Breastfeeding trends in Yerevan: Relationship between maternal knowledge and breastfeeding practices.

A cross-sectional study

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by

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Contents

Abbreviation List

WHO - World Health Organization

SIDS - Sudden Infant Death Syndrome

HIV - Human Immunodeficiency Syndrome

AIDS - Acquired Immune Deficiency Syndrome

MOH - Ministry of Health

UNICEF - United Nations International Children's Emergency Fund

USAID - Agency for International Development

BFHI - Baby Friendly Hospital Initiative

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Abstract

Background: The positive health benefits from exclusive breastfeeding are well documented. Starting from 1993, with support from UNICEF and USAID, the Ministry of Health of Armenia initiated a new nationwide program called State Program on Breastfeeding. State programs were initiated in maternity hospitals as part of the Baby Friendly Hospital Initiative (BFHI). From 1993 to 1997 the rate of exclusive breastfeeding in Armenia increased from 0.7% to 20%. According to the Armenia Demographic and Health Surveys, exclusive breastfeeding increased from 30% to 33% from 2000 to 2005.
Study Aim: This study assessed the current levels of breastfeeding, feeding practices and their influence on breastfeeding, and maternal knowledge about breastfeeding. The findings were compared with the survey outcomes conducted in 1997.
Methodology: The analytical cross-sectional telephone survey was conducted with 135 mothers of children aged 0-6 months served by nine health facilities located in different districts of Yerevan. Infants were randomly chosen according to systematic random sampling and then their mothers were contacted for interviews. The study adapted the instrument used in1997.
Results: Approximately17.0% of mothers reported about prelacteal feeding, 6.0% of these babies received prelacteal feeding by bottle, 77.0% reported that they were explained the benefits of correct positioning and attachment, 74.8% of mothers reported about being informed on demand feeding. About 91.9% of the study participants reported that their babies stayed with them in the same room. Only 2.9% of the study participants reported that they never breastfed their children because of health condition. About 46.7% mothers reported about bottle feeding with a nipple. According to mothers' reports the mean age of giving infants other food than breastmilk was about 4 month. Although the majority of mothers breastfed their children, they substituted their milk with water, tea, fruit juices, bananas, porridge, and infant formula earlier than recommended.
According to WHO indicators, the rate of exclusive breastfeeding for up to 6 months was 23% and for up to 4 months 44.4%. The multiple regression analysis revealed significant associations between exclusive breastfeeding and stress as the main reason of insufficient breastmilk (OR=9.28, 95%CI=2.1-40.8), the need of giving water to a newborn baby besides being breastfed (OR=19.4, 95%CI=2.5-151.8) and infant's age (R=0.974, 95%CI=0.96-0.99).
Conclusion and Recommendations: Although the percent of exclusive breastfeeding increased since 1997, it is still less than ideal. Some of the hospital practices also need improvement. Maternal knowledge related to breastfeeding was less than 50%. Maternal knowledge was identified as strong predictor of exclusive breastfeeding among the mothers, but their knowledge level needs to improve significantly.
The following two recommendations emerge from these findings and the existing literature:
1. The health system should better educate pregnant women and new mothers about exclusive breastfeeding.
2. The MOH should improve the implementation of the Ten Steps to Successful Breastfeeding Policy in order to ensure appropriate post-partum care practices.

1. Introduction

1.1 Background/ Literature Review

Breastfeeding is a natural and normal way of feeding infants and for most of human history and prehistory was universal, as there were no alternative foods for infants. Mothers, children and society gain from breastfeeding. For the infants, breast milk contains antibodies that protect infants from bacteria and viruses (1). Breastfed children have fewer ear infections (2), respiratory infections (3), meningitis (4), urinary tract infections (5) and have diarrhea less often (6). Breastfed babies have lower incidence of sudden infant death syndrome (7), less chance of developing diabetes mellitus type 1 (8), and malignant lymphomas (9), than peers with a shorter duration of breastfeeding and an earlier exposure to artificial feeding. Breastfeeding also has long-term benefits in protecting against obesity (10), asthma (11) and other allergies (12, 13).

Many studies have shown that the mortality risk for artificially fed infants is higher than for breastfed children in both developing and developed countries (14). According to WHO statistics, breastfeeding saves the lives of six million infants every year and additionally, if a child is breastfed only breastmilk for the first six months and with appropriate complementary foods for at least one year, it could save one to two million lives around the world (15).

Breastfed infants are significantly less likely to have diarrhea and acute respiratory infections (particularly pneumonia) which are the main reasons for post-neonatal death (16). Thus, breastfeeding is one of the most important interventions to reduce infant mortality. In an article summarizing data from multiple countries, research confirms the protective effect of breastfeeding against infant mortality (17). This article concludes that children who

are breastfed until 2 months of age are 5.8 times less likely to die than those who are not. Similarly, infants who are breastfed through 3 months of age are 4.1 times less likely to die. This protective effect is seen through eighth month olds (children who are breastfed from 6-8 months are 1.4 times less likely to die than those the same age who are not breastfed) (17). Data from Brazil show that breastfed infants are 17 times less likely to suffer from pneumonia than artificially fed infants (18). Sudden infant death syndrome (SIDS) - is the leading cause of postneonatal death in developed world, but it occurs much less frequently in breast-fed infants (19).

Breastfeeding offers a range of benefits for mothers. It is a cost effective way of feeding an infant, and provides the best nourishment for a child at a small nutrient cost to the mother (21). Frequent and exclusive breastfeeding can delay the return of fertility through lactational amenorrhea and prevent pregnancy (22). Breastfeeding promotes the release of hormones, which make the uterus contract more quickly and reduce bleeding and anemia (23), and helps mothers by earlier return to pre-pregnancy weight as fat accumulated during pregnancy is used to produce milk (24). It also provides long-term preventative effects such as less risk of breast, endometrial, and ovarian cancers and osteoporosis (25, 26, 27). According to collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries (28), the overall risk of breast cancer decreases by 4.3% for every 12 months of breast-feeding and the risk of ovarian cancer decreases by about 20% for 2 to 7 months of breastfeeding (28). Additionally, breastfeeding creates emotional, physiological and psychological bonds between mothers and children and reduces rates of infant abandonment (29).

Breastfeeding also offers society economic and environmental benefits. Infants who are exclusively breastfed tend to need fewer health care visits, prescriptions and

hospitalizations resulting in a lower total medical care cost compared to never-breastfed infants (30).

Breastfeeding reduces the number of sick days that families must use to care for their sick children (31). Breastfeeding requires no packaging, fuel or electricity for preparation as artificial food and it does not harm the environment (32).

However, several situations do exists, when breastfeeding is not recommended in order to prevent the possible negative impact on the health of child and mother. These situations include serious illnesses such as heart diseases, mental diseases, cancer, nephritis, active, untreated tuberculosis, HIV infections or AIDS, active herpes lesions on the breast, and severe malnutrition (33).

Data from the National Health and Nutrition Examination Surveys in the United States show that in 2005-2006, nearly 77% of infants were ever breastfed; however, only 31% of babies were exclusively breastfed until 3 months and 11% until 6 months (34).

Around 2005, the proportion of children who were ever-breastfed varied widely in European countries, ranging from less than 70% in Ireland and France, up to almost 100% in Denmark, Sweden and Norway. The incidence of exclusive breastfeeding and its duration is higher/longer in such countries as Norway with rate of 65% up to four months of age and 45% up to six months of age, Slovakia about 58% up to four months of age and 42% up to six months of age, Czech Republic about 40% up to six months, and Sweden about 60% up to four months of age and 19% up to six months of age (35).

Based on UNICEF reports for 2005-2007, the percentage of the exclusively breastfed infants respectively less than four months and six months of age in the former Soviet Union countries were the following: Armenia 37% and 33%, Azerbaijan 16% and 12%, Georgia 13% and 11%, Belarus 12% and 9%, Ukraine 28% and 18%, Moldova 57% and 46%,

Kyrgyzstan 41% and 32%, Tajikistan 36% and 25%, Turkmenistan 15% and 11%, Uzbekistan 37% and 26%, and Kazakhstan 25% and 17% (36).

1.2 Situation in Armenia

After the 1988 Armenian earthquake, rates for predominant breastfeeding dropped from 65% to just 20% over 6-7 years (37). This drastic decline was blamed on the shortage of food, economic hardship, and continuous stress that had endured since the collapse of the Soviet Union. The majority of mothers with young infants reported insufficient breast milk and requested infant formula, because they lacked confidence in their breastfeeding capabilities under such hard living conditions (38). During the early 1990s Armenia was provided with infant formula as humanitarian aid, and the availability of free infant formula was one of the most obvious reasons for the dramatic decrease in breastfeeding (38). Other factors included unfavorable hospital practices such as late initiation of breastfeeding, scheduled feeding, routine prelacteal feeding with water, glucose water, donor milk and formula, use of bottle-feeding and pacifiers, the lack of trained medical staff capable of helping mothers with common breastfeeding problems, and lack of knowledge among the population and primary health care providers regarding the advantages and techniques of breastfeeding (37, 38).

From 1993 to1997 the rate of exclusive breastfeeding increased by 20.1% following a four year breastfeeding promotion program by the Ministry of Health (MOH) (39, 40). According to the Armenia Demographic and Health Surveys, exclusive breastfeeding increased from 30% to 33% from 2000 to 2005 (Figure1). The percentage of infants who have been fed with breast milk plus other supplementary nutrition increased from 17% to 20% respectively during this period. The exclusive breastfeeding rate declined among young

children under four months age from 40 to 37% for the same period. Additionally, the use of bottles with nipples reached 40% among infants under four months and 57% for children between six and nine months in 2005 (41).

Although the statistics of breastfeeding have improved since the 1990s, breastfeeding levels are still low in Armenia and measures are required to further improve the general picture of breastfeeding.

1.3 Key Determinants

Infant feeding practices are influenced by many factors. Such demographic characteristics as socioeconomic status (42), mothers' age (43, 44), employment status (45, 46), and cultural practices (47) are related to low breastfeeding rate. Several studies have mentioned the importance of advice received during prenatal consultation for mothers' knowledge and attitude and further successful breastfeeding (48, 49). According to WHO protocols, successful breastfeeding is associated with appropriate hospital practices such as early initiation, bottle-feeding, rooming-in, breastfeeding on-demand, appropriate positioning, and attachment (50, 51, 52). Several studies have shown that type of delivery is also an important predictor for further successful breastfeeding (53, 54). Literature also suggests that mothers' health status (AIDS, cocaine use, and other) is associated with breastfeeding status (55).

1.4 Summary of current interventions

Starting from 1993, the MOH initiated a new nationwide program called State Program on Breastfeeding (41). Programs financed by UNICEF and USAID heavily supported the national breastfeeding program. Program were initiated in maternity hospitals

as part of the Baby Friendly Hospital Initiative (BFHI). Examples of such reforms included immediate contact between the mother and newborn after delivery, early initiation of breastfeeding (within the range of 30 to 60 minutes after birth), allowing the mother and newborn to stay in the same hospital room, breastfeeding the baby on-demand, and other baby-friendly practices (41, 51). The BFHI Program has expanded since 2000, and currently 15 maternity hospitals (where 30% of children are delivered annually) have Baby Friendly status (41).

In 2002, with WHO and UNICEF assistance, exclusive breastfeeding (defined as breast milk only and no other foods or liquids) until the infant reaches six month of age was intensively recommended to mothers, with timely, adequate, safe, and appropriate complementary food and feeding after six months of age. The program also advised continuing breastfeeding into the second year of life and beyond (52, 56).

1.5 Objectives of the Study

This study assessed the current levels of breastfeeding, identified the feeding practices and their influence on breastfeeding, and assessed maternal knowledge about it and determined if there was a relationship between these two factors. The findings were compared with survey outcomes, conducted in 1997 on the same topic.

The specific research objectives were:

1. Determine the prevalence and duration of breastfeeding among infants aged 0-6 months in Yerevan.
2. Determine the factors which predict exclusive breastfeeding among infants aged 0-6 months in Yerevan.

3. Assess the relationship between the level of maternal knowledge and exclusive breastfeeding among infants aged 0-6 months in Yerevan.

4. Identify risk factors which negatively impact breastfeeding for infants, aged 0-6 months in Yerevan and give recommendations to improve the situation.

5. Identify if there were some differences in feeding practices, postnatal care, and maternal knowledge in 2009 compare to 1997.

2. Methodology

2.1 Study Design

The study design was analytical cross-sectional, which examined statistical correlation of all those variables, that were acquired during the cross-sectional survey (exclusive breastfeeding, postpartum care practices, level of maternal knowledge) (57).

The chosen design has the following advantages: it measures a snapshot of the population to estimate the relationship between an outcome of interest and population variables at one particular time. In addition, statistics are gathered rapidly by "one-time" interview. Generally, it is not expensive and easy to conduct. However, the study design has the following disadvantages: as the outcome and independent variables are measured at the same point in time it may not always be possible to distinguish whether the exposure proceeded or followed the outcome, and cause and effect relationships are not certain. It does not economize on subjects and is not helpful for rare cases (58).

