AMERICAN UNIVERSITY OF BEIRUT

MATERNAL BREASTFEEDING EXPOSURE, KNOWLEDGE, ATTITUDE, INTENTION, AND PRACTICE IN LEBANON: RESULTS FROM THE MINA COHORT STUDY

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Sciences to the Department of Nutrition and Food Sciences of the Faculty of Agriculture and Food Sciences at the American University of Beirut

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MATERNAL BREASTFEEDING EXPOSURE, KNOWLEDGE, ATTITUDE, INTENTION, AND PRACTICE IN LEBANON: RESULTS FROM THE MINA COHORT STUDY

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ABSTRACT OF THE THESIS OF

Aya Ahmad Chatila for Master of Science

Major: Public Health Nutrition

Title: <u>Maternal Breastfeeding Exposure</u>, <u>Knowledge</u>, <u>Attitudes</u>, <u>Intentions</u>, <u>and Practices in Lebanon: Results from the Mina Cohort Study</u>

Background and Objective: Despite the importance of adequate breastfeeding during early life, its rates in Lebanon remain low. This study aims to examine the association of maternal exposure, knowledge, attitude, and intentions to breastfeeding during pregnancy with breastfeeding practices at 4 and 6 months postpartum among Lebanese women.

Methods: Data for this study are derived from the Mother and Infant Nutrition Assessment (MINA) study, a longitudinal cohort study, conducted from 2015 to 2018 in Lebanon and Qatar. The data analyzed in this study focus on the Lebanese arm of the cohort, which took place in two hospitals (AUBMC and MGH). A total of 194 pregnant women were recruited in this study. The data were extracted from visits 1 (at the first trimester), 3 (at the third trimester), 4 (at 4 months postpartum), and 5 (at 6 months postpartum). It included 1) sociodemographic characteristics, 2) breastfeeding exposure, 3) breastfeeding knowledge (Infant Feeding Knowledge Test), 4) breastfeeding attitude (Iowa Infant Feeding Attitude Scale), breastfeeding intention (Infant Feeding Intention Scale), and 5) breastfeeding practices (WHO definitions). Simple linear regressions were used to examine the determinants to the breastfeeding exposure, knowledge, attitude, and intention scores. Simple logistic regressions were used to determine the factors associated with breastfeeding initiation and exclusivity at 4 and 6 months.

Results: Overall, participants had a high breastfeeding exposure score (2.8±0.5), good breastfeeding knowledge score (12.7±2.1), neutral breastfeeding attitude score (64.1±7.0), and strong breastfeeding intention score (13.2±3.6). After birth, 61% of the participants have initiated breastfeeding within less than one hour. Exclusive breastfeeding practices among the studied population were 41% at 4 months and 26% at 6 months. Major gaps in knowledge and attitudes identified among the Lebanese mothers were related to the duration of breastmilk completeness, breastmilk adequacy, breastfeeding misconceptions, and concerns. Participants from MGH had significantly lower breastfeeding exposure [-0.2(-0.4,0.0)] and knowledge scores [-2.1(-2.9, -1.2)] than those from AUBMC. Breastfeeding knowledge was more prevalent among women with the following characteristics: older age [1.3(0.2,2.4)], higher maternal education

[1.9(0.8,3.0)], higher paternal education [1.7(0.8, 2.6)], maternal employment status [1.4(0.6, 2.2)], and higher-income individuals [2.2(0.8, 3.7)]. Participants who were not pregnant with their first child and had a household crowding index of greater than or equal to one person per room had significantly lower mean intention scores to exclusive breastfeeding by -1.3(-2.6,-0.0) and -1.67(-3.1,-0.3), respectively. Women who were residing in other districts than Beirut had a significantly higher mean breastfeeding intentions score by 2.0(0.0, 3.9) than those residing in other districts. There was a significant positive association between exclusive breastfeeding at 4 months with breastfeeding intentions [1.4(1.1, 1.7)]. Also, exclusive breastfeeding at 6 months was negatively associated with breastfeeding exposure [0.1(0.0, 0.7)].

Conclusion: The findings from this study highlighted the gaps in knowledge and attitudes related to breastfeeding among lactating mothers in Lebanon. Considering these findings, it is recommended to develop context and culture-specific prenatal breastfeeding education, postnatal peer/professional support, and workplace support.

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ABBREVIATIONS

AUBMC American University of Beirut Medical Center

BF Breastfeeding

BFHI Baby-Friendly Hospital Initiative BFK Infant Feeding Knowledge Test

BMS Breastmilk substitute
CF Complementary feeding
CI Confidence Interval
EBF Exclusive breastfeeding
FF Formula feeding

IFI Infant Feeding Intention Scale
IIFAS Iowa Infant Feeding Attitude Scale

IRB Institutional Review Board
IYCF Infant and young child feeding
KSA Kingdom of Saudi Arabia

LPB Lebanese Pounds

MENA Middle East and North Africa MGH Makassed General Hospital

MINA Mother and Infant Nutrition Assessment

MoPH Ministry of Public Health NCD Non-communicable diseases OBGYN Obstetrician-gynecologist

OR Odds Ratio

PBC Perceived behavioral control RCT Randomized controlled trial

SD Standard Deviation SN Subjective norms

SPSS Statistical Package for Social Sciences

TPB Theory of Planned Behavior

UK United Kingdom UN United Nations

USA United States of America

USAID United States Agency for International Development

WHO World Health Organization

CHAPTER I

INTRODUCTION

Non-communicable diseases (NCDs), commonly known as chronic or lifestylerelated diseases, are the leading cause of death worldwide, being responsible for twothirds of all deaths globally, with nearly 85% of these deaths occurring in low- and middle-income countries (Organization 2018). Most global deaths have been largely attributed to four main NCDs: cardiovascular diseases, diabetes, cancer, and chronic respiratory diseases (Rahim, Sibai et al. 2014). While it has been traditionally accepted that hereditary and adult lifestyle factors, including nutrition and physical activity, determine one's risk of developing NCDs, recent emerging evidence points towards nutrition during the first 1,000 days of a child's life starting from conception until 2 years of age. "Fetal or metabolic programming" is the concept that links early-life exposure to adult diseases. The first 1,000 days of life is considered a critical period and exposures to certain factors might lead to permeant irreversible changes in organs, systems, and subsystems. These permanent changes will affect the organ's metabolic function and structure, which will limit the body's ability to fight exposures (Kuh, Ben-Shlomo et al. 2003). Scholars have identified the first 1,000 days as a "window of opportunity" to plan effective interventions aiming at preventing or delaying the onset of the development of NCDs (Kuh, Ben-Shlomo et al. 2003).

Adequate breastfeeding (BF) and complementary feeding (CF) practices during the early-life period have been suggested to not only modulate growth and functional development of an infant or young child, but also modulate health and adult-onset of

NCDs namely obesity, type 2 diabetes, high blood pressure, and elevated blood lipids (Kelishadi and Farajian 2014, Grummer-Strawn and Rollins 2015). Evidence shows that the lives of 820,000 infants and young children could be saved as a result of being breastfed optimally (Victora, Bahl et al. 2016). For this reason, offering breastmilk substitute (BMS) instead of breastmilk could jeopardize the health shield offered by proper breastfeeding in this important stage (Schwarzenberg and Georgieff 2018).

CHAPTER II

LITERATURE REVIEW

A. General Information about Breastmilk

1. Stages of Lactation

Lactation goes through multiple stages causing changes in the breastmilk composition. Colostrum, the first fluid to be produced from the mother to the infant, is rich in immunologic components such as secretory IgA, lactoferrin, leukocytes, and epidermal growth factor. (Kulski and Hartmann 1981, Castellote, Casillas et al. 2011). It also contains high levels of sodium, chloride, and magnesium, and low levels of lactose potassium and calcium (Kulski and Hartmann 1981). The transitional milk, which is the second stage of lactation, is similar in characteristics to colostrum and is produced from 5 days to 6 weeks postpartum (Ballard and Morrow 2013). At 4 to 6 weeks postpartum the breastmilk becomes hindmilk, which is fully mature milk, with a lot of changes in its composition.

2. Nutritional Components

Breastmilk has unique and varied nutrient components- macronutrients and micronutrients, bioactive components, growth factors, and immunologic factors- that cannot be mimicked in formula synthesis (Ballard and Morrow 2013, Schwarzenberg and Georgieff 2018).

a. Macronutrient

The macronutrient composition of human milk varies from mother to mother, stages of lactation, and maternal nutritional status. The macronutrient composition of mature/term milk is estimated to be approximately 65 to 70 kcal/dL for energy, 0.9 to 1.2 g/dL for protein, 3.2 to 3.6 g/dL for fat, and 6.7 to 7.8 g/dL for lactose/carbohydrate (Ballard and Morrow 2013). Macronutrient content of the human milk can vary between preterm and term milk- with preterm milk tending to be higher in protein and fat- and between the maternal characteristics- maternal body weight for height, protein intake, parity, the return of menstruation, and nursing frequency (Nommsen, Lovelady et al. 1991).

b. Micronutrient

The micronutrient content, of vitamins A, B1, B2, B6, B12, and iodine, in human milk, might vary depending on maternal diet and body stores (Ballard and Morrow 2013). This might be due to the suboptimal intake of the maternal micronutrients from their diets and changes in body composition (Greer 2001). It is recommended that the mother continues vitamin/mineral supplementation during the lactation period to have adequate stores. On the contrary, certain nutrients cannot be transmitted from the mother to the child through human milk, and thus require to be supplemented to the infant. For this reason, the American Academy of Pediatrics recommends an injection of vitamin K- to avoid the hemorrhagic disease of the newborn- and supplementation of vitamin D (Greer 2001).

c. Other Components

In addition to having optimal nutritional components, breastmilk also contains numerous growth factors. Those growth factors have a wide variety of effects on the

infant's systems, subsystems, and organs. Human milk contains epidermal growth factors, neuronal growth factors, insulin-like growth factor, vascular endothelial growth factor, erythropoietin, and other factors for the growth and maturation of the intestinal tract, vasculature, nervous system, and endocrine system (Ballard and Morrow 2013).

