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Knowledge attitude and practice of exclusive breastfeeding among breastfeeding mothers in Trongsa district, Bhutan

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ABSTRACT

Introduction: The World Health Organization (WHO) has estimated around 1.4 million deaths and 10% of the disease burden in children under 5 years of age is due to non-exclusive breastfeeding in the first 6 months of life. As per the WHO, exclusive breastfeeding is considered the best nourishment for children in first six months. However, majority of the mothers fail to practice exclusive breastfeeding due to inadequate or lack of knowledge which poses a challenge. Thus, this study intends to assess knowledge, attitude and practices among breastfeeding mothers in Trongsa. **Methods:** A cross-sectional study was used. Data was collected from 205 breast feeding mothers in Trongsa District using the pre-tested structured questionnaire. **Results:** Majority (98%) of the mothers had an adequate knowledge on exclusive breastfeeding starting from early initiation, the feeding of colostrum and providing complementary feeding. Health staff and the national television were the main source of information for the mothers on exclusive breastfeeding. However, in terms of practice, 20% of them did not exclusively breastfeed and had given additional feeds along with breast milk with the assumption of insufficient mother's milk. Similarly, 13.2% of them had squeezed and thrown away the colostrum. **Conclusions:** Despite mothers having good knowledge on exclusive breastfeeding, it was not practiced and followed. This study's findings indicate a gap between the knowledge and the actual practice of exclusive breastfeeding among breastfeeding mothers in Trongsa.

Keywords: Attitude; Exclusive breastfeeding; Knowledge; Practice.

INTRODUCTION

Globally, it was estimated that more than nine million children under five years die annually and about two-thirds of these deaths are associated with inappropriate feeding practices occurring in the first year of life¹. However, early and exclusive breastfeeding could prevent over 800,000 deaths (13% of all deaths) in children under five years. The promotion of breastfeeding knowledge leads to the promotion of attitude and subsequently to the improvement of their breastfeeding practices². The existing knowledge, unawareness, socio-cultural beliefs and misconceptions are reported to influence breastfeeding practice among mothers². An adequate breastfeeding knowledge, positive attitude and the best practices have the potential to save the lives of 1.5 million children under five years annually³.

Every infant must be exclusively breastfed for the first six months of life as per the recommendation of the World

Health Organization (WHO) and United Nations Children's Fund (UNICEF)³. Exclusive breastfeeding is giving of only breast milk without any additional foods or drinks, including water but with exception of vitamins and oral rehydration solution⁴.

Mother's milk is an ideal nourishment containing nutrients for survival, growth and development in the first six months of life^{5,6}. It also builds the immune system of the baby and protects against gastro intestinal and acute respiratory infections^{5,6}. Those children who are partially breastfed or not breastfed at all are more at risk of dying due to diarrhea and other infections than exclusively breastfed babies^{7,8}. Studies have confirmed that the exclusive breastfeeding is not only important for the infant but also for maternal health since it establishes a strong maternal and child bonding and emotional satisfaction^{9,10}. It doesn't cost anything, reduces health care costs and is easily digestible¹¹

However, the actual practice of exclusive breastfeeding is confronted with a number of challenges and barriers like poor family and social support, lack of knowledge, social norms, mothers shyness, problems related to breast and barriers related to health services¹². It was also found that major reasons for

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poor health outcomes among children was mainly due to the poor practices and attitudes toward exclusive breastfeeding especially in developing countries¹²⁻¹⁴.

The National Nutrition Survey, (2015) of Bhutan found that 51.4% of Bhutanese women exclusively breastfed their children as per the WHO guidelines¹⁵. Wangdiphodrang and Samtse districts reported the highest pre-lacteal feed (feeding a baby prior to giving breast milk and colostrum) with 21.3% and 17.2% respectively. Likewise, Lhuentse and Zhemgang had the lowest with 2.6% and 1.9%^{15,16}.

As per the Bhutan Multiple Indicator Survey, (2010) bottle-feeding is still prevalent in Bhutan. About 11.5% of children aged 0-23 months are bottle-fed¹⁶. The prevalence of bottle-feeding among children 0-23 months is highest in the Western region (14.8%) when compared with the Central (9.9%) and Eastern regions (7.8%). The practice of bottle feeding is highest among highly educated mothers, in richer households and urban areas¹⁶.

Therefore, this study intends to assess the knowledge, attitude and practices of exclusive breastfeeding among breastfeeding mothers to develop appropriate program interventions and evidence-based policy decisions. The findings will enable identification of gaps in knowledge, attitude and practices related to exclusive breastfeeding practices and assist health care professionals to promote exclusive breastfeeding practice with a focused effort. Furthermore, as there is limited research on exclusive breastfeeding in Bhutan, this study can be used as a benchmark for further studies.