The study was conducted by telephone interview technique. The choice of this method is explained by the following reasons: 1) during the survey, the heating in polyclinics was not adequate, and it was cold there, 2) the visits were seldom and irregular, and 3) most of the mothers refused to come to the cold ies. Therefore, conducting face-to-face interviews

in the facility was difficult and would probably lead to low response rates. In addition, telephone interviewing is considered cost and time effective. However, telephone interview technique has some disadvantages: rate of no-response or no-contact can be higher due to coverage of people with wrong numbers. Besides, some people may have no telephone or be absent from their residence. The refusal rate could be higher than for face-to-face interviews (57). However, since this study concerned children aged 0-6 months and residents of Yerevan who at that time were registered in the polyclinic, the wrong numbers were minimal. Taking all these factors into consideration, telephone interview proved to be the most appropriate for the aim of the study.

2.2 Study population

The target population was mothers with children aged 0-6 months served by nine health facilities located in different districts of the city. From each district one polyclinic was chosen for the purpose of the study (see Appendix 1). Information about the children with their phone numbers was obtained from polyclinics.

Inclusion criteria:

Yerevan residents, who had a child aged 0-6 months.

*Exclusion criteria***:**

Inability to understand Armenian.

Women with conditions when breastfeeding was not advised, according to medical records.

2.3 Sampling Considerations

The required sample size was calculated taking into consideration a two-sided $\alpha = 0.05$, $1-\beta=0.80$ based on sample size calculations for a cross-sectional study using Epinfo, adjusting for response rates (59). For this calculation, it was assumed, based on the best estimates for Armenia, that 80% of physicians would provide recommendations to new mothers for exclusive breastfeeding for six months, with 20% of physicians not providing these recommendations. Based on trends from 2000 and 2005 for percentages of exclusive breastfeeding for 6 months for all new mothers (39), for sample size calculations, it was reasonably assumed that of new mothers who received complete instructions from physicians (for exclusive breastfeeding for six months) 45% breastfed exclusively for six months and that for new mothers who did not receive complete instructions from their physician, 15% exclusively breastfed for six months.

After calculations using the statcalc utility in EpiInfo, the computed total sample size equaled to 135. Assuming an 80% response rate, the adjusted sample size was 169. The sample size for each of the 9 polyclinics was calculated according to the relative proportion of infants receiving services at each out-patient department (Appendix 2). The infants were randomly chosen according to systematic random sampling and then their mothers were contacted for interviews. After each interview, the journal form was filled (Appendix 3).

2.4 Study instrument

A pre-tested instrument used in previous studies about breastfeeding in Armenia was used to collect data in this study. The questionnaire was based on validated WHO/UNICEF questions (37). The instrument included 8 sections: 1) introduction, 2) background information, 3) prenatal care practices, 4) delivery, 5) hospital practices, 6) current feeding

practices, 7) maternal knowledge and beliefs, and 8) health education channels (Appendix 4). These eight sections addressed all variables (dependent: breastfeeding status and independent variables: socio-demographic characteristics, health care services, and maternal knowledge regarding breastfeeding) and helped to answer the research questions. Table1 displays the main variables.

2.5 Ethical Consideration

The Institutional Review Board (IRB) within the College of Health Sciences at the AUA approved the research proposal. The data collection process started after obtaining the approval.

An oral consent process was used before asking questions (Appendix 5). The participants were involved in the study only if they agreed to participate. They could refuse to participate or quit the study whenever they wanted. The participants were informed that they were participating in research issues related to breastfeeding and they were not exposed to any kind of risk. The only discomfort for them was the time that they spent on interviews. Participants did not get direct benefits or incentives from the participation, but the information received from them would help to estimate the nature of the problem and facilitate infant feeding in Armenia.

The participants knew that the study did not include personal and sensitive questions and that the collected data would be completely confidential and reviewed only by the research team. Strict regulations were followed to maintain the participants' right to privacy.

2.6 Data Analysis

The student investigator entered the data into SPSS11 statistical package, checked for accuracy and later transferred to STATA 10.0 and then conducted the analysis in two stages using SPSS, STATA, and Epi Info.

During the first stage the descriptive analysis and frequency analysis for all variables for the study population and the prevalence of exclusive breastfeeding were performed. Differences in characteristics between exclusive and non-exclusive breastfeeding groups were compared using either a standard 2-tailed t-test (for continuous variables) or a χ^2 test (for dichotomous variables).

Further bivariante analysis with the feeding status as a dependent variable and factors of interest and potential confounders as independent variables were conducted. All variables identified as statistically significant ($p < 0.05$) in the bivariate analysis were included in multivariate analysis. In the simple logistic regression analysis categorical data were converted into" dummy'' variables, however the original continuous variables were used for the multiple logistic regression analyses.

The findings were also compared with the survey outcomes conducted in 1997 on the same topic.

3. Results

3.1 Descriptive statistics

From the nine polyclinics 135 mothers of children from 0 to 6 months of age were enrolled in the study. The contact rate was 93%. Of the 12 non-respondents, 2 (1.5%) refused to

participate, 2 (1.5%) were not at home and 8 (5.0%) were with wrong numbers. The response rate was 92%.

Characteristics of study participants

Socio-Demographic Characteristics of the Sample. The age of children ranged from 20 to 180 days, with mean age of 131.1 ±42.5 days. The age structure targeted by the sampling design was obtained, however the age distribution of infants among age groups is not similar because of unequal distribution of the different age groups in the sample frame. Young infants less than two months of age were underrepresented in the sample.
The age of mothers ranged from 15 to 41 years, with the mean age of 26.8±4.4 years. Only 3.7% of the study participants were currently working, 0.7% had an incomplete education (less than 10 years), 18.5% had 10 years of schooling, and about 80% of mothers had beyond secondary school education (30% college and 50% institute/university). Above 55% of study population had one child. The majority of the sample (92.6%) had more than 4 people living in the family and 73.3% of study population had monthly expenditure of more than 100,000AMD (Table 2.1*).*

Prenatal Care and Birth History of Mothers of Infants. All study participants attended prenatal consultation. The majority of mothers (75%) attended prenatal consultation during the first trimester (80.6% in exclusive breastfeeding group and 74% in non-exclusive breastfeeding group**)**. Approximately 30% of the study population received advice about exclusive breastfeeding during prenatal consultation (41.9% in exclusive breastfeeding group and 28.8% in non-exclusive breastfeeding group). All the study population delivered in the hospital, 32 women (24%) had a Cesarean section (19.4% in exclusive breastfeeding group and 25.0% in non-exclusive group). About 95% of children were born with weight more than

2,500 g (including all exclusively breastfeeding children), which is considered by the WHO as normal weight at birth (Table 2.2).

Post-Partum Hospital Practices of sample. The percentage of immediate initiated infants was 52% (54.8% in exclusive group and 51% in non-exclusive group). Only17% of babies were put on their mothers' breast within the first hour. The percentage of the early initiation during the first hour is higher for the exclusive group compared to the non-exclusive (25.8% vs.14.4%). Approximately 17.0% of mothers reported about prelacteal feed (12.9% in the exclusive breastfeed group vs.18.3% in the non-exclusive breastfeed group); 6% of these babies received the prelacteal feed by bottle. The results have shown that 77.% of mothers (87.1% in the exclusive breastfeeding group vs. 74.0% in the non exclusive breastfeeding group) reported that they were explained the benefits of correct positioning and attachment. Similarly, 74.8% of mothers (87.1% in the exclusive breastfeeding group vs.71.2% in non- exclusive breastfeeding group) reported that they were informed about on-demand feeding. Moreover, 91.9% of study participants (90.8% in the exclusive breastfeeding group vs. 92.3% in the non- exclusive breastfeeding group) reported that their babies stayed with them in the same room (rooming-in). About 7.4% of the study population (6.5% in the exclusive breastfeeding group vs. 7.7% in the non- exclusive breastfeeding group) reported that their children were taken out of the room at night. The majority of mothers (75%) were discharged from the hospital during the first 4 days. The percentage of early discharged mothers in the exclusive group is higher compared to the non-exclusive (83.3% vs.73.1%) (Table 2.3).

Feeding Practice. The trends in current feeding practices were found according to mothers' 24-hour recall. The results show 28% decline of the breastfeeding rate after 3 months (Figure 2). Only 2.9% of the study participants reported that they never breastfed

their children because of health condition. About 46.7% mothers reported about bottle feeding with a nipple. According to mothers' reports, the mean age of giving infants other food than breastmilk is between 4 and 4.5 months. Approximately 76.4% of mothers breastfed their infants on- demand (in the exclusive breastfeeding group 90.3% and 70.9% in the non-exclusive group).

WHO defines different infant feeding indicators: 1) exclusive breastfeeding, when infant receives only breast milk; 2) predominant breastfeeding, when infant receives breastmilk and liquids, 3) partial breastfeeding (BF+formula), and 4) formula feeding. According to these indicators, the rate of exclusive breastfeeding is 23.0%, predominant breastfeeding is 12.6%, breasttfeedind and formula is 6.7%, only formula is 2.2% and other is 55.6%. Table 2.4 presents these indicators.

Maternal Knowledge. To assess maternal knowledge, women were asked a series of knowledge and belief questions. Table 2.5 shows that 57% of the study population were aware of the correct answer to the question about the age an infant would remain healthy on breast milk only. The percentage of correct answers in the exclusive breastfeeding group was 54.8% versus 57.8%. in the non-exclusive group. None of the mothers answered 0 days.

According to the mothers' reports, the main causes of insufficient milk were diet 30% (in the exclusive breastfeeding group 34.8% and in the non-exclusive group 47.8%) and stress 32.7% (in the exclusive breastfeeding group 79.2% and in the non-exclusive group 37.3%).The percentage of correct answer, that the cause of insufficient milk is infrequent breastfeeding, was 11% (in the exclusive breastfeeding group 20.8% and in the non-exclusive group15%). Mothers were read 15 statements related to their beliefs about breastfeeding. Table 2.6 displays the percentage of correct answers in both groups.

3.2 Standard 2-tailed t-tests and $\chi 2$ tests

Exclusively breastfed children are younger, mean 98.1 days, than non-exclusively breastfed, mean 140.9 days ($p < 0.0001$). Children are marginally significantly more likely to be exclusively breastfed in large families vs. small: 100.0% vs. 90.4%, $p = 0.073$. The results show that children in the exclusive breastfeeding group are more likely to be breastfed on-demand than in the non-exclusive group: 90.3% vs. 70.9%, $p = 0.031$.

According to the mother's reports, the main cause of insufficient milk was stress, in the exclusive breastfeeding group 79.2% and in the non-exclusive group 37.3%, $p < 0.0001$. The results show statistically significant difference in the exclusive and non-exclusive groups according to only one statement: "A newborn baby needs to be given water besides being breastfed to quench his/her thirst" 93.5% vs. 53.9%, $p < 0.0001$ and marginally significant difference according to the following statement: "If a woman is breastfeeding, she is less likely to become pregnant" 66.7% vs. 44.6%, $p = 0.05$. Also, 87.1% in the exclusive breastfeeding group vs.71.2% in non- exclusive breastfeeding group reported about being informed on-demand feeding in the hospital, $p = 0.073$ (Table 3).

3.3 Simple logistic regression analysis

Table 4 presents the results of simple logistic regression analyses. The odds of being exclusively breastfed decreases with age. So the odds of exclusively breastfeeding is 0.02 times (95% CI [0.00-0.31], $p = 0.00001$) less in children, who are older age compared to those who are younger. No association was found between exclusive breastfeeding and socio-demographic characteristics of mothers (age, education, employment status, monthly income, and numbers of persons in family), nor between exclusive breastfeeding and prenatal care, birth history, and post-partum hospital practices.

The results show that exclusively breastfed children are 3.83 times more likely to be breastfed on-demand than in the non-exclusive group (95% CI [1.06-13.87], p = 0.041). The odds of answering "yes" to the question that stress was the main cause of insufficient breastmilk is 6.38 times greater in exclusive breastfeeding group (95% CI [2.120-19.227], p = 0.001). The mothers of exclusively breastfed children were 12.4 times more likely to correctly answer the statement: "A newborn baby needs to be given water besides being breastfed to quench his/her thirst" than mothers of non-exclusively breastfed children (95% CI [2.8-54.7], p = 0.001). Also, the results show marginally significant difference according to the following statement: "If a woman is breastfeeding, she is less likely to become pregnant" (95% CI [0.988-6.248], p = 0.053). The odds of answering "yes" are 2.4 times greater in exclusively breastfeeding group.

3.4 Confounding

Crude odds ratio for feeding on-demand was equal to 3.83 (95% CI [1.06-13.87], p = 0.041), after adjusting for infant's age, the OR was attenuated to 2.74 (95 % [0.70-10.65], p = 0.146). Similarly, crude odds ratio for "stress as main reason of insufficient breastmilk" was equal to 6.38 (95% CI [2.12-19.23], p = 0.001), after adjusting for infant's age the OR was 5.18 (95% CI [1.55-17.32], p = 0.008) and crude odds ratio for statement, that "breastfeeding women being less likely to become pregnant" was equal to 2.49 (95% CI [0.99-6.25], p= 0.053) , after adjusting for infant's age, the OR was 1.67 (95% CI [0.60-4.60], p = 0.324). Also, crude odds ratio of correct answer to the statement "need of giving water to a newborn baby besides being breastfed" was equal to 12.39 (95% CI [2.8-54.7], p = 0.001), after adjusting for infant's age, the OR increased by twofold (OR=21.47, 95% CI [3.91-114.64], p < 0.0001) (Tables 5.1and 5.2).

