

**KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING
BREASTFEEDING AMONG MILITARY MOTHERS IN THE
MINISTRY OF DEFENCE**

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July 2015

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**A Thesis Submitted to the School of Psychology of Addis Ababa
University in Partial Fulfilment of the Requirements for the
Degree of Masters of Arts in Developmental Psychology**

Addis Ababa, Ethiopia

July 2015

Addis Ababa University

School of Psychology

This is to certify that the thesis prepared by Getnet Shewa Teshager entitled Knowledge, Attitude and Practices regarding Breastfeeding among Military Mothers in the Ministry of Defence and submitted in partial fulfilment of the requirements for the degree of Master of Arts (Developmental Psychology) complies with the regulations of the university and meets the accepted standards.

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Acknowledgement

First I'm very glad to express my special thanks to my adviser, Prof. Darge Wole, for his valuable suggestions, comments and constructive criticisms from the very beginning to the end of this study.

My special thanks also goes to the command of Ministry of Defence Women's Affairs Center, Col. Letebrhan Kahssay, for her great cooperation and support. I don't forget the cooperation and contribution of the commands and staff members of Women's Affairs branches: Col. Mamit, W/r Mastewal, Col. Huluagersh, Maj. Gidey, Captain Trihas, Col. Adina, W/r Sisay, W/t Sosina, Ato Yonas, Captain Tiemti, Sergt. Tsigereda, Col. Awut, Lt. Haregeweyn, and others "THANK YOU SO MUCH".

I offer my heartfelt gratitude, deepest love and respect to my beloved, W/t Seble, A. and to my families, not only for their moral, financial and material support but they are everything to me.

My gratitude also goes to my classmates, in particular to Ato Tesfaye, G., Ato Esubalewu, A. and W/t Roman, T.; they are always with me and have contributed a lot to the present study.

I really also want to give my thanks to workers in the Training Main Department Human Resource Department, especially all psychology staff members: their advice, support and cooperation are unforgettable.

Abstract

The aim of this study was to assess the knowledge, attitude and practices of military mothers in the Ministry of Defence regarding breastfeeding. Data were collected from 268 randomly selected sample from seven purposively selected units. The sample consisted of military mothers who gave birth in the last five years. The mean age of the respondents was 33.9 years. All data were collected through structured and pretested questionnaire. Descriptive statistics, one-way ANOVA, and binary logistic regression were employed to the quantitative data. These statistics were processed by using SPSS-version 20, with 95% level of confidence. Results revealed that most military mothers (73.1%) have good overall breastfeeding knowledge. They have also a positive overall attitudes towards breastfeeding ($M=4.24 / 5.00$). Around 67.8% of the respondents practiced breastfeeding. From those activities of breastfeeding, practice of exclusive breastfeeding and weaning at appropriate time were observed only by 35.1% and 45.3% of the respondents respectively. Respondents whose educational levels were diploma and degree indicated better breastfeeding knowledge than respondents whose educational levels were $\leq$ grade 12 (mean difference = -.1596 and -.225). Those respondents who had four children also indicated better breastfeeding knowledge than respondents who had only one child (mean difference = -.187). However, attitudes did not show significant differences ($P > .05$) regarding the respondents' age, rank, educational level and number of children. Military rank had contributions to the respondents' overall practice ($ODD=.73$) and initiation of breastfeeding ($ODD=.715$). Educational level of the respondents had also contribution to their overall practice ($ODD=2.045$), initiation ($ODD=2.638$) and for continuation of breastfeeding ($ODD=1.958$) up to the age of two years. Respondents whose nature of duty demanded to work half in office-and-half in field were 3.6 times more likely to practice exclusive breastfeeding than those respondents who worked mostly in field. The main reasons of the respondents for stopping breastfeeding were work related problems (46%) followed by age of child (22.4%) and insufficient breast milk (16.7%). Generally, the present study indicates that knowledge on breastfeeding had significant relations with the respondents' attitude and practices.

Key words: Knowledge, Attitudes, Practices, military mother, Breastfeeding, mother

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List of Acronyms

DOD: Department of Defence

EBF: Exclusive Breastfeeding

FDRE: Federal Democratic Republic of Ethiopia

HIV: Human Immunodeficiency Virus

IQ: Intelligence Quotient

KAP: Knowledge, Attitude and Practice

METEC: Metal and Engineering Corporation

NCO: Non Commission Officer

PHC: Primary Health Care

SPSS: Statistical Packages for Social Science

US: United States

WHO: World Health Organization

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

A nourished nation can enrich in human resources and thus educated mother can help to make a healthy nation. Knowledge about breastfeeding and education of mother is the most important determinants for the practice of breastfeeding, which also implies its greater role for healthy children (Shaker et al., 2012). Women Infant Child Nutrition Program (2000) (cited in Shaker et al., 2012) described that growth during the first year of life is greater than at any other time after birth and good nutrition during this period of rapid growth is vital to ensure that the infant fully develops both physically and mentally.

Breast milk is the first natural food for babies. Breastfeeding is the safest, a natural gift and universally accepted means of infant feeding that provides the ideal food for the healthy growth, development and prevention of diseases of infants. Breastfeeding has also important implications for maternal health (United Nations Children's Fund, 2009; Federal Ministry of Health, Family Health Department, 2004; & Federal Democratic Republic of Ethiopia, Ministry of Health, 2003). For instance, children who are not breastfed appropriately have repeated infections, grow slowly, and are almost six times more likely to die by the age of one month compared to children who receive at least some breast milk (Shaker et al., 2012).

Tan (2009) divided infant feeding into three types: exclusive breastfeeding for the duration of six months, mixed breastfeeding when infants received both infant formula and breastfeeding, and infant formula feeding. The World Health Organization (WHO) (cited in Tan, 2009; & Al-Binali, 2012) recommend that every infant should be breastfed exclusively for the first six months of life, and continuing with breastfeeding for up to two years of age or

longer. Similarly, United Nations Children's Fund (2009) explained that infants who are exclusively breastfed up to their six months and continued up to two years with appropriate supplementary foods grow up as healthier, smarter and more productive than those who are not breastfed.

The effect of breastfeeding on the cognitive and emotional development of children and later IQ has been also documented by several studies. For instance, breastfeeding for a longer duration appears to have significant benefits for the development, cognitive IQ, educational attainment and mental health of the child up to adolescence (Ozdemir, 2012).

According to Tan (2009), the effects of westernization and urbanization in recent years have had an impact on infant feeding practices in Klang, Malaysia. The Federal Ministry of Health, Family Health Department (2005) also described that breastfeeding is widely practiced in Ethiopia and 96% of children had been breastfed during some period in their lives and this varies somehow across regions. The data showed that 72% of children were breastfed up to 24 months of age and 31% were up to their 36 months of age. However, the study of Abdulbasit, Melkie & Digsu (2013) showed that the prevalence of exclusive breastfeeding was low (8.3%) in Bahir-Dar city.

Generally, the practices of breastfeeding had associated with different background of parents and the infant as well. For instance, Tan (2009) stated that, in Malaysia, women of Chinese ethnicity, more-educated women, working women, high family income level and with male infants were less likely to practice exclusive breastfeeding than their counterparts.

In addition, different related studies were also conducted regarding different professions; including teachers (Al-Binali, 2012), garment workers (Afrose et al., 2012), nurses and midwives (Berihun & Berhanu, 2014) and military women (Lundquist et al., 2014; Freitas et al., 2012; & Bell & Ritchie, 2003).

Accordingly, Bell & Ritchie (2003) stated that because of the demographics of the active duty military force, mission requirements and organizational barriers, breastfeeding might be more difficult in the US Department of Defense. Maintaining breastfeeding would pose additional challenges if the mother has to go for field services. Bell & Ritchie (2003) also stated that little data had been collected to assess breastfeeding rates or the impact of breastfeeding on infant illness and absenteeism.

Although many similar studies were conducted in Ethiopia by different researchers at different time with different regions and professions, studies are not found in military mothers of the Ministry of Defense. Therefore, the main aim of this study was to assess the knowledge, attitude and practices of military mothers in Ministry of Defense regarding breastfeeding.

1.2. Statement of the Problem

Even though breastfeeding is a natural act, it is also a learned behavior in which most mothers get an accurate information, support and skilled practical help from their families, peers, health workers and communities, etc. These could be help to build mothers' confidence, improve feeding techniques, and prevent/ resolve breastfeeding problems that might be faced (Federal Ministry of Health, Family Health Department Ethiopia, 2004).

The World Health Organization (2003) described that malnutrition has been responsible, directly or indirectly for 60% of the 10.9 million deaths annually among children under five worldwide. Over two-thirds of these deaths, which are often associated with inappropriate feeding practices, occur during the first year of life (cited in Al-Binali, 2012).

Although breastfeeding is practiced by 96% of children in Ethiopia as stated by the Federal Ministry of Health, Family Health Department (2005), studies found that the practices were not optimal. For instance, practice of pre-lacteal feed was common. Similarly, Mussie et al. (2014) stated that 45% of respondents did not feed colostrum and 72% were giving other than breast milk in the first three days of birth. In addition, the Federal Ministry of Health, Family Health Department (2005) also stated that the median duration of exclusive breastfeeding in Ethiopia was 2.5 months, varying from 1.8 months in urban to 2.6 months in rural area.

Several reasons for these poor practices of breastfeeding in Ethiopia were identified by United Nations Children's Fund (2004), which included the traditional and cultural beliefs of the society, low education levels, heavy workload of mothers and poor sanitary conditions and poverty. However, Tan (2009) said that in order to improve the rates of exclusive breastfeeding, specific information about the beliefs and practices that influence this outcome was needed.

Variables that may influence breastfeeding include maternal age, maternal employment and profession, levels of education of parents, socio-economic status, number of previous children/parity, method of delivery, sex of child, marital status, (Al-Binali, 2012; Freitas et al., 2012; Afrose et al., 2012; Shaker et al., 2012; Tewodros, Jemal & Dereje, 2009; Mussie et al., 2014; and Berihun & Berhanu, 2014), insufficient milk supply, infant health problems, maternal obesity, smoking, maternal interest (Al-Binali, 2012), place of delivery, mode of delivery (Abdulbasit et al., 2013), military rank (Freitas et al., 2012; & Bell & Ritchie, 2003), and other related factors.

For instance, Freitas et al. (2012) found a non-significant difference on breastfeeding among mothers to the military rank, educational level and operational activities. However,

Bell & Ritchie (2003) found that higher ranking mother were more able to continue breastfeeding than lower ranking military mothers because of the higher opportunities to have an office and have a chance to control their working/operational schedules.

In general, as Bell & Ritchie (2003) stated, although most breastfeeding military mothers had a risk similar to the civilian mothers, there were some important segments of the army member population that might be at higher risks. Therefore, the purpose of the present study was to answer the following research questions regarding military mothers in the Ministry of Defense.

Research Questions

1. To what extent do mothers serving in the army demonstrate adequate knowledge, attitude and practices (KAPs) concerning breastfeeding?
2. Do the knowledge and attitude towards breastfeeding differ on account of mothers' age, military rank, educational level, and number of children?
3. To what extent do age of mothers, military rank, educational level, nature of job duty (operational activities), number of children, sex of child, and place of delivery contribute to the practices of breastfeeding?
4. What are the main reasons for stopping breastfeeding?

1.3. Objective of the Study

Recently breastfeeding has been become a workplace concern in the United States military area (Roche-Paul, 2011). The main aim of the present study was to assess the knowledge, attitude and practices of military mothers in the Ministry of Defense regarding breastfeeding.

In addition to this general objective, the study also tried to examine the following **specific objectives**:

- 1) Examining whether or not knowledge and attitude towards breastfeeding differ by age of mothers, military rank, educational level, and number of children.
- 2) Examining the contribution of mothers' age, military rank, educational level, nature of work duty (operational activities), number of children, sex of child, and place of delivery to the practices of breastfeeding.
- 3) Identifying the main reasons for stopping breastfeeding.

1.4. Operational Definitions of Terms

Knowledge – is a familiarity, awareness or understanding about breastfeeding which is acquired through experience or education.

Attitude – a predisposition or a tendency to responds positively or negatively towards a certain idea/situation (regarding breastfeeding).

Practice – a method, process and rules that mothers implemented on breastfeeding of their babies regarded as the standards.

Military Mother – a mother who is registered, trained, serving and obliged to accomplish any operations by and in the FDRE Ministry of Defense.

Initiation – the term used to describe starting breastfeeding within six hours after delivery (rather than one hour after delivery).

1.5. Significance of the Study

This study is expected to have important implications and contributions to the following:

To the Ministry of Defense – The FDRE Ministry of Defense, especially Women's Affairs Center, Human Resource Management Main Department, and different hospitals under the Health Main Directorate can get directions and information to focus on the issues to create healthy family and so more satisfied worker in the organization. In this regard, Bell & Ritchie (2003) said that breastfeeding is an important workplace issue for the Department of Defense. Supports in breastfeeding improve the health of infants and mothers, save costs, decrease absenteeism, and improve retention of active duty mothers.

To practitioners – Different practitioners including family counselors, community health expertise and policy makers can use its results in the planning, designing, educating and/or intervening for breastfeeding related tasks and problems, as well as it can be a base line for further studies.

To the academic world – Since the target population of this study was military mothers (in which breastfeeding related study was not conducted in the context of Ethiopia), its outputs might provide an additional input and source to the academy, academicians and/or to the students in many ways.

To the Ministry of Health – The Ethiopian Ministry of Health (2010) had a target to reduce child mortality and to improve child health by increasing EBF (cited in Abdulbasit et al., 2013). The present results, thus, can be a source regarding one part of the population that did not get sufficient attention (military mothers).

1.6. Delimitation of the Study

Due to dispersed location of the units and its accessibility to the researcher, this study was delimited in the units of which their main offices were placed in and around Addis Ababa. In other words, the study did not include the four Commands and Agazi division. In order to reduce recalling bias effect of breastfeeding practices, the study was also delimited to those military mothers who gave birth in the last five years.

1.7. Limitation of the Study

One of the main limitations of this study was related to recall bias. Although this study used military mothers who gave birth in the last five years, it might be difficult to accurately recall the time of initiation and when they introduced first supplemental foods, which might under or over estimate the exact prevalence of initiation and exclusive breastfeeding. Due to the nature of the army's dispersed residence, its difficulty to easily accessed them as well as researcher's time and money constraints, the study did not covers the four commands and Agazi division might limit to generalize the study population was also another limitation of this study.

CHAPTER TWO

LITERATURE REVIEW

This section is intended to provide an overview of infant feeding (with a particular focus on breastfeeding) definition, benefits, recommendations and other related concepts. Some studies conducted in the areas of breastfeeding were also reviewed. These reviewed related studies were conducted in different countries; some were in the context of Ethiopia and some were conducted in the military area.

2.1. Basic Concepts Regarding Breastfeeding

2.1.1. Definition of Breastfeeding

The Federal Democratic Republic of Ethiopia, Ministry of Health (2003) described the word “breast milk” as a liquid that contains all necessary nutrients for the growth and development of infant as well as for the prevention of diseases. It is a natural gift and a very necessary food for the baby (Shaker et al., 2012; & Al-Binali, 2012). Kumar & Kaur (2011) also defined breastfeeding as “the feeding of an infant or young child with breast milk directly from human mothers”.

Similarly, the Federal Ministry of Health, Family Health Department (2004) described breastfeeding as the ideal food for healthy growth and development of infants and is a natural act; breastfeeding is also a learned behavior. Most of these mothers have accurate and the necessary information and support from their families, peers and societies. They also have access to learn and get help from trained health workers, counselors, etc.

The World Breastfeeding Week (August 1-7) was celebrated for the first time in 1992 with the aim to promote exclusive breastfeeding (United Nations Children’s Fund, 2009).

Ethiopia is one of 120 countries that celebrate World Breastfeeding Week, starting from the time of 2009. The goal is to support infant and young child feeding, by supporting breastfeeding mothers (United Nations Children's Fund, 2004).

2.1.2. Advantages of Breastfeeding

Studies have shown the emotional and psychological importance, as well as the bonding effects of breastfeeding to both mother and child. For instance Dermer (2001) stated that breastfeeding helps to build very important bond with mother-child both physically and emotionally. The skin-to-skin contact between mother and infant is special that mothers would have not experienced before. Dermer (2001) said that "Holding a baby in the arms and looking into their eyes while he/she feeds, knowing that you are giving him everything he needs to develop and grow will bring your protective maternal instincts to the surface".

