

ARTICLE

Knowledge of breastfeeding women regarding exclusive breastfeeding in one district in Omusati region, Namibia

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Abstract. Breast milk is needed for the growth and development of the baby; therefore, a woman should breastfeed exclusively for six months for the baby to get all the necessary nutrients. Breastfeeding mother's knowledge on exclusive breastfeeding plays an important role in the baby's growth. To determine and describe the knowledge of breastfeeding women regarding exclusive breastfeeding in the Outapi District, Omusati region. A quantitative, descriptive research design was used. The population were all women in nine clinics in Outapi district breastfeeding babies aged 0 to 6 months. The target population consisted of 401 lactating mothers of postnatal attendance with babies from 0-6 months in the Outapi district, in nine clinics. Cluster sampling was used to select clinic according to higher attendance, low and moderate attendance and three clinic were selected. The sample size was calculated using Solvin's formula. Simple random sampling was used to select the sample size of 200 participants. Data were collected using a self developed questionnaires that collected socio-demographic information and knowledge questions. Data was analysed using SPSS version 26. Descriptive statistics generating frequencies and percentages. The results revealed that majority of the participants have knowledge regarding exclusive breastfeeding, include, the definition, the importance and advantages of breastfeeding. Most of the participants have higher knowledge on the importance of colostrum, complementary feeding as well as the importance of breastfeeding in disease prevention on the mother and the baby. The overall knowledge of participants were higher. The study found out that most of the participants are aged 20 to 31 years old, single and unemployed. The study have identified that participants have higher knowledge regarding exclusive breastfeeding. The study recommended that the Ministry of Health and Social Services (MoHSS) should institute strategies and actions that

can help breastfeeding mothers to better utilize their knowledge on practicing exclusive breastfeeding and enshrined in the nutritional policy to promote health and wellbeing of new-born babies.

Introduction

For the new-born baby, breastfeeding is recognized as providing the best nourishment for the baby, hence the global recommendation for exclusive breastfeeding for new-born babies (1). Exclusive breastfeeding means that giving breast milk only to the baby for the first month in exception of medication, vitamins and minerals (1). Breastmilk is the healthiest diet for babies because it has a specific nutrient profile of proteins, carbohydrates, and lipids that are essential for proper cell function and growth. According to the United National International Children's Emergency Fund (UNICEF) (2), half of the population deaths in the world are newborn babies. However, placing a baby on a mother's breast immediately after birth may reduce the infant mortality rate (2). Moreover, exclusive breastfeeding promotes mothers' health because it prevents the risk of breast cancer and ovarian cysts; it also strengthens the bond between the mothers and their babies (3). According to the study done in Ghana (4) maternal knowledge may influence the practice of exclusive breastfeeding. Furthermore, Poreddi *et al* (5), showed that only 36.9% of women had knowledge of exclusive breastfeeding. These authors further concluded that the mothers' lack of knowledge due to the fact that health workers might not have provided them with pre and postnatal education on exclusive breastfeeding.

A study by Tyndai *et al* (6) in Nigeria revealed that breastfeeding mothers are not practicing exclusive breastfeeding because they had no knowledge on the advantages of exclusive breastfeeding. According to the report of the World population data sheet (7), 70% of infants are not exclusively breastfed globally. The WHO (1) recommends that every breastfeedingb mother should exclusively breastfeed because breast milk provides complete nutrition for the babies for the first six months. According to Outapi district annual report for 2016/2017 (8), only 57% of babies were exclusively breastfed. However, the researchers could not find any study on knowledge of breastfeeding mothers regarding exclusive breastfeeding in Outapi District.

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Materials and methods

Ethical Considerations. Ethical approval for the study was granted by the University of Namibia, Research Ethical Committee (SON/3/2020). Approval was also obtained from the Ministry of Health and Social Service Research Ethics Committee and from Outapi district management. The participants who agreed to participate in the study were provided with a consent form to sign after the research purpose and process has been explained to them. The participants were ensured that participation in the study is voluntary. Confidentiality was ensured by not recording the patient names, but using pseudo numbers instead. The study did not pose any direct risk or harm as the questionnaires did not have a question that may cause harm to the participants. Probability sampling was utilized to ensure that all participants had an equal chance of participating in the current study.

Study setting. The study context was three clinics in Outapi district in Omusati region. Outapi district consist of nine clinics. The selected clinics provides comprehensive primary health care services that include antenatal care, postnatal care and immunization. The Omusati Regional annual report of the Ministry of Health and Social Services for 2016/2017 (8), indicated that only 64% of the babies were exclusively breastfed. However, the report for 2017/2018 (9), revealed that the number of breastfed babies at Omusati region decreased to about 45%. The report further illustrated the percentages of babies who were exclusively breastfed for the districts in Outapi were 39%.

Study design. This study used a quantitative, descriptive analytical research design was used.

Population and sampling. The study population was all women in Outapi district breastfeeding babies aged 0 to 6 months. The target population consisted of 401 breastfeeding women attending the clinic with babies aged 0-6 months in nine clinics. Cluster sampling was used to select three clinics by clustering the clinic as higher, moderate and low attendance respectively. Participants were sampled using a simple random sampling. A sample size of 200 was calculated using Slovin formula ($n = \frac{N}{1 + N(a)^2}$) at a 5% margin of error. The distribution of the sample for each clinic was done according to the proportion of lactating mothers per each facilities follow: Outapi clinic 146 (73%), Onawa clinic 39 (19.5%) and Anamulenge clinic 15 (7.5%). The inclusion criteria was all women visited clinics for babies' consultation, either for immunization or treatment with babies aged 0-6 months who are residing in Outapi District. Breast feeding women with babies from 0-6 months who are from clinics which are not part of the study were excluded.

Data collection and analysis. Data were collected in April 2022 using interviewer led questionnaire developed by the researchers in English. The data collection tool consisted of two sections that collected data on socio-demographic factors and knowledge on exclusive breastfeeding. Participants were identified from different consulting rooms such as immunization room and pediatric screening room with the assistance of the registered nurse at the clinics.

Validity of the data collection tool was ensured by ensure that questionnaires were consisting of questions related to the topic and study objectives. Furthermore the items on the data collection tool were clear and understandable and derived from the literature. Data collection tool was also reviewed by an experts in the field. Reliability was ensured by piloting the data collection tool on 10% of maternal records to ensure that all important variables of concern were covered. Data were analysed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive univariate analysis was performed for each variable, generating frequencies and percentages for sociodemographic characteristics and variables on knowledge regarding exclusive breastfeeding.

Results

Sociodemographic characteristics. The mean age was 27.5 years with a standard deviation of 8.2 years. As displayed in Fig. 1 participant's ages were categorized with the maximum frequency 83 (41.5%) recorded in the 21 to 30 years age category and a minimum, 16 (8%) of 41 years and above years age category. Wambo's were the most dominating tribe (92.5%), and a few were Dhembas 7 (14%) as well as 1 (0.5%) respondent who was a Herero. Regarding the marital status, 138 (69%) were single, 33 (16.5%) were married, 23 (11.5%) were cohabitating, 5 (2.5%) widow and 1 (0.5%) divorced. Most participants attended secondary school 123 (61.5%) and the minority of, 4 (8%) went up to college. Regarding the employment status, most participants 137 (68.5%) were unemployed, 27 (13.5%) had full time employment, 22 (11%) were self employed while 14 (7%) were on part time employment. The mean age of babies was 2.6 months with a standard deviation of 1.5 months. Most babies, 58 (29%) were 2 months of age while only few, 6 (3%) were five months old. The results illustrated that most of the babies were the first babies 56 (28%) and the least were the seventh babies which is 7 (0.5%).

Knowledge regarding exclusive breastfeeding. Only few participants 8 (4%) indicated that they never heard about exclusive breastfeeding. Participant s' knowledge was evaluated on where they heard about exclusive breastfeeding. Most 130 (65%) heard about exclusive breastfeeding at the health facilities, 35 (17.5%) radio, 21 (10.5%) friends or relatives and 10 (5%) at school while a smaller number of, 10 (5%) heard about it at school. As shown in Table I participants indicated the meaning of exclusive breast feeding. Majority 158 (79%) indicated that exclusive breastfeeding means giving breast milk only up to six months followed by 31 (15.5%) that indicated that exclusive breastfeeding mean giving breastmilk and water up to six months.

Knowledge on the importance and advantages of exclusive breastfeeding to the baby. Participants were assessed on the knowledge concerning the importance of exclusive breastfeeding to the baby. Majority, 191 (95.5%) indicated that exclusive breastfeeding is important to the baby, while nine 9 (4.5%) indicated that exclusive breastfeeding is not important. Participants were requested to specify their knowledge concerning the advantage of exclusive breastfeeding. Most of the respondents 169 (84.5%) know that the advantage of

Table I. Knowledge regarding the meaning of exclusive breastfeeding.

Meaning of exclusive breastfeeding	Frequency	Percentage (%)
Giving breast milk only up to six months	158	79
Giving breast milk and water up to six months	31	15.5
Giving breast milk only up to one year	8	4
Giving breast milk and formula milk up to six months	3	1.5
Total	200	100

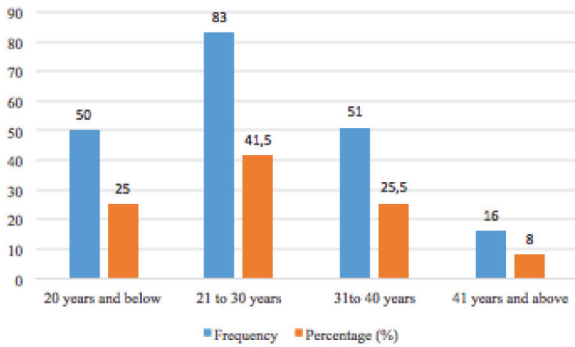


Figure 1. Age categories of participants.

exclusive breastfeeding is to protect the baby from certain diseases, 23 (11.5%) stated that it does not contain all the nutrients, 7 (3.5%) stated that breastmilk is not enough for the baby and only 1 (0.5%) revealed that exclusive breastfeeding causes abdominal cramps. Participants were also requested to indicate their knowledge regarding the meaning of colostrum. Large number of participants 121 (60.5%) stated that colostrum is the first milk that the mother must discard before breastfeeding. Moreover, 60 (30%) indicated that colostrum is the first milk which is rich in nutrient, 13 (6.5%) indicated that they do not know what colostrum is while (3%) indicated that colostrum is the first milk that babies do not like. Regarding their knowledge about the use of the first milk expressed after childbirth most participants 148 (74%) reported that the first milk expressed after childbirth is discarded, 27 (13.5%) indicated that they do not know while 25 (12.5%) indicated that the milk should be fed to the baby immediately.

Knowledge about complementary food for the baby. Majority 103 (51.5%) of the participants expressed that the right time to start complementary food for the baby is when the baby is six months, 66 (33%) indicated seven months or above, 19 (9.5%) indicated four months, 8 (4%) participants indicated at five months and few 4 (2%) indicated that is when the baby is three months or less. Regarding whether breast milk alone is enough for an infant during the first six months, most of the participants 131 (65.5%) expressed that breast milk alone is enough for an infant during the first six months whereas least of them 6 (3%) indicated that they do not know.

Regarding whether breast milk alone is enough for an infant during the first six months, most participants 131

Table II. Level of knowledge on exclusive breastfeeding.

Level of knowledge on exclusive breastfeeding	Frequency	Percentage (%)
Low level of knowledge	44	22.0
High level of knowledge	156	78.0
Total	200	100

(65.5%) expressed that breast milk alone is enough for an infant during the first six months, 63 (31.5%) stated that breast milk alone is not enough for an infant during the first six months whereas least of them 6 (3%) indicated that they do not know. Regarding the knowledge on whether exclusive breastfeeding for the first six months helps to prevent diarrheal and respiratory diseases for the infant a half 100 (50%) revealed that exclusive breastfeeding for the first six months helps to prevent respiratory diseases for the infant, 67 (33.5%) indicated that exclusive breastfeeding for the first six months does not to prevent respiratory diseases for the infant and the lowest number, 33 (16.5%) indicated that they do not know.

Level of knowledge on exclusive breastfeeding. All statements under knowledge regarding exclusive breastfeeding were scored and summed up and the total categorized as a low or high level of knowledge. The minimum score was 9 and the maximum score was 18. A score of 9-13 was categorized as low level of knowledge while a score of 14-18 was categorized as high level of knowledge. The results in Table II illustrated that 44 (22%) had a low level of knowledge on exclusive breastfeeding while 156 (78%) had a high level of knowledge.

Discussion

The research outlined that the majority of the respondents were between 21 to 30 years, and they were from Outapi clinics. Most of the breastfeeding mothers had babies that were 2 months of age, and most of the babies were their first babies. According to Indongo and Mutorwa (10), the proportion of babies exclusively breastfed varied depending on the age of the baby. In addition, 35% of babies aged 0 months, 25% of babies aged 1-2 months were exclusively breastfed, while babies from 3 months were given additional food (10). Therefore, it can be

concluded that the babies who are three months upwards are likely not to be exclusively breastfed.

The current study established that majority of the respondents attended up to secondary school, and they were unemployed. Literature has shown that employment status of the breast feeding mothers may influence their practice of exclusive breastfeeding negatively. In support, Marzian, Sima, and Najaf (11), stated that infants born by working mothers are not exclusively breastfed because mothers spend some hours at work. These author further argue that working mothers are not concerned with exclusive breastfeeding since they can afford to buy formula milk that the infant can be fed on while they are at work. In contrasts Falculan and Falculan (12) indicated that educational level of the mother and age at birth have been identified as factors that are most likely to influence the onset, duration and level of child nutrition with 63 percent of elementary graduate mothers are more likely to practice exclusive breastfeeding. Even though most of the lactating mothers had knowledge about exclusively breastfeeding, they were not practicing exclusive breastfeeding. The study revealed that among the lactating mothers 78% had high level knowledge on exclusive breastfeeding. Similarly, Saghar, Asghar and Farooq (13) found that 95% mothers were armed with information on EBF but only half were practising it. Therefore, having knowledge in EBF does not necessarily translate into practising it.

The findings of the study revealed that most of the respondents knew that exclusive breastfeeding means giving breast milk only up to six months. The World Health Organisation (14) define exclusive breastfeeding as giving a baby only breast milk with no additional foods or liquid with exception of medicines or vitamins if prescribed for the first six months of life. Majority the participants, 95.5% have indicated that breastfeeding is important to the baby. Further, the study established that exclusive breastfeeding has an advantage as it protects the baby from acquiring certain diseases. This finding agrees with Khan and Islam (15), who concluded that breast milk can prevent diarrhoeal disease as well as malnutrition. The result of this study further resonates with the Ene-Peterand and Orukwou (16) who concluded that breastfeeding exclusively is an unrivalled method of supplying optimum nutrition for infants' healthy growth and development.

Most 60.5% of the participants stated that colostrum is the first milk that the mother discards before breastfeeding. This result is similar to the findings by Rollins, *et al* (17), that stated that the advice or influence of the community may sometimes result in infants not getting colostrum or being provided with fluids or foods prior to six months. This implies that the discarding of colostrum by breastfeeding mothers may be due to external influences as represented by family members, friends, or relatives. The study revealed that mothers do not use the first milk that is expressed after childbirth. Most of the respondents (74%) indicated that they discarded the first milk which is expressed after childbirth. Oftentimes, colostrum that is treated as dirty, sour, and immature milk and as a result, they are discarded. This finding is similar to a study by Onyango *et al* (18), which stated that breastmilk alone provides nutrients for just four months, and colostrum is harmful to infants since it is thought to induce diseases like leprosy and

eye disorders. The study further established that participants had sufficient knowledge on the right time to start complementary food for the baby. Therefore, most of the participants expressed that the right time to start complementary food for the baby is from six months.

Furthermore, the study findings outlined that breast milk alone is not enough for an infant during the first six months. This finding is in line with Indongo and Mutorwa (10), who mentioned that the majority of babies are not exclusively breastfed because lactating mothers do not have knowledge about exclusive breastfeeding, and they have negative attitudes which may result in the poor practice of exclusive breastfeeding. A study by Saghar, Asghar and Farooq (13), stated that despite the fact that the majority of the mothers had relevant information or knowledge on the exclusive breastfeeding, it nearly a half of these mothers were practicing breastfeeding. Therefore, lactating mothers should be educated on the importance of implementing the knowledge they have regarding breast feeding.

Limitation

The study was conducted in one district, so the findings could not be generalised. Furthermore, the study only used quantitative approaches. Using a mixed method could have increased chances of getting more information after exploration through qualitative approach.

Conclusions

The findings of this study have identified that lactating mothers are mostly middle aged and single. Further, the study concluded that participants have higher knowledge regarding exclusive breastfeeding.

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Contributions

VN, Study design, data collection and data analysis, final approval of the version to be published; EMN, Study design, man- uscript writing, final approval of the version to be published; MN, Study design, manuscript review, final approval of the version to be published.

Conflict of interests

None.

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