Thus, infant's age confounded the relationship between exclusive breastfeeding and the following factors: feeding on demand, stress as main reason of insufficient breastmilk, the need of giving water to a newborn baby besides being breastfed, and breastfeeding women being less likely to become pregnant.

3.5 Multiple logistic regression analysis

All the statistically significant variables (feeding on-demand, stress as main reason of insufficient breastmilk, the need of giving water to a newborn baby besides being breastfed, and breastfeeding women being less likely to become pregnant, infants age) were included in different multiple logistic regression models to identify the association between exclusive breastfeeding and these variables. Table 6 displays the final model.

Although on demand feeding factor is not statistically significant in the model, it was retained because of its importance for exclusive breastfeeding, especially during the first months. The statistical significance of this variable was lost after adjusting for age as a confounder.

The odds of answering "yes" to the question, that stress is the main cause of insufficient breastmilk is 9.2 times (95% CI [2.1-40.8], $p = 0.003$) higher in the exclusively breastfeeding group, after adjusting for other variables. Also, the odds of the correct answer to the statement:"A newborn baby needs to be given water besides being breastfed to quench his/her thirst" is 19.4 times (95% CI [2.5-151.8], $p = 0.005$) higher in exclusively breastfeeding group than in non- exclusively breastfeeding group, after controlling for other variables. The odds of exclusively breastfeeding is 0.97 times (95% CI [0.96-0.99], $p = 0.0003$) less in children, who are older age compared to those who are younger, after adjusting for other variables.

3.6 Comparison of Frequencies between 1997and 2009.

The same analysis was performed for children less than four months to compare with the previous study on the same topic conducted in 1997. The most significant achievements found in this study include: in 1997, infants aged 0-4 months were 0.28 times (95% CI [0.10-0.71], p = 0.003) less likely to be exclusively breastfed than infants aged 0-4 months in 2009 (Table 7); mothers in 2009 were 2.58 times (95% CI [1.11-6.12], p = 0.016) more likely to be explained the benefits of correct positioning and attachment compared to 1997 demonstrating improvement of post-partum hospital practice. Moreover, in 2009, the odds of reporting prelacteal feed is 0.26 times (95% CI [0.09-0.70], p = 0.002) less than in 1997, and the odds of baby taken out of mother's room at night is 0.14 times (95%CI [0.03-0.51], p = 0.0005) less than in 1997 (Table 8). Additional improvement is seen in mothers' knowledge regarding breastfeeding: in 2009, mothers were 2.32 times (95% CI [1.05-5.19], p = 0.023) more likely to correctly answer the statement about the relationship between breastfeeding and women's weight than in1997. Similarly, the odds of correct answer on statement "Breastfeeding changes the shape of your breasts in ways you would not like" is 3.66 times (95% CI [1.61-8.38], p = 0.0005) greater in 2009 than in 1997. The odds of correct answer on statement "If a woman is breastfeeding, she is less likely to become pregnant" is 3.70 times (95%CI [1.57-8.80], p = 0.00007) higher in 2009 than in 1997. Mothers are 2.85 times (95% CI [1.10-7.65], p = 0.02) more likely to correctly answer the statement that "Colostrum (the first milk) should not be fed to a baby; it is better to wait until the milk appears before putting the baby to the breast " in 2009, than in1997. The odds of giving a correct answer to the statement "A newborn baby needs to be given water besides being breastfed to quench his/her thirst" is 5.93 times (95% CI [2.70-13.4], p = 0.00000) greater in 2009 than in 1997, and the odds of

correct answer on statement "Breast milk with a watery texture is not good for the baby" is 2.69 times (95% CI [1.23-5.91], p=0.006) higher in 2009, than in 1997 (Table9).

In summary, the rate of exclusive breastfeeding among infants aged 0-6 months in Yerevan is 23%. No association was observed between exclusive breastfeeding and prenatal as well as postnatal care. Maternal knowledge related to breastfeeding was less than 50%. Maternal knowledge was identified as the stronger predictor of exclusive breastfeeding among mothers' of infants under six months old in Yerevan.

4. Discussion

This analytical cross-sectional study explored breastfeeding trends among children aged 0-6 months and tried to find relationship between maternal knowledge and breastfeeding practices among mothers from 9 polyclinics located in different districts of Yerevan.

Feeding status of infants was defined according to the WHO categories. The results have shown that from a total of 135 infants, only 31 (23%) were exclusively breastfed. Taking into consideration the existing rate of exclusive breastfeeding in many developed countries (35), the rate in Yerevan is still low and it is necessary to do much work in this area.

As expected, this study found a statistically significant difference between exclusive and non-exclusive breastfeeding groups by infant age categories, with infants less than four months of age more likely to be exclusively breastfed than infants over four months of age. One reason for this decline could be that mothers think that their babies need supplementary feeding after four months of age (39).

Several studies have mentioned the importance of advice received during prenatal consultation for further successful breastfeeding (48, 49). In this study the percentage of

women, who received advice during prenatal consultations was about 30%. Among the exclusive breastfeeding mothers the rate of receiving advice was twice that of the non-exclusive group; however, this difference was not statistically significant.

The majority of hospital practice variables were similar in both groups and no significant association was found. Some variables (initiation within the first 30 minutes and time to when the baby was first put to breast) have shown low results: about 50% of children were initiated within the first 30 minutes and 17% of babies were put on their mothers' breast within the first hour, important factors for further successful breastfeeding (50,51). The main reason for late initiation was difficult deliveries (including c-section). This finding was supported by literature (53, 54). The results of hospital practice variables have shown, that hospital practices were improved according to the state program reforms initiated in maternity hospitals as part of the Baby Friendly Hospital Initiative (39,51), but further improvements are necessary in this area.

The results of the current study indicate that maternal knowledge is the main factor which determines the exclusive breastfeeding in Yerevan. These findings are consistent with the previous surveys (37, 39). Mothers' awareness of on-demand feeding was statistically significantly associated with exclusive breastfeeding. Mothers' belief that newborn baby does not need water to quench thirst was a main factor which determined the exclusive breastfeeding. In addition, this variable was defined by multiple regression analysis as fundamental to the possibility of exclusive breastfeeding.

4.1 Strength and limitations of the study

The study population was chosen by systematic random sampling from 9 polyclinics, located in different districts of Yerevan. Given that there are 12 districts in Yerevan, the

chosen polyclinics covered almost the majority of the population in the city. Given that this study concerned children aged 0-6 months and residents of Yerevan who at that time were registered in the polyclinic, the amount of wrong phone numbers was minimal. Also, the rate of exclusive and non-exclusive breastfeeding was compared according to prenatal care, postnatal care as well as maternal knowledge. In addition, findings of the current study were compared with survey outcomes conducted in 1997 on the same topic with the same survey instrument.

However, the study had several limitations. One study limitation was not equal distribution of different infant age groups in the sample frame, which limited possibilities to conduct analyses for some variables. Another limitation was not controlling for all possible confounders and interactions. Data collected for this study were based on mothers' recall; there is a potential for recall bias.

4.2 Comparison of Frequencies between 1997and 2009

Before 2002, the WHO recommendation was for infants to be exclusively breastfed for at least the first four months of life. The percentage of exclusive breastfeeding among infants up to 4 months of age has increased from 20.8% in 1997 to 44.4% in 2009. Hospital practices have improved in accord with state program reforms initiated in maternity hospitals as part of the Baby Friendly Hospital Initiative (increase positioning/attachment from 57% in 1997 to 78% in 2009, decrease in reporting prelacteal feeds from 40% in1997to 20% in 2009, decrease in baby taken out of mother’s room at night from 28% in 1997 to 7% in 2009). Significant improvement in mothers’ knowledge was also revealed.

5. Conclusion and Recommendations

The rate of exclusive breastfeeding among the infants aged 0-6 months in Yerevan is 23%, for infants less than four months of age it is 44.4%, which is twice higher than in 1997, but the rate of exclusive breastfeeding still remains lower compared to that of some high income industrialized countries. No association was observed between exclusive breastfeeding and prenatal as well as postnatal care. The rate of some factors from postpartum health care practices such as immediate initiation within 30 minutes (50%) and initiation within one hour (17%) is still low and needs improvement. Maternal knowledge related to breastfeeding was less than 50%. Maternal knowledge was identified as the stronger predictor of exclusive breastfeeding among mothers' of infants under six months old in Yerevan. This was also true in the similar studies conducted in 1993 and 1997 using the same survey instrument (37, 39).

Based on these finding and the existing literature, the following two recommendations emerge from this study:

1. The health system should better educate pregnant women and new mothers.

Although the majority of mothers breastfed their children, they substituted their milk with water, tea, fruit juices, bananas, porridge, and/or infant formula earlier than recommended. This fact may explain why the percentage for "others" in feeding categories is so high. In order to increase the rate of exclusive breastfeeding, additional means are needed to explain to mothers the advantages of exclusive breastfeeding for infant and mother health. They should know that their babies do not need water and other supplements till six months of age. This information could be provided to pregnant women and mothers through printed materials distributed in polyclinics and delivery hospitals, because according to the survey

results mothers tend to better remember what they read compared to advise given by physicians.

2. The MOH should improve the implementation of the Ten Steps To Successful Breastfeeding Policy in order to ensure appropriate post-partum care practices. Considerable progress has been made in delivery hospitals. However, according to the study results, some steps are not on the desired level. In this situation, the MOH should develop and implement stricter policy and control.

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Tables

Table 1. Dependent and Independent Study Variables

Dependent Variables	**Type**	**Measure**
Breastfeeding status	Binary	24 hr. recall(Y/N)
Exclusive breastfeeding(breastmilk only) Predominant breastfeeding(breastmilk+ liquids) Partial (breast milk + formula) Formula without breast milk Other(other liquids/other foods)		1=no,2=yes 1=no,2=yes 1=no,2=yes 1=no,2=yes 1=no,2=yes
Duration of breastfeeding	Numerical	Continuous (birth to cessation date)
Independent Variables		
Socio-demographic: *Maternal*		
Work status	Binary	1=no,2=yes
Maternal Age	Numerical	Continuous
Education Categorical	Ordinal	Categorical (≤ 10 yrs, 11-13 yrs, 14+ yrs)
Infant		
infant age	Numerical	Continuous
infant birth weight	Numerical	Categorical(<2500g,2500+g)
Health Care Services: *Prenatal*		
Prenatal Attendance	Binary	1=no,2=yes
Start of First Visit	Numerical	Categorical by Trimester(1,2,3)
Delivery		
Type of Delivery	Binary	1=no,2=yes(vaginal/C-section)
Postpartum		
Time to First Breastfeed	Numerical	Categorical(0-1hour vs>1hour)
Prelacteal Feed	Binary	1=no,2=yes
Prelacteal Bottle	Binary	1=no,2=yes
Rooming-in	Binary	1=no,2=yes
BF instruction by health care providers	Binary	1=no,2=yes

Maternal knowledge re: BF Infant age for exclusive BF Dichotomous (correct/incorrect) Excl. BF nutritious enough - 4 month BF makes a woman fat BF protects against diarrhea and pneumonia BF changes shape of breast you won't like If woman is BF, less likely to get pregnant If not produce enough milk, BF more often Colostrum should not be fed to infant Infant formula as nutritious as Breast milk If diet not rich in calories, give formula Newborn needs water to quench thirst If other foods given, breast milk dries up Baby with diarrhea should stop breastfeeding If breast milk watery, supplement Importance of how baby grasps nipple If give baby bottle, will stop wanting breast	Binary	1=no,2=yes

Table 2.1 Socio-Demographic Characteristics

Variables name	Total n(%)	Exclusive breastfeeding Yes	No
Currently working			
Yes	5(3.7%)	1 (3.2%)	4 (3.8%)
No	130(96.3%)	30(96.85)	100(96.2%)
Age of mothers:			
15-19	1 (0.7%)		1(1%)
20-24	49(36.3%)	12(38.7%)	37(35.6%)
25-29	56(41.5%)	13(41.9%)	43(41.3%)
30-34	22(16.3%)	4(12.9%)	18(17.3%)
35-39	6(4.4%)	2 (6.5%)	4(3.8%)
40+	1 (0.7%)		1(1.0%)
Year of education:			
Less than 10 years	1(0.7%)	0(0%)	1(1%)
10 years	25(18.5%)	5(16.1%)	20(19.2%)
11-13 yrs	41(30.4%)	13(41.9%)	28(26.9%)
14+ yrs	58(50.4%)	13(41.9%)	55(52.9%)
Number of children:			
One	75(55.6%)	16(51.6%)	59(56.7%)
>1	60(44.4%)	15(48.4%)	45(43.3%)
Infants ages (days)			
0-30	5(3.7%)	4(12.9%)	1(1%)
31-60	5(3.7%)	3(9.7%)	2(1.9%)
61-90	11(8,1%)	6(19.4%)	5(4.8%)
91-120	24(17.8%)	7(22.6%)	17(16.3%)
121-150	33(24.4%)	6(19.4%)	27(26.0%)
151-180	57(42.2%)	5(16.1%)	52(50.0%)
Monthly income:			
Below 20.000dr	0	0	0
20.000dr to 50000dr	0	0	0
50.001dr to 100000dr	3(2.2%)	1 (3.2%)	2(1.9%)
More 100000dr	99(73.3%)	21(67.7%)	78(75%)
Refused	8(5.9%)	1(3.2%)	7(6.7%)
Don't know	25(18.5%)	8(25.8%)	17(16.3%)
Numbers of persons in family:			
2-3	1 (7.4%)	0(0%)	10(9.6%)
>4	125(92.6%)	31(100%)	94(90.4%)