Breastfeeding also improves the cognitive, linguistic and motor development of the child (Oddy et al. (2009). The advantages of breastfeeding includes to increase the love and bond between the mother and child, serves as a contraceptive method, and contains antibodies that protect the child from diseases (Federal Democratic Republic of Ethiopia, Ministry of Health, 2003).

In addition, the Federal Ministry of Health, Family Health Department (2004) described the benefits of breastfeeding from the perspectives of maternal health and stated that after delivery, it helps the uterus to return to its normal size, reduce bleeding and prevents anemia, as well as to reduce the mother's risk of ovarian and breast cancer. Breastfeeding (especially, exclusive breastfeeding) also contributes to delay of fertility. Holbrook et al. (2012) said:

Expectant mothers are updated with information about the benefits of breastfeeding for their babies but are often poorly informed about the consequences breastfeeding has for their own mental and physical health.

Contrary to many possible benefits of breastfeeding to the mothers, it can also clash with other goals for women, such as having a full-time career. It can be problematic for women with certain physical or health conditions. It can be also associated with the social stigma in some societies. Furthermore, many women had difficulty of breastfeeding because of work constraints or physical pain (Holbrook et al. 2012).

2.1.3. Some Recommendations on Breastfeeding Practices

Many concepts were raised and recommended by the Federal Ministry of Health, Family Health Department (2004) regarding breastfeeding practice. The basic recommendations include the following:

1. Initiate breastfeeding immediately – which describes breastfeeding that should begin within one hour after birth.
2. Giving of colostrum – describes the feeding of colostrums (the first breast milk; which is yellow in color) should be promoted and pre-lacteal feeds discouraged. Colostrum is three times richer in vitamin A than mature milk. Because of its high levels of vitamin A, anti-bodies, and other protective factors, colostrum is often considered as the baby's first immunization.
3. Practice of exclusive breastfeeding from 0-6 months – refers that the child should feed only breast milk and no additional food, water, or other liquids (with the exception of medicine and vitamins, if needed) for the first 6 months of age.
4. Maintain breastfeeding up to two years of age – the child should get continuous and frequent breast milk until the age of 2 years or beyond. This is because breast milk is

an important source of energy, protein and micronutrients providing 35-40% of energy needs as well as a key source of fat, vitamin A, calcium and riboflavin.

5. Exclusive breastfeeding by HIV positive mother – describes that HIV positive mother that prefers to breastfeed should practice only EBF and should avoid mixed feeding.

The National Public Health (cited in Federal Ministry of Health, Family Health Department, 2004) as well as World Health Organization (WHO) (cited in Tan, 2009; & Al-Binali, 2012) recommended that infants should be breastfed exclusively for the first six months to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements infants should get adequate and safe complementary diet with breast milk for two years and beyond. In this regard, United Nations Children's Fund (2004) stated that the transition period between breastfeeding and infant formula feeding should be kept short as much as possible.

Women in paid employment can be helped to continue breastfeeding by being provided with enabling conditions, for example, paid maternity leave, part-time work arrangements, facilities for expressing and storing breast milk, and breastfeeding breaks (Federal Ministry of Health, Family Health Department, 2004). Similarly, the Federal Democratic Republic of Ethiopia, Ministry of Health (2003) also stated that if it is not possible to take the child to the workplace, breastfeed the child before going to work, upon returning from work, at night and at any time when the child is with his mother.

However, organizations given emphasis and even implemented by drafting related policy. For instance, the US Department of Defense (DOD) (2009) stated that the Navy revised the "Pregnancy and Parenthood Instruction" policy in 2007 that includes 12 months of operational deferment for post-partum service women, and 21 days of administrative leave for

adopting parents and mandatory requirements to support breastfeeding service-women in the work place.

2.2. Different Studies Conducted on Breastfeeding Issues

Many researches are conducted regarding breastfeeding and related issues in different countries/societies, including in the Ethiopian context. In this sub-section, some of those available articles would be reviewed with the focus of their main purposes, sample and methods used and the main findings.

2.2.1. Studies Conducted in Different Countries

One of breastfeeding related literatures that the researcher reviewed was conducted in Malaysia by Tan (2009). The main purpose of the study was to investigate the practice, knowledge and attitude of breastfeeding as well as to assess the factors that were associated with breastfeeding among Klang, Malaysia women.

The study was a cross-sectional type that involved 220 women (age ranged between 21 – 42 years) with infants aged six months from two randomly selected health clinics. All eligible mothers who attended the clinic during the study period were included. Data were collected through pre-tested and structured questionnaire ($r = \text{between } 0.82 - 1.00$) guided by interview. A Five-point Likert scale questions were used to assess women's knowledge and attitude towards breastfeeding; which then converted to 100 percent scale. All respondents were also asked a question regarding their main reasons for the types of feeding (exclusive, mixed or formula). Frequency distribution was used to describe categorical variables and mean with standard deviation for continuous variables. Chi-square test (with a p-value of less than 0.05 was considered as significant) was used to test the distribution of infant feeding.

The results of Tan (2009) indicated that exclusive breastfeeding, mixed breastfeeding and infant formula feeding practice was 32.8%, 14.5% and 52.7% of the respondents respectively. The results also showed that women with high household income, higher level of education and with male infants were associated with those who did not practice exclusive breastfeeding. The Chinese women (95%) than the Malay women (84.5%) and the working women (95%) than not working women (8.6%) were more likely not to practice exclusive breastfeeding.

As Tan (2009) stated, 29% of the respondents said that mothers' employment was a main reason for infant formula feeding and another 48% thought that having insufficient breast milk was the main reason for failure to breastfeed. Most of the respondents (71%) reported that the main reason for the practice of breastfeeding was their thought that breastfeeding was the best for the infant health. Most of the respondents also agreed with the statement of "breastfeeding is a good contraceptive method".

Al-Binali (2012) also conducted a related study with the main purpose of assessing breastfeeding knowledge, attitude and practice (KAP) among female teachers in the Abha Female Education Districts and to compare them against international standards. The study also aimed at identifying the factors that affected breastfeeding practice in the study population.

The study was also a cross-sectional type but used a self-administered questionnaire. Knowledge, attitude and practice of breastfeeding were assessed by selecting 289 mothers (mean age = 34.97 years) based on their last child experiences of breastfeeding, who had a child aged ≤ 5 years at the time of the study. Questionnaire was used to collect the data which included items addressing knowledge, attitude and practice with Cronbach's $\alpha = 0.71$. These questionnaires were sent by regular mail to all female schools within the Abha Female

Education District. Descriptive data analyses were employed. Student t-test and analysis of variance were also used as test of significance at 5% level.

The result indicated that exclusive breastfeeding up to 6 months was practiced only by 8.3% of the respondents. Breastfeeding was stopped at a mean age of 8.7 months with the most common reason of insufficient breast milk (44%) as well as work-related problems (38.5%) which is similar to the study of Tan (2009). These reasons likely shifted most of the respondents to practiced formula feeding at the age of six month (91.7%). The duration of which the child should exclusively breastfeed for six months was chosen by 28%, while 33.5% thought that the child must be breastfed exclusively up to 4 – 6 months of age.

The result also showed that breastfeeding prevalence was affected by the low rate of knowledge regarding the appropriate duration of exclusive breastfeeding (28.9%), and the time when complementary food should be introduced (30.7%), in conjunction with very low rates of attending classes related to breastfeeding issues during pregnancy (8.6%). However, 68% of the respondents indicated their willingness to attend such classes if available in the future pregnancies (Al-Binali, 2012).

Since the focus of Al-Bnali (2012) study was only on female school teachers as well as the cultural differences between this educational district and other Saudi provinces schools, the results might not be appropriate to other sector workers is the main limitation of this study.

The other related research was conducted by Afroze et al. (2012) on “Factors Associated with Knowledge about Breastfeeding among Female Garment Workers in Dhaka City”. The main purpose of the study was to determine the level of knowledge and factors associated with knowledge on breastfeeding among female garment workers in a selected garment factory.

Similarly, Afrose et al. (2012) used a cross sectional method. 200 female garment workers from age 15-49 years were selected by using purposive sampling technique and those who agreed to participate in the study. Data were collected through a pre-tested questionnaire using face-to-face interview method. Data were collected on socio-demographic information as well as different knowledge concerning on breastfeeding. The univariate and multivariate analysis (with 95% level of confidence) were employed to analyze the data.

Afrose et al. (2012) came up with the finding that the overall level of knowledge regarding breastfeeding was very poor. Most of the respondents had very poor knowledge regarding the advantages of exclusive breastfeeding (89%) and breastfeeding (100%). In contrast, majority (74% and 66%) had good knowledge on duration of exclusive breastfeeding and breastfeeding respectively. This finding also contradicts with the finding of Al-Binali (2012) that indicated the low rate (28.9%) of knowledge regarding the appropriate duration of exclusive breastfeeding.

The result also indicated that practice of breastfeeding did not show a significant association with socio-demographic variables including age, marital status, family income and expenditure. However, education was significantly associated with higher total knowledge score of breastfeeding. That is, women with secondary level of education had higher level of total knowledge score than illiterate, primary and higher secondary level of education.

Afrose et al. (2012) concluded that a large proportion of female garment workers had inadequate knowledge regarding breastfeeding. Duration of breastfeeding was a good indicator to achieved breastfeeding practice. But women who breastfeed their children without knowing the advantages of breastfeeding indicated poor knowledge of breastfeeding.

Shaker et al. (2012) conducted a study on the “Knowledge, Attitude and Practices (KAP) of Mothers towards Infant and Young Child Feeding in Primary Health Care (PHC) Centers, in Erbil City”. The main objective of the study were to assess mothers’ KAP regarding infant and young child feeding (breast, formula and complementary feeding) using WHO - 2008 recommendations, and to assess the relationship between mothers’ socio-demographic characteristics and mothers’ KAP.

In this study, a survey was carried out in 13 Primary Health Care Centers in Erbil city. Purposive sampling technique was used to select 1000 (mother child pairs) sample. To collect the data, structured questionnaire with 85 items; guided by face-to-face interview with mothers was employed. A two-point type scale for rating the knowledge and practice, and a three-point Likert scale for rating the mothers’ attitudes were used. SPSS-version 15 was used for data processing and statistical analysis.

The result indicated that mothers had well practices and positive attitudes toward breast, formula and complementary feeding. Around 23.4% of the respondents stopped breastfeeding before the child was 2 years age. More than half were stopped breastfeeding before the child was three months of age due to for having insufficient milk (35.1%), child refusal (29.7%), mother health problem (5.4%), mothers’ dislike of breastfeeding (8.1%) and pregnancy (5.4%).

The finding also indicated that there was a significant correlation among mothers’ knowledge, attitude and practices regarding child feeding. Mothers from age group 30 – 34 years were more knowledgeable about child feeding and had better attitude than other age group. Mothers’ age had also a high significant relation with their practice of infant and young child feeding which is consistent with the finding of Tan (2009) and Al-Binali (2012), and contrary to the finding of Afrose et al. (2012) and Shaker et al. (2012).

The study of Shaker et al. (2012) also showed that mothers' educational level and working status were associated with the type of child's feeding. Mothers' occupation had a high significant relation with mothers' knowledge but non-significant relation with mothers' attitude and practices.

2.2.2. Breastfeeding Related Studies in the Context of Ethiopia

Several breastfeeding related studies were also conducted in Ethiopia including the following.

A research article conducted by Rubin, Nir-Inbar & Rimon (2010) dealt with the patterns of breastfeeding among Ethiopian immigrant mothers to Israel from 2005 – 2006. The main purpose of the study was to explore the rate and duration of breastfeeding among these target population.

The study was a cross-sectional type and used structured questionnaire to interview 93 Ethiopia born mothers. Mothers who had children aged up to 5 years old were selected from the Northern part of Israel. Independent t-test was used to see the association between the duration of breastfeeding and the independent variables.

The result indicated that the Ethiopian mothers' children (92%) were breastfed exclusively than those of Israel mothers' children (76.3%). Regarding the duration of breastfeeding, the youngest child (20.1 months) was significantly shorter time than that of the first one (24.8 months).

In addition, the result indicated that there was no association between the rate of breastfeeding and the year of immigration (work outside the home). However, the duration of breastfeeding was found somehow influenced by the length of stay in Israel. In contrast to

75.7% of mothers who did not work outside the home, mothers who worked outside of the home (55.6%) breastfeed for more than two years.

Although attitude towards breastfeeding was positive, the study showed that there was lack of specific knowledge concerning the breast milk and infant formulas. For instance, the result indicated that 44% of the respondents knew the recommendation of Ministry of Health about exclusive breastfeeding, 31.2% thought that exclusive breastfeeding is up to the age of one year, 89.8% thought that breastfeeding is more comfortable than bottle feeding, and 90% thought about it as more enjoyable. About 61% of them also indicated that work does not prevent breastfeeding as well as only 3% thought that working women could not breastfeed.

Similarly, the finding of Al-Binali (2012) showed that 28.9% of the respondents had poor knowledge about the appropriate duration of exclusive breastfeeding.

Like that of Al-Binali (2012) and Tan (2009), the findings of Rubin et al. (2010) indicated that lack of breast milk (37.5%), work related problems (9.4%), and weight loss of the baby (3.3%) were the main reasons to terminate breastfeeding.

Based on those results found, Rubin et al. (2010) concluded that “Breastfeeding patterns among Ethiopian women had changed since their immigration to Israel” as the result of acculturation, and due to cultural and societal pressure.

The main limitations of the study, as stated by Rubin et al. (2010), were related to sampling technique (not used random sampling method from the total immigrants) and the effect of recall bias in collecting the data.

Tewodros et al. (2009) also conducted a related study with the main purpose of exploring the determinants of exclusive breastfeeding practice in the context of Ethiopia and

provide relevant information/suggestion to policy makers and non-governmental organizations for planning and interventions.

The study used stratified cluster sampling technique to collect data from nine regions and two city administrations with a total sample of 14,500 households from 540 selected clusters. Bi-variate analysis was used to determine the differentials of exclusive breastfeeding by explanatory variables. Pearson's chi-square test of independence was used to test the existence of associations between risk factors and exclusive breastfeeding.

Tewodros et al. (2009) found that the overall rates of exclusive and full breastfeeding were 49% and 68.2% respectively. This was somehow better prevalence of exclusive breastfeeding as compared to the finding of Tan (2009) which indicated only 32.8%. Exclusive breastfeeding was found a significant association with maternal educational level, marital status, child age and economical status. However, Afrose (2012) found that age, marital status and economical status had no association with exclusive breastfeeding.

On the other hand, Tewodros et al. (2009) study indicated that no association was observed in regards to maternal age, place of residence, current employment of women, access to mass media, attending antenatal care and sex of the child.

Based on those findings, Tewodros et al. (2009) concluded that a range of maternal and child health attributes such as marital status, economical status and child age influenced the practice of exclusive breastfeeding in Ethiopia.

The other related study was conducted by Lindstrom & Betemariam (2010) with the main purpose of examining the effect of breastfeeding and birth spacing on infant and early childhood mortality in the context of Ethiopia. The study covered 10 years (the time from 1980 – 1989).

Women aged 15 – 49 years were the target population of the study. The study involved 9,173 children from 5,640 mothers. A series of time-varying dummy variables was used to measure the effect of continued breastfeeding on mortality at the first year of life.

The result indicated that never breastfeed and infants mortality rate were strongly associated. That is, infants who were never breastfed were about 100 times more likely to die in their first month of life than breastfed infants. Lindstrom & Betemariam (2010) said that, in Ethiopia, “Infants were never breastfed either because of poor infant or maternal health condition at the time of birth or because of unwanted birth”.

In addition, the findings indicated that breastfeeding beyond the second year of life were associated with higher mortality. Children who were breastfed at the time of their second birth day were 1 or 1.5 times more likely to die before reaching age three as compared to children who were no longer being breastfed.

Breastfeeding was prolonged and extended in many cases in to third or fourth years of life. The delay of weaning was a common response to shortage of food and interpreted as a further evidence of the negative consequence of resource deprivation for child survival. However, the finding of Tan (2009) indicated that the main reason for feeding of breast milk was their knowledge that it is best for infants.

Lindstrom & Betemariam (2010) concluded that children who were breastfed in the first year of life but weaned before age two enjoyed better survival chances than being breastfed at the time of their second years. They also concluded that continued breastfeeding up to age three or later was associated with higher mortality.

In the northern part of Ethiopia, Mussie et al. (2014) conducted a study on breastfeeding with the main purpose of assessing the proportions and factors that were associated with timely initiation and exclusive breastfeeding among mothers who lived in the town of Axum.

The study was a cross-sectional type, and used systematic random sampling method to collect the data from 418 mothers who had children less than one year old. Structured and pretested (by using 5% of the total sample) questionnaire supported by interview were used. The questionnaire included knowledge, attitude and practice related items. Simple descriptive frequency tables and bi-variate analysis were used in addition to multiple logistic regression analysis to estimate indicators and effects of the predictors on timely initiation and exclusive breastfeeding.

The result of Mussie et al. (2014) indicated that the overall proportion of timely initiation and exclusive breastfeeding was 41.6% and 40.9% respectively. Sixty percent of the respondents agreed on the timely initiation of breastfeeding and 95.5% agreed on the duration of breastfeeding that should be at least for two years. Results also found that a significant percentage of mothers (over 59.3%) considered breastfeeding as time consuming and that affect the posture or health of mothers. 45% of the respondents did not feed colostrums. Seventy two percent gave the child a supplemental food than breast milk in the first three days of delivery (among them, 33% mothers gave cow milk). The result of Al-Binali (2012) also indicated that only 8.3% of the respondents breastfed exclusively for six months.

Regarding the attitudes, findings of Mussie et al. (2014) indicated that 87% mothers had positive attitude towards timely initiation as well as exclusive breastfeeding.

According to Mussie et al. (2014) study, only sex of the child and providing colostrums within an hour after delivery had a statistically significant association with timely initiation of breastfeeding. Mothers with female child were positively predisposed to breastfeed at the appropriate time.

Mussie et al. (2014) concluded that the proportion of timely initiation and exclusive breastfeeding was low and were influenced by giving of colostrums. In addition, sex of the child had an influence on timely initiation of breastfeeding.

The other related study conducted in the north-west part of Ethiopia, in Bahir Dar city was done by Abay, Dereje & Worku (2013). The main purpose of the study was to assess the determinants of exclusive breastfeeding practice among mothers who had children aged less than six months.

Similarly, Abay et al. (2013) used a cross-sectional, community based study. Six kebeles were selected randomly by using lottery method and 162 sample were used for the study. Semi-structured interview questionnaire was used. Descriptive statistics were used to determine the prevalence of exclusive breastfeeding. Binary logistic regression analysis was employed to identify associated factors. The strength of the prevalence of exclusive breastfeeding associated factors was measured by the odds ratio with 95% confidence intervals.

The results indicated that mothers' educational level, parity, family size, and time of post natal care (PNC) predict the practice of exclusive breastfeeding in the study area. In regards to this, mothers who were primary school level were 3 times more likely to practice exclusive breastfeeding than those who completed secondary school or higher. Mothers who had more families (four or more) were 3 times more likely to practice exclusive breastfeeding than those who had three or less family size.

Regarding the sex of the child, the findings showed that mothers whose child was male were 2 times more likely to practice exclusive breastfeeding than those whose child was female. However, in contrast to this finding, the result of Tewodros et al. (2009) and Tan (2009) found that women with male infants were less likely to practice exclusive breastfeeding.

Based on those findings, Abay et al. (2013) claimed and concluded that prevalence of exclusive breastfeeding was below WHO recommendation and the target of the 5th Ethiopian Health Sector Development Program.

Abdulbasit et al. (2013) also conducted a related study in the same society in Bahir-Dar city. But the main purpose was to assess the prevalence of exclusive breastfeeding and associated factors in Bahir-Dar city mothers (than the determinants, conducted by Abay et al., 2013).

Abdulbasit et al. (2013) also used a community based, cross-sectional type of study. A cluster sampling technique was used to select 819 (mean age = 26.1 years) respondents from four kebeles by using simple random sampling method. The sample size was determined by using a single population proportion formula at 95% level of confidence. The data were collected by using pre-tested and structured questionnaire supported by face-to-face interview. Results were presented using frequencies and summary statistics (such as mean, standard deviation and percentage) to describe the study population in relation to relevant variables. Logistic regression was used to determine the effects of various factors on the outcome variable.

The results indicated that almost all (99.5%) children had breastfed at some point in the past. 50.3% of respondents also practiced exclusive breastfeeding appropriate to their age. This was similar to the result of Tewodros et al. (2009) and Abay et al. (2013), which found around half of the respondents practiced exclusive breastfeeding. The mean duration of exclusive breastfeeding was three months. In the first month of life, 74.2% of infants received exclusive breastfeeding, which declined to 47.5% by the age of 4-5 months. Al-Binali (2012) also indicated that 33.5% of the respondents thought that breastfeeding must be up to 4 to 6 month of age. Similarly, Mussie et al. (2014) stated that the proportion of exclusive breastfeeding was low.

The age of the child, maternal occupation and prenatal exclusive breastfeeding plan were significantly and independently associated with exclusive breastfeeding practice. For instance, regarding maternal occupation, the result of Abdulbasit et al. (2013) was similar with the results obtained by Tan (2009), Al-Binali (2012) and Rubin et al. (2010). They all indicated that housewives had more practice of exclusive breastfeeding as compared to mothers having other occupations. 93.5% of the respondents received infant feeding counseling / advice from different sources such as health professionals, media, health extension workers and family members.

One of the limitations of the study of Abdulbasit et al. (2013) was its recall bias. Mothers might not accurately remember the exact time when they introduced the first food item.

In the south-western part of Ethiopia, Wubareg, Getasew & Gudina (2014) conducted a similar study with the main purpose of assessing the prevalence of exclusive breastfeeding and its associated factors among infants aged up to six months in the town of Jimma.

The study was also a cross-sectional type, conducted on 422 mothers selected randomly for the quantitative study by using pretested structured questionnaire and purposively selected discussants (for group discussion) for the qualitative data. The respondents were selected systematically from three governmental health centers and two hospitals. Bivariate regression was used to assess the association between explanatory variables and outcome variables. Respondents were considered as having good knowledge if they answered at least 70% of items related to breastfeeding practices.

The results of Wubareg et al. (2014) indicated that 96.6% of mothers had breastfed their infants. The prevalence of exclusive breastfeeding was 67.2%, 24.3%, and 8.4% at the age of ≤ 2 , 3 – 4, and >4 months respectively, and a mean duration = 3.2 months. As the infant grew older, the prevalence of exclusive breastfeeding decreases significantly. This was similar to the finding of Abdulbasit et al. (2013). Abdulbasit et al. (2013) found that the average

duration of exclusive breastfeeding was 3 months and the duration declined from 74.2% in the first month of life to 47.5% at the age of 4 – 5 months.

According to the findings of Wubareg et al. (2014), 53.7% of the respondents had good knowledge while 46.3% had poor knowledge about breastfeeding practice. 73% of the respondents had positive attitude towards breastfeeding practice. On the other hand, the results showed that 34.9% of the respondents strongly objected to providing breast milk to their infants at public places. Afrose (2012) indicated that almost all the respondents had poor knowledge about the advantages of breastfeeding and 66% had good knowledge about the duration of breastfeeding.

According to Wubareg et al. (2014), being younger in age, perception of adequacy of breast milk, having one child and attendance at antenatal clinics during pregnancy predicts the practice of exclusive breastfeeding.

Since the study included mothers only whose experience were not more than six months, it could reduce the recall biases and so this was the strength, while the main limitation of the study was being cross-sectional in which cause-effect can not be ascertained.

The other recent study conducted in Ethiopia was done by Berihun & Berhanu (2014) with the purpose of assessing breastfeeding practice and associated factors among female nurses and midwives in North-Gondar zone. Thus, it was focused on one professional group.

The study of Berihun & Berhanu (2014) was also cross-sectional and institution-based quantitative study, conducted among 178 nurses and midwives who had children aged from six to twenty months. Respondents were selected from 12 randomly selected health institutions from a total of 24. Data were collected by using semi-structured self-administered questionnaire. Bi-variate and multivariate logistic regression were used to identify the prevalence and strength of associations.

The results indicated that 49.4% of the respondents exclusively breastfeed for only ≤ 3 months and the mean duration was 4.1 months. This duration was, however, higher as compared to the study of Abdulbasit et al. (2013) and Wubareg et al. (2014) which indicated around 3 months.

Like most of the studies reviewed above, Berihun & Berhanu (2014) also found that maternal age, place of residence, profession, modes of delivery, parity and the time before resuming work were factors associated with exclusive breastfeeding. 78.7% of the respondents knew that the child should receive only breast milk without any supplemental food for six months, and knew that breastfeeding should be continued for up to 24 months.

The study also showed that 89.8% of the respondents could not breastfeed during working hours. None of the respondents continued or planned to continue breastfeeding up to 24 months or beyond; rather, the mean duration of breastfeeding was 9.3 months.

As the results of Berihun & Berhanu (2014) indicated, work related problems such as inadequate maternity leave, lack of child care facilities and rigid work schedules that do not allow the nurses to take breaks were among the most common reasons for the failure of exclusive breastfeeding followed by lack of breast milk (5.3%) and maternal illness (5.3%). Results also indicated that respondents who aged between 36 – 45 years were 2.8 times more likely to breastfeed exclusively than those who were aged between 15 – 25. Shaker et al. (2010) also stated that the age of mothers had a significant relationship with EBF practice.

Berihun & Berhanu (2014) also found that the respondents who were midwives by profession were 2 times more likely to breastfeed exclusively than that of nurses. Respondents who resumed work after three months were 1.6 times more likely to practice exclusive breastfeeding than those who resumed work before three months.

In the study of Berihun & Berhanu (2014), the main limitation was recall bias and small size of sample which could limit the generalization of the findings.

2.2.3. Breastfeeding Related Studies in the Military

Military is one of the areas in which women's experience is different from others due to the nature of work and working environment. Bell & Ritchie (2003) stated that the characteristics of military service, operational activity that includes policing of public places, mission requirements and organizational barriers, could make breastfeeding practice too difficult. The number of women in the military service as well as who breastfeed have increased in the last two decades. However, the chance of exclusive breastfeeding practice is lower as compared to the opportunity for civilian mothers (Haas, 2006; cited in Freitas et al., 2012).

Some breastfeeding related studies have been conducted on military women. The following are some of them.

The study conducted by Lundquist et al. (2014) aimed at comparing behavior of military and civilian mothers and examining racial disparities in the initiation and duration of breastfeeding.

The sample consisted of singleton births of 306,808 civilian women and 6601 military affiliated women. The data were obtained from mothers by using mailed questionnaires and telephone follow ups for non respondents. T-test was employed to compare the independent and dependent variables across the military and civilian samples, and chi-square test was employed to compare means and proportions. In addition, logistic regression was used to predict the likelihood of ever breastfeeding.

The results of the study indicated that breastfeeding was more prevalent among the military mothers than civilians. The black-white gap in breastfeeding duration was common among civilians; it significantly decreased among military affiliates. That is, the results showed a significant difference in breastfeeding among the military affiliated population, with 8% more initiating breastfeeding. Among those who initiated breastfeeding, military affiliated women breastfed for a week longer on average than civilian women.

The findings also showed a statistically significant increase in breastfeeding initiation among both black and white military affiliated women as compared to the civilians. The military - civilian differences were most extreme for black mothers.

The results further indicated that military affiliation was associated with increased breastfeeding practice. The likelihood of military women to initiate breastfeeding and to continue breastfeeding was about 17% and 20% more than civilian women respectively.

Based on those findings, Lundquist et al. (2014) concluded that features of the military environments were conducive for breastfeeding. These include high quality health care and prenatal counseling. The peer influence effects of breastfeeding might be particularly strong in such military setting. Then, Lundquist et al. (2014) recommended that the military context should be examined more closely to identify potential implications for civilian policy.

Freitas et al. (2012) also conducted a related study among the military women. The main purpose was to assess the prevalence of breastfeeding and risk factors associated with discontinuation of breastfeeding among military women in the South East Brazil.

The study of Freitas et al. (2012) was cross sectional and employed convenience sampling method. The data were collected from 100 military mothers with children aged from birth to 24 months on the frequency of breastfeeding, and risk factors such as socio-economic profile, military career, health care, maternal and child habits. Logistic regression analysis was employed to see the association between discontinuation of breastfeeding and independent variables.

The results indicated that 94% of the respondents initiated breastfeeding and among those, 23% were breastfed exclusively. The median duration was 4 months for exclusive breastfeeding and 7.2 months for breastfeeding. This finding is in agreement with the finding of Berihun & Berhanu (2014) but contrary to the finding of Abdulbasit et al. (2013) and Wubareg et al. (2014).

The result also showed that there was no significant difference between the prevalence and duration of breastfeeding based on the military rank, educational level and occupational activities of military mothers. The variables of children's sex, number of previous children, smoking, alcohol, complications in pregnancy, use of contraception, type of birth, and consultations before two months had also no significant association with the duration of breastfeeding. The only variable that positively associated with longer duration of exclusive breastfeeding was mothers who had two children ($p=0.04$). Similarly, Abay et al. (2013) found that large family size to be a predictor of exclusive breastfeeding.

Freitas et al. (2012) concluded that the operational activity did not affect the prevalence of breastfeeding among military mothers. They also stated:

The knowledge of rates and factors that determined the duration of breastfeeding among military populations was an important instrument for the conception of a plan aimed at protecting and supporting breastfeeding.

The main limitation of the study of Freitas et al. (2012) was the use of a convenience sampling technique that could not be generalized the military population.

The other related literature regarding breastfeeding in the military area was conducted by Bell & Ritchie (2003), which had two parts. Part-I investigated the information and resources provided to military women, and part-II focused on the resources and consideration of the policy.

In order to determine what was known about the frequency, duration and barriers to breastfeeding in the military, Bell & Ritchie (2003) searched data from 1970-2001. They conducted a survey of location supported programs by using a standardized questionnaire to examine the resources, information and services provided by DOD (Department of Defense) hospitals.

The first part of the study indicated that the rate of breastfeeding initiation was observed by 65% and the time of weaning was generally short. However, Freitas et al. (2012) showed that initiation of breastfeeding was 94%. In contrast, Mussie et al. (2014) showed that the proportion of respondents who initiated breastfeeding was 40.9%. The Navy (the only service that has a written policy directly addressing breastfeeding) indicated that 35% of the respondents did not breastfeed at all and 18% breastfed for 2-3 months. The Navy policy allowed women to breastfeed during time allotted for breaks and meals provided that they had permission from their commander (Bell & Ritchie, 2003).

The result also showed that after returning to work, military mothers had substantially less support. For instance, only 47% hospitals had support and counseling programs for working mothers.

Bell & Ritchie (2003) concluded that breastfeeding provides substantial benefits for infants, for mothers and for the society.

The second part of the study of Bell & Ritchie (2003) focused on the resources that would be required to optimally support breastfeeding after active duty mothers return to work. They showed that in the military environment the attitude of leaders such as commanders and coworkers were key factors for the practice of breastfeeding. They stated:

While allowing a soldier an hour of break time per day might seem exclusive, it should make both the mother and infant healthier and happier, in which this might pay dividends in terms of reduced health care cost and absenteeism.

Bell & Ritchie (2003) compare this idea with the habit of cigarette breaks which are accepted in many military workplaces.

In contrast to the findings of Freitas et al. (2012), Bell & Ritchie (2003) found that high ranking mothers had a better opportunity to continue breastfeeding due to having a personal office and enough control over their schedules.

Another potential policy concern issued by Bell & Ritchie (2003) was to assess the level of risks entailed in breastfeeding for active duty mothers. Depending on the job, a military mother might be exposed to potentially harmful chemicals. In this regard, they stated that “Although most breastfeeding mothers in the military probably had a risk profile similar to civilians, there were important segments of the military population that might be at higher risk”.

Bell & Ritchie (2003) concluded that breastfeeding was an important workplace issue for the DOD. There were great potential benefits to gain from supporting breastfeeding including to improve the health of infants and mothers, cost saving for health care, decreasing absenteeism, and improving morale and retention of active duty mothers.

3. Summary and Implications of the Reviews

From the above literatures reviewed, we can understand that breastfeeding is a natural practice, yet it is a learned behavior. Breastfeeding is an ideal and safest food source for infants, which contains all the basic and necessary nutrients for the growth, development and prevention of diseases for the child as well as for the mother.

Various studies were conducted regarding breastfeeding in different communities, at different time and women in different professions, etc. as indicated by the articles reviewed above. Results showed that there were differences in the KAPs regarding breastfeeding. Most studies were focused on differences on account of different demographical variables; including maternal age, educational level, parity (the number of children previously born), place of residence, type of profession, nature of work/tasks, sex of the child, status/rank, modes of delivery etc.

As we have seen above, though many studies on breastfeeding were conducted in different parts of Ethiopia at different times and professions, conducting related studies in the Ministry of Defense military mothers has not been given due attention.

Therefore, the main aim of the present study was to address the research gap regarding the military mothers' knowledge, attitude and practices of breastfeeding in the Ministry of Defense.

CHAPTER THREE

METHODOLOGY

This chapter covers the overall design of the study, the target population, samples and the sample selecting procedure, the instrument used, pilot study, procedures of data collection, methods of data analysis as well as ethical considerations in the study.

3.1. Design of the Study

This was a cross-sectional type of study conducted with the main aim of assessing the military mothers' knowledge, attitude and practice regarding breastfeeding. The study employed a descriptive survey, presented both quantitatively and qualitatively. All data were collected through structured and pretested questionnaire.

3.2. The participants and sampling procedure

In the Ministry of Defense, there are different units called “Main Department, Command, Division, Directorate and Head quarter”, which have more or less similar in structures and positions. Each unit consists of army members with different military ranks and different operational missions.

One unit differs from the other unit in the demands of man-power (including number of military women), nature of operation, budget, materials, etc. Among those units, more than fourteen units' main offices are placed in Addis Ababa. Most of the military women are placed and operate under these units. For instance, Metal and Engineering Corporation consisted of more than 1200 military women at the time of study.

Thus, having obtained information about each unit's status (number of military women) and demand (nature of operation), the following seven unit were first purposively selected for

this study: Logistics Main Department, Training Main Department, Combat Engineering Division, Health Main Directorate, Indoctrination Department, Metal and Engineering Corporation (METEC), and Air Force.

The Rules and Regulations of FDRE Defense Force No. 36/5 and 37/6 declared about confidentiality of military issues including prohibit to announcing the military data. At the time of study, the sum of the obtained data of only the selected (seven) units' military women were around 2247. Among them, around 1221 were military mothers and 869 were those who gave birth in the last five years. The researcher, therefore, collected data from 268 randomly selected sample from those of 869 (who gave birth in the last five years) by considering their proportions in the unit. The mean age of the participants was 33.9 years and the mean age of their last child was 3.46 years. Around half of the participants were sergeant.

The number of sample was determined based on the "Minimum Return Sample Size for a Given Population Size" table developed by Bartlett, Kotrlik & Higgins, at 0.05 margin of error. The units were contacted through the kind facilitation of the Ministry of Defense Women's Affairs Center.

3.3. Data Collection Instrument and Pilot Study

3.3.1. Instrument

The instrument used to collect data was questionnaire, which had four main parts. The first part was about participant's demographic data.

The second part consisted of 12 items presented in two-point (True or False) type to measure the respondents' knowledge about breastfeeding. Part three was about attitude towards breastfeeding, which consisted of 14 items on a five-point Likert scale type - ranging from strongly disagree (1) to strongly agree (5).

The fourth part contained items with closed ended and some open ended questions in which most of them intended to assess the respondents' breastfeeding practices and the main reason of stopping breastfeeding.

In addition, the fourth part of the questionnaire also included additional open-ended questions to assess the overall view and/or experience of the benefits and drawbacks of being a member of the army in regards to breastfeeding. These items were used to strengthen the overall findings of the respondents' KAPs.

Most of these questions were adapted from "Breastfeeding in the Work Place Questionnaire" used by Velpuri (2004) as well as the study of Mbada (2013) in which its $r = 0.967$ and 0.758 respectively. Before conducting a pilot test, the instrument was translated into Amharic language (the official language of the participants). (See Appendix – A1 & A2)

3.3.2. Pilot Study

A pilot study was conducted to examine the extent of item consistency and to assess the clarity of the instrument. Pilot test was conducted on 30 randomly selected military mothers. Around one-third of them were selected from four commands at the time of "women's meeting". The rest 19 were selected from Communication Main Department and Command Staff College.

A measure of reliability (Cronbach Alpha) and each item total statistics were computed by using SPSS-version 20. The result showed that the reliability (Cronbach Alpha) of the knowledge, attitude, and practice tests were .794, .738, and .791 respectively, which indicates all (three) instruments had good reliability. However, a little modification was done in part-Two/knowledge (item no. 11) and in part-three /attitude (item no. 3, 4 & 8) to make it more clear. (See Appendix – B & C).

3.4. Procedures of Data Administration

With the acceptance and permission of Defense Minister Head Quarter Chief of Staff and with the approval of Defense Minister Women's Affairs Center, the researcher contacted each selected unit's Women's Affairs branch commands. All of these commanders as well as their subordinates (particularly gender expert workers) showed great cooperation and support including in giving the available data as well as in gathering distributed questionnaires.

In addition to the researcher, the five facilitators (1 civil and 2 captain) who are psychology experts in the Training Main Departments, Human Power Development Department collected data from different sub-units after they got a short training. The training covered the objective of the study, the overall nature of instruments, and the procedures and ethical considerations in data administration that took around one hour.

The data were collected through a self-administered questionnaire. Filling the questionnaire (all items) took approximately 20 - 25 minutes.

3.5. Methods of Data Analysis

Different statistical methods were employed to analyze the collected data. Descriptive statistics (including frequency, percentage, mean, and standard deviation) were used to summarize and describe demographic characteristics of respondents, the extent of KAPs, time of initiation, type and time of providing supplemental foods as well as to identify the main reasons to stop breastfeeding.

One-way ANOVA was employed to assess differences on knowledge and attitude towards breastfeeding with some selected demographic characteristics (of mother's age, military rank, educational level, and number of children). In addition, since the sample size were unequal regarding these demographical characteristics, Bonferroni Post Hoc multiple

comparisons test was used for those variables that showed a statistical significant difference in the measure of one-way ANOVA.

In order to estimate the contribution of independent variables (demographic characteristics) to the dependent variable (overall result of breastfeeding practice as well as the prevalence, initiation, exclusive breastfeeding and weaning time), binary logistic regression was employed. This logistic regression employs binary dependent variables: “1” for those who practiced appropriate breastfeeding and “0” for those who did not practice appropriate breastfeeding. To analyze the overall breastfeeding practices, those who scores above the overall mean score were considered as the “Adequately Practice Group” (1) and those who scores below the mean were considered as the “Not-Adequately practice Group” (0). The independent variables of the nature of operation, sex of child, and place of delivery were categorical covariates in the analyses of logistic regression.

Those quantitative estimations of data were processed by using statistical package for social sciences application software program (SPSS) version 20; with a pre-set $\alpha = 0.05$.

The respondents’ general view and experience about the benefits and/or drawback of the organization regarding breastfeeding were analyzed qualitatively. These were used to strengthen the overall findings of the respondents’ KAPs.

3.6. Ethical Considerations

In order to conduct the study, the researcher followed the procedural flows of the Ministry of Defense. Accordingly, first, permission to do was allowed by Ministry of Defense Chief of Staff, and then approval to conduct a study regarding breastfeeding was obtained from the concerned branch (Women’s Affairs Center). (See Appendix - F). On those

processes, the format and content of items in the questionnaire was showing to some higher commanders in order to be assured that it is free from prohibited concerns of the organization.

The other important permission was get from the respondents. In order to get real data, consent must be so essential. Therefore, in order to get their consent, explanations on the purpose of the study and about confidentiality were given orally in addition to the written information in the introduction part of the questionnaire. Therefore, respondents knew the confidentiality of their information and they participated in the study voluntarily.

CHAPTER FOUR

RESULTS

In this chapter, the data collected through closed-ended questions are presented and analyzed quantitatively, while data collected through open-ended questions are presented and analyzed in a qualitative way.

4.1. Background of the Respondents

Table 1: Demographic Characteristics and related information of the respondents (n=268)

Demographic Characteristics	Category	Descriptive Statistics			
		N	%	Mean	SD
1. Rank	NCO	≤ Corporal	11	4.1	
		Sergeant	133	49.6	
	Commission officer	2 nd Lieutenant	23	8.6	
		Lieutenant	26	9.7	
		Captain	35	13.1	
	Higher officer	Major	21	7.8	
		L/Colonel	10	3.7	
		Colonel	7	2.6	
	Missing		2	.7	
	Total		268	100.0	
2. Age of mother	≤ 35 years		167	62.3	
	36 – 45 years		71	26.5	
	≥ 46 years		18	6.7	33.9 6.11
	Missing		12	4.5	
	Total		268	100.0	
3. Educational level	≤ grade 12		42	15.7	
	Diploma		177	66.0	
	First degree		42	15.7	
	≥ second degree		5	1.9	
	Missing		2	.7	
	Total		268	100.0	
4. Nature of operation	Mostly in office		176	65.7	
	Around half office/half field		70	26.1	
	Mostly in field work		19	7.1	
	Missing		3	1.1	
	Total		268	100.0	

5. Total number of children	Only one	145	54.1	1.64	0.756
	Two	79	29.5		
	Three	31	11.6		
	Four	9	3.4		
	Missing	4	1.5		
	Total	268	100.0		
6. Sex of last child	Male	160	59.7		
	Female	103	38.4		
	Missing	5	1.9		
	Total	268	100.0		
7. Age of last child	Below 1 year	30	11.2	3.46	1.43
	Between 1 – 2 years	52	19.4		
	Between 2 – 3 years	49	18.3		
	Between 3 – 4 years	39	14.6		
	Between 4 – 5 years	98	36.6		
	Total	268	100.0		
8. Place of last delivery	Home	6	2.2		
	Health center	256	95.5		
	Mission area	1	.4		
	Missing	5	1.9		
	Total	268	100.0		

Table 1 indicates that around half of the respondents are sergeant (49.6%), aged ≤ 35 years old (62.3%), with diploma educational level (66%), and mostly working in office (65.7%). The mean age of the respondents and their recent child is 33.9 years and 3.46 years respectively. Most of them (54.1%) have one child. Around sixty percent of the respondents' last child is male.

Table 1 also shows that very few number of respondents are colonel (2.6%), above the age of 45 years (6.7%), second or above degree holders (1.9%), mostly working in field (7.1%), and with three or more children (15%).

4.2. Knowledge of Respondents on Breastfeeding

Table 2: *The Respondents' Knowledge on breastfeeding (n=268)*

Variables	Frequency				Mean	SD
	Have Knowledge		Have no knowledge			
	N	%	N	%		
1. Breastfeeding is a good contraceptive method	141	53.0	125	47.0	1.53*	.500
2. Three months of EBF is long enough	241	90.3	26	9.7	1.90	.297
3. Giving water to the infant is allowed in the practice of EBF	147	55.5	118	44.5	1.55*	.498
4. Breastfeeding promotes mother-baby attachment	229	87.1	34	12.9	1.87	.336
5. The optimal duration of breastfeeding is 12 months	123	46.8	140	53.2	1.47*	.500
6. Growth pattern of breastfed infants differ from those of formula fed	227	86.3	36	13.7	1.86	.344
7. Infant formula contains all ingredients found in human breast milk	196	75.7	63	24.3	1.76	.430
8. Immune systems of breastfed infants are more developed than formula fed infants	242	92.0	21	8.0	1.92	.272
9. A mother can exclusively breast feed even if she is HIV-positive	117	47.6	129	52.4	1.48*	.500
10. Colostrum is nutritionally useless for the baby and should be discarded	253	94.4	12	4.5	1.95	.208
11. EBF helps to improve mothers' health	157	60.6	102	39.4	1.61*	.490
12. A new baby should not suck breast before a minimum of one day after delivery	231	87.8	32	12.2	1.88	.328
Overall breastfeeding knowledge	73.1%		26.9%		1.73	.209

*mean < mean of the overall knowledge

Table 2 indicates that most of the respondents (averagely 73.1%) have good overall breastfeeding knowledge with the mean score of 1.73 / 2.00.

Specifically, respondents have relatively low knowledge (below the mean score) in the duration of breastfeeding (46.8%), practice of exclusive breastfeeding by HIV-positive mothers (47.6%), the advantages of breastfeeding as a contraceptive method (53%), the benefits of exclusive breastfeeding to the health of mothers (60.6%), and the practice of exclusive breastfeeding (55.5%).

On the other hand, respondents show relatively high knowledge ($M \geq 1.90 / 2.00$) regarding the benefits of colostrum (94.4%) and breast milk for infants' immune system (92%), as well as about the duration of exclusive breastfeeding (90.3%).

Table 3 shows the result of the analysis of knowledge regarding breastfeeding by mothers in the age categories of ≤ 35 years, 36 – 45 years and ≥ 46 years.

Table 3: One-way ANOVA for knowledge on breastfeeding differences as a function of maternal age (n=256)

Source	df	SS	MS	F	Sig
Between group	2	.218	.109	2.476	.086
Within group	253	11.134	.044		
Total	255	11.352			

P>0.05, two-tailed.

As Table 3 indicates that the respondents' knowledge about breastfeeding does not vary as a function of their age [$F(2,253) = 2.476$; $P > 0.05$].

The result of the analysis of the respondents' breastfeeding knowledge difference in regard to the three levels of military rank (NCO, commission officer and higher officer) is shown in Table 4.

Table 4: One-way ANOVA for knowledge on breastfeeding differences as a function of military rank (n=266)

Source	df	SS	MS	F	Sig
Between group	2	.143	.072	1.634	.197
Within group	263	11.541	.044		
Total	265	11.684			

P>0.05, two-tailed.

Table 4 indicates that there is no a statistically significant difference in knowledge of breastfeeding as a function of military rank [$F(2,263) = 1.634$; $P > 0.05$]. This implies that the three levels of military rank do not make a difference regarding the respondents' breastfeeding knowledge.

Table 5 shows the analysis result concerning breastfeeding knowledge in regard to the categories of the respondents' educational level: $\leq$ grade 12, diploma, first degree, and $\geq$ second degree.

Table 5: One-way ANOVA for knowledge on breastfeeding differences as a function of mothers' educational level (n=266)

Source	df	SS	MS	F	Sig
Between group	3	1.192	.397	10.246	.000*
Within group	262	10.160	.039		
Total	265	11.352			

* $P < 0.005$, two-tailed.

Table 5 indicates that there is a statistically significant knowledge difference as a function of respondents' educational level [$F(3,262) = 10.246$; $P < 0.05$]. Moreover, a multiple comparison of Bonferroni's Post Hoc test result indicated significant differences between the

category of $\leq$ grade 12 educational level with diploma holder (mean difference = $-.15956$; Sig. = $.000$), and between the category of $\leq$ grade 12 educational level with degree level (mean difference = $-.22471$; Sig. = $.000$). (See Appendix - D).

This result implies that respondents with $\leq$ grade 12 educational levels have significantly less breastfeeding knowledge as compared to diploma as well as degree holders.

The result of the analysis regarding knowledge about breastfeeding on account of the respondents' number of children is presented in Table 6.

Table 6: One-way ANOVA for knowledge on breastfeeding differences as a function of number of children (n=264)

Source	df	SS	MS	F	Sig
Between group	3	.443	.148	3.542	.015*
Within group	260	10.842	.042		
Total	263	11.285			

* $P < 0.05$, two-tailed.

Table 6 result indicates that there is a statistically significant breastfeeding knowledge difference on account of the respondents' number of children [$F(3,260) = 3.542$; $P < 0.05$]. Furthermore, the Bonferroni's Post Hoc multiple comparison test indicated that a significant knowledge difference between those respondents who have only one child and respondents who have four children (Mean difference = $-.18730$; Sig = $.048$). (See Appendix - E).

This result implies that the respondents who have only one child have significantly less breastfeeding knowledge as compared to those respondents who have four children.