METHODS

Study design

A quantitative study with cross-sectional design was used to assess knowledge, attitude and practice towards exclusive breastfeeding among breastfeeding mothers from November 2016 to April 2017 in Trongsa district, Bhutan.

Setting

Bhutan is a Himalayan country with rugged terrain and scattered settlements with a population of 7,35,553 and an area of 38,394 square kilometers, administratively divided into 20 districts (Dzongkhags) and 205 blocks (Gewogs)¹⁷. Health services are delivered through 30 hospitals, 25 Basic Health Units (BHU) I (10 bed capacity), 185 BHU-II (5-bed capacity), 49 sub-posts and 59 traditional health facilities, and 553 Out Reach Clinics (ORCs). In total there are 5,028 health staff workers and an additional 1149 Village Health Workers (VHWs) scattered all across the country¹⁸. It is structured into a three-tiered health system with a hierarchy ascending from VHW and ORC to BHUs at the primary level and district hospital at the secondary level and regional and national referral hospital at tertiary level^{19,20}. The study was conducted in all health centers under Trongsa district. The district is located in the center of the country with a population of

16,012 (8088 male and 7924 female) with 1807 sq.km²¹. There is one district hospital, six BHUS, four sub-posts and 18 outreach clinics through the network of primary health care services^{22,23}.

Participants

All breast feeding mothers with infants less than six months in Trongsa District during the study period were included in the study.

Data collection

Data was collected using a pre-tested, structured questionnaire which was self-administered for literate participants and was conducted via a face-to-face interview for illiterate participants by the trained health workers. The questionnaire included socio-demographic characteristics of the participants, initiation and duration of exclusive breastfeeding and weaning practices. Data was collected from 1st November 2016 to 30th April 2017. The questionnaire was validated by three experts using Rovinelli & Hambleton's three categories of ratings for the index of Item-Objective Congruence (IOC)²⁴ and was further field tested before the study.

Data entry and analysis

Data was checked for completeness, coded and double entered from the questionnaire into statistical software (SPSS version 20) and analyzed using descriptive statistics comprising of frequencies, percentages and measures of central tendencies.

Measurement of variables

Knowledge was measured using a set of questions on exclusive breastfeeding especially on the duration and the initiation of breast feeding, definition and information on feeding the "first milk" or colostrum. Respondents who answered positively were assessed to be knowledgeable about exclusive breastfeeding. Attitude was measured using a set of questions that focused on the reactions and fulfillments of mothers during exclusive breastfeeding. Respondents who answered in the affirmative were considered to have had positive attitude.

Practice was measured by assessing response to questions that dealt with the conduct of exclusive breastfeeding. Those with positive responses were assumed to have had good practices of exclusive breastfeeding as detailed in the result section.

Ethical considerations

Ethical clearance was obtained from the Research Ethics Board of Health (REBH), Ministry of Health Thimphu Bhutan (REBH/Approval/2016/071, dated 21st November, 2016). Administrative clearance from the ministry and the district were also sought before the commencement of the study. A written informed consent was obtained from all participants.

RESULTS

The demographic characteristics of the participants

A total of 205 breast feeding mothers participated in this study. The mean age of the participants was 26.61 years and their age ranged from 18-45 years. More than 50% of them were from rural areas (67.8%). The major occupational group was housewives (51.6%) followed by farmers (18.0%) and corporate and private employees (11.7%) and civil servants (10.7%). Nearly 50% of respondents had an education level of high school (grade 7-12). However, 18.5% of them had no formal education.

Knowledge on exclusive breastfeeding among breastfeeding mothers

Of the 205 breastfeeding mothers, 69.8% knew about immediate initiation of breastfeeding soon after birth. About 21.5% of them responded as initiation being less than one hour after the delivery.

About 98.0% of the mothers had a knowledge on feeding the first milk “colostrum” and thought that has to be given to the baby soon after birth. However, 2.0% of them had no knowledge and thought that they need to throw it away and start breast feeding when the real milk comes in.

A total of 96.6% mothers knew that the complementary food should be started at six months, whereas 0.9% introduced it before six months and 2.5% stated it is to be given only at nine months or later.

About 91.2% mothers had heard, seen and read about exclusive breastfeeding in the last one month and the main source of information was obtained from doctors and health workers (51.2%) followed by national television (24.4%). Other sources mentioned were neighbours, friends and families (5.9%), radio, posters, leaflets and books (9%). Very few of them cited newspapers and social media as a source.

With regards to the actual duration of the exclusive breastfeeding, almost all (98.5%) knew that the baby should be exclusively breastfed till six months.

Attitudes and practices regarding exclusive breastfeeding among lactating mothers

Although 98.5% breastfeeding mothers reported having breast fed their child, only 20% of them had not exclusively breastfed. About 36.6% of them gave plain water followed by infant formula (12.2%), cow’s milk (9.8%), butter (7.2%), fruit juice and tea (4.9%), sugar and glucose (2.4%) and others local foods such as porridge and floor. It was found that 13.2% of them had squeezed and thrown away colostrum.

Reasons for non-exclusive breastfeeding were because mothers had a feeling of producing insufficient breast milk for their babies (56.1%) and having to return for work before six months due to absence of six months maternity leave (22.0%). Some of the mothers (7.3%) gave additional feed when their children fell sick and when the child refused to drink even when well (4.9%). Very few mothers reported that due to problems related to

the breast such as breast engorgement and nipple sores, they had to discontinue breastfeeding and started with the additional foods and drinks.

DISCUSSION

This study showed that although mothers had an adequate knowledge on exclusive breastfeeding, their knowledge did not translate to practice; thereby resulting in a big knowledge and practice gap. The findings were similar to a study conducted by Victor Mogre et al²⁵ where the attitude towards exclusive breastfeeding was positive and the knowledge was generally high but the practice was found to be lower than desired.

This study found that the majority of the mothers had a sound knowledge about the early initiation of breastfeeding immediately after the birth similar to the study conducted in Nigeria in 2016²⁶. It has also shown that the majority of them knew about the actual duration of the exclusive breastfeeding. Results were similar to a study carried out by Maeza Mitiku Asfaw et al²⁷. However, 20% of mothers did not breastfeed exclusively and had given additional feeds along with breast milk before six months of age. Mothers perceived that once the baby is born and as the child grows and increases in age, breast milk alone might not be sufficient to get the required nutrition for growth and development. In addition, about 98% of mothers knew the importance and necessity of feeding of first milk “colostrum” to the baby soon after the birth but 13.2% of them had squeezed and thrown away colostrum.

Majority of the mothers knew about complementary feeding that has to be started after six months since they heard, seen and read about the exclusive breastfeeding from doctors and health workers, national television and other sources. This is similar to a study conducted in Nigeria²⁸. The finding from the Bhutan Multiple Indicator Survey, 2010 highlighted that the main source of information to mothers was through family and friends¹⁶.

The reason why lactating mothers started foods or drinks apart from breast milk before six months was mainly because they assumed that mother’s milk is not sufficient for their babies. The findings were similar to the studies conducted by Sohair et al. in Saudi Arabia²⁹ but different from other studies^{30,31}. Another reason stated was mothers having to return to their work which is similar to the finding from this study in Saudi Arabia²⁹. Health problems for both the baby and the mother was an additional reason for the early introduction of other feeds, which was similar to studies in Saudi Arabia and Ajman^{29,32}. Similar reasons were cited in the study conducted by Ruwei Li et al where the child’s health issues and mother’s health problems were stated to be reasons for adopting and preferring bottle feeding³³. Mother’s poor knowledge and negative attitude towards breastfeeding may influence their practices and constitute a barrier to optimizing. Hence, it is necessary that breastfeeding mothers should have a positive attitude, adequate knowledge and appropriate practices of breastfeeding.

CONCLUSIONS

This study found that there was an adequate level of knowledge among the breastfeeding mothers in Trongsa district. However, there were gaps between the knowledge, attitude and their practice level. Mothers were aware that their babies need to be exclusively breast fed for the first six months, only 20% of the mothers started additional feeds such as plain water, milk, tea and juice before six months of age. Similarly, they knew that colostrum was supposed to be given soon after the birth but 13% threw it away instead of feeding.

LIMITATIONS AND STRENGTHS OF THE STUDY

Since data was collected by health workers, there may be a high probability of social desirability bias. The strengths of the study are that this is the first district-wide study on exclusive breast feeding and data was double entered and validated to ensure data quality and to avoid data entry errors.

RECOMMENDATIONS

This study recommends the findings to be applied at three levels. Firstly, at the policy level where our study findings may be used as one of the future references at the national level. Secondly, at the management and practice level where health managers and other health professionals can use it as a reference to solve problems related to exclusive breastfeeding. Thirdly, findings from this study may serve as an eye opener for the future to study important proper practices such as the throwing away of colostrum.

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AUTHORS CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

DT: Concept, design, data collection and analysis, manuscript writing and review.

MSG: Design, design and manuscript writing

NW: Design, data collection and analysis, manuscript writing and review

DP: Design, data collection and analysis, manuscript writing and review

Author agree to be accountable for all respects of the work in ensuring that questions related to the accuracy and integrity of any part of the work are appropriately investigated and resolved.

CONFLICT OF INTEREST

None

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