Table 2.2 Prenatal Care and Birth History

Variable name	Total n(%)	Exclusive Breastfeeding Yes	Exclusive Breastfeeding No
First Prenatal Consultation:			
first trimester (0-3 months)	102(75.6%)	25(80.6%)	77(74.0%)
second trimester (3-6 months)	32(23.7%)	6(19.4%)	26(25.0%)
third trimester (6-9 months)	1 (0.7%)		1 (1.0%)
Type of Delivery:			
vaginal	103(76.2%)	25(80.6%)	78(75%)
cesarean	32(23.7%)	6(19.4%)	26(25%)
Infant's Birth Weight:			
<2500 grams	7 (5%)	0(0%)	7 (6.7%)
2500+	128(95%)	31(100%)	97(93.3%)

Table 2.3 Post-Partum Hospital Practices

Variable name	Total n(%)	Exclusive Breastfeeding Yes	No
Immediate Initiation (< 30 mins):			
Yes	70(52%)	17(54,8%)	53(51.0%)
No	65(48%)	14(45.2%)	51(49.0%)
Time to First Put Baby to Breast:			
0 - 1 hrs. after delivery	23(17.1%)	8(25.8%)	15(14.4%)
> 1 hrs. after delivery	112(82.9%)	23(74.2%)	89(85.6%)
Prelacteal Feeds:			
Yes	23(17%)	4 (12.9%)	19(18.3%)
No	78(57.8%)	21(67.7%)	57(54.8%)
Don't know	34(25.2%)	6(19.4%)	28(26.9%)
Explain positioning/attachment:			
Yes	104(77%)	27(87.1%)	77(74%)
No	31(23%)	4(12.9%)	27(26%)
Explain on- demand feeding:			
Yes	101(74.8%)	27(87.1%)	74(71.2%)
No	34(25.2%)	4(12.9%)	30(28.8%)
Rooming-in:			
Yes	124(91.9%)	28(90.8%)	96(92.3%)
No	11(8.1%)	3(9.7%)	8(7.7%)
Baby Taken Out at Night:			
Yes	10(7.4%)	2(6.5%)	8(7.7%)
No	125(92.6%)	29(93.5%)	96(92.3%)
Bed Days:			
1-4	102(75.6%)	26(83.3%)	76(73.1%)
>4	33(24.4%)	5(16.1%)	28(26.9%)

Table 2.4 WHO Indicators for Infants < 6 Months of Age

BREASTFEEDING STATUS	Yerevan,2009 n=135(100%)
Exclusive BF	31(23%)
Predominant BF	10 (7.4%)+7(5.2%) 17(12.6%)
BF+Formula	9 (6.7%)
Formula-BF	3 (2.2%)
Other	75 (55.6%)

Table 2.5 Maternal Knowledge about Duration of Breastfeeding and Main Cause of Insufficient Milk

Variable name	Total	Exclusive Breastfeeding	
	n (%)	Yes	No
Will remain healthy:			
2 to 3 months	7(5.2%)	2 6.5%)	5(4.8%)
4 to 5 months	17(12.6%)	6(19%)	11(10.6%)
6 months	77(57%)	17(54.8%)	60(57.8%)
> 6 months	19(14.1%)	5(16.1%)	14(13.5%)
Don't know	15(11.1%)	1(3.2%0	14(13.5%)
Cause of insufficient milk:			
Diet	40(30%)	8(34.8%)	32(47.8%)
Stress	44(32.6%)	19(79.2%)	25(37.3%)
Infrequent breastfeeding	15(11%)	5(20.8%)	10(15%)
Breastfeeding on-demand	84(76.4%)	28(90.3%)	56(70.9%)

Table 2.6 Mothers Knowledge Regarding Breastfeeding

STATEMENTS (correct answers)	% Answering correctly		
	Total	Exclusive BR	
		Yes	No
Breastfeeding alone is nutritious enough for the first four months of life[True]	95.4%	96.7%	95.0%
Breastfeeding can make a woman fat [False]	67.2%	56.7%	70.5%
Breastfeeding protects a baby against diarrhea and pneumonia [True]	91.5%	90.3%	91.8%
Breastfeeding changes the shape of your breasts in ways you would not like[False]	43.5%	50.0%	41.5%
If a woman is breastfeeding, she is less likely to become pregnant [True]	50.5%	67.9%	44.6%
A mother that does not produce enough breast milk should try to breastfeed more often [True]	77.8%	86.7%	75.0%
Colostrum (the first milk) should not be fed to a baby. It is better to wait until the milk appears before putting the baby to the breast [False]	80.3%	80.6%	80.2%
Infant formula is as nutritious as breast milk [False]	96.2%	100.0%	95.0%
Usually, if a woman's diet is not rich in calories, her breast milk will be insufficient for feeding her child and should be supplemented with formula [False]	39.5%	51.6%	35.7%
A newborn baby needs to be given water besides being breastfed to quench his/her thirst [False]	63.2%	93.5%	53.9%
When foods other than breast milk are given to the child, the mother's milk dries up [True]	49.6%	50.0%	45.9%
A baby with diarrhea should stop breastfeeding while sick [False]	63.4%	62.1%	63.9%
Breast milk with a watery texture is not good for the baby [False]	61.4%	53.6%	64.0%
It doesn't matter how the baby grasps the nipple, as long as it is in its mouth [False]	78.2%	76.7%	78.6%
If a baby is given a bottle, he/she will stop wanting the breast after that [True]	67.2%	63.3%	68.5%
Putting child to sleep with a bottle of sweetened or milk is harmful for a child’s teeth[True]	83.3%	94.4%	80.3%

Table 3. Results of Standard 2-tailed t-tests and χ^2 tests

Variables name	Exclusive breastfeeding		p-value
	Yes	No	
Currently working			
Yes	1 (3.2%)	4 (3.8%)	0.872
no	30(96.85)	100(96.2%)	
Mother's age (years)	26.61±4.4	26.8±4.4	0.830
Year of education (years)	13.19±1.7	13.26±2	0.892
Number of children			
One	16(51.6%)	59(56.7%)	0.615
>1	15(48.4%)	45(43.3%)	
Infant's age (days)	98.13±46	140.94±36.2	0.000
Monthly income			
Below 20.000dr			
20.000dr to 50000dr			
50.001dr to 100000dr	1 (3.2%)	2 (1.9%)	0.572
More 100000dr	21(67.7%)	78(75%)	
Refused	1 (3.2%)	7 (6.7%)	
Don't know	8(25.8%)	17(16.3%)	
Numbers of persons in family			
2-3	0(0%)	10(9.6%)	
>4	31(100%)	94(90.4%)	0.073

Variables name	Exclusive breastfeeding		p-value
	Yes	No	
First Prenatal Consultation			
first trimester (0-3 months)	25(80.6%)	77(74.0%)	0.685
second trimester (3-6 months)	6(19.4%)	26(25.0%)	
third trimester (6-9 months)		1 (1.0%)	
Advice receive about breastfeeding during prenatal consultation	13(41.9%)	30(28.8%)	0.170
Type of Delivery			
vaginal	25(80.6%)	78(75%)	0.517
cesarean	6(19.4%)	26(25%)	
Infant's Birth Weight			
<2500 grams	0(0%)	7 (6.7%)	0.138
2500+	31(100%)	97(93.3%)	
Immediate Initiation (< 30 mins)			
Yes	17(54,8%)	53(51.0%)	0.705
No	14(45.2%)	51(49.0%)	
Time to First Put Baby to Breast			
0 - 1 hrs. after delivery	8(25.8%)	15(14.4%)	0.139
> 1 hrs. after delivery	23(74.2%)	89(85.6%)	
Prelacteal Feeds			
Yes	4(12.9%)	19(18.3%)	0.352
No	21(67.7%)	57(54.8%)	
Don't know	6(19.4%)	28(26.9%)	
Explain positioning/attachment			
Yes	27(87.1%)	77(74%)	0.129
No	4(12.9%)	27(26%)	
Explain on demand feeding			
Yes	27(87.1%)	74(71.2%)	0.073
No	4(12.9%)	30(28.8%)	
Rooming-in			
Yes	28(90.8%)	96(92.3%)	0.723
No	3(9.7%)	8(7.7%)	
Baby Taken Out at Night			
Yes	2(6.5%)	8(7.7%)	0.817
No	29(93.5%)	96(92.3%)	
Bed Days			
1-4	26(83.3%)	76(73.1%)	0.220
>4	5(16.1%)	28(26.9%)	

Variables name	Exclusive breastfeeding		p-value
	Yes	No	
Will remain healthy			
2 to 3 months	2(6.5%)	5(4.8%)	
4 to 5 months	6(19%)	11(10.6%)	0.711
6 months	17(54.8%)	60(57.8%)	
> 6 months	5(16.1%)	14(13.5%)	
Don't know	1(3.2%0	14(13.5%)	
Cause of insufficient milk			
Diet	8(34.8%)	32(47.8%)	0.280
Stress	19(79.2%)	25(37.3%)	0.000
Infrequent breastfeeding	5(20.8%)	10(15%)	0.503
Breastfeeding on-demand	28(90.3%)	56(70.9%)	0.031

STATEMENTS (correct answers)	% Answering correctly		
	Exclusive BR		p-value
	Yes n=31(23%)	No n=104(77%)	
Breastfeeding alone is nutritious enough for the first four months of life[True]	96.7%	95.0%	0.703
Breastfeeding can make a woman fat [False]	56.7%	70.5%	0.159
Breastfeeding protects a baby against diarrhea and pneumonia [True]	90.3%	91.8%	0.792
Breastfeeding changes the shape of your breasts in ways you would not like[False]	50.0%	41.5%	0.413
If a woman is breastfeeding, she is less likely to become pregnant [True]	66.7%	44.6%	0.05
A mother that does not produce enough breast milk should try to breastfeed more often [True]	86.7%	75%	0.180
Colostrum (the first milk) should not be fed to a baby. It is better to wait until the milk appears before putting the baby to the breast [False]	80.6%	80.2%	0.956
Infant formula is as nutritious as breast milk [False]	100%	95.0%	0.222
Usually, if a woman's diet is not rich in calories, her breast milk will be insufficient for feeding her child and should supplemented with formula [False]	51.6%	35.7%	0.115
A newborn baby needs to be given water besides being breastfed to quench his/her thirst [False]	93.5%	53.9%	0.000
When foods other than breast milk are given to the child, the mother's milk dries up [True]	50.0%	49.5%	0.961
A baby with diarrhea should stop breastfeeding while sick [False]	62,1%	63.9%	0.056
Breast milk with a watery texture is not good for the baby [False]	53.6%	64%	0.327
It doesn't matter how the baby grasps the nipple, as long as it is in its mouth [False]	76.7%	78.6%	0.818
If a baby is given a bottle, he/she will stop wanting the breast after that [True]	63.3%	68.5%	0.602
Putting child to sleep with a bottle of sweetened or milk is harmful for a child’s teeth	94.4%	80.3%	0.154
Which do you feel is easier, formula feeding or Breastfeeding	83.9%	82.7%	0.878

Table 4. Results of Simple logistic regression analyses (Crude Odds Ratios)

Variable name	OR	p-value	95% CI
Currently working			
Yes	0.83	0.87	0.090-7.74
no	1.00		
Age of mothers:			
15-19			
20-24	1.07	0.87	0.40-2.89
25-29	1.00		
30-34	0.74	0.62	0.17-2.90
35-39	1.65	0.58	0.18-12.57
40+			
Year of education:			
Less than 10 years			
10 years	1.06	0.92	0.29-3.76
11-13 yrs	1.96	0.14	0.74-5.27
14+ yrs	1.00		
Number of children:			
One	1.00		
>1	1.13	0.62	0.550-2.747
Infant age (days):			
0-30	1.00		
31-60	0.38	0.49	0.01-11.27
61-90	0.30	0.32	0.01-5.14
91-120	0.10	0.03	0.00-1.34
121-150	0.06	0.003	0.00-0.72
151-180	0.02	0.00001	0.00-0.31
Monthly income:			
Below 20,000dr			
20,000dr to 50,000dr			
50,001dr to 100,000dr	1.86	0.62	0.0-28.21
More 100,000dr	1.00		
Refused	0.53	0.56	0.02-4.76
Don't know			
First Prenatal Consultation:			
first trimester (0-3 months)	1.00		
second trimester (3-6 months)	0.71	0.51	0.23-2.09
Type of Delivery:			
vaginal	1.00		
cesarean	0.72	0.52	0.27-1.95

Variable name	OR	p-value	95%CI
Immediate Initiation (< 30 min):			
Yes	1.17	1.71	0.49-2.82
No	1.00		
Time to First Put Baby to Breast:			
0 - 1 hrs. after delivery	2.06		
> 1 hrs. after delivery	1.00	0.14	0.78-5.46
Prelacteal Feeds:			
Yes	0.99	0.39	0.99-1.00
No	1.00		
Don't know			
Explain positioning/attachment:			
Yes	2.36	0.14	0.76-7.37
No	1.00		
Explain on demand feeding:			
Yes	2.74	0.08	0.88-8.49
No	1.00		
Rooming-in:			
Yes	0.78	0.72	0.19-3.13
No	1.00		
Baby Taken Out at Night:			
Yes	0.83	0.82	0.17-4.12
No	1.00		
Bed Days:			
1-4	1.00		
>4	1.92	0.23	0.67-5.48
Will remain healthy:			
2 to 3 months	1.41	0.69	0.17-9.44
4 to 5 months	1.93	0.25	0.54-6.78
6 months	1.00		
> 6 months	1.26	0.15	0.34-4.51
Don't know			
Cause of insufficient milk:			
Diet	0.58	0.28	0.22-1.56
Stress	6.38	0.001	2.12-19.2
Infrequent breastfeeding	1.50	0.5	0.46-4.94
Breastfeeding on-demand	3.83	0.041	1.06-13.87

STATEMENTS (correct answers)	OR	p-value	95%CI
Breastfeeding alone is nutritious enough for the first four months of life[True]	1.52	0.705	0.171-13.592
Breastfeeding can make a woman fat [False]	0.54	0.162	0.234-1.274
Breastfeeding protects a baby against diarrhea and pneumonia [True]	0.83	0,793	0.206-3.341
Breastfeeding changes the shape of your breasts in ways you would not like[False]	1.41	0.414	0.618-3.218
If a woman is breastfeeding, she is less likely to become pregnant [True]	2.48	0.053	0.988-6.248
A mother that does not produce enough breast milk should try to breastfeed more often [True]	2.16	0.188	0.686-6.831
Colostrums (the first milk) should not be fed to a baby. It is better to wait until the milk appears before putting the baby to the breast [False]	1.02	0.956	0.372-2.843
Usually, if a woman's diet is not rich in calories, her breast milk will be insufficient for feeding her child and should be supplemented with formula [False]	1.92	0.117	0.848-4,345
A newborn baby needs to be given water besides being breastfed to quench his/her thirst [False]	12.39	0.001	2.807-54.696
When foods other than breast milk are given to the child, the mother's milk dries up [True]	1.02	0.961	0.428-2.444
A baby with diarrhea should stop breastfeeding while sick [False]	0.92	0.864	0.373-2.255
Breast milk with a watery texture is not good for the baby [False]	0.62	0.329	0.274-1.542
It doesn't matter how the baby grasps the nipple, as long as it is in its mouth [False]	0.89	0.818	0.339-2.350
If a baby is given a bottle, he/she will stop wanting the breast after that [True]	0.79	0.603	0.335-1.885
Putting child to sleep with a bottle of sweetened or milk is harmful for a child’s teeth	4.16	0.184	0.505-34.247
Which do you feel is easier, formula feeding or Breastfeeding	1.08	0.878	0.368-3.216

Confounding

5.1 Crude Odds Ratios

Variable name	OR	95%CI	p-value
Breastfeeding on-demand	3,833	1.06-13.87	0.041
Stress the main cause of insufficient milk	6.38	2.12-19.2	0.001
A newborn baby needs to be given water besides being breastfed to quench his/her thirst	12.391	2.807-54.696	0.001
If a woman is breastfeeding, she is less likely to become pregnant	2.485	0.988-6.248	0.53

5.2 Adjusted Odds Ratios

Variable name	OR	95%CI	p-value
Breastfeeding on-demand	2.738	0,704-10.648	0.146
Stress the main cause of insufficient milk	5.176	1.55-17.32	0.008
A newborn baby needs to be given water besides being breastfed to quench his/her thirst	21.147	3.91-114.64	0.000
If a woman is breastfeeding, she is less likely to become pregnant	1.667	0.604-4.596	0.324

6. Multiple Logistic Regression Analyses: Adjusted Effect of Independent Variables on Exclusive Breastfeeding

Variables	OR	95%CI	p-value
Breastfeeding on-demand	6.8	0.788-58.8	0.081
Stress is the main cause of insufficient milk	9.28	2.1- 40.8	0.003
A newborn baby needs to be given water besides being breastfed to quench his/her thirst [False]	19.4	2.5- 151.8	0.005
Children age	0.974	0.957-0.991	0.003

Table 7. Comparison between 1997 and 2009 Survey Results according to WHO Indicators for Infants < 4 Months of Age

BREASTFEEDING STATUS	1997 Yerevan N=125	2009 Yerevan N=45	OR	95%CI	p-value
Exclusive BF	26(20,8%)	20(44.4%)	0.28	0.10-0.71	0.003
Predominant BF	52(41.6%)	11(24.5%)	1.00		
BF+Formula	16(12.8%)	7(15.6%)	0.48	0.14-1.67	0.019
Formula-BF	20(16.0%)	2(4.4%)	2.12	0.39-15.20	0.35
Other	11(8.8%)	5(11.1%)	0.47	0.12-1.92	0.22

Table 8. Post-Partum Hospital Practices (1997 vs. 2009) < 4 Months of Age

Variable name	1997	2009	OR	95%CI	p-value
Prelacteal Feeds:	50(40%)	7(20%)	0.26	0.09-0.70	0.002
Explain positioning/attachment:	72(57.6%)	35(78%)	2.58	1.11-6.12	0.016
Baby Taken Out at Night:	35(28%)	3(17%)	0.14	0.03-0.51	0.0005

Table 9. Mothers Knowledge Regarding Breastfeeding (1997 vs. 2009) < 4 Months of Age

STATEMENTS (correct answers)	% An. correctly		OR	P-value	CI
	1997	2009			
Breastfeeding can make a woman fat [False]	51(40%)	24(61%)	2.32	0.023	1.05-5.19
Breastfeeding changes the shape of your breasts in ways you would not like[False]	23(18.4%)	19(45%)	3.66	0.0005	1.61-8.38
If a woman is breastfeeding, she is less likely to become pregnant [True]	38(30%)	21(62%)	3.70	0.00007	1.57-8.80
Colostrum (the first milk) should not be fed to a baby. It is better to wait until the milk appears before putting the baby to the breast [False]	82(65.6%)	38(84.4%)	2.85	0.02	1.10-7.65
A newborn baby needs to be given water besides being breastfed to quench his/her thirst [False]	34(27.2%)	31(69%)	5.93	0.00000	2.7-13.4
Breast milk with a watery texture is not good for the baby [False]	43(34.4%)	24(58.5%)	2.69	0.006	1.23-5.91

Figures

Figure 1.Situation in Armenia

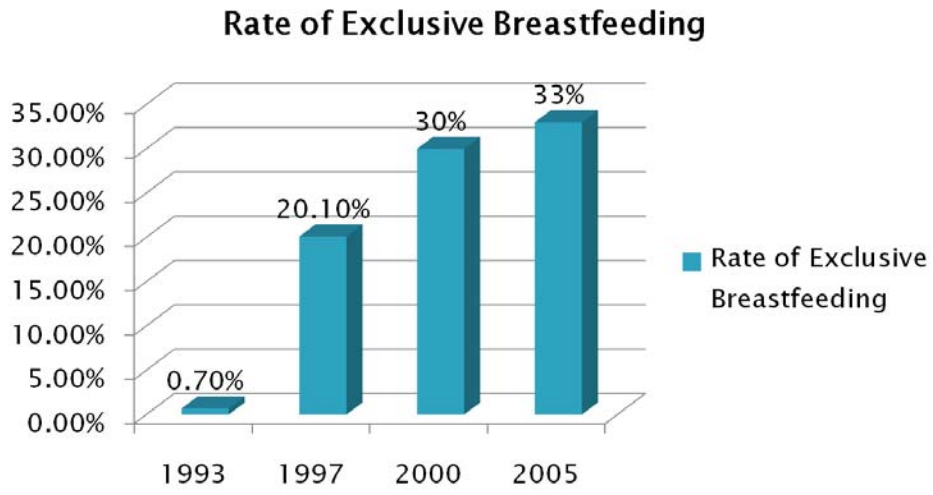
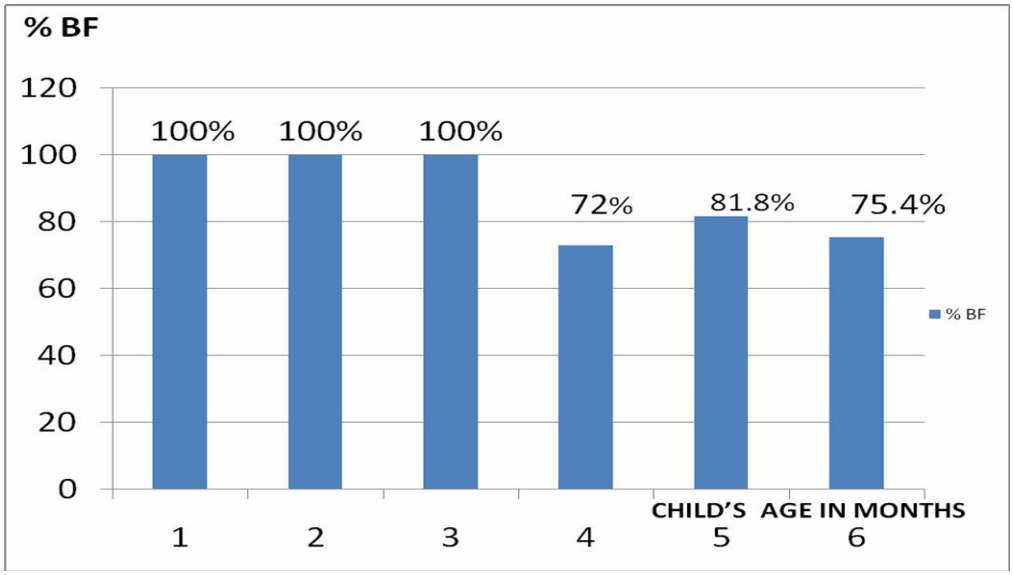
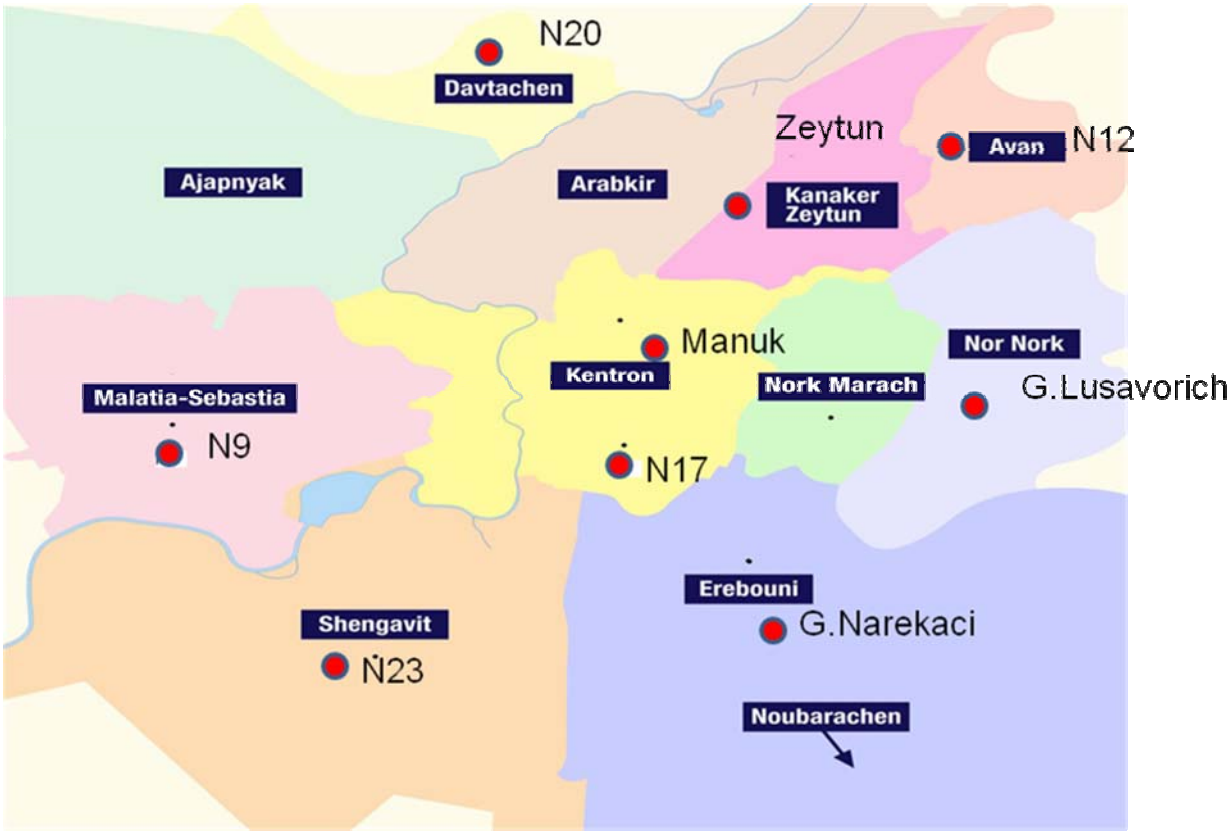


Figure 2.Reported Rates of Breast Feeding in Last 24 hrs. by Infant Age in Months



Appendix 1. Pictorial representation of the locations of study polyclinics across Yerevan



Appendix 2. Pediatric Polyclinics and Number of Respondents Sampled

Name of polyclinic	**Total Number of Registered Infants aged 0-6 months**	**Sample size for each polyclinic**
Grigor Lusavorich Medical Center	447	37
Grigor Narekaci Medical Center,Pol.''Hor-Aresh''	247	20
Qanaqer-Zeytun Medical Center,Pol.''Zeytun''	390	31
Polyclinic ''Manuk''	106	9
Polyclinic#17	63	6
Polyclinic#9	286	23
Polyclinic#20	231	19
Polyclinic#23	53	4
Polyclinic#12	235	19
Total	2058	168

Appendix 3. Journal form for contact

ID	Age	Date of the first interview	Preliminary Result	Final Results
1				
2				
3				
4				

Appendix 4. Questionnaire (English & Armenian)

Questionnaire for Mothers of Infants 0-6 months of age

1 Location_____ Entry#_____

2 Interviewer_____

3 Date of Interview_____

Time of interview start_____

Time of the interview end_____

BACKGROUND INFORMATION:

1. Are you currently employed?

□ 1. No

□ 2. Yes

2. Mother's Date of Birth_____(Day/Month/Year)

3. Level of Education (Years)

□ 1. school (8)

□ 2. school (10)

□ 3. college (2)

□ 4. institute/ university (5)

□ 5. post. grad(_____)

□ 6. other_____

Total Years_____

4 Number of children_____

5. Name of Youngest Child_____(use this name in every question which refers to this child
6. Date of Birth of the Youngest Child_____(day/month/year)

PRENATAL CARE

7. Did you go to prental consulations with (name of youngest child)?
□ 1. No (if no go to Q # 14)
□ 2. Yes
If yes, specify the place
□ 1.district policlinic
□ 2.hospital
□ 3.other_____

8. What month of pregnancy did you start to go?

_____month

9. Did you receive advice about breastfeeding during consulations?
□ 1. No (if no go to Q # 14)
□ 2. Yes
□ 99. Don't know
If yes, what kind of advice you received there?
a._____Breastfeed your child, breast milk is the best
b._____ Breastfeed w/o schedule
c._____ Breastfeed with schedule
d._____ Breastfeed frequently
e._____Don't worry if your milk is insufficient
f._____Don't worry if your milk is not fatty enough
g._____Don't worry about your diet
h._____Feed only breastmilk for 4-6 month
i._____Avoid bottle – feeding
j._____Mother is not able to recall massages
k. other_____

DELIVERY (Now I am going to ask you some questions concerning the birth of your youngest child)

10. City of Delivery of Youngest Child (name)

□ 1. Yerevan
□ 2. Other regions of Armenia
□ 3. Outside of Armenia

11. Place of Delivery of Youngest Child (name)
    □ 1. Hospital
    (specify the name)_____
    □ 2. Home
    (specify who attended the birth)
        □ 1. doctor
        □ 2. nurse
        □ 3. relatives
        □ 4. other_____
12. Type of delivery (READ RESPONSES)
    □ Vaginal w/o induction
    □ Induced Vaginal
    □ Caesarean section

13. Did you have an episiotomy (stitches)?
    □ 1. No
    □ 2. Yes
    □ 99. Don't know

14. What was the birth weight of your infant in grams?

_____ grams

HOSPITAL PRACTICES – *now I'm going to ask you questions about what happened after delivery*

15. When was the baby put your breast for the first time after the delivery?

_____ minutes

_____ hours

_____ days

16. How long after the delivery did you first BF your child?

_____ minutes

_____ hours

_____ days

- 00. Was never brought to breastfeed
- 99. Don't know

17. What was the reason it was brought at that time and not sooner? (Do not read answers)
    - 1. That is the normal time
    - 2. RH conflict
    - 3. Other_____
    - 99. Don't know

18. Before the baby was brought you to be breastfed, was it fed something else?
    - 1. No(if no skip Q# 23)
    - 2. Yes
    - 99. Don't know

If yes,

(18a) what was it fed?

- 1. Donor's milk
- 2. Glucose water
- 3. Infant formula
- 4. Mother's breastmilk(pumped)
- 5. Other
- 99. Don't know

(18b) Were those things fed with a bottle?

- 1. No
- 2. Yes
- 99. Don't know

19. Has a hospital nurse or doctor ever explained to you about positioning and attachment of the baby for breastfeeding?

- 1.No
- 2.Yes
- 99. Don't know

20. Has a hospital nurse or doctor ever explained to you about on-demand feeding?

- 1.No
- 2.Yes
- 99. Don't know

21. Did your baby stay with you in your room while you were in the hospital?

- 1. No (if no, got to # 27)
- 2. Yes
- 99. Don't know

22. Was the baby ever taken out of the room for the night?

- 1.No (if no, got to # 27)
- 2.Yes
- 99. Don't know

23. How many days did you stay in the hospital?
24. How much did you pay for the delivery, in total?

_____drams

_____US dollars

_____OO Refusals

_____ 99 Don't Know

CURRENT FEEDING PRACTICES

Now I'm going to ask you to think about the last 24 hours.

25. Since this time yesterday has your youngest child been breastfed?

- 1.No
- 2.Yes(If yes, go to Q#33)

26. If no, why aren't you breastfeeding? (main reason)

- 1. child too old (go to # 32)
- 2.child gave up breast (go to # 32)
- 3.insufficient milk (Go to Q # 31)
- 4.mother ill (go to # 32)
- 5.child ill (go to # 32)
- 6.problems nursing(sore nipples, mastitis,etc.)(go to # 32)
- 7. New pregnancy (go to # 32)
- 8. Other_____(go to # 32)

27. If it was 3, how did you know it was insufficient?

- 1.infant cried after feeding
- 2.pediatric test weighting
- 3.appearance of milk

□ 4.had no milk first time tried to breastfeed
□ 5.the child was not gaining weight
other_____

28. If you youngest child is not breastfeeding now, did it ever breastfeed?
□ 1. No
If no, why did you not BF from the beginning? (do not read answers)
□ 1.no milk (go to # 38)
□ 2.mother ill (go to # 38)
□ 3.child ill (go to # 38)
□ 4.problem with breasts(go to # 38)
other_____

□ 2.Yes
If yes, how old was the child when it stopped breastfeeding? (go to # 38)
_____months
_____days

29. If your youngest child had been breastfeed since this time yesterday, was this only source of food?
□ 1. No
□ 2. Yes

30. On average, how many times do you BF during the day?
_____times

31. Do you BF your child at night?
□ 1. No
□ 2. Yes
If yes, how many times?_____

32. Do you breastfeed your child on a schedule or on – demand
□ 1. by schedule
□ 2. on- demand

33. Do you breastfeed your child using both breasts during each breastfeeding?

1. No
2. Yes

Again, I am going to ask you think about the feeding of your child during the last 24 hours

34. Since this time yesterday has this child received any of the foolowing? (read all responses).

_____vitamins, mineral supplements or medicines

_____ plain water

_____ sweetened or flavoured water

_____ fruit juice

_____ tea

_____infant formula (if yes, specify_____)

_____fresh, canned or powdered milk

_____ solid or semi- solid food (eg crackers, soup, rice etc.)

_____ Narineh

_____ yogurt(Madzun)

_____ breastmilk

_____other_____

35. Since this time yesterday did this child drink anything from a bottle with a nipple/teat?

- 1. No (if no skip to Q42)
- 2. Yes (if yes, specify, but do not read answers)
  - 1. water
  - 2. juice
  - 3.infant formula
  - 4.other_____

36. Do you ever leave the bottle in the child mouth while sleeping?

- 1. No (if no, go to Q#41)
- 2. Yes

37. How frequently do you leave the bottle in the child mouth while sleeping?

1. Every day
2. Once a week
3. Rarely

38. How old was your youngest child when you gave him/her any other liquids besides breastmilk and water?

_____month

_____ days

- code 00 if has not given

39. How old was your youngest child when you first gave her/him any food besides breast milk?

_____month

_____ days

□ code 00 if has not given

40. How old was your youngest child when you first gave her/him infant formula?

_____month

_____ days

□ code 00 if has not given

41. Have you ever had painful or sore breast/nipples?

□ 1. No (if no, skip Q#46)

□ 2. Yes

41a) If yes, have you turned to a health care provider?

□ 1. No(if no, skip to the Q#45b)

□ 2. Yes

If Yes, who

□ 1. Pediatrician

□ 2. Gynecologist

□ 3. Other _____

41b) Did you cease breastfeeding due to this problem?

□ 1. No

□ 2.Yes

MATERNAL KNOWLEDGE AND BELIEFS

42. In your opinion, what do you think is the main cause of insufficient /no milk?

□ 1. Diet

□ 2. Stress

□ 3. Infection

□ 4. Environment/ population

□ Infrequent breastfeeding

□ 6. Other_____

43. According to you, up to what age will a baby remain healthy to only breast feeding, not even water, juice, or any other food?

_____month

_____ days

_____99 if don't know

I AM GOING TO READ SOME STATEMENTS TO YOU. I WANT YOU TO TELL ME IF YOU AGREE< DISAGREE OR DON' KNOW.

44. Breastfeeding alone is nutritious enough for the baby for the first four months of life

□ 1. No

□ 2. Yes

□ 99. Don't know

45. Breastfeeding can make a woman fat.

□ 1. No

□ 2. Yes

□ 99. Don't know

46. Breastfeeding protects a baby against diarrhea and pneumonia.

□ 1. No

□ 2. Yes

□ 99. Don't know

47. Breastfeeding changes the shape of your breasts in ways you would like.

□ 1. No

□ 2. Yes

□ 99. Don't know

48. If a woman is breastfeeding, it is harder for her to become pregnant

□ 1. No

□ 2. Yes

□ 99. Don't know

49. A mother that does not produce enough breastmilk should try to breastfeed more often.

□ 1. No

□ 2. Yes

□ 99. Don't know

50. Colostrum (first milk) should not be fed to a baby. It is better to wait until the first milk appears before putting the baby to the breast.

□ 1. No

□ 2. Yes

□ 99. Don't know

51. Infant formula is more nutritious than breastmilk.

□ 1. No

□ 2. Yes

□ 99. Don't know

52. Usually, if a woman's diet is poor, her breastmilk will be insufficient for feeding her child and should be supplemented with infant formula.

□ 1. No

□ 2. Yes

□ 99. Don't know

53. A newborn baby needs to be given water besides being breastfed to quench his/her thirst.

□ 1. No

□ 2. Yes

□ 99. Don't know

54. When foods other than breastmilk are given to the child , the mother milk dries up.

□ 1. No

□ 2. Yes

□ 99. Don't know

55. A baby with diarrhea should stop breastfeeding while sick.

□ 1. No

□ 2. Yes

□ 99. Don't know

56. Breastmilk with a very water texture is not good for her baby

□ 1. No

□ 2. Yes

□ 99. Don't know

57. It doesn't matter how the baby grasps the nipple, as long as it is in its mouth

□ 1. No

□ 2. Yes

□ 99. Don't know

58. If a baby is given a bottle, he/she will stop wanting the breast after that .

□ 1. No

□ 2. Yes

□ 99. Don't know

59. Putting a child to sleep with a bottle of sweetened liquids or milk is harmful for a child's first teeth.

□ 1. No

□ 2. Yes

□ 99. Don't know

60. Which do you feel is easier, formula feeding or breastfeeding?

□ 1. Formula feeding

□ 2. Breastfeeding

61. Is colostrums (the first milk) good for the baby?

□ 1. No

□ 2. Yes

□ 99. Don't know

62. When your youngest child was born, did you have anyone in the house to help with housework, care of the baby, shopping, etc.

□ 1. No

□ 2. Yes

PEDIATRIC POLICLINIC

63. When did you first visit a pediatric policlinic after delivery of your youngest child?

_____ days

_____ monts

64. Did you receive any breastfeeding counselling during that first visit.

□ 1. No(skip to Q# 70)

□ 2. Yes

□ 99. Don't know

65. What was the counseling?

a.____ Breastfeed your child, breast milk is the best

b.____ Breastfeed w/o schedule

c.____ Breastfeed with schedule

d.____ Breastfeed frequently

e.____ Don't worry if your milk is insufficient

f. ____ Don't worry if your milk is not fatty enough

g.____ Don't worry about your diet

h.____ Feed only breastmilk for4-6 months

i. ____ Avoid bottle feeding

j. ____ Mother is not able to recall massages

k. Other_____

66. Have you ever received infant formula as a humanitarian aid for your youngest child

□ 1. No

□ 2. Yes

HEALT EDUCATTION CHANEL

67. Did you have a television which works at home

□ 1. No

□ 2. Yes

71a. If yes, have you watched the Armenian television channels in the last two days?

□ 1. No

□ 2. Yes

If yes, what did you watch

_____

68. Do you have a working radio in your house?

□ 1. No

□ 2. Yes

□ 68a. If yes, have you listened to the radio in the last two days?

□ 1. No

□ 2. Yes

68b. If yes, what station did you listen to?

_____

69. Have you read any newspapers in the last week?

□ 1. No

□ 2. Yes

73a. If yes, what do you read?

_____

70. Have you read any print materials about breastfeeding?

□ 1. No

□ 2. Yes

70a. If yes, what?

□ 1. Book(specify)_____

□ 2. Brochure

□ 3. Newspaper

□ 4. Other

71. On average, how much does your family spend each month?

□ 1. Below 20,000 drams(below US$ 40)

□ 2. 20,000 drams to 50,000 drams(US$ 40 to $ 100)

□ 3.50,001 drams to 100,000 drams(US$ 101 to $ 200)

□ 4. More than 100,000 drams(More than $ 200)

□ 5. Refuse to answer

□ 99. Don’t know.

72. How many people live in your family?

_____person

THANK YOU VERY MUCH FOR YOUR COOPEARTION.

ԿՐՃՔՈՎ ԿԵՐԱԿՐՄԱՆ ԻՐԱՎԻՃԱԿԸ ՀԱՅԱՍՏԱՆՈՒՄ, 2009 թ.

Հարցաշար 0-6 ամսական երեխաներ ունեցող մայրերի համար

1. Վայրը _____ Տվյալների մուտքագրման#

   _____

2. Հարցում անցկացնողը _____

3. Հարցման ամսաթիվը _____ (օրը, ամիսը, տարին)

ԸՆՀԱՆՈՒՐ ՏԵՂԵԿՈՒԹՅՈՒՆՆԵՐ

1.Մոր անունը

_____

2.Դուք այժմ աշխատանքի գնու՞մ եք:

- □ 1.Ոչ
- □ 2. Այո

3.Մոր ծննդյան ամիսը / ամսաթիվը _____

(օր/ ամիս/ տարի)

4.Կրթությունը (տարիներով)

- □ դպրոց(10)
- □ 2.Ուսումնարան/Տեխնիկում(2)
- □ 3.Ինստիտուտ/համալսարան(5-6)
- □ 4.Ասպիրանտուրա
- □ 5. Այլ հաստատություններ _____
- □ 6. Տարիների ընդհանուր թիվը

  _____

5. Երեխաների թիվը _____

6.Ամենփոքր երեխայի անուն ազգանունը

_____

7. Հղիության ժամանակ Դուք բժշկի հսկողության տակ եղե՞լ եք.

□ 1. Ոչ (եթե ոչ անցեք հարց 14-ին)

□ 2. Այո

7. ա. եթե այո, նշեք վայրը .

□ 1. Կանանց կոնսուլտացիա

□ 2. հիվանդանոց

□ 3.այլ _____

8.Հղիության որ ամսից եք դուք սկսել հաճախել կանանց կոնսուլտացիա _____

կրկնել. Ճշգրիտ ամիսը _____

9. Դուք ստացել եք խորհուրդ կրծքով կերակրելու համար կոնսուլտացիաների ժամանակ.

□ 1.Ոչ (եթե ոչ անցեք հարց 14-ին)

□ 2.Այո

□ 99.Չեմ հիշում

եթե այո , ինչ կարգի խորհուրդ եք ստացել այնտեղ(պատասխանը չկարդալ)

կրկնել. հատկապես ինչ են Ձեզ ասել.

a. _____ Կրծքով կերակրեք ձեր երեխային, կրծքի կաթը լավագույնն է
b. _____ Կրծքով կերակրեք առանց ռեժիմի
c. _____ Կրծքով կերակրեք ռեժիմով
d. _____ Կրծքով կերակրեք հաճախակի
e. _____ Մի անհանգստացեք, եթե ձեր կաթը չի բավարարում
f. _____ Մի անհանգստացեք, եթե ձեր կաթը բավականաչափ յուղոտ չէ
g. _____ Մի անհանգստացեք, ձեր դիետայի առումով
h. _____ 4-6 ամիս կերակրեք միայն կրծքով

i. _____ խուսափեք շշով կերակրելուց
j. _____ Մայրը չի հիշում
k. _____ ՈՒրիշ և
_____

ԾՆՆԴԱԲԵՐՈՒԹՅՈՒՆ(այժմ ես ձեզ կտամ մի քանի այլ հարցեր, որոնք վերաբերվում են ձեր ամենափոքր երեխային ծննդին)

10. Բնակավայր, որտեղ ծննդաբերել եք ձեր ամենաոքր երեխային.

- ☐ Երևան
- ☐ Հայաստանի այլ շրջաններ
- ☐ Հայաստանից դուրս

11. Ամենփոքր երեխայի ծննդաբերության վայրը.

- ☐ 1. հիվանդանոց
  (նշեք անունը)
- ☐ տանը
  (նշեք թե ով է ընդունել ծննունդը).
  - o 1. բժիշկը
  - o 2.մանկաբարձուհին
  - o 3.հարազատները
  - o 4.այլ

12. Ծննդաբերության տեսակը(կարդացեք պատասխանները)
- ☐ 1. հեշտոցային, առանց խթանման
- ☐ 2. հեշտոցային (խթքնված)
- ☐ 3.կեսարյան հատումով

13. Դուք ունեցե՞լ եք էպիզոտոմիա (շեքահատում/ կտրվածք)
- ☐ 1.Ոչ (եթե ոչ անցեք հարց 14-ին)
- ☐ 2.Այո
- ☐ 99.Չգիտեմ

14. Քանի՞ գրամ էր Ձեր երեխան կշռում ծնվելիս:
_____ գրամ

ՀԻՎԱՆԴԱՆՅԱՅԻՆ ՊՐԱԿՏԻԿԱ

(Այժմ ես ձեզ կտամ հարցեր Ձեր ամենափոքր երեխայի ծննդի վերաբերյալ)

15. Ծննդից հետո աջաջին անգամ երբ են երեխային մոտեցրել ձեր կրծքին. Կրկնել.ճշգրիտ ժամանակը՝ ժամերով:

_____րոպե
_____ժամ
_____օր

16. Ծննդաբերությունից որքան ժամանակ հետո Դուք առաջին անգամ կրծքով կերակրեցիք Ձեր երեխային.

_____ րոպե
_____ ժամ
_____ օր

- □ 00.երեխան երբեք չի բերվել կրծքով կերակրման
- □ 99.Չգիտեմ

17. Որն է այն պատճառը որ երեխան բերվեց այդ ժամանակ և ոչ ավելի շուտ (պատասխանը չկարդալ, նշեք բոլոր պատասխանները).
    - □ 1. Դա նորմալ ժամանակ էր
    - □ 2.RH կոնֆլիկտ
    - □ 3.այլ բժշկական պրոբլեմներ _____
    - □ 99. չգիտեմ

18. Նախքան բերվելը կրծքով կերակրելու Ձեր երեխան արդյոք ուրիշ կերով կերակրվե՞լ էր:
    - □ 1.Ոչ (եթե ոչ անցեք հարց 23-ին)
    - □ 2.Այո
    - □ 99.Չգիտեմ

    եթե այո

    18a.ինչով էր նա կերակրվել.

    - □ 1. Դոնորական կաթով
    - □ 2. գլյուկոզա(քաղցր ջուր)
    - □ 3.Արհեստական կեր(formula)
    - □ 4.մայրական կաթ(կթած)
    - □ 5.այլ _____
    - □ 99. Չգիտեմ

    18b. Սննուդը ծծով էր տրվե՞լ:

- 1.Ոչ
- 2.Այո
- 99.Չգիտեմ

19. Հիվանդանոցում բուժքույրը կամ բժիշկը Ձեզ ինֆորմացիա տվե՞լ են կրծքով կերակրելու ժամանակ երեխայի դիրքի և կուրծքը ճիշտ վերցնելու վերաբերյալ.
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

20. Հիվանդանոցում բուժքույրը կամ բժիշկը Ձեզ բացատրել են ըստ պահանջի կերակրման մասին:
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

21. Հիվանդանոցում եղած ժամանակ երեխան Ձեր հետ նույն սենյակու՞մ էր մնում:
    - 1.Ոչ (եթե ոչ անցեք հարց 27-ին)
    - 2.Այո
    - 99.Չգիտեմ

22. Երբևէ գիշերը երեխային դուրս բերե՞լ են սենյակից:
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

23. Քանի օր եք դուք մնացել հիվանդանոցում
    _____

24. Ընդհանուր առմամաբ ինչքա՞ն եք դուք վճարել ծննդաբերության համար :

    _____ դրամ
    _____$
    _____ կոդ 00 , եթե հրաժարվում է պատասխանել
    _____ 99 Չգիտեմ

ԿԵՐԱԿՐՄԱՆ ՆԵՐԿԱ ՊՐԱԿՏԻԿԱՆ (խնդրում եմ Ձեզ վերհիշել վերջին 24 ժամերը).

25. Սկսած երեկվա այս ժամից Ձեր երեխան կերակրվե՞լ է կրծքով:
    - 1.Ոչ
    - 2.Այո((եթե այո անցեք հարց 33-ին)

26. Եթե ոչ, ինչու՞ չեք կերակրում կրծքով(նշել միայն հիմնական պատճառը).

- 1. Երեխան բավական մեծ է.
- 2.Երեխան ինքն է հրաժարվում
- 3.Անբավարար կաթ/ կաթի բացկայություն(անցի հարց 31-ին)
- 4.Մոր հիվանդության պատճառով
- 5.Երեխայի հիվանդության պաատճառով
- 6.Կրծքի հետ կապված պրոբլեմներ(կերակրելը ցավոտ է , մաստիտ, և այլն)
- 7.Մայրը աշխատում է, սովորում է.
- 8.այլ պատճառներ_____

(եթե, պատասխանը 3-ը չէ, անցնել 38-րդ հարցի)

27. Եթե երրորդ պատասխանն է, ինչի հիման վրա հանգեցիք նման եզրակացության.

- 1. Երեխան կերակրելուց հետք լացում է (անցնել հարց 38-ին)
- 2. Ստուգիչ կշռում (անցնել հարց 38-ին)
- 3. Կաթի տեսքով (անցնել հարց 38-ին)
- 4. Առաջին անգամ կրծքով կերակրելիս կաթ չկար (անցնել հարց 38-ին)
- 5. Երեխայի քաշը չէր ավելանում (անցնել հարց 38-ին)
- 6. Այլ _____

28.Եթե Ձեր ամենափոքր երեխան այժմ կրծքով չի կերակրվում, նա երբևէ կրծքով կերակրվե՞լ է :

- 1. Ոչ

Ինչու Դուք նրան սկզբից չեք չկերակրեցիք

- 1.Կաթի բացակայություն
- 2. Մոր հիվանդության պատճառով
- 3.Երեխայի հիվանդության պաատճառով
- 4.Այլ պատճառներ

- 2. Այո

եթե այո, քանի տարեկան էր Ձեր երեխան, երբ դադարեցիք կրծքով կերակրելը _____

29. Եթե Ձեր երեխան սկսած երեկվա այս ժամից կերակրվել է կրծքով, արդյո՞ք դա է նրա հիմնական սնունդը.

- 1.Ոչ
- 2.Այո

30. Միջին հաշվով օրը քանի անգամ եք կերակրում
_____

31.Դուք գիշերը կրծքով կերակրու՞մ եք:

- □ 1.Ոչ
- □ 2.Այո

Եթե այո, քանի՞ անգամ
_____

32. Դուք ռեժիմո՞վ եք կերակրում, թե ըստ պահանջի:

- □ 1.Ռեժիմով
- □ 2.Ըստ պահանջի

33. Սովորաբար երեխայի կերակրելուց, արդյո՞ք երկու կուրծքն էլ օգատոգործում եք մի կերակրման ընթացքում:
    - □ 1.Ոչ
    - □ 2.Այո

Նորից ես Ձեզ խնդրում եմ վերհիշել վերջին 24 ժամերը:

34. Սկսած երեկվանից երեխան ստացե՞լ է (կարդացեք ցուցակը և նշեք, եթե պատասխանը դրական է).

_____վիտամիններ, միներալներ կամ դեղորայք
_____ջուր
_____քաղցրացված ջուր
_____թեյ
_____արհեստական կեր(formula, եթե այո, նշել անուը _____)
_____կաթ/ կաթի փոշի
_____պինդ կամ ջրալի կերակուր
_____նարինե
_____մածուն
_____կրծքի կաթ
_____այլ

35. Սկսած երեկվա այս ժամից երեխան օգտվել ծծակով չշից.

- □ 1.Ոչ (եթե ոչ անցեք հարց -ին)
- □ 2.Այո

35a. Եթե այո, ինչ՞(պատասխաններին չնայել)

- □ 1. ջուր
- □ 2.հյութ
- □ 3.արհեստական կեր
- □ 4.այլ_____

36. Դուք երբևէ թողել եք շիշը երեխայի բերանում, երբ նա քնած էր լինում
    - □ 1.Ոչ (եթե ոչ անցեք հարց 42 -ին)
    - □ 2.Այո

37. Երբ երեխան քնած է լինում, որքա՞ն հաճախ եք դուք շիշը թողնում երեխայի բերանում.
    - □ 1. ամեն օր
    - □ 2.շաբաթը մեկ
    - □ 3.հազվադեպ

38. Որքան էր Ձեր երեխայի տարիքը, երբ դուք բացի կրծքի կաթից և ջրից նրան տվեցիք այլ հեղուկներ.

_____ամիս

_____օր

_____ կոդ 00, եթե ոչինչ տրված չի

39. Որքան էր Ձեր երեխայի տարիքը, երբ դուք բացի կրծքի կաթից նրան տվեցիք այլ սնունդ (շիլա, պյուրե, արհեստական կեր…….)
    _____ամիս
    _____օր
    _____ կոդ 00, եթե տրված չի

40. Որքան էր Ձեր երեխայի տարիքը, երբ Դուք նրան առաջին անգամ արհեստական կեր տվեցիք.
    _____ամիս
    _____օր
    _____ կոդ 00, եթե տրված չի

41. Ունեցել եք արդյո՞ք կրծքի ցավ և այտուցվածություն.
    - □ 1.Ոչ (եթե ոչ անցեք հարց 46 -ին)
    - □ 2.Այո

41a. Եթե այո, դուք դիմել եք որևէ մեկին(եթե ոչ, անցնել հարց45b - ին).