4.3. Attitude of Respondents towards Breastfeeding

Table 7: The respondents' attitude towards breastfeeding (n=268)

Variables	Frequency										M	SD
	SA		A		UD		D		SD			
	N	%	N	%	N	%	N	%	N	%		
1. It is not difficult for breastfeeding mother to care her other family members	50	19.1	111	42.4	38	14.5	51	19.5	12	4.6	3.52*	1.1
2. Breast feeding is a difficult way of infant feeding	6	2.3	8	3.0	6	2.3	91	34.2	155	58.3	4.43	.9
3. It should be allowed to breastfeed during working hour	85	32.5	88	33.7	42	16.1	35	13.4	11	4.2	3.77*	1.2
4. Children looking healthy might not be necessary breastfeed	5	1.9	8	3.1	3	1.1	61	23.3	185	70.6	4.58	.82
5. Exclusive breastfeeding is an outdated fashion	12	4.5	20	7.6	22	8.3	46	17.4	164	62.1	4.25	1.2
6. A formula feed is usually advisable before the first breastfeed	13	5.0	1	.4	2	.8	50	19	196	74.8	4.58	.94
7. Breastfeeding is not comfortable	15	5.6	2	.7	14	5.2	91	34.1	145	54.3	4.31	1.0
8. Women who want to breastfeed should not work outside the home.	142	53	93	34.7	14	5.2	6	2.2	13	4.9	4.29	1.0
9. Feeling of shyness to breastfeed in public places	10	3.8	9	3.4	19	7.3	72	27.5	152	58.0	4.32	1.0
10. For a baby, formula feeding is healthier than breastfeeding.	10	3.8	16	6.0	11	4.2	79	29.8	149	56.2	4.29	1.1
11. Breastfeeding is a good way to decrease family expenses	71	27.1	81	31	33	12.6	65	24.8	12	4.6	3.51*	1.3
12. Breastfeeding has negative effect on marital relationship	10	3.7	7	2.6	15	5.6	78	29.2	157	58.8	4.37	.98
13. Workplaces should provide a designated place for breastfeeding	109	41	85	32	33	12.5	26	9.8	12	4.5	3.95*	1.2
14. Breastfeeding is practiced only if not have enough money for formula feeding.	4	1.5	4	1.5	9	3.4	85	32.1	163	61.5	4.51	.77
Overall attitude towards breastfeeding											4.24	.78

*mean < mean of the overall Attitude

SA= Strongly agree, A= Agree, UD= Undecided, D= Disagree, SD= Strongly disagree

Table 7 indicates that majority of the respondents (81.7%) have positive overall attitude towards breastfeeding (M = 4.24 / 5.00). Among those attitude related issues of breastfeeding, respondents have relatively low (but not negative) attitude to the difficulty of mothers to care her other family members (61.7%), to breastfeed in working hour (66.2%), the advantages of breastfeeding to decrease family expenses (58.1%), and providing of breastfeeding designated place by the organization (73%); all are below the mean score.

However, table 7 also shows that there are relatively high positive attitude in some ideas such as “looking healthy children might not be necessary breastfeed” (93.9%), initiation related attitudes (93.8%) and preferring breastfeeding as the first choice for infant feeding (93.6%).

The result of the analysis of the respondents’ attitude towards breastfeeding by mothers in the age categories of ≤ 35 years, 36 – 45 years and ≥ 46 years is presented in Table 8.

Table 8: One-way ANOVA for on attitude towards breastfeeding differences as a function of maternal age (n=256)

Source	df	SS	MS	F	Sig
Between group	2	.538	.269	.432	.650
Within group	253	157.394	.622		
Total	255	157.931			
P>0.05, two-tailed.					

Table 8 indicates that there is no a statistically significant difference in attitude towards breastfeeding as a function of the respondents’ age category [F (2,253) = .432; P>.05]. This result implies that the three age categories do not show a significant difference in respondents’ attitude towards breastfeeding.

Table 9 shows the analysis result concerning the respondents' attitude towards breastfeeding in terms of military rank: NCO, commission officer and higher officer.

Table 9: One-way ANOVA for attitude towards breastfeeding differences as a function of military rank (n=266)

Source	df	SS	MS	F	Sig
Between group	2	1.984	.992	1.647	.195
Within group	263	158.380	.602		
Total	265	160.364			

P>0.05, two-tailed.

Table 9 indicates that there is no a statistically significant difference among the three levels of military rank regarding the respondents' attitude towards breastfeeding [F (2,263) = 1.1647; P>.05].

Table 10 presents the result of the analysis concerning the respondents' attitude towards breastfeeding in regard to their educational level ($\leq$ grade 12, diploma, first degree, and $\geq$ second degree).

Table 10: One-way ANOVA for attitude towards breastfeeding differences as a function of mothers' educational level (n=266)

Source	df	SS	MS	F	Sig
Between group	3	2.511	.837	1.392	.246
Within group	262	157.541	.601		
Total	265	160.053			

P>0.05, two-tailed.

Table 10 result indicates that the respondents' difference in attitude towards breastfeeding as a function of educational level categories is not statistically significant [F (3,262) = 1.392; P>.05].

The result of the analysis concerning the difference in attitude towards breastfeeding on account of the respondents' number of children is presented in Table 11.

Table 11: One-way ANOVA for attitude towards breastfeeding differences as a function of number of children (n=2684)

Source	df	SS	MS	F	Sig
B/n group	3	.234	.078	.127	.944
W/n group	260	160.028	.615		
Total	263	160.262			

P>0.05, two-tailed.

Table 11 indicates that there is no a statistically significant attitude difference towards breastfeeding as a function of the respondents' number of children [F (3,260) = .127; P>.05].

4.4. Breastfeeding practices of the Respondents

Table 12 shows the extent of the respondents' breastfeeding practice and related activities. The "experienced" group indicates those respondents who practiced the appropriate breastfeeding activities while the "not experienced" groups are those whose practice of breastfeeding activities were not appropriate.

Table 12: The respondents' practices of breastfeeding and related issues (n=268)

Variables	Frequency				Mean	SD
	Experienced		Not experienced			
	N	%	N	%		
Attend training or seminar on breastfeeding issues	110	41.5	155	58.5	1.58*	.494
Pregnancy follow up in health centers	234	88	32	12	1.88	.326
Experience on breastfeeding	264	98.5	4	1.5	1.99	.121
Giving of colostrums	257	97.3	7	2.7	1.97	.161
Time to start breastfeeding (≤ 6 hr of delivery)	179	69.1	80	30.9	1.70*	.506
Not giving supplemental food (≤ 6 months of age)	92	35.1	170	64.9	1.35*	.478
Time to terminate breastfeeding (≥ 2 years of age)	92	45.3	111	54.7	1.45*	.499
Overall practice of breastfeeding	67.8		32.2		1.72	.243

*mean < mean of overall practice

Table 12 indicates that breastfeeding and related actions (like attending training/seminar on breastfeeding issues, and pregnancy follow up) are practiced by 67.8% of the respondents ($M = 1.72 / 2.00$).

Table 12 also shows that the experience of breastfeeding (98.5% or $M=1.99$) and giving of colostrum (97.3% or $M=1.97$) are relatively practiced by most of the respondents. However, not giving supplemental food before the age of six months and weaning after the age of two years are practiced by 35.1% and 45.3% of the respondents respectively.

Table 13 presents the result of the analysis regarding the contribution of the respondents' demographical characteristics to the overall practice of breastfeeding.

Table 13: Binary logistic regression analysis to the overall practice of breastfeeding with different demographic variables of the respondents (n=241)

Variables	B	Sig.	Exp(B)	95% C.I. for EXP(B)	
				Lower	Upper
Age of mother	-.001	.980	.999	.914	1.092
Rank	-.314	.037*	.731	.55	.982
Educational level	.715	.005*	2.045	1.247	3.352
Nature of operation		.243			
Nature of operation (1)	.673	.204	1.960	.694	5.537
Nature of operation (2)	.947	.096	2.578	.846	7.854
No. of child	.039	.844	1.040	.706	1.531
Child sex(1)	.059	.833	1.061	.613	1.836
Delivery place		.889			
Delivery place(1)	-21.7	1.000	.000	.000	
Delivery place(2)	-21.3	1.000	.000	.000	
Constant	20.15	1.000	561586291		

Table 13 indicates that only the respondents' military rank and educational level are significantly associated with their overall practice of breastfeeding (ODD = .731; CI = .55, .982 & ODD = 2.045; CI = 1.247, 3.352 respectively), while all other variables are not. When the respondents' military rank increases by each level, the odds of overall breastfeeding practice decreases by .73 times. Each advanced educational level of the respondents increases the odds of practicing breastfeeding by 2.05 times.

This result implies that each promotion in military rank decreases the likelihood of practicing breastfeeding, while each higher level of education (between $\leq$ grade 12, diploma, degree, and above degree) increases the likelihood of overall breastfeeding practices.

Table 14 shows the frequency of the respondents' initiation time (when they start to breastfed after delivery).

Table 14: *The respondents' breastfeeding initiation time (n=261)*

Initiation time (After birth)	Frequency	
	N	%
within 6 hours	177	67.8
6 - 12 hours	56	21.5
12 - 24 hours	17	6.5
After first day	11	4.2
Total	261	100.0

Table 14 indicates that most of the respondents (67.8%) start to breastfeed their infants within six hours of delivery. Only 4.2% of the respondents initiate to breastfeed after the first day of delivery. This result implies that breastfeeding initiation is practiced well by the respondents within six hours of delivery.

The result of the analysis regarding the contribution of the respondents' demographical characteristics to the practice of breastfeeding initiation is presented in Table 15.

Table 15: Binary logistic regression analysis to the initiation of breastfeeding with different demographic variables of the respondents (n=233)

Variables	B	Sig.	Exp(B)	95% C.I. for EXP(B)	
				Lower	Upper
Age of mother	.054	.263	1.056	.960	1.161
Rank	-.336	.033*	.715	.525	.973
Educational level	.970	.000*	2.638	1.537	4.529
Nature of operation		.955			
Nature of operation (1)	.139	.805	1.149	.382	3.455
Nature of operation (2)	.182	.763	1.200	.367	3.919
No. of child	-.244	.254	.783	.515	1.192
child.sex(1)	.221	.476	1.247	.680	2.288
Delivery place		.938			
Delivery place(1)	-19.9	1.00	.000	.000	.
Delivery place(2)	-20.3	1.00	.000	.000	.
Constant	18.60	1.00	1204355		

Table 15 indicates that the respondents' military rank and educational level are significantly associated with initiation of breastfeeding (ODD = .715; CI = .525, .973 & ODD = 2.638; CI = 1.537, 4.529 respectively), while other variables are not. Each level promotion of the respondents' military rank decreases their breastfeeding initiation by the odds of around .72 times. Each advanced educational level of the respondents increases their breastfeeding initiation by the odds of 2.6 times.

This result implies that each promotion in military rank decreases the likelihood of breastfeeding initiation. Each advanced educational level increases the likelihood of initiation of breastfeeding.

Table 16 shows the analysis result regarding the contribution of the respondents' demographical characteristics to the practice of exclusive breastfeeding.

Table 16: Binary logistic regression analysis to the practice of exclusive breastfeeding with different demographic variables of the respondents (n=236)

Variables	B	Sig.	Exp(B)	95% C.I. for EXP(B)	
				Lower	Upper
Age of mother	-.016	.740	.985	.898	1.080
Rank	-.008	.959	.992	.736	1.337
Educational level	.493	.056	1.637	.987	2.715
Nature of operation		.010*			
Nature of operation (1)	.372	.540	1.451	.442	4.766
Nature of operation (2)	1.284	.044*	3.610	1.035	12.595
No. of child	-.143	.498	.867	.573	1.311
child.sex(1)	.020	.944	1.021	.575	1.812
Delivery place		.944			
Delivery place(1)	21.48	1.000	2138511353	.000	.
Delivery place(2)	21.16	1.000	1547889828	.000	.
Constant	-22.6	1.000	.000		

Table 16 indicates that only the overall effect of the nature of operation/duty is significantly associated with exclusive breastfeeding. As table 16 shows, respondents who working half in office and half in field [Nature of operation (2)] are 3.61 times more likely to breastfeed exclusively as compared to the respondents who mostly working in field.

This result implies that the nature of operation which demands half in office-and-half in field than which demands mostly working in field contributes for the practice of exclusive breastfeeding.

The extent (frequency) of the respondents' exclusive breastfeeding practice, the type of supplemental food(s) and the time to start to provide the first supplemental food within six months after delivery are presented in Table 17.

Table 17: Respondents exclusive breastfeeding practice, the time and type of supplemental foods provided within six months of age (n=170)

	Frequency	
	N	%
Practice of Exclusive breastfeeding (n=262)		
1. Practiced	92	35.1
2. Not practiced	170	64.9
Total	262	100
2.1. Type of supplemental food given (n=170)		
Water	106	62.4
Fresh butter	2	1.18
Honey	5	2.94
Cow milk	62	36.5
Other (like, AS-26, powder milk, potato, fruit, etc)	27	15.88
2.2. Time to started supplemental food (n=170)		
within 1 month	17	10.0
Between 1 – 2 months	20	11.8
Between 2 – 4 months	51	30
Between 4 – 6 months	82	48.2
Mean	3.13	
SD.	1.02	

Table 17 indicates that most of the respondents (64.9%) do not breastfeed exclusively for six months. Among those, 62.4% of the respondents give water to their infants before the age of six months, followed by cow milk (36.5%).

Table 17 also shows that 78% of the respondents start to feed supplemental foods after the age of 2 months. The mean age to start supplemental food is 3.13 month.

Table 18 shows the result of the analysis regarding the contribution of the respondents' demographical characteristics to the practice of weaning in the appropriate time ($\geq$ two years).

Table 18: Binary logistic regression analysis to the practice of appropriate weaning time with different demographic variables of the respondents (n=177)

Variables	B	Sig.	Exp(B)	95% C.I. for EXP(B)	
				Lower	Upper
Age of mother	.027	.589	1.027	.932	1.133
Rank	-.256	.117	.774	.563	1.066
Educational level	.672	.013*	1.958	1.153	3.324
Nature of operation		.202			
Nature of operation (1)	.846	.251	2.330	.550	9.871
Nature of operation (2)	.297	.700	1.346	.297	6.102
No. of child	-.046	.846	.955	.600	1.519
child.sex(1)	-.210	.524	.811	.425	1.545
Delivery place		1.000			
Delivery place(1)	-43.4	.999	.000	.000	.
Delivery place(2)	-21.8	1.000	.000	.000	.
Constant	19.78	1.000	389384951		

Table 18 result indicates that all variables, except educational level (ODD = 1.958; CI = 1.153, 3.324) are not significantly associated with the duration of breastfeeding. When the respondents' education level increases by one level, the odds of continuing breastfeeding until the appropriate time (versus stopping) also increases by around 2 times.

This result implies that each advanced educational level increases the likelihood of continuing breastfeeding up to the appropriate time than discontinuation.

4.5. The Main Reasons for Stopping Breastfeeding (Weaning)

Table 19 shows the result of frequency concerning the respondents' main reasons for the discontinuation of breastfeeding.

Table 19: Frequency of respondents' reason to terminate breastfeeding (n=143).

Reason	Frequency	
	N	%
1. Operation related problem	88	45.8
2. Maternal health related problem	2	1.0
3. Educational related cases	7	3.6
4. Insufficient breast milk	32	16.7
5. Pregnancy	7	3.6
6. Age of child	43	22.4
7. To reduce mother-baby attachment	3	1.6
8. Baby's refusal of breastfeed	7	3.6
9. Other (like peer and family influence)	3	1.6
Total	192	100.0

Table 19 indicates that operation related problems (45.8%), the age of child (22.4%), and insufficient breast milk (16.7%) are the main reasons of many respondents to terminate/stop breastfeeding.

Among those whose main reason is work related problems, most of them described that different occasional duties, movements (including engaging in peace keeping operation), day-and-night shift work nature of operation, being unstable, and difficult to manage and control both work and home chores are the difficulties.

4.6. The Relationships Between KAPs of Breastfeeding

The result of the analysis concerning the relationships between the respondents' overall knowledge, attitudes and practices of breastfeeding is shown in Table 20.

Table 20: Pearson Correlation for the overall breastfeeding KAPs of the respondents (n=268)

		Knowledge	Attitude	practice
Knowledge	r	1		
	Sig.			
Attitude	r	.184**	1	
	Sig.	.002		
practice	r	.203**	.066	1
	Sig.	.001	.280	

**P<0.01, 2-tailed

Table 20 reveals that respondents' knowledge on breastfeeding has a statistically significant relationship with both attitude and practice of breastfeeding ($r = .184$ and $r = .203$; $P < 0.01$ respectively). Thus, this result implies that the respondents' breastfeeding knowledge is related with their attitudes and practices.

4.7. The Advantages and Disadvantages of being Military Mother and the Ministry of Defense regarding Breastfeeding

The data obtained from the respondents through open-ended questions about the benefits and drawbacks of being a military mother and/or serving in the army as a military are presented as follows.

Advantages

Getting free health services within the organization, free shelter/house as well as different material support are advantages. As they reported, the health services, for instance, includes pregnancy follow up, consultation, medication and vaccination are provided for the army members and their family members. They also have opportunities of education, training, peer - to- peer consultation, and sharing of experience within and/or across different units.

Respondents who lived as well as worked in the military camp also point out that they have a chance to breastfeed their child even during their tea break time.

Since the respondents have a monthly salary and so a source of consistent income that makes them to economically stable. Consequently, as they said, they can raise their children by providing different supplemental foods.

Disadvantages

Respondents point out that the main drawbacks are related with the nature and responsibilities of operations. They mostly reported that unstable living conditions in the camps and frequent movement, regular shifts of duty, unexpected/occasional orders, and day-and-night shift work do not allow even to raise their children. That is the main cause for some respondents to prefer to leave their child with their family, mostly with grandparents of the child. In this regard, one respondent, for instance said:

Twelve days after delivery, an immediate operation was ordered from the command-post to work some tasks at home. And forty days after delivery, I was ordered to return to office and that caused to stop breastfeeding early.

Respondents described and believed that their breast provides milk for a short period (insufficient breast milk) due to the nature of duty that demands physical movement, strength and frequent exercises.

Gender related issues of the respondents' commanders (that are mostly male) for usually not willing and free to discuss regarding their family related issues including breastfeeding related problems were also mentioned.

Respondents also indicated that three months of maternal leave are not enough for exclusive breastfeeding practice. Furthermore, they stated and recommended that the

permission period should be at least six months for the health of baby by getting sufficient breast milk.

Generally, as they reported, the merits and demerits of being a military mother regarding breastfeeding are highly associated with the specific mission of the unit and relationship/ interaction with commands.

CHAPTER FIVE

DISCUSSION

The main objective of this study was to assess the knowledge, attitude and practices regarding breastfeeding of military mothers in the Ministry of Defense. Result reveals that there was a relationship between the military mothers' breastfeeding knowledge and attitudes, and between their knowledge and practices. Shaker et al. (2012) found that the knowledge, attitude and practice of breastfeeding were significantly correlated. Tan (2009) also stated that the main reason for mothers to breastfeed their infants was their knowledge of breastfeeding.

5.1. Breastfeeding Knowledge of Military Mothers

The present study indicates that majority of the respondents had good overall knowledge about breastfeeding. The result is somehow greater than the result obtained by Afros et al. (2012) and Wubareg et al. (2014). Wubareg et al. (2014), for instance, found that only 53.7% had good knowledge about breastfeeding practice, which is lower than the result of the present study (73.1%). Afrose et al. (2012) also found that the overall level of knowledge of female garment workers regarding breastfeeding was very poor.

The good knowledge of these military mothers might be related to the free health services, educational opportunity and different related training provided by the Ministry of Defense, as these were also described by most of the respondents as a merit.

Moreover, the result of the present study reveals that the respondents' knowledge on the substantial benefits of colostrums, duration of exclusive breastfeeding, and usefulness of breast milk for infants' immune system were relatively high. Similarly, Afrose et al. (2012) and Berihun & Berhanu (2014) found that 74% and 78.4% (respectively) of the respondents had good knowledge about the duration of exclusive breastfeeding. However, the result of Al-

Binali (2012) indicated that a very low rate of knowledge about the appropriate duration of exclusive breastfeeding.

The present study also reveals relatively low level of knowledge regarding the benefits of exclusive breastfeeding to maternal health, the importance of breastfeeding as a contraceptive method, duration of breastfeeding, and about the exclusive breastfeeding practice by HIV-positive mothers. This result seems to confirm the findings of Afrose et al. (2012) and Holbrook et al. (2012). Afrose et al. (2012) found that respondents had very poor knowledge regarding the advantages of exclusive breastfeeding (89%) and breastfeeding (100%). Holbrook et al. (2012) also said that expectant mothers were poorly informed and had poor knowledge about the consequence of breastfeeding on their own mental and physical health. However, Tan (2009) found that most of the respondents had good knowledge to the benefits of breastfeeding as a good contraceptive method.

The results indicated that military rank and maternal age did not show a difference regarding breastfeeding knowledge. However, a difference in breastfeeding knowledge was found in terms of educational level and number of children.

Accordingly, the military mothers who had either diploma or degree level had better breastfeeding knowledge than military mothers whose educational level were not beyond grade 12. Afrose et al. (2012) also found a significant association of educational level with higher total knowledge score of breastfeeding. Their finding showed that secondary educational level mothers had higher total knowledge score than the illiterate and primary educational level mothers.

The present study also reveals a difference between military mothers who had one child and who had four children. That means, military mothers who had four children had high overall breastfeeding knowledge than those who had only one child. This advanced

breastfeeding knowledge could be associated with learning through frequent infant raising experience.

5.2. Attitude of Military Mothers towards Breastfeeding

The present study indicates that the overall score of the respondents' attitude towards breastfeeding was positive. Different recent studies also showed similar inclination to breastfeeding, including the study of Shaker et al. (2012), Rubin et al. (2010), Mussie et al. (2014), and Wubareg et al (2014). For instance, Wubareg et al. (2014) found that 73% of the respondents had positive attitude towards breastfeeding practice.

The positive attitude of military mothers towards breastfeeding was relatively high regarding issues such as initiation of breastfeeding, the necessity of breastfeeding and the most preferred type of infant feeding. These results seem to confirm the study of Mussie et al. (2014) which indicated that 87% of mothers had positive attitude towards timely initiation and EBF.

Unlike the study of Wubareg et al. (2014) which found only 34.9% of the respondents agreed to provide breast milk in public places, the present study reveals that around 85.5% of the respondents had positive attitude to breastfeed in public places such as café and work place. To the statement that describes breastfeeding as more comfortable than that of bottle feeding (92.5%) and to consider breastfeeding as more enjoyable (88.4%), the present study indicates high positive attitudes. This is very similar to the finding of Rubin et al. (2010) which indicated 89.8% for breastfeeding as comfortable way of feeding and 90% consider breastfeeding as more enjoyable for the mothers.

The present study result also indicates that only 29.4% and 24% of the respondents had positive attitude towards the acceptability of breastfeeding in working hour and towards the difficulty of breastfeeding mothers to care other family members respectively. In addition,

fewer respondents had positive attitude to the advantages of breastfeeding to decrease family expenses (17.6%) and to the workplace should provide a designated breastfeeding place (14.3%). However, Rubin et al. (2010) found that 61% of the respondents agreed to the statement of “work did not prevent breastfeeding” and only 3% agreed to the statement of “working women could not breastfeed”.

Regarding attitude differences, the results of the present study indicate that the attitude of military mothers towards breastfeeding did not differ by their different demographic characteristics (of military rank, maternal age, educational level, and number of children). However, Shaker et al. (2010) found that age of mother made a difference in attitude towards breastfeeding. They stated that mothers aged from 30 – 43 years group had more positive attitude towards breastfeeding than other age groups.

5.3. Breastfeeding Practices of Military Mothers

The present study indicates that the overall breastfeeding practice and related actions (participated in related trainings and pregnancy follow up) were practiced by most of the respondents (67.8%). Tewodros et al. (2009) found that the overall rate of breastfeeding is almost the same with the present one, which was 68.2%. The prevalence of breastfeeding (98%) and giving of colostrums (97.3%) were relatively high as compared to other breastfeeding activities. However, Abay et al. (2013) and Mussie et al. (2014) stated that the prevalence of breastfeeding was low and around 45% of mothers did not give colostrums to their infants.

As the present study reveals, 35% and 45% of the respondents did not give supplemental food before the age of six months and did not wean before the age of two years respectively. Similarly, Al-Binali (2012) and Berihun & Berhanu (2014) found that the mean age of weaning was 8.7 month and 7.2 month respectively. As Al-Binali (2012) stated, the

prevalence of breastfeeding was affected by the level of knowledge and the rate of attending classes related to breastfeeding during pregnancy. In this regard, the present study shows that around 42% and 88% of the respondents also attended training/seminar on breastfeeding and pregnancy follow up respectively.

The respondents' good knowledge and pregnancy follow up could be factors that help to explain their overall well breastfeeding practices. In addition, as respondents also reported, free health services including consultation provided by Ministry of Defense could contribute for their good breastfeeding practices. The finding of Lundquist et al. (2014) also supports the merits of military climate. They stated that the military environment features were conducive and likely to play an important role for breastfeeding. This conducive military environment includes high quality health care and prenatal counseling as well as strong peer influences.

The present study indicates that only military rank and educational level were significantly associated with the overall breastfeeding practices, while maternal age, the nature of operation, number of children, sex of child and place of delivery were not. Accordingly, when the respondents' military rank increased by one level, the likelihood of overall breastfeeding practice decreases by .73 times. This might be related to the high susceptibility of higher military rank officers' responsibility and duty that demands higher participation in different organizational concerns. However, Freitas et al. (2012) stated that high ranking military mothers could be more able to practice breastfeeding.

Regarding the relationship between educational level and overall breastfeeding practice, the present result reveals that the likelihood of respondents to practice overall breastfeeding increase 2 times for diploma holders than $\leq$ grade 12 respondents, first degree than diploma holders, and $\geq$ second degree than first degree holders. This educational level contribution to the overall practice of breastfeeding could be related to the respondents' good overall knowledge about breastfeeding.

Breastfeeding initiation, exclusive breastfeeding and weaning time are basic concepts in the practice of breastfeeding. The recommendation of the Federal Ministry of Health, Family Health Department (2004) also gave attention to these and related activities. Thus, the present study deserves to be discussed along these lines, as follows.

5.3.1. Initiation of Breastfeeding

The present study indicates that almost all (98.5%) of the respondents had experience of breastfeeding with their most recent child. Among those, only 67.8% of the respondents started breastfeeding within six hours of delivery. This result is greater than the finding of Mussie et al. (2014) which indicated 40.9%. Bell & Ritchie (2003) and Freitas et al. (2012) found that the initiation of breastfeeding in the military mother were 65% and 94% respectively. Lundquist et al. (2014) also found that military mothers initiate breastfeeding by 17% than civilian mothers.

The present study also reveals breastfeeding initiation (within versus after 6 hours of delivery) was associated with their military rank and educational level. Accordingly, like that of the overall practice, each promotion of the respondents' military rank decreases the likelihood of breastfeeding initiation by .7 times.

However, the likelihood of the respondents' breastfeeding initiation increases 2.6 times to the diploma holders than $\leq$ grade 12 respondents, first degree than diploma holders, and $\geq$ second degree than first degree holders.

5.3.2. Exclusive Breastfeeding Practice

Providing supplemental food to infants after the age of six months is a measure of exclusive breastfeeding practice. The present study indicates that only 35.1 % of the

respondents breastfeed exclusively. The corresponding results found in other studies are Tan (2009) – 32.8%, Al-Binali (2012) – 8.3%, Tewodros et al. (2009) – 49%, Abay et al. (2013) – 49.1%, and Abdulbasit et al. (2013) – 50.3%. Hass (2006) (cited in Freitas et al., 2012) stated that the chance to practice exclusive breastfeeding were lower in military mothers than civilian mothers.

In the present study, the average time to start supplemental food was 3.13 ± 1.02 months. From those who did not practice exclusive breastfeeding, 62.4% of military mothers gave water to their infants within six months after delivery followed by cow milk (36.5%). This result confirms the finding of Tewodros et al. (2009) which indicated that 33% of mothers gave cow milk with in the first three days after delivery.

The low practice of exclusive breastfeeding of military mothers could be related with the high load of operational activities, unstable life condition, and the nature of profession as these are also reported by the respondents.

The present study reveals that only the nature of operation contributed to the practice of exclusive breastfeeding. Accordingly, the likelihood of exclusive breastfeeding was 3.6 times higher for those respondents who work half in office-and-half in field as compared to respondents who mostly work in field. Contrary to this result, Freitas et al. (2012) found that operational activities of military women did not show a significant difference in exclusive breastfeeding practice. However, studies conducted by Mussie et al. (2014) and Tan (2009) regarding maternal occupation showed a significant association with exclusive breastfeeding.

5.3.3. Weaning and its Main Reasons among Military Mothers

The present study indicates that less than half (45.3%) of the respondents breastfed until the appropriate time. This could be related with their low level of knowledge regarding the duration of breastfeeding that showed only 46.8%. Shaker et al. (2010) found that 23.4% of

the respondents stopped breastfeeding before the age of two years. The Navy (cited in Bell & Ritchie, 2003) showed that 18% of military mothers' children were breastfed for only 2 – 3 months.

Unlike some other studies (such as Rubin et al. (2010) which found a significant association in regards to maternal age and number of children), in the present study, only educational level was associated with the respondents' weaning time practice. Accordingly, military mothers whose educational level were diploma than $\leq$ grade 12, first degree than diploma, and $\geq$ second degree than first degree holders were 2 times more likely to continue to breastfeed until the appropriate time ($\geq$ 2 years). The one potential reason could be related with the obvious associations between advanced educational opportunities and good understanding (knowledge), which also includes the duration and benefits of breastfeeding.

The present study also indicates that the main reason of most respondents to stop breastfeeding was work related problems (accounts about 46% of the total reasons). This work related problems include frequent movement, instability in place and time, and the demanding nature of their operation like day-and-night shift work. Insufficient breast milk (16.7%) was also another potential reason for the discontinuation of breastfeeding. Tan (2009), Al-Binali (2012), Rubin et al. (2010), and Wubareg et al. (2014) also identified that insufficient breast milk and work related problems were the main reasons for stopping breastfeeding. For instance, Tan (2009) found that mothers stopped breastfeeding due to mothers' employment (29%) and due to insufficient breast milk (48%).

CHAPTER – SIX

SUMMARY, CONCLUSION AND RECOMMENDATION

6.1. Summary

The main aim of the present study was to assess the knowledge, attitude and practice of military mothers in the Ministry of Defense regarding breastfeeding.

The study was a cross-sectional type. The data used for analysis were collected from 268 sample selected randomly from seven purposively selected units in the Ministry of Defense. The sample consisted of military mothers who gave birth only in the last five years. Those data were collected through structured and pre-tested questionnaire which consisted of closed-ended and some open ended items.

For the quantitative data, descriptive statistics (mainly frequency, percentage, mean and standard deviation), one-way ANOVA, and binary logistic regression were employed to describe the extent of KAP, to identify knowledge and attitude differences due to their demographic characteristics, and to examine the contribution of demographic variables regarding breastfeeding practices respectively. Quantitative data were processed by using SPSS-version 20, with $\alpha = .05$.

Most of the respondents (73.1%) had good overall breastfeeding knowledge. This good knowledge was also relatively high on the usefulness of colostrum, duration of exclusive breastfeeding, and benefits of breast milk in preventing infants from diseases. However, the results of current study also show that the respondents' knowledge was relatively low on the maternal benefits of exclusive breastfeeding, duration of breastfeeding, and the practice of exclusive breastfeeding by HIV-positive mother. Military mothers with diploma or degree education level and military mothers who had four children showed significantly good knowledge as compared to military mothers not educated beyond grade 12 and who had only

one child. Military rank and age of mother did not show a significant difference regarding respondents' breastfeeding knowledge.

Regarding the respondents' attitude towards breastfeeding, the study shows that they had positive overall attitudes ($M=4.24 / 5.00$). Moreover, the attitude of respondents was relatively high for breastfeeding initiation and benefits of breast milk to their infants. The respondents' different demographical characteristics (military rank, age of mother, educational level and number of children) did not show a significant difference in their attitudes towards breastfeeding.

The present study also indicates that most of the respondents (67.8%) practiced breastfeeding well. The overall practices average score of respondents was $1.72 / 2.00$. The prevalence of breastfeeding (98.5%) and giving of colostrum to newborn baby (97.3%) were relatively high, while exclusive breastfeeding and weaning at the appropriate time (after two years) were practiced by only 35.1% and 45.3% of the respondents respectively.

Most of the respondents (67.8%) started to breastfeed within six hours after delivery. Around 70% of the respondents started to give supplemental food to their infant at the mean age of 3.13 ± 1.02 months. Among them, 62.4% and 36.5 % gave water and cow milk to their infants respectively.

The respondents' military rank and educational level were significantly associated with the overall practice as well as initiation of breastfeeding. The nature of duty/operation showed a significant association with exclusive breastfeeding practice. Weaning time of the respondents were also significantly associated with the level of education, which showed each advanced level of education was two times higher to the likelihood of continued breastfeeding up to two years.

6.2. Conclusion

Military mothers in the Ministry of Defense had good knowledge, positive attitude as well as good practices of breastfeeding.

The military mothers KAPs of breastfeeding were especially better on colostrum related concerns. However, they had relatively less level of knowledge and attitude regarding the maternal benefits of breastfeeding and breastfeeding-work related concerns. Most military mothers initiated breastfeeding at appropriate time. But, the practice of exclusive breastfeeding and continuation of breastfeeding until the appropriate time was not satisfactory.

Military mothers' knowledge regarding breastfeeding differs in terms of their level of education and number of children. Having a diploma or degree educational level as well as having four children implies to having better breastfeeding knowledge. However, age of mothers and military rank did not make a difference in their breastfeeding knowledge.

Age of mothers, military rank, educational level, and number of children did not make a difference in the military mothers' attitude towards breastfeeding.

Although mothers' age, sex of child, and place of delivery did not contribute to the practices of breastfeeding, military rank, educational level and the nature of operation had influence on breastfeeding practices and related activities, as follows:

- Military rank contributes to the overall practice of breastfeeding and breastfeeding initiation.
- Educational level contributes to the overall practice of breastfeeding, breastfeeding initiation, and to the weaning time.
- Working half in office-and-half in field than mostly working in field contributes to the practice of exclusive breastfeeding.

6.3. Recommendation

In line of the overall results and conclusions that were made, the following points are recommended to improve the KAPs of military mothers regarding breastfeeding.

1. The Ministry of Defense should first give attention to the family issues of the members (including breastfeeding). Consequently, each unit should fulfill in appropriate manpower (experts), budget, material, etc. to provide appropriate program, consultation, support, and intervention regarding the KAPs of military women. Research centers and researchers should also be give attention to such kind of area and profession.
2. Like that of US DOD, the FDRE Ministry of Defense should also provide and implement breastfeeding and related policy programs. This is useful for the child and mothers as well as for the organization to fulfill its mission by reducing the rate of absenteeism and withdrawal, and active/full engagements in the duty improves.
3. As the respondents also recommended, the Ministry of Defense should consider the maternal leave time to be longer (for example 6 months). Military mothers should also get a full permission (do not obligated to return to work until the leave time is ended) could improve the practice of exclusive breastfeeding and weaning time.
4. Since knowledge was significantly related with attitude and practice of breastfeeding, efforts should be first focused on improvement of knowledge. For instance, providing more advanced educational opportunities to the military mothers could improve their practice of initiation and continuation of breastfeeding.

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[illegible]

Part Two

Instructions: Read each statement carefully and place an “√” mark in the appropriate TRUE or FALSE box to indicate your answer. (Please remember to answer each question)

Questions/ Statements	Alternatives	
	True	False
1. Breastfeeding is a good contraceptive method.		
2. Three months of exclusive breastfeeding is long enough.		
3. Exclusive breastfeeding doesn't prohibit giving of water to the infant.		
4. Breastfeeding promotes mother-baby attachment.		
5. The optimal duration of breastfeeding of an infant is 12 months.		
6. Growth pattern of breastfed infants differ from those of formula fed.		
7. Infant formula contains all ingredients found in human breast milk.		
8. Immune systems of breastfed infants are more developed than formula fed infants.		
9. A mother can exclusively breast feed her child even if she is HIV-positive.		
10. Initial breast production of yellow milk (colostrum) is nutritionally useless for the baby and should be discarded.		
11. Exclusive breastfeeding helps to improve mothers' health.		
12. A new baby should not sucking breast before a minimum of one day of a delivery.		

Part Three

Instructions: Please indicate your response for each of the following items as carefully and accurately as you can that best describes the degree of your agreement by putting an “√” mark in the space to the left of each item. There is no right or wrong answer. Mark each statement by using the following response continuum:

SD = Strongly disagree

D= Disagree

UD= Neutral (undecided)

A = Agree

SA = Strongly agree

No	Statement	SD	D	UD	A	SA
1	It is not difficult for breastfeeding mother to care of her other family members.					
2	Breast feeding is a difficult way of infant feeding.					
3	It should be allowed for women to breastfeed their infant during working hour					
4	Children looking healthy might not be necessary breastfeed.					
5	Exclusive breastfeeding is an outdated fashion.					
6	It is usually advisable for babies to receive a formula feed before the first breastfeed.					
7	I'm not comfortable with breastfeeding.					
8	Women who want to breastfeed their infants should not work outside the home.					
9	I am feeling shy of breastfeeding in public places, such as cafe, work place, etc.					
10	For a baby, formula feeding is healthier than breastfeeding.					
11	Breastfeeding is a good way to decrease family expenses.					
12	Breastfeeding has negative effect on ones marital relationship.					
13	Workplaces should provide a designated place for breastfeeding.					
14	I can only breastfeed if I did not have enough money for formula.					

Part Four

Instructions: Read each statement carefully and place an “√” mark in the appropriate alternative box or write your answer for the space provided to indicate your answer regarding your breastfeeding practice. (Please remember to answer each question and based on only your most recent birth experience)

1. Did you attend training or seminar on breastfeeding issues? A. Yes ☐ B. No ☐

2. Did you follow up your pregnancy in health centers? A. Yes ☐ B. No ☐

3. Did you feed your breast milk to your infant? A. Yes ☐ B. No ☐

3.1. If “No”, what was your main reason? _____

3.2. If “Yes”, just continue to the rest question:

4. Did you feed the colostrums soon after birth to your new baby? A. Yes ☐ B. No ☐

5. When did you start/initiate breastfeeding? A. 0 – 6 hour ☐ B. 6 – 12 hour ☐
C. 12 – 24 hour ☐ D. After first day ☐

6. Did you give other supplemental diet in addition to your breast milk to your baby within the age of 6 months? A. Yes ☐ B. No ☐

6.1. If “Yes”, which of the following? (More than one answers is allowed)

- A. Water ☐ B. Fresh butter ☐ C. Honey ☐
D. Cow milk ☐ E. Other (specify) _____

6.2. If “Yes”, when did you start the first supplemental diet?

- A. Before 1 month ☐ B. Between 1 - 2 months ☐
C. Between 2 - 4 months ☐ D. Between 4 - 6 months ☐

7. Are you feeding your breast milk currently?

- A. Yes ☐ B. No ☐

7.1. If “No”, when did you terminate your breastfeeding?

- A. Before 6 months ☐ B. 6 – 12 months ☐
C. After 1 year but before 2 years ☐ D. 2 years or above ☐

7.2. What was your **main reason** for termination of your breastfeeding? (If possible, please describe this cause in detail in the space provided.)

- A. Job/operation related problems ☐ (specify) _____
B. your health related problems ☐ (specify) _____
C. baby’s health related problems ☐ (specify) _____
D. Education related difficulties ☐ (specify) _____
E. Insufficient breast milk ☐
F. Pregnancy ☐
G. Age of child ☐
H. To reduce mother-baby bonding ☐
I. Baby’s refusal to breastfeed ☐
J. Other (specify) _____

8. Describes the advantages and disadvantages of serving as in the military in regards to the general situations of breastfeeding, based on your experiences?

Advantages: _____

Disadvantages: _____

Thank you for your co-operation!!

Appendix – A2: Amharic Version

አዲስ አበባ ዩኒቨርሲቲ የትምህርትና የባህሪ ጥናት ኮሌጅ የሳይኮሎጂ ትምህርት ቤት ዴፕርትመንታል ሳይኮሎጂ ዲፓርትመንት

የመጠየቁ ዋና አላማ፡ ይህ መጠየቅ ጡት ማጥባትን በተመለከተ እናቶች ያላቸውን እውቀት፣ አመለካከት እና ልምድ/አተገባበር ለማየት የተዘጋጀ ነው። እርስዎ የሚሰጡት መረጃ ሚስጢራዊነት እጅግ የተጠበቀ ሲሆን በየትኛውም ስፍራ ላይ ስም መፃፍ አስፈላጊ አይደለም። በመሆኑም በተቻለ መጠን ለሁሉም ጥያቄዎቹ መረጃ/መልስ እንዲሰጡ ይጠየቃሉ።

ስለትብብርዎ ከወዲሁ እናመሰግናለን!!

ክፍል አንድ፡ የግል መረጃ

ከታች ለቀረቡት ጥያቄዎች አማራጭ ላሏቸው የ “X” ምልክት በማድረግ እንዲሁም ክፍት ቦታ ላሏቸው ደግሞ በመፃፍ መልስዎትን ይሙሉ።

- ማዕረግ ሀ. $\bar{I}$ አለቃ ወይም ከዛ በታች ☐ ለ. $\bar{II}$ አለቃ ☐ ሐ. ም/መቶ አለቃ ☐
መ. መቶ አለቃ ☐ ሠ. ሻምበል ☐ ረ. ሻለቃ ☐
ሰ. ሌ/ኮሎኔል ☐ ሸ. ኮሎኔል ☐ ቀ. ብ/ጀነራል ወይም ከዛ በላይ ☐
- የትውልድ ዘመን _____ ዓ. ም.
- የትምህርት ደረጃ ሀ. ≤ 12 ኛ ክፍል ☐ ለ. ዲፕሎማ ☐ ሐ. ዲግሪ ☐ መ. ከዲግሪ በላይ ☐
- በተቋሙ ውስጥ ያለዎት የስራ ሃላፊነት/ ግዳጅ ሁኔታ፡
ሀ. በአብዛኛው ቋሚ ቢሮዎ ውስጥ የሚከናወን ነው ☐
ለ. ግማሽ በግማሽ በሚሆን ደረጃ በቢሮና ከቢሮ ውጭ/በፊልድ የሚከናወን ነው ☐
ሐ. በአብዛኛው ከቋሚ ቢሮዎ ውጭ/ፊልድ ላይ የሚያተኩር ነው ☐
- የልጅ ብዛት _____
- የመጨረሻ ልጅዎ የታ ሀ. ወንድ ☐ ለ. ሴት ☐
- የመጨረሻ ልጅዎ እድሜ ሀ. ከ 1 አመት በታች ☐ ለ. ከ 1 – 2 አመት ☐
ሐ. ከ 2 – 3 አመት ☐ መ. ከ 3 – 4 አመት ☐
ሠ. ከ 4 – 5 አመት ☐
- የመጨረሻ ልጅዎን የወለዱት፡ ሀ. በቤት ውስጥ ☐
ለ. በጤና ተቋማት ☐
ሐ. ሌላ ከሆነ (ይገለፅ) _____

ክፍል ሁለት

ከታች በሰንጠረዥ ውስጥ የሰፈሩትን ሃሳቦች እያንዳንዱን በሚገባ ካነበቡና ከተረዱ በኋላ መልስዎን ፊት ለፊት በተዘጋጁት “እውነት” እና “ሀሰት” የሚሉ አማራጮች ውስጥ የ “✓” ምልክት በማስቀመጥ ያመለክቱ። (እባክዎ ለሁሉም ጥያቄዎች መልስ መስጠጥዎን ያረጋግጡ)

ሃሳቦች / ጥያቄዎች	አማራጭ	
	እውነት	ሀሰት
1. ጡት ማጥባት አንድ አንድ ጥሩ የእርግዝና መከላከያ መንገድ ያገለግላል።		
2. የእናትን ጡት ብቻ አንድን ህፃን ለ 3 ወራት ማጥባት በቂ ይሆናል።		
3. የእናትን ጡት ብቻ ማጥባት ሲባል ንፁህ ውሃ ለህፃኑ መስጠትን የሚቃወም ማለት አይደለም።		
4. ጡት ማጥባት በእናትና-ልጅ መካከል ያለውን ትስስር/ቀረቤታ ያጠናክራል።		
5. አንድን ህፃን ቢያንስ ለ 12 ወራት ያህል ማጥባት ከተቻለ ህፃኑ አስፈላጊውን ያህል ጊዜ ጡት የጠባ መሆኑን ያሳያል።		
6. የእናት ጡትን የሚጠባ ህፃን ተመጣጥኖ የተዘጋጀ የህፃናት ምግብን ከሚመገብ ህፃን የተለየ የእድገት ሂደት/ሁኔታን ያሳያል።		
7. ከእናት ጡት ወተት ሊገኝ የሚችልን የምግብ ይዘት በሙሉ ተመጣጥኖ ከሚዘጋጅ የህፃናት ምግብ ውስጥ ማግኘት ይቻላል።		
8. የእናት ጡት የሚጠባ ህፃን ለህፃናት ተመጣጥኖ የተዘጋጀን ምግብ ከሚመገብ ህፃን የተሻለ በሽታን የመከላከል አቅም አለው።		
9. ኤች. አይ.ቪ. በደሟ ውስጥ ያለባት እናት ብትሆንም እንኳን ልጇን ያለተጨማሪ ምግብ ጡት ብቻ ማጥባት ትችላለች።		
10. የመጀመሪያው የእናት ጡት ወተት (እንገር) ለህፃኑ የሚጠቅም ንጥረ-ነገር የያዘ ባለመሆኑ ማጥባቱ አስፈላጊ አይሆንም።		
11. የእናት ጡትን ብቻ ማጥባት ለእናትዮዎም ጤና ጠቃሚ ነው።		
12. አንድ ህፃን ከተወለደ ቢያንስ ከአንድ ቀን በፊት ጡት እንዲጠባ መደረግ የለበትም።		

ክፍል ሶስት

ከታች በሰንጠረዥ የቀረቡት የተለያዩ ሃሳቦች “ትክክለኛ” ወይም “ስህተት” የሚባል መልስ ያላቸው አይደሉም። ስለሆነም እያንዳንዱን ሃሳብ በትኩረት አንብበው ከተረዱ በኋላ እርስዎ የሚያምኑበትን ደረጃ ከሃሳቡ ፊት ለፊት ከተዘጋጁት አማራጮች ውስጥ የ “✓” ምልክት በማድረግ ይጠቁሙ። እባክዎትን ለሁሉም ሃሳቦች የሚከተሉትን የመግለጫ ደረጃዎች በመጠቀም መልስዎትን ያስቀምጡ።

1 = በጣም አልስማማም

2 = አልስማማም

3 = መወሰን አልችልም

4 = እስማማለሁ

5 = በጣም እስማማለሁ

ሃሳቦች/ጥያቄዎች	1	2	3	4	5
1. የምታጠባ እናት ስለሆነች ብቻ ሌሎች የቤተሰቦቿን አባላት ለመንከባከብ ልትቸገር አትችልም፡፡					
2. ጡትን ማጥባት ከሌሎች ህፃናትን የመመገቢያ መንገዶች ይልቅ አስቸጋሪው ዘዴ ነው፡፡					
3. በስራ ሰዓት ወቅትም ልጅን ጡት ማጥባት ተቀባይነት ሊኖረው ይገባል፡፡					
4. ጤነኛ ሆነው የሚታዩ ልጆች ጡት መጥባት ላያስፈልጋቸው ይችላል፡፡					
5. የእናትን ጡት ብቻ ማጥባት ያለፈበትና ከጊዜው ጋር የማይሄድ ሆኗል፡፡					
6. ህፃኑ የመጀመሪያውን ጡት ከመቅመሱ በፊት ለህፃኑ የተዘጋጀ ምግብ እንዲወስድ ማድረግ በአብዛኛው የሚመከር ነው፡፡					
7. ጡት ማጥባት ምችት አይሰጠጥም፡፡					
8. ልጄን ጡት ማጥባት የምትፈልግ እናት ከቤት ውጭ ስራ መስራት የለባትም፡፡					
9. እንደ ካፌና የስራ ቦታ በመሳሰሉትና ህዝብ በሚገኝባቸው ቦታዎች ጡትን ማጥባት ያሳፍረኛል፡፡					
10. ከህፃኑ አኳያ ከታየ ከእናት ጡት ይልቅ ተመጣጥኖ የተዘጋጀ የህፃናትን ምግብ መመገብ የበለጠ ጠቀሜታ አለው፡፡					
11. ጡት ማጥባት የቤተሰብን ወጪ ከመቀነስ አንፃር ጥሩ ዘዴ ነው፡፡					
12. ጡት ማጥባት በትዳር ግንኙነት ላይ አሉታዊ/ኔጋቲቭ ተፅዕኖ ይኖረዋል፡፡					
13. የስራ ቦታዎች/ድርጅቶች ጡት ለማጥባት የሚያመች ቦታ ሊያዘጋጁ ይገባል፡፡					
14. ጡት ላጠባ የምችለው ተመጣጥኖ የተዘጋጀ የህፃናት ምግብን ለመግዛት የሚያስችል በቂ ገቢ እስከሌለኝ ድረስ ይሆናል፡፡					

ክፍል አራት

ከዚህ ቦታች ያሉትን ጥያቄዎች በሚገባ ካነበቡና ከተረዱ በኋላ ልምድዎትን ከተዘጋጁት አማራጮች ወስጥ በመምረጥና በሳጥኑ ውስጥ የ “✓” ምልክት በማስቀመጥ እንዲሁም ክፍት ቦታ ለተዘጋጁላቸው ደግሞ በመፃፍ መልስ ይስጡ፡፡ (እባክዎ ለሁሉም ጥያቄዎች መልስ መስጠጥዎን እና ልምድዎ የመጨረሻ ልጆዎትን ብቻ መሰረት ያደረገ እንደሆነ ያረጋግጡ)

1. በእርግዝናዎ ጊዜ ጡት ማጥባትን በተመለከተ ትምህርት/ስልጠና ይወስዱ ነበር? ሀ. አዎ ☐ ለ. አልወሰድኩም ☐

2. በእርግዝናዎ ወቅት ወደ ጤና ተቋማት በመመላለስ አስፈላጊውን ክትትል አድርገዋል? ሀ. አዎ ☐ ለ. አልተከታተልኩም ☐

3. ልጅዎን ጡት አጥብተዋል? ሀ. አዎ ☐ ለ. አላጠባሁም ☐

3.1. መልስዎ “ለ” (አላጠባሁም) ከሆነ ምክንያትዎ ምን ነበር? _____

3.2. መልስዎ “ሀ” (አጥብቻለሁ) ከሆነ እባክዎትን ለተከታዮቹ ጥያቄዎች መልስ ይስጡ፡፡

4. ልጅዎትን እንደወለዱ እንገር (የመጀመሪያውን የጡትዎን ወተት) አጥብተዋል? ሀ. አዎ ☐ ለ. አላጠባሁም ☐

5. ልጅዎን በወለዱ በምን ያህል ሰዓታት ውስጥ ነበር ጡት ማጥባት የጀመሩት?

ሀ. 0 – 6 ሰዓት ☐

ለ. 6 – 12 ሰዓት ☐

ሐ. 12 – 24 ሰዓት ☐

መ. ከተወለደ ከ 1 ቀን በኋላ ☐

6. ልጅዎ 6 ወር እስኪሞላው ድረስ ከእናት ጡት በተጨማሪ ሌሎች ተጨማሪ ነገሮችን/ምግብ ሰጥተው ያውቃሉ?

ሀ. አዎ ☐ ለ. አልሰጠሁም ☐

6.1. መልስዎ “ሀ” (አውቃለሁ) ከሆነ የሰጡት ተጨማሪ ምግብ ምን ነበር? (ከአንድ በላይ መልስ ሊሰጡ ይችላሉ)

ሀ. ንፁህ ውሃ ☐ ለ. ለጋ ቅቤ ☐ ሐ. ማር ☐

መ. የላም ወተት ☐ ሠ. ሌላ ከሆነ/ካለ (ይገለፅ) _____

6.2. መልስዎ “ሀ” (አውቃለሁ) ከሆነ የመጀመሪያውን ተጨማሪ ምግብ መስጠት የጀመሩት መቼ ነበር?

ሀ. ከተወለደ ከ 1 ወር በፊት ☐

ለ. ከተወለደ ከ 1 - 2 ወር ባለው ጊዜ ውስጥ ☐

ሐ. ከተወለደ ከ 2 - 4 ወር ባለው ጊዜ ውስጥ ☐

መ. ከተወለደ ከ 4 - 6 ወር ባለው ጊዜ ውስጥ ☐

7. ልጅዎን በአሁኑ ሰአት ጡት ያጠባሉ?

ሀ. አዎ ☐

ለ. አላጠባም/አቁሚያለሁ ☐

7.1. መልስዎ “ለ” (አቁሚያለሁ) ከሆነ ማጥባት ያቆሙት ልጅዎን ከወለዱ ከምን ያህል ጊዜ በኋላ ነበር?

ሀ. 6 ወር ከመሆኑ በፊት ☐

ለ. ከ 6 - 12 ወር ባለው ጊዜ ☐

ሐ. ከ 1 አመት በኋላ ነገር ግን 2 አመት ሳይሞላው ☐

መ. 2 አመት ከሆነው በኋላ ☐

7.2. መልስዎ “ለ” (አቁሚያለሁ) ከሆነ ልጅዎን ጡት ማጥባት ካቋረጡበት ምክንያቶች ውስጥ ዋነኛ የሚሉት ምንድን ነው? (እባክዎ በተቻለ መጠን የምክንያቶችን ሁኔታ/ምንነት በተዘጋጀው ክፍት ቦታ ላይ ይግለፁ)

ሀ. ስራ/የግዳጅ ሁኔታ ☐ (ይገለፅ) _____

ለ. የእናት(የራስ) የጤና ችግር ☐ (ይገለፅ) _____

ሐ. የህፃኑ የጤና ችግር ☐ (ይገለፅ) _____

መ. በትምህርት ምክንያት ☐ (ይገለፅ) _____

ሠ. ጡቴ በቂ ወተት ሊሰጥ ባለመቻሉ ☐

ረ. በእርግዝና ምክንያት ☐

ሰ. የህፃኑ እድሜ በቂ መሆኑን በማመን ☐

ሸ. ከእናት ጋር ያለውን ጥገኝነት ለመቀነስ ☐

ቀ. ህፃኑ በራሱ ባለመፈለጉ/በማቆሙ ☐

በ. ሌላ ከሆነ (ይገለፅ) _____

8. በአጠቃላይ የውትድርና ሙያ/ስራ ጡት ከማጥባት ሁኔታ ጋር ያለውን ጠቀሜታ እንዲሁም ጉዳት(ተግዳሮት) ምን እንደሆነ ከእርስዎ ልምድ በመነሳት ይግለፁ?

8.1. በጎ ጎን (ጠቀሜታ) _____

8.2. ጉዳት (ተግዳሮት) _____

ስለትብብርዎ በድጋሚ እናመሰግናለን!!

Appendix – B: Cronbach’s Alpha and Item Total Statistics Results of Pilot Test

Appendix-B1: Breastfeeding Knowledge Test Reliability Statistics of the Pilot Test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	N
.794	.818	12	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Breastfeeding is a good contraceptive method	19.38	6.006	.362	.786
Three months of exclusive breastfeeding is long enough	19.27	6.205	.445	.781
Exclusive breastfeeding doesn't prohibit giving of water	19.46	5.778	.413	.782
Breastfeeding promotes mother-baby attachment	19.31	5.822	.607	.766
The optimal duration of breastfeeding is 12 months	19.58	5.614	.435	.781
Growth pattern of breastfed infants differ from those of formula fed	19.38	5.846	.450	.778
Infant formula contains all ingredients found in human breast milk	19.35	5.915	.464	.776
Immune systems of breastfed infants are more developed than formula fed infants	19.31	5.822	.607	.766
A mother can exclusively breast feed even if she is HIV-positive	19.81	5.602	.440	.780
Colostrum is nutritionally useless for the baby and should be discarded	19.23	6.345	.505	.782
Exclusive breastfeeding will help to improve mothers' health	19.69	5.982	.257	.803
A new baby should not sucking breast before a minimum of one day of a delivery	19.35	5.755	.561	.767

Appendix-B2: Attitude towards Breastfeeding Test Reliability Statistics of the Pilot Test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	N
.738	.759	14	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correln.	Cronbach's Alpha if Item Deleted
It is not difficult for breastfeeding mother to care of her other family members	52.00	57.091	.315	.727
Breast feeding is a difficult way of infant feeding	51.00	56.000	.331	.725
It is acceptable for women to breastfeed during working hour	52.09	57.447	.228	.737
Children looking healthy should not be breastfeed	51.61	58.431	.113	.756
Exclusive breastfeeding is an outdated fashion	51.04	53.316	.396	.718
A formula feed is usually advisable before the first breastfeed	51.39	50.794	.445	.712
Breastfeeding is not comfortable	50.87	57.300	.335	.725
Women who want to breastfeed their infants should not employed/work outside the home.	51.43	56.621	.242	.737
Feeling of shy of breastfeeding in public places	51.83	54.059	.443	.713
For a baby, formula feeding is healthier than breastfeeding.	50.96	58.680	.337	.727
Breastfeeding is a good way to decrease family expenses	51.61	53.431	.456	.711
Breastfeeding has negative effect on ones marital relationship	51.30	54.221	.536	.706
Workplaces should provide a designated place for breastfeeding	51.52	54.806	.634	.703
Breastfeeding is only if not have enough money for formula.	50.87	57.664	.331	.726

Appendix-B3: Breastfeeding Practice related Test Reliability Statistics of the Pilot Study

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	N
.791	.757	7	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Attend training or seminar on breastfeeding issues	10.68	2.513	.558	.759
Pregnancy follow up in health centers	10.32	2.799	.645	.744
Experience of breastfeeding	10.23	3.327	.395	.789
Giving of colostrums	10.23	3.708	-.090	.831
Time to start/initiate breastfeeding	10.45	2.545	.637	.739
Giveing of supplemental food in addition to breast milk within the age of 6 months	10.55	2.355	.716	.719
Time to terminate breastfeeding	10.64	2.338	.694	.724

Appendix – C: Cronbach’s Alpha and Item Total Statistics Results of the Main Study

Appendix-C1: Breastfeeding Knowledge Test Reliability Statistics of the Main Study

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	N
.802	.817	12	268

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Breastfeeding is a good contraceptive method	19.28	6.332	.378	.796
Three months of exclusive breastfeeding is long enough	18.92	6.924	.338	.796
Exclusive breastfeeding doesn't prohibit giving of water	19.25	6.248	.418	.792
Breastfeeding promotes mother-baby attachment	18.98	6.208	.663	.769
The optimal duration of breastfeeding is 12 months	19.34	6.037	.504	.782
Growth pattern of breastfed infants differ from those of formula fed	18.98	6.485	.498	.783
Infant formula contains all ingredients found in human breast milk	19.07	6.500	.386	.793
Immune systems of breastfed infants are more developed than formula fed infants	18.93	6.653	.511	.785
A mother can exclusively breast feed even if she is HIV-positive	19.34	6.039	.504	.782
Colostrum is nutritionally useless for the baby and should be discarded	18.88	6.986	.410	.794
Exclusive breastfeeding helps to improve mothers' health.	19.19	6.275	.423	.791
A new baby should not sucking breast before a minimum of one day of a delivery	18.94	6.605	.517	.784

Appendix-C2: Attitude towards Breastfeeding Test Reliability Statistics of the Main Study

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	N
.773	.784	14	268

Item-Total Statistics

	Scale Mean if Item Delete	Scale Variance if Item Deleted	Corrected Item-Total Correlatio	Cronbach's Alpha if Item Deleted
It is not difficult for breastfeeding mother to care of her other family members	55.67	44.889	.333	.765
Breast feeding is a difficult way of infant feeding	54.74	45.525	.422	.757
It should be allowed for women to breastfeed their infant during working hour.	55.41	44.927	.323	.766
Children looking healthy might not be necessary breastfeed	54.62	44.549	.557	.747
Exclusive breastfeeding is an outdated fashion	54.93	43.177	.433	.755
A formula feed is usually advisable before the first breastfeed	54.57	45.811	.392	.759
Breastfeeding is not comfortable	54.90	45.342	.357	.762
Women who want to breastfeed their infants should not work outside the home.	54.92	45.900	.322	.765
Feeling of shy of breastfeeding in public places	54.89	44.765	.405	.757
For a baby, formula feeding is healthier than breastfeeding.	54.90	43.235	.504	.748
Breastfeeding is a good way to decrease family expenses	55.62	43.348	.397	.759
Breastfeeding has negative effect on ones marital relationship	54.75	45.138	.454	.754
Workplaces should provide a designated place for breastfeeding	55.23	46.969	.190	.779
Breastfeeding is only if not have enough money for formula.	54.68	45.749	.460	.755

Appendix-C3: Breastfeeding Practice related Test Reliability Statistics of the Main Study

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	N
.786	.759	7	268

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Attend training or seminar on breastfeeding issues	10.31	2.141	.748	.702
Pregnancy follow up in health centers	10.07	2.608	.591	.744
Experience of breastfeeding	9.91	3.400	.135	.805
Giving of colostrums	9.93	3.257	.276	.795
Time to start/initiate breastfeeding	10.23	2.261	.691	.718
Giveing of supplemental food in addition to breast milk within the age of 6 months	10.53	2.450	.511	.762
Time to terminate breastfeeding	10.43	2.320	.585	.745

Appendix – D

Bonferroni's Post hoc Comparison test for breastfeeding Knowledge as a function of educational level

(I) Mothers' educational level	(J) Mothers' educational level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
? 12 grade	Diploma	-.15956*	.03380	.000	-.2494	-.0697
	First Degree	-.22471*	.04297	.000	-.3389	-.1105
	Second degree or above	-.17498	.09316	.369	-.4226	.0727
Diploma	? 12 grade	.15956*	.03380	.000	.0697	.2494
	First Degree	-.06515	.03380	.330	-.1550	.0247
	Second degree or above	-.01542	.08930	1.000	-.2528	.2220
First Degree	? 12 grade	.22471*	.04297	.000	.1105	.3389
	Diploma	.06515	.03380	.330	-.0247	.1550
	Second degree or above	.04973	.09316	1.000	-.1979	.2974
Second degree or above	? 12 grade	.17498	.09316	.369	-.0727	.4226
	Diploma	.01542	.08930	1.000	-.2220	.2528
	First Degree	-.04973	.09316	1.000	-.2974	.1979

*. The mean difference is significant at the 0.05 level.

Appendix – E

Bonferroni's Post hoc Comparison test for breastfeeding Knowledge as a function of respondents' number of children

(I) Number of children	(J) Number of children	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.05261	.02856	.399	-.1285	.0233
	3	-.06995	.04041	.508	-.1774	.0375
	4	-.18730*	.07015	.048	-.3738	-.0008
2	1	.05261	.02856	.399	-.0233	.1285
	3	-.01734	.04328	1.000	-.1324	.0977
	4	-.13470	.07184	.372	-.3257	.0563
3	1	.06995	.04041	.508	-.0375	.1774
	2	.01734	.04328	1.000	-.0977	.1324
	4	-.11735	.07732	.782	-.3229	.0882
4	1	.18730*	.07015	.048	.0008	.3738
	2	.13470	.07184	.372	-.0563	.3257
	3	.11735	.07732	.782	-.0882	.3229

*. The mean difference is significant at the 0.05 level.

Appendix – F

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15-07-07

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የሰነድ ምረቃ ትምህርት

አዲስ አበባ ዩኒቨርሲቲ
የሰነድ ምረቃ ትምህርት

2015

To: Ministry

Add: Addis

Dear Sir/Madam,

Ato/Wro/Wrt Getnet Shewo is among our postgraduate students scheduled to graduate by the end of this academic year. He/She is currently writing thesis entitled:

Knowledge, Attitude and Practices Regarding
Breastfeeding: The Case of Ethiopian Army Member
Mothers in Ministry of Defense

Therefore, we kindly request you to afford her/him access to all relevant documents and materials that may be helpful.

Kind Regards,

Moges Ayale (PhD)
Head, School of Psychology

የአዲስ አበባ ዩኒቨርሲቲ
የሰነድ ምረቃ ትምህርት
የሰነድ ምረቃ ትምህርት

የአዲስ አበባ ዩኒቨርሲቲ
የሰነድ ምረቃ ትምህርት
የሰነድ ምረቃ ትምህርት

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