Human milk also offers protection against inflammation and infections, since it contains immunological factors. Those immunological factors include cells of human milk- macrophages, T cells, stem cells, lymphocytes, cytokines, chemokines, and acquired/innate factors. Those factors are responsible for transferring the protection and programming of different internal and external cells, communication between cells, and protection from infections (Ballard and Morrow 2013).

B. Benefits of Breastfeeding

Breastfeeding is considered the optimal nutrition and offers a lot of benefits when compared to formula feeding (FF). Continuous efforts have identified breastfeeding to be beneficial for the infant, mother, economy, and sustainability. This section will review the literature to identify the potential benefits of breastfeeding on multiple levels.

1. Infant

a. Infectious disease

Breastfeeding offers some important benefits for the infant that are thought to be short-term, such as protection against infectious diseases. Breastfeeding can minimize the risk of multiple infectious diseases- diarrhea, respiratory tract infections, otitis media, other infections, and their related mortality (León-Cava, Lutter et al. 2002). This

is because breastfeeding requires minimal handling than formula feeding which minimizes the risk of contamination as a result of poor hygiene and sanitation (León-Cava, Lutter et al. 2002, Isaacs 2005). A recent meta-analysis of studies conducted in developed countries showed that infants who were exclusively breastfed for at 4 months, had 3 times fewer symptoms of severe respiratory tract infections than those who were formula-fed (Heinig and Dewey 1996). In addition to that, human milk contains immunologic and antibacterial properties, which makes it a strong agent to fight pathogens and eliminate exposures (León-Cava, Lutter et al. 2002, Isaacs 2005).

b. Neurodevelopment

Breastfeeding can have a great impact on intellectual and motor skill development in term and preterm newborns (Allen and Hector 2005). Although maternal intelligence was considered to be a confounding factor, breastfeeding still had a positive effect on the infant's intelligence regardless of maternal intelligence (Heinig and Dewey 1996, Allen and Hector 2005).

The mechanisms behind the association of breastmilk with neurological development are not well understood (León-Cava, Lutter et al. 2002); however, it can plausible biological explanations since breastmilk contains long-chain polyunsaturated fatty acids known to be important for brain growth and development. In addition to that, studies have reported that breastfeeding provides bonding between the mother and the child, which in turn may have developmental benefits for the infant (León-Cava, Lutter et al. 2002).

c. Chronic disease

The association of breastfeeding and the risk of development of NCDs in childhood and adulthood has been very well reviewed in the literature. Recent meta-

analyses have indicated a short-term protective effect of breastfeeding against childhood obesity (Arenz, Rückerl et al. 2004). A cross-sectional study done in Lebanon has revealed that the odds of being overweight were reduced by 26% for every additional month of exclusive breastfeeding (Issa, Hobeika et al. 2019). In addition to that, this study also showed that exclusive breastfeeding can reduce respiratory affections (37% less wheezing and 27% less asthma) and gastrointestinal problems (26% less colic and 16% less reflux) (Issa, Hobeika et al. 2019). Since childhood obesity is a risk factor in the development of obesity in adulthood and related morbidity, breastfeeding can prevent obesity in the long-term (Allen and Hector 2005). Breastfeeding can also have a protective effect against other diseases such as allergies, diabetes, hypertension, cancer, and Crohn's disease in adulthood (León-Cava, Lutter et al. 2002).

2. Mother

The benefits of breastfeeding can go beyond the infant, as many studies have proved that it is beneficial for the mother. The evidence indicates that breastfeeding can be protective against pre and postmenopausal breast cancer through a dose-response relationship (Allen and Hector 2005). This means that the longer duration of breastfeeding is associated with a lower risk of development of breast cancer. A systematic review has indicated that 12 months of breastfeeding can reduce the risk of developing breast cancer by 4.3% (Beral 2002). Evidence from cohort studies also showed that breastfeeding may protect against ovarian cancer (Labbok 2001). The mechanisms behind the protection against breast and ovarian cancer can be linked to the hormonal changes and the release of oxytocin that are associated with breastfeeding, which will help in contracting the uterus, expelling the placenta, reducing postpartum

bleeding, and reducing fertility (León-Cava, Lutter et al. 2002, Rea 2004). In addition to that, lactation can help to reduce the risk of rheumatoid arthritis, postpartum depression, increase postpartum weight loss, and mother-infant bonding (Allen and Hector 2005).

3. Economy

The benefits of breastfeeding go beyond health, as it was proven in the literature that breastfeeding can have a positive impact on the economy. Cost analysis has indicated that breastfeeding can reduce costs directly and indirectly (Allen and Hector 2005). The direct costs include spending on health, medications, hospitalizations, infant formula, equipment, storage, and preparation, whereas the indirect costs long term increased productivity and higher intelligence. This can be supported by evidence from the Lancet Series for Breastfeeding, that breastfeeding can cause an economic gains of \$302 billion/year as a result of increased productivity associated with higher intelligence (Victora, Bahl et al. 2016). Reviews done in the United States (US), United Kingdom (UK), Brazil, and urban China have indicated that breastfeeding can save up to \$400 million annually due to reduced healthcare costs (Victora, Bahl et al. 2016).

4. Environment

Breastfeeding also has environmental benefits, as it is considered a natural and renewable source of food; whereas, formula feeding is detrimental to the environment due to several reasons. (Health and Services 2011). First, the production of formula milk requires a lot of industrial equipment and machines that produce pollutants and chemical exposures. In addition to that, the powdered formula milk requires specific packaging, which might be deposited in landfills and requires transportation. For all the

previously mentioned reasons, breastfeeding is still considered more environmentally friendly and has minimal carbon footprint exposures, which will help to save global resources and energy

C. Global and National Breastfeeding Rates

Globally, the breastfeeding rates remain low, as it was estimated that the exclusive breastfeeding (EBF) rate is around 42% (Victora, Bahl et al. 2016). The rate is much lower in the Middle East and North African (MENA) with only 35% of the infants are being breastfed. A significant difference is seen across countries, as evidence shows that breastfeeding is 50 % less in low- and middle-income countries than high income come (Victora, Bahl et al. 2016). Breastfeeding continuation is also on a decreasing pattern as it was shown that the breastfeeding rate has dropped by 30% for children aged 0-5 months (Victora, Bahl et al. 2016).

Lebanon, a middle-income country in the Middle Eastern, has very low breastfeeding rates and is on a decreasing pattern. In 2008, EBF was 56% during the first month of age and dropped to 25% at four months of age (Al-Sahab, Tamim et al. 2008). A similar decreasing pattern was seen in 2010, where breastfeeding of 1-month old infants is 40% and exclusive breastfeeding for up to 6 months is 14.8% (UNICEF 2010, UNICEF 2013). Over 40% of Lebanese infants receive a combination of infant formula and breast milk during their first month of life (UNICEF 2010). A validation study in Lebanon have studied breastfeeding practices, the results showed that breastfeeding initiation within the recommendation was 77%, EBF at 1 month was 46.5%, EBF at 3 months was 41.2%, and EBF at 6 months was 31.6% (Yehya, Tamim et al. 2017). In 2019, a cross-sectional study on infants have indicated that the mean age

for breastfeeding initiation was 2.7 days, exclusive breastfeeding was 3.23 months, and total breastfeeding was 10.38 months (Issa, Hobeika et al. 2019). The authors also noted that EBF rates at 6 months were 32% in the studied sample. On the contrary, a national study on toddlers in Lebanon has found that EBF was 46.5% at 1 month, 26.16% at 3 months, and 6.5% at 6 months of age (Mattar, Hobeika et al. 2019). The results estimating the breastfeeding rates in Lebanon are controversial, with all rates being suboptimal, which increases the need to develop and implement interventions to address this public health issue.

D. International Guidelines for Infant Feeding Practices

1. Definitions

The World Health Organization (WHO) Global Data Bank on breastfeeding defines breastfeeding into the following 1) "exclusive breastfeeding" when infants receive no other food or drinks, not even water, other than breastmilk (including expressed milk) and specific medications 2) "combined/mixed feeding" when infants receive breastmilk and formula milk 3) "bottle-feeding" when infants receive formula milk only without any breastmilk (Organization 2011).

2. Responses

As a response to suboptimal infant feeding practices, the United Nations (UN) has adopted the "Convention on the Rights of the Child," pointing out the importance of addressing optimal feeding practices for infants and young children. Global agencies and health organizations was been working on developing recommendations aiming at improving the global breastfeeding rates and addressing this public health problem. The

WHO's member states have endorsed a comprehensive implementation plan, which includes 6 global nutrition targets to be met in 2025, aiming at improving maternal, infant, and young child nutrition (Organization 2014). The nutrition targets include policy briefs to improve the global rates of stunting, wasting, childhood overweight/obesity, breastfeeding, low birth weight, and maternal anemia. The policy brief for the fifth target aims to "increase the rate of exclusive breastfeeding in the first 6 months up to at least 50%". The purpose of this policy brief is to support, promote, and implement cost-effective interventions and policies to increase the global practice of exclusive breastfeeding.

3. Recommendations

The WHO has set several recommendations for breastfeeding initiation and continuation. These recommendations include initiation of breastfeeding within 1 hour of delivery, exclusive breastfeeding (EBF) for 6 months, and continuation of breastfeeding for two years of age or beyond (Organization 2019). For measuring infant feedings practices, the United States Agency for International Development (USAID) and WHO have developed the "Indicators for Assessing Infant and Young Child Feeding Practices", which serve as a valid, reliable, and standardized tool to assess infant and young child feeding practices (USAID and WHO 2007).

E. National Breastfeeding Response

The Lebanese government and policymakers have been continuously working on the development of public policies to address the suboptimal breastfeeding rates. In 2008, a new law (No. 47 of 11/12/2008) was issued and implemented, which was

related to the "Organizing the Marketing of Infant and Young Child Feeding Products and Tools" (Akik, Ghattas et al. 2015, Darjani and Berbari 2015). Law 47/2008 is like the "International Code of Marketing of Breastmilk Substitutes" (BMS), but with stricter regulations, which lead to the termination of the "Code". This law includes the banning and marketing of BMS and FF for children between 0 to 3 years. Law 47 has been poorly implemented and enforced by the government, as the Ministry of Public Health (MoPH) has caught a well-known hospital in Lebanon and Philips Avent in violating this law and took specific actions accordingly (Akik, Ghattas et al. 2015).

The "Baby-Friendly Hospital Initiative" (BFHI) has been also adopted by the Lebanese government to address breastfeeding during the hospital stay. The BFHI includes ten steps that focus on the training of healthcare providers, educating new mothers and rooming-in of the mother and child within the first 24 hours after delivery (BFHI 1991). However, there are some challenges and barriers that are present in the context, which hinders the effective implementation of this initiative. Some of those challenges could be related to the resistance at multiple levels- hospital administration, physicians, shortage in human resources and supplies, infrastructure and routine practices, financial incentives for hospitals and health professionals to market breast milk substitutes, and organizational cultures, and cultural barriers mothers face (Akik 2014).

In 2014, the maternity legislation was further modified and updated, which now gives the working mothers 10 weeks of paid leave, instead of 7 weeks (LawNo17 2014). Despite this extension of this legislation, concerns were raised from the Lebanese

working mothers related to the maternity leave duration being short, early return to work, and inadequate work schedule (Nabulsi 2011, Mattar, Hobeika et al. 2019).

In 2018, the MoPH and UNICEF have developed the "National Policy for Infant and Young Child Feeding Practices in Lebanon" (UNICEF 2018). The purpose of this policy is to enhance the promotion, protection, and support of infant and young child feeding (IYCF) practices in Lebanon by using multiple initiatives, policies, laws, and regulations. There are ten policy statements in this document that focuses on the policy issues related to IYCF under normal circumstances and exceptionally difficult situations- such as for malnutrition, low birth weight, and in emergencies. It also focuses on supportive initiatives, including BFHI, Law 47/2008, Codex Alimentarius, and maternity leave legislation. Mother and childcare practices were also addressed in the national IYCF policy- 2018 document, as a specific policy statement addressed skinto-skin contact between the mother and child during delivery. The combination of all previously established laws, initiatives, and policies provides a unified source of information for healthcare providers and breastfeeding mothers leading to more effective implementation to address the breastfeeding problem. However, these policy statements are very broad, as no specific action plans have been implemented, which hinders their use as a guide for practical application.

F. Determinants of Breastfeeding in Lebanon

Breastfeeding in Lebanon is still suboptimal, the reasons for that cannot only be linked to only one causal pathway but there are multi-level determinants are affecting this breastfeeding behavior.

The first level can be linked to personal factors, such as the infant-mother dyad which affects the breastfeeding choice of the women, (Akik, Ghattas et al. 2015). Differences in maternal characteristics and personal factors- such as maternal wealth, education, and occupation- could affect the breastfeeding decision. For example, mothers in the low- and middle-income countries tend to breastfeed less than mothers in high-income ones, which could be related to the differences in education and wealth among both groups. (Victora, Bahl et al. 2016). On the contrary, scholars have found that the differences within the country, such as living in rural areas and lower education has a positive effect on the rates of exclusive breastfeeding (Batal and Boulghaurjian 2005). Longer breastfeeding duration was associated with sociodemographic factors-religion (Muslim), higher paternal education, mother's health-related degree, natural deliveries, and behavioral factors such as caffeine and alcohol consumption (Mattar, Hobeika et al. 2019).

In addition to that, the low BF rates in Lebanon were related to beliefs and concerns related to having inadequate amounts of milk, changes in the milk quality, and concerns for lack of infant's satisfaction (Osman, El Zein et al. 2009). A recent qualitative study in Lebanon, have explored the reasons for this low breastfeeding rate in Lebanon (Nabulsi 2011). The results revealed that the mothers had some concerns and misconceptions such as the negative effects of breastfeeding on their breasts (sag) and figure (gain weight) and that it might be painful and tiring. Another concern was related to having bad or harmful milk and lack of infant satisfaction.

Maternal determination- such as maternal knowledge, attitudes, beliefs, and social networking, are the reasons affecting breastfeeding decisions (Nabulsi, Hamadeh et al.

2014). A complex intervention was done in Lebanon, which consists of breastfeeding education/counseling, breastfeeding skills building, and lactation support (professional and peer/ lay support) (Nabulsi, Hamadeh et al. 2014). Such interventions are important as they help to improve the lactating mother's knowledge, expectations, self-efficacy, and empowerment.

Social support and networking are other breastfeeding barriers and influence breastfeeding decisions positively or negatively. Those determinants are beyond the individual factors and are present around the lactating mother. A support to this is the lack of assistance from the mother's social networking as the breastfeeding mother views breastfeeding as a tiring task and no-one can assist her in feeding her infant, mainly the mother-in-law (Nabulsi 2011). In addition to that, breastfeeding needs instrumental support from others, and mothers conveyed that they need aid and services from their husbands and family members.

Also, mothers find the perceptions of family and society to be important. The maternal concerns related to changes in the body shape and image and the way others see her (Nabulsi 2011). In addition to that, the lactating mother could be influenced by seeing other relative's breastfeeding experiences. The belief that the infant needs formula feeding in addition to breastmilk is highly present in the Lebanese culture and crosses from one generation to another.

G. Theory of Planned Behavior

A wide range of determinants to breastfeeding are present, which are leading to suboptimal breastfeeding initiation, duration, and exclusivity worldwide as well as in

Lebanon. Those determinants could be better understood using the theory of planned behavior (TPB) lens (Ajzen 1991).

The TPB says that the attitudes, subjective norms, and perceived behavioral control, all influence and interact with the intentions which affect the individual's ability to perform the desired behavior (Ajzen 1991). (see Figure 1: The Theory of Planned Behavior Constructs). Each of the TPB constructs is explained in detail in the below section.

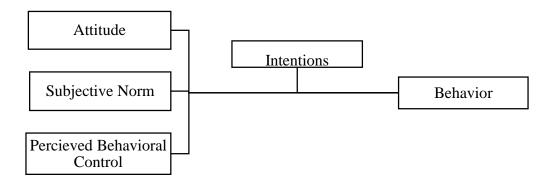


Figure 1 The Theory of Planned Behavior Constructs

1. Predicting Behavior: Intentions and Perceived Behavioral Control

Intentions are defined as the motivational factors- willingness, effort, and abilitythe individual has towards performing the desired behavior (Ajzen 1991). Intentions and
behaviors are interdependent, meaning that high individual intentions are associated
with a greater ability to engage and maintain the desired behavior. In addition to that,
the behavioral intentions can be influenced by non-motivational factors- time, money,
skills, and other resources- which are considered as the individual control to the

engagement in a behavior. The TPB states that intentions, motivation, ability, and behavioral control influence the desired behavior achievement (Ajzen 1991).

Perceived behavioral control (PBC), which is an important predictor of the behavior, is related to the individual's ability to control the behavior. PBC is influenced by relations among beliefs, attitudes, intentions, and behavior. The behavioral intentions and PBC together directly affect behavioral achievement through two pathways. The first pathway is that by increasing the PBC the engagement in the desired behavior will be more successful without affecting the behavioral intentions. The second pathway is that the PBC can be used as a substitute for the actual control, which in turn leads to the behavior.

1. Predicting Intentions: Attitude, Subjective Norms, and Perceived Behavioral Control

The TPB states that the concepts of attitudes, subjective norms, and perceived behavioral control influence behavioral intentions. The theory defines attitude as the person's evaluation of the behavior, which can be favorable and unfavorable factors. Subjective norms (SN) include the perceived social pressure and cultural beliefs that shape individual behaviors and decisions. The last construct is the *PBC*, which was explained earlier in the previous section. All the constructs of the TPB are interlinked, as high attitudes and subjective norms will have a greater favorable effect on the PBC leading to stronger individual's intentions to perform the desired behavior.

H. Theory of Planned Behavior and Breastfeeding

The TPB has been widely used to predict breastfeeding practices in different settings and contexts. A systematic review that pooled 30 observational studies,

conducted in the United States of America (USA), United Kingdom (UK), Hong Kong, Australia, Turkey, Japan, Canada, and Scotland, examined the association between the TPB constructs and self-efficacy framework to predict breastfeeding duration (Lau, Lok et al. 2018). Results presented in this study showed that high breastfeeding intentions and self-efficacy were associated with longer breastfeeding duration and greater maternal commitment to breastfeeding. Also, mothers who had high intentions to breastfeed at 3 months postpartum were more likely to continue exclusive breastfeeding to up to 6 months of age. High commitment to breastfeeding was caused due to positive breastfeeding experiences and exposures, which gave breastfeeding mothers a greater ability to overcome breastfeeding barriers. Results also showed that breastfeeding behavior was associated with positive maternal psychological factors such as higher confidence, enjoyment, competence, autonomy, and mother-to-infant attachment.

A randomized controlled trial (RCT) conducted in China has examined breastfeeding practices at 3 days and 6 weeks postpartum among two groups- the intervention group, who received TPB based interventions, and the control group received, who received standard obstetric care (Zhu, Zhang et al. 2017). The results stated that overtime a significant increase in breastfeeding knowledge and attitude was seen in both groups, with the intervention group having greater knowledge than the control group. In the intervention group, breastfeeding SN increased at 3 days postpartum and decreased at 3 months postpartum. The perceived control to breastfeeding was significantly higher at 3 days postpartum in the intervention group than the control group; however, no significant difference was seen between both groups at 6 weeks postpartum. In addition to that, breastfeeding practices were higher in the intervention group than in the control group at 3 days and 6 weeks postpartum. The

results of this study prove the significant advantage of the TPB interventions on the successful promotion of breastfeeding among new mothers.

A study done in the UK has investigated infant feeding intentions using the TPB, which aims at informing future interventions to address optimal breastfeeding practices (McMillan, Conner et al. 2009). Results showed that the participating mothers had positive breastfeeding attitudes, high PBC, and perceived subjective norms. They also found that maternal education seems to have a significant effect on breastfeeding intentions. Attitudes and PBC had a role in the mother's decision to give her infant formula feeding, whereas, the SN did not have any impact on the mother's choice towards the infant feeding practices. In addition to that, it was found that the PBC was not an important factor affecting the formula feeding practice, which is an important predictor of breastfeeding.

A study conducted in Scotland has examined the normative influences of social referents- woman's partner, midwives/nurses, and others- on the new mothers' decisions related to breastfeeding and bottle-feeding, using the TPB (Swanson and Power 2005). The researchers gathered from newly delivered mother's information related to past infant feeding behavior, feeding intentions during birth, feeding behavior at baseline (during the hospital stay) and follow-up (after 6 weeks), and social cognition model components- behavioral beliefs, subjective norms, and perceived behavioral control. Results from the 203 participants showed that 60% of the mothers were breastfeeding, 38% bottle-feeding, and 2% combined feeding. In addition to that, 88% of the participated mothers had positive breastfeeding and bottle-feeding beliefs and were significant predictors of intentions. For predicting the feeding behavior, at baseline breastfeeding behavior was predicted by negative bottle-feeding beliefs and by positive

SN beliefs, whereas, at follow-up, bottle-feeding SN were significant predictors in this model. The breastfeeding mothers received great social support against breastfeeding, which was greater in breastfeeding mothers than for bottle-feeding, with the partners' and nurses/midwives' support being the most important. Social pressure was the greater influence to discontinue breastfeeding and begin with formula feeding.

A cohort study conducted in Malaysia used the TPB to identify predictors of exclusive breastfeeding intention and the actual breastfeeding behavior (Ismail, Alina et al. 2016). Results showed that women have identified 51% of the variance in exclusive breastfeeding intention, which was weak predictors of the TPB. Breastfeeding intentions and exclusive breastfeeding were also poor in the studied population. This might be because actual decisions cannot be made during pregnancy and that it is not a real and practical decision to be taken and continued for the next 6 months. The PBC and attitudes were the strongest predictors of breastfeeding intentions, while subjective norms did not have any effect due to their irrelevant effect in the studied context.

A cross-sectional study done in Iran aimed to determine the determinants of exclusive breastfeeding using TPB. Results showed a significant effect between EBF and the father's employment and education. In addition to that, subjective norms (p=0.007, r=-0.13) and intention (p=0.001, r=-0.39) had a significant negative effect on EBF, while attitudes and perceived behavioral control had no significant relationship with EBF behavior (p>0.05). This indicates the importance of the close social referents in supporting the mothers to continue breastfeeding behavior.

A study done in Hong Kong has evaluated breastfeeding duration using the application of three TPB-based models (Dodgson, Henly et al. 2003). The participants were followed up until 12 months postpartum or until breastfeeding was discontinued.

Results showed that breastfeeding duration in the studied participants was short, with a mean duration of 12.65 weeks. In addition to that, breastfeeding continuation was also poor as 44 % of the mothers had discontinued breastfeeding after 4 weeks.

In Bangladesh, researchers have examined factors association of exclusive breastfeeding intention during the third trimester of pregnancy in two rural sub-districts (Thomas, Elaine et al. 2015). Results, which were presented according to the TPB constructs, showed that 84 % of the women had EBF intention. The mean breastfeeding knowledge was 3.5, the attitude was 55.8, and self-efficacy was 25.6. A positive association was examined between BF counseling during pregnancy, parity, maternal literacy, and household wealth with higher positive breastfeeding knowledge, attitudes, and self-efficacy (P < 0.05). Knowledge was associated with EBF intention (OR 2.47, 95 % CI 1.74, 3.51), attitudes toward EBF (OR 1.68, 95 % CI 1.31, 2.16), and self-efficacy (OR 1.72, 95 % CI 1.23, 2.40) were independently associated with EBF intention in the model in which all three constructs were entered simultaneously.

I. Exposure, Knowledge, Attitudes, and Intentions to Breastfeeding

Consistent with the TPB, researchers have found a positive association between BF exposure and attitudes (Kavanagh, Lou et al. 2012). Interaction of exposure, knowledge, attitudes, and intentions to breastfeeding have been studied globally.

For this reason, multiple tools and scales have been developed to measure breastfeeding readiness in the desired populations (Grossman, Harter et al. 1991, Mora, Russell et al. 1999, Kavanagh, Lou et al. 2012). Those tools and scales have been adapted and validated in some countries to make them more context-specific and relevant (Mora, Russell et al. 1999, Dungy, McInnes et al. 2008, Charafeddine, Tamim

et al. 2016, Tamim, Ghandour et al. 2016, Yehya, Tamim et al. 2017, Cotelo, Movilla-Fernández et al. 2018).

The breastfeeding exposure scale includes information related to witnessing others breastfeed, being breastfed as an infant, knowing someone who has breastfed, which is a measure of external/surrounding factors, and prior experience to BF (Kavanagh, Lou et al. 2012). For the measurement of the individual knowledge about breastfeeding the "The Infant Feeding Knowledge Test" (BFK) was developed (Grossman, Harter et al. 1991). Attitudes and intentions towards breastfeeding were measured using the "Iowa Infant Feeding Attitude Scale" (IIFAS) and "The Infant Feeding Intention Scale" (IFI), respectively (Mora, Russell et al. 1999, Yehya, Tamim et al. 2017).

The study of breastfeeding knowledge, attitudes, intentions have been assessed on different groups- men, nonpregnant, pregnant women, and lactating women. This will help to view breastfeeding from multiple perspectives and to identify appropriate interventions to improve breastfeeding practices and public health.

1. Breastfeeding Perceptions of Undergraduate Students

A cross-sectional study in the USA aims to measure breastfeeding knowledge, attitudes, and prior exposure among undergraduate university students. Breastfeeding exposure and knowledge in a convenient sample was good. BF exposure results were divided into the following 61% were breastfed when they were young, 92 % knew someone who had breastfed, and 90.7 % having witnessed breastfeeding (Kavanagh, Lou et al. 2012). The association between BF exposure and intentions was the same for differences in sex, age, or major of the students (health-related or non-health-related). Breastfeeding attitudes were neutral, with a common misconception belief that

breastfeeding is painful, restrictive, and inconvenient, specifically for the working mother. Breastfeeding knowledge and attitude scoring was good and significantly positively correlated (r = 0.433, P < .01). When comparing gender, females had significantly higher breastfeeding knowledge and attitudes than males. In addition to that, students ≥ 20 years of age reported significantly higher overall breastfeeding attitude scores than those ≤ 19 years of age (81.07 vs 74.69, P = .002). Also, the female students showed low support for breastfeeding in public as they thought it is embarrassing and unacceptable. On the contrary, no significant difference was seen in the knowledge and attitude scores of students in health-related and non-health-related majors. Overall, most students have indicated that they will intend to breastfeed/support a partner to breastfeed in the future.

A similar cross-sectional study was conducted in Malaysia but showed different results (Hamid and Yahya 2018). The mean breastfeeding knowledge and attitude scores were low, as they were 10.61 ± 2.10 and 60.64 ± 5.02 respectively. While comparing gender using independent t-tests, young female undergraduate students had higher breastfeeding knowledge (P= < 0.001) and attitudes (P= <0.05) than males, which were consistent with the previous study. BF exposure scorings were high among both males and females, with a mean score of 2.55 and 2.74, respectively. Results from this study have found a significant positive correlation between breastfeeding knowledge, attitudes, and exposure to future intentions/support to breastfeeding among the sample population.

Moving to our context, a cross-sectional study was conducted that aims to examine breastfeeding knowledge, attitude, and perceived behavior among female undergraduate students in Lebanon and Syria (Hamade, Naja et al. 2014). Results showed that the

participated undergraduate female students had an average breastfeeding knowledge level (mean score, 10.39 ± 2.09) and positive attitudes (mean score, 58.12 ± 6.49). The mean score for breastfeeding intention was 11.11 ± 3.38 and breastfeeding exposure 2.67 ± 0.59 , which was high. From the knowledge scale, the items that had low scores were information related to the maternal breastfeeding benefits, adequacy of milk supply, contraindications, and its suitability for working mothers. The results also highlighted the misconceptions and knowledge gaps, which were presented by the young females, as they showed concerns related to inadequate enough milk production, cannot continue breastfeeding when sick with the flu or cold, and cannot eat pizza and spicy foods while breastfeeding. The students in Lebanon and Syria perceived breastfeeding positively as a moment of joy and allowed greater bonding between the mother and the child. Almost 50% of the students showed concerns related to breastfeeding in public and believed that formula feeding is better for working mothers. While comparing between the two countries, participated students in Lebanon had a higher knowledge scoring than the students in Syria; on the contrary, Syrian students had higher attitude scoring than the Lebanese students. Students enrolled in healthrelated majors had significantly higher knowledge scorings than the non-health-related majors. A conclusion of the results showed a significant association between breastfeeding intention with knowledge and attitude in Lebanon ($\beta = 0.103$ and $\beta =$ 0.230, respectively).

2. Breastfeeding Perceptions of Women

A study in Spain conducted a study on a sample of 297 women with an uncomplicated pregnancy, between 26 and 38 weeks of gestation, to examine maternal attitudes to breastfeeding using IIFAS and maternal practices at 6 weeks, 16 weeks, and

6 months (Cotelo, Movilla-Fernández et al. 2018). Results showed that the participated mothers had neutral breastfeeding attitude scores, with a mean score of 69.76 ± 7.75. Multiparous women were significantly associated with higher attitude scores (P=0.0034); while no significant difference in attitude scores was examined in marital status, age, education level, and occupation. Postpartum exclusive breastfeeding was 56% at 6 weeks, 44% at 16 weeks, and 22% at 6 months, which were significantly associated with high IIFAS scores. In addition to that, exclusive breastfeeding practices were higher among women who had high intentions to exclusively breastfeed while they were pregnant.

In Glasgow, a low-income community, a study was conducted to examine infant feeding attitudes and knowledge among pregnant women and their social networks (Dungy, McInnes et al. 2008). The mean IIFAS score for the entire sample ranged from neutral to negative, with mothers having a significantly lower mean score than social network members (P = 0.001). A statistically significant association was established between positive BF attitudes, among mothers and their social networks, and breastfeeding at the hospital. A higher maternal IIFAS score was significantly associated with breastfeeding intentions and practices. Breastfeeding mothers had a negative attitude towards formula feeding as they thought that it is inconvenient and unhealthy. Results, for the mothers and their social networks, showed a positive attitude towards breastfeeding in public, as they believed that the lactating mothers should not be restricted in breastfeeding places.

The objective of a study conducted in Japan was to describe the infant feeding practices, knowledge, and attitudes- using the IIFAS- related to breastfeeding at 18 months postpartum (Inoue, Binns et al. 2013). Overall, the results showed that the

participated mothers had a neutral attitude towards breastfeeding. In addition to that, formula feeding received positive attitudes, as only 35% of the mothers believed that breastfed infants were healthier than formula-fed ones. Results also showed a significant positive association between high IIFAS scores and "any breastfeeding" postpartum (adjusted OR = 1.05, 95% CI = 1.02-1.08). The authors highlighted the importance of providing Japanese mothers with prenatal breastfeeding education to increase their knowledge and attitudes towards optimal feeding practices.

In the Kingdom of Saudi Arabia (KSA), a study was conducted to examine maternal knowledge, attitudes, and barriers to breastfeeding (Saied, Mohamed et al. 2013). The data were collected using a multi-component questionnaire which includes 1) The Sociodemographic Data Questionnaire, 2) Iowa Infant Feeding Attitude Scale (IIFAS) 3) The Breastfeeding Knowledge Questionnaire, and 4) The Perceived Breast-Feeding Barriers Questionnaire. Results showed that 89% of the participants had neutral attitudes and only 7% had a positive attitude to BF, with a mean attitude score of 60.6, ± 6.6 SD. The participants had a good BF knowledge, with a mean score of 12.4. Barriers to BF were divided into the following: 83% BF public places, 74% return to work, 61% insufficient milk production, 59% pain, and 52% due to poor prenatal and postpartum support. A significant positive correlation was examined between BF attitudes with older maternal age (r= 0.32), BF knowledge with longer duration (r=0.11), and BF attitudes with BF knowledge (r=0.71).

In Lebanon, a study was conducted to measure the knowledge towards breastfeeding, using the BFK test, among pregnant women and support mothers (Tamim, Ghandour et al. 2016). Results showed that the mean BFK score was 11.4, which were grouped into 4 categories poor (13%), fair (35%), good (29%), and very good (22%). In addition to that,

90 % knew that increase in milk supply with frequent breastfeeding, 92% breast milk being the best food for the newborn, and 96% that breastfeeding is contraindicated when women drink alcohol excessively; however, only 29.7% knew that getting enough wet diapers was an indicator for infant receiving adequate feeding. A significant positive association was examined between high BFK and older age, support mother, multiparity, advanced gestational age, having more children and/or who were BF, higher education, and higher monthly income. For measuring the attitudes towards BF, results from overall participants' IIFAS scores were neutral ranging between 37 and 85 (Charafeddine, Tamim et al. 2016). A significant positive association was examined between high IIFAS scores with higher education, higher income, and the number of breastfed children; on the contrary, lower BF attitude scores were associated with age, employment status, and a high number of children. Higher BFK and IIFAS scores were found more among support mothers than pregnant women. Also, pregnant women participating in a clinical trial were contacted and asked to fill a questionnaire to measure breastfeeding intentions using IFI (Yehya, Tamim et al. 2017). In this study, the intervention group received breastfeeding promotion and support, while the control group received standard care. Results, for the intervention group, showed that the mean IFI scores were weak (12%), moderate (28%), strong (30%), and very strong (30%). For this group, exclusive breastfeeding duration at 1 month was 64% and at 3 months was 40%. In the control group, lower IFI scores- 24% had very strong IFI scores- and exclusive breastfeeding durations- 46% EBF at 1 month, 41% at 3 months, and 31% at 6 months- were examined. In the intervention group, IFI scores were significantly correlated with EBF duration (r = .624; p = .001) and BF duration (r = .624; p = .001) whereas in the control group, IFI was

significantly correlated with BF attitudes (r = .390; p < .001) and previous BF experience (r = .237; p = .011).

In addition to that, a group of researchers has conducted a randomized control trial that aims to examine the effect of a multi-component breastfeeding intervention on breastfeeding knowledge, attitudes, behavior, and practices until 6 months of age (Nabulsi, Tamim et al. 2019). Participants allocated in the intervention group received antenatal breastfeeding education, professional, and peer support whereas the ones who were randomly assigned in the control group received standardized care. Results showed no statistically significant difference for exclusive breastfeeding as it ranged between 28 in the control and 35% in the invention group. Receiving the multicomponent breastfeeding support, having a previous history of longer breastfeeding duration, and having fewer children were Positive predictors for exclusive breastfeeding at 6 months. At baseline, both groups had comparable breastfeeding knowledge and attitude scores were examined among both groups. However, the BFK scores were higher in the intervention (13.1) than the control (12.0) group, which was statistically significant between the groups at baseline and follow-up. The IIFAS for the intervention and the control groups at 6 months follow-up were 69.1 and 67.6 respectively. On the contrary to BFK, there was no statistical significance between the groups at baseline and follow-up scoring, indicating that both groups had similar breastfeeding attitudes and that the intervention was ineffective to influence breastfeeding attitudes among the studied sample. Lastly, a positive association was examined among exclusive breastfeeding for 6 months and positive breastfeeding knowledge, attitudes, and behavior. The results of this study highlight the importance of integrating multiple

interventions- breastfeeding education, professional support, and peer support- to support and promote breastfeeding among the Lebanese population.

CHAPTER III

OBJECTIVES AND SPECIFIC AIMS

This study aims to examine the association between maternal exposure, knowledge, attitude, and intentions to breastfeeding during pregnancy and breastfeeding practices to up until 6 months postpartum among Mother and Infant Nutrition

Assessment (MINA) cohort participants.

The detailed study objectives are to:

- Examine maternal exposure, knowledge, attitude, and intentions to breastfeeding during pregnancy.
- Examine the breastfeeding initiation at birth and infant feeding practices at 4 and 6 months postpartum, according to the WHO definitions.
- Explore sociodemographic, economic, and geographic determinants of breastfeeding exposure, knowledge, attitude, and intentions among the MINA participants.
- Investigate the association between maternal exposure, knowledge, attitude, and intentions to breastfeeding with breastfeeding initiation, exclusive breastfeeding at 4 months, and 6 months.

This study will identify the gaps leading to the low breastfeeding rate in Lebanon. It will also help to develop and plan interventions to address this public health issue.

CHAPTER IV

MATERIALS AND METHODS

A. Study design

This study is part of the "Mother and Infant Nutrition Assessment (MINA) Cohort." Briefly, the MINA study is a 3-year prospective cohort study conducted on mothers and their infants. The study was approved by the Institutional Review Board (IRB) at the American University of Beirut (Protocol ID: NUT. FN. 12). All eligible participants signed two copies of the informed consent (one copy for us and the other for the participant). (Appendix-Arabic Consent Form & English Consent Form).

B. Study Population

The MINA study randomly selected pregnant women attending obstetrics and gynecology clinics at different healthcare centers in Lebanon and Qatar. In Lebanon, Recruitments were done between November 2015 and March 2018 and took place at the American University of Beirut Medical Center (AUBMC) and Makassed General Hospital (MGH). The potential participants were approached while they were in the waiting areas of the clinics in the above centers, and the study protocol was introduced.

A total of 194 pregnant women in their first trimester have signed the consent form. Eligible participants were between 19-40 years of age, pregnant with a singleton-during the first trimester, and did not suffer from any chronic illness pre-conception. All participants had Lebanese nationality or had been living in Lebanon for at least 5 years,

were residing in areas close to the centers, and did not plan on permanently leaving the country during the study time.

On the contrary, pregnant women were excluded if they carried or had a history of carrying twins or multiple babies, chronic illness, or previously given birth to babies with physical or mental abnormalities (Appendix- Screening Sheet).

C. Study Protocol

Briefly, the MINA study is the first cohort study in the region to investigate the nutritional childhood exposures during the first 1000 days and to determine its association with growth patterns, obesity, and risk of developing NCDs later in life. [Detailed information on the MINA study can be found elsewhere (Naja, Nasreddine et al. 2016)]. In addition to that, at the end of the MINA study dietary guidelines will be produced to guide the Lebanese women about the optimal feeding patterns and ensure adequate nourishment. Participants enrolled in this study underwent a total of 9 visits- 3 were during pregnancy and 6 post-delivery, during which they filled a multicomponent questionnaire (Appendix- Study Timeline).

D. Study Focus

In this study, we focused on the data collected from the MINA participants in Lebanon only. In addition to that, this study aims to focus on the variables related to breastfeeding and its determinants, which were taken from visits 1,2,3, 4, and 5 of the MINA Study (Presented in Figure 1).



Figure 2 MINA Study Timeline and Study Focus (Red)

Below is a detailed description of the main components of each visit.

1. Visit 1

All participants were approached in the waiting areas at their obstetrician-gynecologist (OBGYN) clinic. Interested participants were introduced to the consent, which included the study design, objectives, ethical considerations, and addressed their questions and concerns. Participants who completed visit 1 were during their first trimester from 1-13 weeks of gestation.

This report will focus on the following sections from visit 1:

a. General Information about The Current Pregnancy

This section includes variables related to family size, parity, and the number of children.

b. <u>Demographic and Socioeconomic Characteristics</u>

A total of 16 multiple choice questions were collected, which includes data related to maternal/paternal age (in years), an education level (grouped into up to high-

school and university of higher), employment status (grouped into employed and housewife), and the expected maternity leave duration (grouped into 49 days-old legislation, 70 days-new legislation, and others- 3 months, do not know, or not planning to return to work). In addition to that, information related to the household's number of rooms, number of individuals, crowding index (calculated based on household's number of individuals/household's number of rooms; grouped into <1 persons/room and ≥1 persons/room), monthly income (grouped into low < 1,499,000 Lebanese Pounds (LBP), medium 1,500,000- 2,999,000 LBP, high ≥3,000,000 LBP and does not know/refused to answer), and area of residence (grouped into Beirut, Mount Lebanon, and other districts- South, Nabatiyeh, North, and Bekaa) were also collected.

2. *Visit 3*

Participants who completed this visit were during their third trimester- 27-42 weeks of gestation. The questionnaire for this visit was completed in the waiting areas of the participants' OBGYN clinics. The sections covered in this questionnaire are:

a. <u>Maternal Exposure, Knowledge, Attitude, and Intentions regarding Infant</u>

<u>Feeding Practices</u>

i. Breastfeeding Exposure

The breastfeeding exposure scale includes information related to whether or not the pregnant women have witnessed others breastfeed, being breastfed as a child, and knowing someone who has breastfed (Kavanagh, Lou et al. 2012).

Participants who answered "yes" were given a score of 1 and "no or unsure" were given a score of 0. The total breastfeeding exposure score was computed by summing the scores of the 3 questions to give a total score of 3, which can be classified into low breastfeeding exposure (0 - 1 score) and high breastfeeding exposure (2-3 scores) (Hamade, Naja et al. 2014).

ii. Breastfeeding Knowledge

For the measurement of the individual breastfeeding knowledge, the "The Infant Feeding Knowledge Test" (BFK) was adapted (Grossman, Harter et al. 1991). This test contains a total of 20 questions- 10 multiple-choice and 10 true—false. The BFK test has been originally developed in the United States of America and validated in a cohort study on a group of low-income and multiracial pregnant women. It also has a reliability of 0.54 and 0.63.

In Lebanon, the BFK test had been adapted, translated from English to Arabic, and tested on a group of undergraduates and pregnant women (Hamade, Naja et al. 2014, Tamim, Ghandour et al. 2016). After that, this scale has been validated to show that 16 items of the Arabic version of the BFK were found to be reliable (0.639) and valid with similar to the original/English version of this test (Tamim, Ghandour et al. 2016).

Participants who gave the "correct" or "wrong" answers were given a score of 1 or 0, respectively. The total breastfeeding knowledge score was computed by summing the scores of all 20 questions to give a total score ranging from 0 to 20. Breastfeeding knowledge scores could be further classified into poor breastfeeding knowledge (a score

less than 9), fair knowledge (9 to 11), good knowledge (12 to 13), and very good knowledge (greater than 14) (Tamim, Ghandour et al. 2016).

iii. Breastfeeding Attitudes

Attitude Scale" (IIFAS). The IIFAS consists of 17 items with a five-point Likert scale that ranges from 1 (strongly disagree) to 5 (strongly agree). [Adapted from (Mora, Russell et al. 1999)]. However, 9 questions of the IIFAS were reversed coded as their scores ranged from 5 (strongly disagree) to 1 (strongly agree). The five-point Likert scales could be further grouped into the following three categories: disagree/positive towards formula feeding (scores 1 and 2), neutral (score 3), and agree/positive towards breastfeeding (scores 4 and 5).

The English version of the IIFAS has also been adapted, translated to Arabic, and tested on a group of undergraduate students (Hamade, Naja et al. 2014, Charafeddine, Tamim et al. 2016). In Lebanon, the results from a validation study revealed that all 17 items of the Arabic version of the IIFAS were found to be reliable (0.640) and valid with similar to the original/English version of this test (Charafeddine, Tamim et al. 2016).

The total breastfeeding attitude score was calculated by summing all IIFAS questions and then dividing it by 17. The total breastfeeding attitude scores can range from 17 to 85 and could be further classified as a strong positive attitude toward formula feeding (a score of 17-52), positive attitude toward formula feeding (a score of 53-59), neutral attitude (a score of 60-75), positive attitude toward breastfeeding (a

score of 76-82), and strong positive attitude toward breastfeeding (a score of 83-85) (Charafeddine, Tamim et al. 2016).

iv. Breastfeeding Intentions

Breastfeeding intentions were measured using "The Infant Feeding Intention Scale" (IFI). The IFI scale consists of five infant feeding statements graded on a five-point Likert scale ranging from 0 (very much disagree) to 4 (very much agree) [Adapted from (Nommsen-Rivers and Dewey 2009)]. One statement was reverse coded and was given a score of 4 (very much disagree) to 0 (very much agree). The scores were grouped into the following three categories: disagree/negative intentions towards breastfeeding (scores 0 and 1), unsure (score 2), and agree/positive intentions towards breastfeeding (scores 3 and 4).

The first two statements measure the intention for breastfeeding initiation and the other statements measure the strength of intention to exclusively breastfeed to up to 6 months. The IFI scale was translated to Arabic (Hamade, Naja et al. 2014, Yehya, Tamim et al. 2017) and was found to be reliable (0.86) and valid with similar to the original/English version of this test (Yehya, Tamim et al. 2017).

Total breastfeeding intention scores were summing the average of the first two statements with the scores of the other three statements. The total IFI score ranges from 0 to 16, which could be further classified into weak (a score of 0 to 7.5), fair (8 to 11.5), strong (12 to 15.5), very strong (equal to 16) (Yehya, Tamim et al. 2017).

3. Visit 4

At this stage, participants had given birth and the child has reached 4 months of age. Data collection was located according to the mother's convenience- either at her house or workplace.

The sections from this visit will focus on:

a. <u>Infant Feeding Practices</u>

Information related to breastfeeding initiation was collected from the mother during this visit. The mother will be asked if she had ever breastfed the child and the time after the delivery of which the mother has initiated breastfeeding [grouped into \leq 1 hour and >1 hour- based on the WHO definitions and indicators (Organization 2007)].

Infant feeding practices to up to 4 months of age were also determined by identifying if the infant had received exclusively breastfeeding or combined/mixed feeding [Classification was based on the WHO definitions and indicators (Organization 2007)].

4. Visit 5

After 2 months, the participated mothers completed the questionnaire for visit 5. At this stage, the child has reached 6 months of age, which determines that most of his/her feeding practices have been established. Data collection during this visit was like the previous visit as it also assessed the infant feeding practices of the child but to up to 6 months.

E. Variables of Interest

The variables that were used for the analysis of these results are presented in Table

1. This table facilitates the identification of the visit number, variable type, and shows some details/descriptions for each variable.

Table 1 List of variables for the analysis of the MINA study

Variable	Source/Visit	Туре	Description		
Sociodemographic, Economic, and Geographic Factors					
Site of Recruitment	Visit 1	Dichotomous	AUMBC, MGH		
Maternal Age	Visit 1	Continuous	Question 27 Numerical		
First Child	Visit 1	Dichotomous	Questions 8 Yes/No		
Number of Children	Visit 1	Discrete	Questions 10 Numerical		
Number of Individuals in the Household	Visit 1	Discrete	Questions 37 Numerical	To calculate the Household's	
Number of Rooms in Household	Visit 1	Discrete	Questions 38 Numerical	Crowding Index	
Maternal Education Level	Visit 1	Polytomous, Ordinal	Question 28 Did not go to s Primary School Intermediate S Secondary Sch Technical Diple University Deg Refused to Ans	ol, chool, oool, oma, gree, or	
Health-Related	T7' '. 4	D. I.	Question 29		
Degree Maternal Employment Status	Visit 1 Visit 1	Polytomous, Nominal	Yes/No Question 30 Housewife, Full-time employee, Part-time employee, Self-employed, or Other		
Maternity Leave Duration	Visit 1	Polytomous, Ordinal	Question 31 After 49 days (month and a hadays (about tw	alf), After 70	

			months) Thus a months
			months), Three months later, I do not know, or I do
			not intend to resume work
			Question 33
Related to Husband	Visit 1	Dichotomous	Yes/No
Related to Husballd	V 151t 1	Dichotomous	Question 35
			Did not go to school,
			primary, intermediate,
			secondary school, technical
Father's Education		Polytomous,	diploma, university degree,
Level	Visit 1	Ordinal	or refused to answer
			Question 32
			Beirut, Mount Lebanon,
		Polytomous,	South, Nabatieh, North or
Area of Residence	Visit 1	Nominal	Bekaa
			Question 41
			Less than 600,000 L.L,
			600,001 - 999,999 L.L,
			1,000,000 - 1,499,000 L.L,
			1,500,000 - 1,999,000 L.L,
			2,000,000 - 2,499,000 L.L,
			2,500,000 - 2,999,000 L.L,
			3,000,000 L.L or more, I
M 41-1 II 1-1-1		D-1-4	don't know/not sure, or I
Monthly Household Income	Visit 1	Polytomous, Ordinal	refused to answer
		1	ns to Breastfeeding
Exposure,	INIO WICUZO, INU	ituacs, and intentio	
<u> </u>	<i>y</i> ,		
Exposure to			Questions 12-14
Exposure to Breastfeeding	Visit 3	Dichotomous	Questions 12-14 Yes/No
_			Questions 12-14 Yes/No Questions 15-24
_			Questions 12-14 Yes/No
Breastfeeding			Questions 12-14 Yes/No Questions 15-24 Yes/No
Breastfeeding The Infant Feeding	Visit 3	Dichotomous	Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34
Breastfeeding			Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34 Multiple Choice Questions
Breastfeeding The Infant Feeding	Visit 3	Dichotomous	Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34 Multiple Choice Questions Questions 37, 39, 41, 43, 46,
Breastfeeding The Infant Feeding	Visit 3	Dichotomous	Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34 Multiple Choice Questions Questions 37, 39, 41, 43, 46, 47, 49, and 50
Breastfeeding The Infant Feeding	Visit 3	Dichotomous	Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34 Multiple Choice Questions Questions 37, 39, 41, 43, 46, 47, 49, and 50 Likert Scale: Strongly
Breastfeeding The Infant Feeding	Visit 3	Dichotomous	Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34 Multiple Choice Questions Questions 37, 39, 41, 43, 46, 47, 49, and 50 Likert Scale: Strongly Disagree (1), Disagree (2),
Breastfeeding The Infant Feeding	Visit 3	Dichotomous	Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34 Multiple Choice Questions Questions 37, 39, 41, 43, 46, 47, 49, and 50 Likert Scale: Strongly
Breastfeeding The Infant Feeding	Visit 3	Dichotomous	Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34 Multiple Choice Questions Questions 37, 39, 41, 43, 46, 47, 49, and 50 Likert Scale: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), or Strongly Agree (5)
Breastfeeding The Infant Feeding	Visit 3	Dichotomous	Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34 Multiple Choice Questions Questions 37, 39, 41, 43, 46, 47, 49, and 50 Likert Scale: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), or Strongly Agree (5) Questions 35, 36, 38, 40, 42,
Breastfeeding The Infant Feeding	Visit 3	Dichotomous	Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34 Multiple Choice Questions Questions 37, 39, 41, 43, 46, 47, 49, and 50 Likert Scale: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), or Strongly Agree (5)
The Infant Feeding Knowledge Test	Visit 3	Dichotomous	Questions 12-14 Yes/No Questions 15-24 Yes/No Questions 25-34 Multiple Choice Questions Questions 37, 39, 41, 43, 46, 47, 49, and 50 Likert Scale: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), or Strongly Agree (5) Questions 35, 36, 38, 40, 42, 44, 45, 48, and 51

			Agrag (2) or Strongly
			Agree (2), or Strongly Agree (1)
			Questions 52
			Reversed Likert Scale: Very
			Much Agree (0), Somewhat
			Agree (1), Unsure (2),
			Somewhat Disagree (3), or
			Very Much Disagree (4)
			Questions 53-56
			Likert Scale: Very Much
			Agree (4), Somewhat Agree
The Infant Feeding			(3), Unsure (2), Somewhat
Intentions (IFI)		Polytomous,	Disagree (1), or Very Much
Scale	Visit 3	Ordinal	Disagree (0)
Scare			Disagree (0)
	Infant	Feeding Practices	
Breastfeeding After			Questions 12
Birth	Visit 4	Dichotomous	Yes/No
			Questions 14
Breastfeeding		Polytomous,	Immediately (< 1 hour), 1
Initiation	Visit 4	Ordinal	hour, < 24 hours, or Days
			Questions 15
			Exclusively breastfed:
			weeks or months,
			Mixed (breast & formula
		Polytomous,	milk) fed: weeks
Infant Feeding		Ordinal	or months, or Exclusively
Practices at 4			formula fed:
Months	Visit 4	Continuous	weeks or months
			Questions 10
			Exclusively breastfed:
			weeks or months,
			Mixed (breast & formula
		Polytomous,	milk) fed: weeks
Infant Feeding		Ordinal	or months, or Exclusively
Practices at 6			formula fed:
Months	Visit 5	Continuous	weeks or months
	1		

F. Statistical Analysis

The received hard copy questionnaires were entered using Microsoft Access and then extracted to Excel spreadsheets. Descriptive statistics, including mean, standard deviation, proportion, and scoring were used to present: the 1) socio-demographic,

economic, and geographical characteristics of the MINA participants, 2) maternal exposure, knowledge, attitudes, and intentions towards breastfeeding, and 3) infant feeding practices at 4 and 6 months postpartum. Categorical variables were presented as number (percentage) and the continuous variables were presented as mean ± standard deviation. Linear univariate regression was conducted to determine the predictors for breastfeeding exposure, knowledge, attitude, and intention scores among the MINA cohort participants. Simple logistic regression analysis was conducted to calculate the OR and their corresponding 95% confidence intervals describing the associations among breastfeeding exposure, knowledge, attitude, and intention scores with three main dependent variables: early breastfeeding initiation, exclusive breastfeeding at 4 months, and exclusive breastfeeding at 6 months. Statistical analyses were carried out using Statistical Package for Social Sciences (SPSS) software 25 (SPSS Inc., Chicago, IL). P-values less than 0.05 were considered statistically significant.

CHAPTER V

RESULTS

A. Sample Size

Figure 2 represents the recruitment flow of the MINA cohort participants in this thesis study. Overall, 450 participants were approached and asked to participate in the study. Out of those, a total of 194 participants have agreed to participate and consented. The participants who have completed visit 1 and visit 3 were 169 and 135 respectively. Since breastfeeding exposure, knowledge, attitude, and intentions were the main outcomes of this study, participants who have completed visit 3 (N=135) were selected and included in the analysis of the results. As for the postpartum data, only 100 participants have completed visits 4 and 5, thus infant feeding practices were determined from a subsample of the studied population due to loss to follow-up.

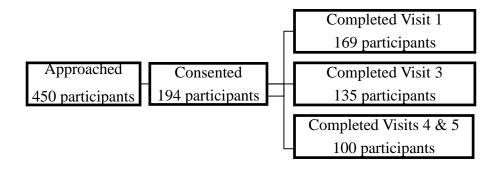


Figure 3 Flow chart of the MINA cohort subjects' recruitment

B. Study Characteristics

Table 2 displays the socio-demographic, economic, and geographic distribution among the MINA participants in Lebanon. The participants were recruited from two well-known hospitals in Beirut- 75% from AUBMC and 25% from MGH. Around 37% of the participants were older than 30 years, 39% were between 25-29.9 years, and 23.5% were younger than 25 years of age. More than 60% of the studied population were not expecting to have this pregnancy as their first child, as 58% had <2 children and 42% ≥2 children.

A total of 103 (77%) participated mothers had a university degree or higher, out of which 22 (21.4%) were health-related. More mothers were employed (63%) than those who were housewives (37%). As for the maternity leave duration, 53% of the working mothers were expecting to return to work after 70 days postpartum. 68% of the fathers had a university degree or higher and the majority (97%) were employed. More than half of the participants were residing in Beirut, 34.6% in Mount Lebanon, and 12.8% in the other districts. The household crowding index could be considered low as 74% of the households had a crowding index of <1 persons/room. The monthly household income of the studied population could be classified into the following: high (40%), medium (20%), and low (13.5%).

Table 2 Socio-demographic, economic, and geographic distribution among the MINA participants in Lebanon (Total= 135)

Socio-Demographic, Economic, and Geographic Characteristics	Total ^a †
Site	
AUBMC	101(74.8)
MGH	34(25.2)
Maternal age (years)	
18-24.9	31(23.5)
25-29.9	52(39.4)
≥30	49 (37.1)
First Child	, ,
Yes	49 (37.1)
No	83 (62.9)
Number of Children	
<2 children	38(57.6)
≥2 children	28(42.4)
Crowding Index	
<1 persons/room	99(74.4)
≥1 persons/room	34(25.6)
Mother's education level	
Up to high school	30(22.6)
University or more	103(77.4)
Health-Related Degree	
Yes	22(21.4)
No	81(78.6)
Mother's Employment Status	
Housewife	49 (37.1)
Employee	83 (62.9)
Maternity Leave	
49 days (1.5 months- old legislation)	8(10.7)
70 days (2.5 months- new legislation)	40(53.3)
Other ^b	27(36)
Related to husband	
Yes	12(8.9)
No	121(89.6)
Father's education level	
Up to high school	42(31.6)
University or more	91(68.4)
Father's employment status	

Not working	5(3.7)
Employee	129(96.3)
Area of residence	
Beirut	70(52.6)
Mount Lebanon	46(34.6)
Other districts ^c	17(12.8)
Monthly household income	
Low (< 1,499,000 LBP)	18(13.5)
Medium (1,500,000- 2,999,000 LBP)	27(20.3)
High (≥3,000,000 LBP)	53(39.8)
Does not know/ Refused to Answer	35(26.3)

Abbreviations: AUBMC- American University of Beirut, MGH- Makassed General Hospital.

C. Breastfeeding Exposure

Overall, the mean breastfeeding exposure score was 2.8±0.5 (Table 3). After categorizing breastfeeding exposure scores, results showed that 97% of the participants had high exposure and only 3% had low exposure to breastfeeding. Moving forward, 85.8% of the pregnant mothers were breastfed as a child, 95.6% knew someone who has breastfed, and 94.8% had witnessed a woman breastfeeding.

[†]Column total number of participants (n) may be different because of missing data.

^a Categorical variables are presented as n (%); continuous variables are presented as Mean±SE.

^b Other includes participants who answered maternity leave of 3 months, not planning to return to work, or do not know the maternity leave duration.

^c Other districts include participants who are residing in South, Nabatiyeh, North, and Bekaa.

Table 3 Breastfeeding Exposure among the MINA participants in Lebanon (Total= 135)

	Total
Ever been breastfed	
Yes	115(85.8)
No	19(14.2)
Knows someone who has breastfed	
Yes	129(95.6)
No	6(4.4)
Ever witnessed a woman	
breastfeeding	
Yes	128(94.8)
No	7(5.2)
Exposure to breastfeeding ^a	2.8±0.5
Low	5(3)
High	130(97)

^a A score of 0 or 1 indicates low exposure to breastfeeding, and a score of 2 or 3 indicates high exposure (Hamade et al 2014)

D. Breastfeeding Knowledge

Table 4 displays the percentage of women, in the MINA cohort, who provided correct answers on the 20-item infant breastfeeding knowledge questionnaire. The overall knowledge scores ranged between 7 and 18 with the mean score 12.7±2.1. Most of the high-scoring items on the knowledge scale were related to breastfeeding recommendations, benefits, contraindication, and disagreeing with certain concerns/misconceptions. Most pregnant mothers have answered questions 8, 11, 14, and 20 correctly, as they knew that "the more often you breastfeed, the more milk you will have for your baby" (91%), "the best food for a newborn baby is breast milk" (98.5%), "you shouldn't try to breastfeed if you drink a lot of alcoholic beverages" (98.5%), and "breastfed babies need only breast milk for the first 4 to 6 months" (85%). Also, a high percentage of the participants knew that breastfeeding might have protective benefits to the infant-lower risks of allergies (88%) and infections (89%)-

and mother- may get back to figure easier (83%) (questions 5, 9, and 17). In addition to that, working was not considered as a barrier to breastfeeding as 90% of the women have disagreed with the following statement "you shouldn't try to breastfeed if you are planning to go back to work or school since you won't be able to be with your baby for feedings" (question 7).

On the contrary, low-scoring items on the knowledge scale were related to the duration for breastmilk completeness, breastmilk adequacy, breastfeeding misconceptions, and concerns. For example, only 36% of pregnant mothers knew that breast milk does not make up a complete diet for a baby for the first year (question 2). Similarly, 53.3% believed that "many women are not able to make enough milk to feed their baby" (question 10). More than 80% of the mothers said that "breastfeeding mothers should never eat pizza or other spicy foods and/or coffee, tea, or other drinks with caffeine because babies may get a bad reaction to them" (question 12) and that "after a baby loses weight following birth, he/she will probably gain it back faster if he/she is breastfed" (question 13). Moreover, 41% of the mothers stated that breastfeeding for the first time will cause sore nipples in the breastfeeding mother (question 15). In addition to that, 65% of the participants lacked knowledge of reliable indicators for adequate infant nutrition, having 6 or more wet diapers in 24 hours, and instead answered that they would rely on crying (42%) and suckling (22%) for identifying infant feeding satisfaction (question 16). Other gaps in breastfeeding knowledge were related to the common belief that a breastfeeding mother('s) will lack assistance in infant feedings (34%) (questions 18. a), find it difficult to breastfeed in public places (22%) (questions 18. c), breasts will sag (43%) (questions 19. a), or breasts will become larger after stopping breastfeeding (24%) (questions 19. b).

Table 4 Percentage of Women in the MINA Cohort Who Provided Correct Answers on the 20-Item Infant Breastfeeding Knowledge Questionnaire (total sample size= 134)

The Infant Feeding Knowledge Testa	n	%
Breastfeeding cuts down on the mother's bleeding after delivery True	89	65.9
2.Breast milk makes up a complete diet for a baby. No extras (food, vitamins, etc.) are needed until the baby is close to one year of age False	49	36.3
3. If your breasts are small, you might not have enough milk to feed the baby False	120	88.9
4. When a mother is sick with the flu or a bad cold, she can usually continue to breastfeed her baby True	79	58.5
5. Babies who are breastfed tend to get fewer allergies than babies who get formula True	119	88.1
6. The pill is the best way to keep from getting pregnant while you are breastfeeding False	89	65.9
7. You shouldn't try to breastfeed if you are planning to go back to work or school since you won't be able to be with your baby for feedings False	122	90.4
8. The more often you breastfeed, the more milk you will have for your baby True	123	91.1
9. Babies who are breastfed tend to get fewer infections than babies who get formula True	120	88.9
10. Many women are not able to make enough milk to feed their baby False	63	46.7
11. The best food for a newborn baby is: a. Breast milk b. Formula c. Breast milk and water	133	98.5
12. Because babies may get a bad reaction to certain foods, breastfeeding mothers should never eat: a. Pizza or other spicy foods b. Coffee, tea, or other drinks with caffeine c. All of the above d. None of these are correct	22	16.5
13. After a baby loses weight following birth, he/she will probably gain it back faster if: a. He/she is breastfed b. He/she is bottle-fed c. Neither is correct	20	15
14. You shouldn't try to breastfeed if you:	131	98.5

a. Have twins		
b. Have a c-section		
c. Drink a lot of alcoholic beverages		
15. Breastfeeding mothers' nipples get sore if:	64	53.3
a. The baby's feeding position is not right		
b. The mother has light-colored skin		
c. This is the first baby she has breastfed		
16. When you breastfeed, the best way to tell if the baby is getting	44	35.2
enough milk is by:		
a. He/she does not suck on his/her fist after he/she is done		
nursing		
b. He/she does not cry		
c. He/she has 6 or more wet diapers in 24 hours		
17. When you breastfeed:	109	83.2
a. You may get your figure back easier		
b. You nearly always gain weight		
c. You may feel weak when you feed your baby		
18. If you breastfeed:	37	31.1
a. No one else can help her with the baby since you have to feed		
him/her		
b. More of your time will be taken up by the baby than if you bottle-feed		
c. It will be very difficult to feed the baby in public places		
d. None of the above are correct		
19. Breastfeeding will probably make:	41	33.1
a. Your breasts sag		
b. Your breasts larger after you stop breastfeeding your baby		
c. No difference in the size or shape of your breasts		
20. Breastfed babies need:	113	85
a. Only breast milk for the first 4 to 6 months		
b. A bottle of formula every day or so		
c. Extra water on a daily basis		
Breastfeeding Knowledge Score	12.7	±2.1 ^b

^a Breastfeeding Knowledge includes 10 Yes/No and 10 multiple-choice questions. The correct answer gets a score of 1 and the wrong answers get a score of 0. The sum of all answers will produce the breastfeeding knowledge score.

^b Overall participants had good breastfeeding knowledge. Classification based on a score less than 9 indicates poor breastfeeding knowledge, 9 to 11 indicates fair knowledge, 12 to 13 indicates good knowledge, and greater than 14 indicates very good knowledge (Tamim et al 2016)

E. Breastfeeding Attitude

Attitude scores among the MINA cohort participants ranged between a minimum of 46 and a maximum of 81, with a neutral overall mean attitude score of 64.1±7.0 (Table 5). Most of the participated mothers perceived breastfeeding to cause increased infant/mother bonding (96%) and to be ideal for infant feeding (98%) (questions 3 and 12). As for overfeeding, 57% of the participants believed that "formula-fed babies are more likely to be overfed than are breastfed babies" (question 5). More than a quarter of the mothers agreed that "formula feeding is the better choice if the mother plans to work outside the home" (question 6). In addition to that, 55% of the participants disagreed that "women should not breastfeed in public places such as in restaurants" (question 8). While comparing breastmilk to formula feedings, 87% of the women agreed that it is more easily digested, 54% to be more convenient, and 98% said that it is less expensive (questions 13, 15, and 16). On the contrary, 88% of the women perceived that "formula is as healthy for an infant as breast milk" (question 14).

Occasional alcohol intake was considered as a maternal dietary restriction since 73% of the mothers perceived it as a barrier to continue breastfeeding (question 17).

Table 5 Breastfeeding attitude during the third trimester among the MINA Cohort Participants (total sample size= 134)

The Iowa Infant Feeding Attitude Scale a				
	Mean±SD	Agree	Neutral	Disagree
1. The nutritional benefits of breast milk last only until the	3.2±1.5	56(41.8)	14(10.4)	64(47.8)
baby is weaned from breast milk ^b				
2. Formula-feeding is more convenient than breastfeeding ^b	3.8±1.4	34(25.4)	3(2.2)	97(72.4)
3. Breastfeeding increases mother/ infant bonding	4.7±0.7	129(96.3)	1(0.7)	4(3)
4. Breast milk is lacking in iron ^b	3.7±1.2	24(17.9)	28(20.9)	82(61.2)
5. Formula fed babies are more likely to be overfed than are	3.5±1.3	76(57.1)	25(18.8)	32(24.1)
breastfed babies				
6. Formula feeding is the better choice if the mother plans to work outside the home ^b	3.5±1.4	36(26.9)	10(7.5)	88(65.7)
7. Mothers who formula feed miss one of the great joys of	3.9±1.3	101(75.9)	10(7.5)	22(16.5)
motherhood				
8. Women should not breastfeed in public places such as in restaurants ^b	3.3±1.4	47(35.1)	14(10.4)	73(54.5)
9. Babies fed breast milk are healthier than babies who are	4.0±1.1	101(75.4)	15(11.2)	18(13.4)
fed formula				
10. