this study was to compare the difference between mother’s and staff nurse’s perception towards the roles of nurses in promoting exclusive breastfeeding in Bangladesh. A systematic problem solving approach was the conceptual framework which guided the roles of nurses in this study. Research methodology was a descriptive comparative study. The subjects consisted of 80 postnatal mothers and 80 postnatal staff nurses who were selected randomly from three hospitals in Dhaka, Bangladesh. Data collected was the demographic data and data regarding the roles of nurses in promoting exclusive breastfeeding (PEB). The content validity of the instrument was tested by three experts. The results found that Staff nurse’s perception (M = 152.99, SD = 12.56) were significantly higher than mother’s perception (M = 92.56, SD = 35.10) regarding the roles of nurses in promoting exclusive breastfeeding (t = 14.49, p < .001). From the results, it can be concluded that the over all levels of perceptions of mothers were at moderate levels while the staff nurse’s perceptions were at high levels. The findings of this study recommend that further in-depth interview and qualitative study may be conducted to explore the factors that increase the mother’s perception regarding roles of nurses.

Keywords: Nurses role, exclusive breastfeeding, mother’s perception, nurses perception.

Background and significance of the problem

Breastfeeding is the best practice for all including mother, baby, and family in terms of physical, psychosocial, and economical aspects. Unfortunately, exclusive breastfeeding rate was quite low in both developed and developing countries particularly in Bangladesh (Galler, Harrison, Ramsey, Chawla, & Taylor, 2006). In Bangladesh, more than two-third of all infant deaths occurred due to diarrhoeal diseases and respiratory tract infection, which are
significantly associated with lacking of exclusive breast feeding (Baque et al., 2001 as cited in Mihrshahi et al., 2003).

An extensive review of literature showed that in spite of many breast feeding promotion strategies, only 43 % were exclusively breastfed up to six months (National Institute of Population Research and Training, 2009). In addition, only 24% mothers had initiated breastfeeding within one hour after birth and 85% had fed prelacteal food to their babies before starting breast milk (Mihrshahi et al., 2003). Exclusive breastfeeding rate over last ten years was not significantly changed (Arifeen, 2008). The health risk for babies without exclusive breastfeeding can be significantly higher (McVeigh & Smith, 2000). It was estimated that large number of infant mortality could be prevented, if the infants are exclusively breastfed up to six months. Breast feeding is also a cost-effective approach for child’s health improvement and decreases the chances of childhood diseases (Cattaneo & Quintero-Romero, 2005). A number of research studies indicated that there are many health benefits of breastfeeding for infants and their mothers. In addition to these individual benefits, breastfeeding provides significant social and economic benefits to the nation. Therefore, the promotion of breastfeeding is very important and essential for all mothers around the world including Bangladesh.

To promote exclusive breastfeeding, nurses can play a key role by using the systematic problem solving approach (Catalano, 2003). It is the scientific method that consists of data collection and assessment, planning, implementation and evaluation. Early assessment, planning and appropriate management are important strategies and fundamental roles of nurses that facilitate the promotion of exclusive breast feeding (Hill & Johnson, 2007). In case of promoting exclusive breastfeeding, nurse’s work experience in a postnatal unit contributes to provide accurate information, demonstrating, teaching, supporting the mothers, and motivating them to do breast feeding to their children (Blincoe, 2007).

Generally, when nurses provide care to promote exclusive breastfeeding, the perception of mothers and staff nurses is important to consider. For instance, various literatures reported that perceptions of the two groups did not matched with each other (Muntlin, Gunningberg, & Carlsson, 2006; Kritcharoen et al., 2005). Mothers perceived that the lack of support and inconsistent breast feeding advice offered by nurses were the major causes for stopping breastfeeding (Montalto, Borg, Buttigieg-Said, & Clemmer, 2008). In contrast, nurses perceived that they had the responsibility for protecting, promoting, and supporting breastfeeding of mothers, who were under their care (Johnston, 1996). However, the perceptions of both the parties, the nurses vs. the mothers may differ from culture to culture.
and depending on many factors, such as, habits, tradition, education, and expectation of mothers (Robbins & Coulter, 2005). Finally, it is important that mother’s expectation needs to be considered when the service delivery is planned (Forster et al. 2008). It is also the important component of the communication between the nurses and mothers which they serve and how they perceived themselves or by others (Moore, 2004). Therefore, the purpose of this study is to identify the roles of nurses in promoting exclusive breastfeeding perceived by mothers and staff nurses in the context of Bangladesh. The results of this study will be helpful and beneficial for designing nursing intervention to promote exclusive breastfeeding.

**Objectives**

The objectives of this study were:

1. To identify mother’s perceptions towards the roles of nurses in promoting exclusive breastfeeding.
2. To identify staff nurse’s perceptions towards the roles of nurses in promoting exclusive breastfeeding.
3. To compare the difference between mother’s and staff nurse’s perception towards the roles of nurses in promoting exclusive breastfeeding.

**Technical terms**

Roles of nurses in promoting exclusive breastfeeding refer to an action process that is performed by nurses which was based on the systematic problem solving approach namely data collection and assessment, planning, implementation and evaluation.

Data collection and assessment refers to activities performed by nurses for the continuous collection of information by asking question, observing and checking of mother and its baby regarding the promotion of exclusive breastfeeding.

Planning refers to activities performed by nurses to the involvement of mother in order to set mutual goals, identify outcomes and formulate a plan of care to established exclusive breastfeeding.

Implementation refers to the activities performed by nurses to provide the information including demonstrate position, teaching, assisting and support to mothers in performing the action for promoting exclusive breastfeeding.

Evaluation refers to activities performed by nurse’s to identify the effectiveness of nursing care to achieve the goals and expected outcomes.

Perception refers to the mother’s and staff nurse’s opinion regarding the roles of nurses in promoting exclusive breastfeeding.
Framework of the study

In this study, systematic problem-solving approaches were used to guide the roles of nurse in promoting the exclusive breastfeeding which consisted of data collection and assessment, planning, implementation, and evaluation. It was developed from the extensive literature review.

![Conceptual Framework of the Study](image)

**Figure 1: Conceptual Framework of the Study**

**Research methodology**

**Research design**

The two group descriptive comparative study in which the roles of nurses in promoting exclusive breastfeeding perceived by mothers and staff nurses were compared.

**Sample and setting**

The study was conducted in three medical college hospitals including Dhaka Medical College Hospital (DMCH), Sir-Salimullah Medical College and Mitford Hospital (SSMCH), and Shahid Shohorawardy Medical College Hospital (SSMCH) of Dhaka, Bangladesh. The samples of this study were 80 mothers and 80 staff nurses. The inclusion criteria for mother were: (1) normal delivery, (2) at least one baby born alive, (3) no contraindication to breastfeeding and (4) willing to participate in this study. While the inclusion criteria for staff nurse
were: (1) completed diploma in nursing and diploma in midwifery (2) experience in postnatal ward for at least three months (3) rotated from postnatal ward to another ward within six months and (3) willing to participate in this study.

The sample sizes were calculated for both groups of mothers and staff nurses based on power analysis. The closest study perceptions regarding the needs of families who have members admitted to critical care units: Perceptions of families and nurses were used to estimate the effect size for this study (Indriyawati, 2004). After calculation, the effect size of that study was 0.422. With this regard, it was estimated at the alpha coefficient of 0.05, which was the accepted minimum level of significance. Accepted power of 0.80 and an estimated effect size of 0.40 were used for this study. According to table 2.4.1, 78 samples in each group were appropriate (Cohen, 1988, p.55). Investigator collected data from 80 subjects from each group of mothers and staff nurses to cover the missing data. A number of 30 subjects in each group were recruited from DMCH and SSMCH, and 20 subjects in each group from Shahid Shohorawardy medical college hospital.

**Instruments**

The instruments of this study consisted of structured self-report questionnaires developed by the investigator based on the literature review. It comprises of two parts: Part I: Demographic data and Part II: Roles of nurses in promoting exclusive breastfeeding. The demographic data were different for mothers and staff nurses and the roles of nurse’s questionnaires were the same for both groups of subjects. It consisted of four steps of systematic problem solving approach, namely data collection and assessment (24 items), planning (4 items), implementation (21 items) and evaluation (6 items). Total 55 items of questionnaires were used to measure the levels of perception of mothers and staff nurses regarding the roles of nurses in promoting exclusive breastfeeding. Four points Likert scale were used, ranged from 0 = Nurse never did to 3 = Nurse always did. Total score of mothers and staff nurses perceptions ranges from 0 to 165 which were divided into three levels; score 0-55 = low, score 56 – 110 = moderate and score 111- 165 = high level of perception. Considering that each sub-scales were based on the number of items, which was also divided into three levels, for data collection and assessment (24 items) and total score ranged from 0-72, where score 0-24 = low level, score 25- 49 = moderate level and score 50- 72 = high levels of perception. For planning (4 items) and total score ranged from 0-12, where score 0- 4 = low level, score 5-8 = moderate level, and score 9-12 = high level. For implementation (21 items) and total scores ranged from 0-63, where score 0-21 = low, score 22-42 = moderate, and score 43-63 = high level. And for evaluation (6 items) and total score ranged.
from 0-18, where score 0-6 = low level, score 7-12 = moderate level, and score 13-18 = high levels of perception regarding the roles of nurse in promoting exclusive breastfeeding.

**Content validity and reliability of the instrument**

The content validity of this instrument was tested by a panel of three experts, one Thai nursing instructor, one advanced midwifery nurse, and one Bangladeshi senior staff nurse. The internal consistency of the instrument was tested. Cronbach’s alpha coefficient for roles of nurse in promoting exclusive breastfeeding for mothers groups was 0.97 and for staff nurses was 0.75.

**Ethical Considerations**

After approval of this study by the Institutional Ethics Committee, Faculty of Nursing, Prince of Songkla University (PSU), permission was obtained from the directors and ward in charge of three settings. The researcher briefly explained to the participants the purpose of the study, assurance of confidentiality and freedom to withdrawal from the study at any time. Finally, written consent forms were taken from the mother and staff nurses for willingness to participate in this study.

**Data collection**

Questionnaires were distributed to the staff nurses and were collected after completion by the subjects. For mothers group, they responded to the questionnaires after at least 6 hours following delivery. Questionnaires were collected and checked by the investigator for the completion before data analysis.

**Data analysis**

Demographic characteristics of data were analyzed by using descriptive statistics, frequency, mean, standard deviation, and percentage. Independent t-test and Mann Whitney U-test was used to compare the mean difference between mothers and staff nurses perception towards the roles of nurses in promoting exclusive breastfeeding.

**Results**

**Mothers’ demographic characteristics**

The mothers age ranged from 18 to 39 years (M = 23.44 years, SD = 4.54 years). Majority of the mothers were Muslim (87.5 %) and all were married. The mothers had attained primary (45 %) and secondary level of education (47.5 %). Most of the subjects were housewife (92.5 %) and their monthly approximate income were less than 150$ (Tk 10,000). More than half of mothers have two babies (53.8 %), while 53.8 % of mothers have only one
baby. Twenty-three mothers (28.8 %) had the age of their last babies greater than 4 years old. Thirty-five mothers (43.8 %) postpartum period were from 12 to 24 hours.

**Staff nurses’ demographic characteristics**

The mean age of staff nurses was 38.56 years (SD = 5.01 years) and it ranged from 30 to 55 years. The majority of the staff nurses were Muslim (71.3 %) and almost all of them were married (92.5 %). Most of the staff nurses gained Diploma in nursing (83.8 %). The average family income per month was approximately 300 to 400$ (Tk 20,000 to 30,000). The staff nurses had work experiences in postnatal ward ranging from 6 months to 2 years. More than half of staff nurses had special training on breastfeeding for around 1 week (55 %).

**Levels of mothers’ perception**

The total level of mother’s perceptions on the roles of nurse in promoting exclusive breastfeeding was moderate (M = 92.56, SD = 35.10). The three sub-scale including 1) Data collection and assessment (M = 44.78, SD = 15.81), 2) Planning (M = 6.18, SD = 3.68) and 3) Implementation (M = 38.33, SD = 14.51) while the only one sub-scale, the evaluation, mothers perception was at a low level (M = 3.29, SD = 4.83) (Table1)

**Levels of staff nurses’ perception**

The total level of staff nurse’s perceptions on the roles of nurses in promoting exclusive breastfeeding was at high level (M = 152.99, SD = 12.57). The four sub-scales including 1) Data collection and assessment (M =67.35, SD = 5.05), 2) Planning (M = 11.41, SD = 1.15), 3) Implementation (M = 59.33, SD = 4.82), and 4) Evaluation (M = 14.9, SD = 5.23) were all at high level (Table1).

<table>
<thead>
<tr>
<th>Roles of nurse</th>
<th>Mothers (n = 80)</th>
<th>Staff nurses (n = 80)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Data collection and assessment</td>
<td>44.78</td>
<td>15.81</td>
</tr>
<tr>
<td>Planning</td>
<td>6.18</td>
<td>3.68</td>
</tr>
<tr>
<td>Implementation</td>
<td>38.33</td>
<td>14.51</td>
</tr>
<tr>
<td>Evaluation</td>
<td>3.29</td>
<td>4.83</td>
</tr>
<tr>
<td>Total scale</td>
<td>92.56</td>
<td>35.10</td>
</tr>
</tbody>
</table>
Comparisons of Means Score of Roles of Nurse between Two Groups Mothers’ and Staff Nurses’

The results showed that the staff nurses have significantly higher mean score of perception on the roles of nurses in promoting exclusive breast feeding (M = 152.99, SD = 12.57) than the mother’s perception (M = 92.56, SD = 35.10) (Table1). The staff nurses perception on the sub-scale of data collection and assessment were significantly higher (M = 67.35, SD = 5.05) than mother’s perception (M = 44.78, SD = 15.81) in promoting exclusive breastfeeding (t = 12.16, p < .001) (Table 2).

Table 2 Comparisons of the Total Means Score of Roles of Nurse and Mean Score of Sub-scale of Data Collection and Assessment in Promoting Exclusive Breastfeeding

<table>
<thead>
<tr>
<th>Roles of nurses</th>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data collection</td>
<td>Mothers</td>
<td>80</td>
<td>44.78</td>
<td>15.81</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>and assessment</td>
<td>Staff nurses</td>
<td>80</td>
<td>67.35</td>
<td>5.05</td>
<td>12.16</td>
<td></td>
</tr>
<tr>
<td>Total nurses</td>
<td>Mothers</td>
<td>80</td>
<td>92.56</td>
<td>35.10</td>
<td>14.49</td>
<td></td>
</tr>
<tr>
<td>roles</td>
<td>Staff nurses</td>
<td>80</td>
<td>152.99</td>
<td>12.57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results showed that the mothers have significantly difference perceptions than perceptions of staff nurses on the sub-scale of planning (z = 9.20, p < .001), implementation (z = 9.05, p < .001) and evaluation (z = 9.21, p < .001) roles of nurse in promoting exclusive breast feeding (Table 3).

Table 3 Comparisons of the Means Rank of Roles of Nurse on Sub-scale of Planning, Implementation and Evaluation between Two Groups Mothers and Staff Nurses in Promoting Exclusive Breastfeeding

<table>
<thead>
<tr>
<th>Roles of nurse</th>
<th>Group</th>
<th>n</th>
<th>Mean Rank</th>
<th>Min</th>
<th>Max</th>
<th>Z</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Mothers</td>
<td>80</td>
<td>47.94</td>
<td>0</td>
<td>12</td>
<td>9.20</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Nurses</td>
<td>80</td>
<td>113.06</td>
<td>7</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementation</td>
<td>Mother</td>
<td>80</td>
<td>47.58</td>
<td>0</td>
<td>63</td>
<td>9.05</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Nurses</td>
<td>80</td>
<td>113.43</td>
<td>36</td>
<td>63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td>Mother</td>
<td>80</td>
<td>47.96</td>
<td>0</td>
<td>18</td>
<td>9.21</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Nurses</td>
<td>80</td>
<td>113.04</td>
<td>0</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion

Discussion of the present findings was focused on the levels of mother’s and staff nurse’s perceptions on the roles of nurse’s in promoting exclusive breast feeding, and the differences of nurse’s roles of perceptions between mother’s and staff nurse’s.

Mothers’ perceptions

The findings of the present revealed that over all moderate level of perception was found among the mothers regarding the roles of nurse in promoting exclusive breast feeding. It indicated that the most of the nurse’s sometimes perform their role in promoting exclusive breast feeding. The age of mothers in this study ranged from 18 to 39 years with a mean age of 23.44 years. In addition, 53.3% mothers were first time mothers and thirty-five mother’s postnatal period was 12 to 24 hours. Immediate postpartum period was very difficult situation for some mothers and during this period physical discomfort and fatigue were more common. In addition, teenage mothers faced more physical discomfort, fatigue and learning difficulty about the technique of appropriate positioning and medical complications that hamper the practicing of exclusive breast feeding. They were also unwilling to breast feed their baby due to discomfort (Bowman, 2007). Moreover, previous study revealed that first-time mothers were unprepared for the birth of their baby and motherhood (Cronin, 2003). They experienced the physical, mental and social changes after birth. Mother perceived that breast feeding require time for physical adjustment. They generally expected breast feeding assistance from health care providers in the hospital (Kelleher, 2006).

Mothers perceived that there is a role of nurses in facilitating easier breast feeding (Adewale, 2007). They expected that the care provider will help them during this period. The study conducted by Moore, (2004) found that participant expressed that their hospital experiences does not met their expectation. Hospital nurses were not provided with enough help or spending enough time with postnatal mothers. Moreover, mother’s personal preference and attitude towards breast feeding may also have influence on their perception (Cronin, 2003). According to Robbins and Coulter (2005) the context of individual and their expectation is also important for levels of perceptions. Therefore, mother’s fatigue and discomfort of immediate postnatal period, short stay in hospital and their high expectation towards the roles of nurse’s might have influence on their level of perceptions regarding the roles of nurses in promoting exclusive breastfeeding.
Staff nurses perception

The results indicated that the staff nurses reported a high level of perception of total roles of nurses including all the sub-scales, regarding promoting the exclusive breast feeding. Nurses were always performing their roles in promoting exclusive breast feeding. The mean age of staff nurses in this study were 38.56 years, minimum and maximum age of staff nurses was 30 and 45 years. Their educational levels were diploma in nursing (83.8 %). They had professional knowledge regarding breastfeeding. In addition their working experience in postnatal ward ranged from six months to more than two year and the job experience was 5 years to more than 25 years. This statistics reflected that their long period of job experience and working experience in postnatal ward were made them knowledgeable to always perform their role as they perceived. Previous study found that nurses considered themselves as an expert in promoting comfort measures (Moore, 2004). Moreover, more than half of staff nurses in this study had special training on breast feeding (55 %) which also has influence to perceive their role at high levels in promoting exclusive breast feeding.

Comparison of perception between two groups of mothers and staff nurses.

The results of the present study indicated that the staff nurses reported higher score for overall perception and for all sub-scales of roles of nurse in promoting exclusive breastfeeding than did that of mothers. The mothers reported a moderate level of the roles of nurse in promoting exclusive breastfeeding while the staff nurse’s perceptions was at a high level. Muntlin, et al. (2006) stated that patient’s perception may not be always congruent with the nurse’s perception. Similarly, another study also found that the mother’s perception was moderate to high level while the nurse’s perceptions on their roles were at high levels (Kritcharoen at al., 2005).

Conclusion

In this study, staff nurses perception were at high level regarding the roles of nurses in promoting breastfeeding while mothers perception were at moderate level. The staff nurse’s perceptions were significantly difference from that of mother’s perception.

Recommendation

Based on the findings of present study, further in-depth interview and qualitative study may be conducted to explore the factors that increase the mother perception regarding the roles of nurses. Findings of this study may not be generalized to the whole nurses in...
Bangladesh. Thus, further study may be needed in this area to generalize the finding and to identify the mother’s expectation regarding the actual roles of nurses in promoting exclusive breastfeeding.

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