- □ 1.Ոչ
- □ 2.Այո

Եթե այո,ապա ու՞մ.

- □ 1. Մանկաբույժ
- □ 2. Գինեկոլոգ
- □ 3. Այլ _____
- □ 4. Ոչ (եթե ոչ անցնել հարց 46-ին)

41b. Այդ պրոբլեմի պատճառո՞վ Դուք դադարեցիք կրծքով կերակրել:

- □ 1.Ոչ
- □ 2.Այո

ՍԱՅՐԱԿԱՆ ԳԻՏԵԼԻՔՆԵՐ

42. Ձեր կարծիքով ինչն է կրծքի կաթի անբավարարության հիմնական պատճառը (պատասխանները չկարդալ)

- □ 1.Դիետա
- □ 2.Ստրես
- □ 3.Ինֆեկցիա
- □ 4.Միջավայրի աղտոտվածություն
- □ 5.Ոչ հաճախակի կրծքով կերակրելը
- □ 6.Երեխայի վիճակը
- □ 7.Հոգնածություն
- □ 8.այլ _____
- □ 99.Չգիտեմ

43. Ըստ Ձեզ մինչև որ տարիքը երեխան առողջ կմնա, եթե միայն կրծքի կաթով կերակրվի, չտրվի նույնիսկ ջուր, հյութ, կամ այլ սնունդ

_____ամիս

_____Օր

- □ 99.Չգիտեմ

Այժմ ես Ձեր համար կկարդամ մի քանի դրույթներ, որոնց խնդրում եմ պատասխանեք՝ համաձայն եմ, համաձայն չեմ, չգիտեմ:

44. Կյանքի առաջին չորս ամիսների համար միակ սնունդն է, որի պահանջը ունի երեխան.

- 1.Ոչ
- 2.Այո
- 99.Չգիտեմ

45. Կրծքով կերակրելը գիրացնում է կնորը:
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

46. Կրծքով կերակրումը պաշտպանում է երեխային լուծից և թոքերի բորբոքումից:
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

47. Կրծքով կերակրումը անցանկալի ձևով փոխում է կրծքի ձևը.
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

48. Եթե կինը կրծքով է կերակրում, նրա համար դժվար է հղիանալ
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

49. Մայրը, որը չունի բավարար չափի կաթ, պետք է փորձի հաճախակի կերակրել երեխային.
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

50. Խեժը (առաջին կաթը) չպետք է տրվի երեխային: Ավելի լավ է սպասել մինչև առաջին կաթը հայտնվի, նախքան երեխային կրծքին մոտեցնելը.
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

51. Արհեստական սննունդը նույնքան սննդարար է, որքան կրծքի կաթը.

- 1.Ոչ
- 2.Այո
- 99.Չգիտեմ

52. Սովորաբար, եթե կնոջ սնունդը հարուստ չէ կալորիաներով, նրա կրծքի կաթը ոչ սննդարար կլինի երեխայի համար և պետք է տրվի հավելյալ սնունդ.
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

53. Նորածինը կարիք ունի ջրի, բացի կրծքով կերակրելուց, որպեսզի հագեցնի ծարավը.
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

54. Երբ ուրիշ սնունդ է օգտագործվում, բացի մայրական կաթից, մոր կաթը հետ է քաշվում.
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

55. Լուծով հիվանդ երեխային չպետք է կերակրել կրծքի կաթով, քանի դեռ նա հիվանդ է.
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

56. Ջրալի կրծքի կաթը սննդարար չէ երեխայի համար.
    - 1.Ոչ
    - 2.Այո
    - 99.Չգիտեմ

57. Կարևոր չէ, թե երերխքն ինչպես է վերցնում կրծքի պտուկը և հարպտուկային շրջանը, կարևոր է, որ կուրծքը լինի երեխայի բերանում.
    - 1.Ոչ
    - 2.Այո

□ 99.Չգիտեմ

58. Երբ երեխան կերակրվում է շշով, նա չի ցանկանա կրծքով սնվել
□ 1.Ոչ
□ 2.Այո
□ 99.Չգիտեմ

59. Երեխային քնեցնելը քաղցր հեղուկով կամ կաթով լցված շիշը բերանում վնասակար է երեխայի կաթնատամների համար.
□ 1.Ոչ
□ 2.Այո
□ 99.Չգիտեմ

60. Որն եք կարծում ավելի հեշտ՝ արհեստական սնունդ տալը, թե կրծքով կերակրելը.
□ 1.Ոչ
□ 2.Այո
□ 99.Չգիտեմ

61. Խեժը (Առաջին կաթը) օգտակար է երեխային
□ 1.Ոչ
□ 2.Այո
□ 99.Չգիտեմ

62. Երբ Ձեր ամենափոքր երեխան ծնվեց, ունեիք դուք ինչ-որ մեկին տանը, որ Ձեզ օգներ՝ երեխային նաելով, խանութ գնալով և այլն…
□ 1.Ոչ
□ 2.Այո
□ 99.Չգիտեմ

ՍԱՆԿԱԲՈՒԺԱԿԱՆ ՊՈԼԻԿԼԻՆԻԿԱ

63. Երբ է եղել Ձեր առաջին հանդիպումը մանկական պոլիկլինիկայի բուժաշխատողի հետ ծննդաբերլուց հետ.
_____ամիս
_____օր
_____ կոդ 00, եթե հանդիպում չի եղել

64. Դուք ստացել եք կրծքով ցնուցման վերաբերյալ որևէ խորհուրդ մանկական պոլիկլինիկայի բուժաշխատողի կողմից.

- 1.Ոչ(բաց թողնել հարց 69-ը)
- 2.Այո
- 99.Չգիտեմ

65. Ինչ խորհուրդ եք ստացել(պատասխանները չկարդալ, անհրաժեշտության դեպքում ստուգել երկակի պատասխանները)
   a. _____Կրծքով կերակրեք ձեր երեխային, կրծքի կաթը լավագույնն է
   b. _____Կրծքով կերակրեք առանց ռեժիմի
   c. _____Կրծքով կերակրեք ռեժիմով
   d. _____Կրծքով կերակրեք հաճախակի
   e. _____Մի անհանգստացեք, եթե Ձեր կաթը չի բավարարում
   f. _____Մի անհանգստացեք, եթե Ձեր կաթը բավականաչափ յուղոտ չէ
   g. _____Մի անհանգստացեք Ձեր դիետայի առիթով
   h. _____4-6 ամիս կերակրեք միայն կրծքով
   i. _____Մայրը չի հիշում
   j. _____Ուիշ

66. Երբևէ ստացե՞լ եք արհեստական կեր, որպես մարդասիրական օգնություն
- 1.Ոչ
- 2.Այո

ԱՌՈՂՋԱՊԱՀԱԿԱՆ ԻՆՖՈՐՄԱՑԻԱ ՍՏԱՆԱԼՈՒ ԱՂԲՈՒՐՆԵՐԸ

67.Դուք ունեք հեռուստացույց տանը, որն աշխատում է
- 1.Ոչ
- 2.Այո

67a. Եթե այո, նայել եք Դուք Հայաստանի ալիքները վերջին երկու օրվա ընթացքում.

- 1.Ոչ
- 2.Այո

67b. Եթե այո, ինչ եք դուք նայել _____

68.Դուք ունե՞ք գործող ռադիո տանը
- 1.Ոչ

□ 2.Այո

68a. Եթե այո, վերջին երկու օրվա ընթացքում լսել եք ռադիո

□ 1.Ոչ
□ 2.Այո

68b. Եթե այո, որ ռադիոալիքն եք Դուք լսել

_____

69. Վերջին երկու շաբաթվա ընթացքում Դուք թերթ կարդացե՞լ եք

□ 1.Ոչ
□ 2.Այո

69a. Եթե այո, ինչ՞ թերթ եք կարդացել

_____

70. Կարդացել եք դուք որևէ տպագիր հոդված կրծքով կերակրելու մասին.

□ 1.Ոչ
□ 2.Այո

70a. Եթե այո, ի՞նչ

□ 1.Գիրք _____
□ 2.Բրոշյուր _____
□ 3.Թերթ _____
□ 4.այլ _____

71. Միջին հաշվով ինչքա՞ն է ծախսում Ձեր ընտանիք անսեկան.

□ 1.20000 դրամից քիչ (below US$40)
□ 2.20000- 50000 դրամ(US$ 41-100)
□ 3.50000-100000 դրամ(US$101-200)
□ 4.100000 դրամից ավել(more than $ 201)
□ 99.Չգիտեմ

72. Քանի՞ մարդ է ապրում Ձեր տանը _____

ՇԱՏ ՇՆՈՐՀԱԿԱԼՈՒԹՅՈՒՆ.

Appendix 5. Consent Form (English & Armenian)

Oral Consent Form.

Title of Research Project: Breastfeeding trends in Yerevan: Relationship between maternal knowledge and breastfeeding practices.

Explanation of Research Project:

Hello, My Name is Anna Abazyan. I am a student of Public Health Department at American University of Armenia. I am conducting a study related infant feeding practices in Yerevan. You are asked to participate in the study because you are one of 135 randomly selected mothers from polyclinic list, who has infant aged 0-6 months. The study does not include personal and sensitive questions. Your participation is very important for us. The interview will take about 20 minutes.

Risk/Benefits

You don't take any risk participating to this study. Your answers or refusal to participate will not have any impact on the future medical care of your child. No benefits or incentives are supposed for the participants of this study, but the information provided by you will help us to estimate the nature of the problem and facilitate the infant feeding in Yerevan.

Confidentiality

The collected data will be completely confidential and reviewed only by me. After the input of comprehensive information into the system, the personal data will be removed and consequently the confidentiality will be ensured. The names of participants will be coded and replaced by ID numbers. As for the reported information, it will be generated based on summarized and evaluated data and no individual information will be shown. The data will be destroyed from the system as well after six months.

Voluntariness

Participation in this survey is voluntary and you can refuse or be free to stop the study whenever you want.

Whom to contact

For more information you can contact Varduhi Petrosyan, Associate Dean, College of Health Sciences: (010) 51 25 64, e-mail: vpetrosi@aua.am.

Thank you in advance.

Հարցման Մասնակցության Համաձայնություն

Հետազոտության անվանում. Կրծքով կերակրման տեղեկացը Երևանում ,Կապը ՝ Մայրերի գիտելիքների և կրծքով կերակրելու միջև:

Հետազոտության բացատրությունը

Բարև Ձեզ, Իմ անունը Աննա Աբազյան է: Ես Հայաստանի Ամերիկյան Համալսարանի Հանրային առողջություն ֆակուլտետի ուսանող եմ: Ես իրականացնում եմ հետազոտություն Երևանում երեխաների կերակրման պրակտիկայի վերաբերյալ: Խնդրում եմ Ձեզ մասնակցել այս հարցմանը, որովհետև դուք պատահականորեն պոլիկլինիկայի ցուցակից ընտրված 135 մայրերից մեկն եք , որն ունի 0-6 ամսական երեխա: Հետազոտությունը չի ներառում ոուրբ անձնական հարցեր:Ձեր մասնակցությունը շատ կարևորը մեզ համար:Հարցումը կտևի մոտ քսան րոպե:

Ռիսկ/Շահույթ

Այս հետազոտությանը մասնակցելով՝Դուք որևէ ռիսկի չեք դիմում:Մասնակցությունը կամ հրաժարվելը որևէ ձևով չի անդրադառնա Ձեր երեխայի բուժսպասարկման վրա:

Մասնկցության համար ոչ մի խրախուսական պարգևատրում նախատեսված չէ, բայց Ձեր կողմից տրամդրված ինֆորմացիան կօգնի մեզ գնահատել խնդրի էությունը և կնպաստի երեխաների ճիշտ կերակրման հիմնախնդրին Հայաստանում:

Գաղտնիություն

Հավաքագրված տվյալները կլինեն բացառապես գաղտնի և կմշակվեն միայն իմ կողմից: Ամբողջական ինֆորմացիան համակարգ մուտքագրելուց հետո, անձնական տվյալները կջնջվեն և հետևաբար գաղտնիությունը ապպահովված կլինի: Մանակիցների անունները կկոդավորվեն և կփոխարինվեն համապատասխան չկրկնվող համարնեով:Ինչ վերաբերվում է հաշվետվության մեջ ներառված ինֆորմացուային, այն կկազմվի մշակված և խմբավորված տվյալներից և ոչ մի անձական ինֆորմացիա չի ներկայացվի: Վեց ամիս անց ամբողջ ինֆորմացին կհեռացվի նաև համակարգից:

Մասնակցության իրավունք

Մասնակցությունն այս հարցմանը կամավոր է, և դուք կարող եք մերժել կամ ընդհատել այն

ցանկացած պահի:

Ոմ դիմել

Լրացուցիչ տեղեկությունների համար դուք կարող եք դիմել Ամերիկյան Համալսարան, Վարդուհի Պետրոսյանին՝Առողջապահական գիտությունների քոլեջի փոխդեկան, (010) 512564, e-maill: vpetrosi@aua.am

Նախապես շնորհակալություն: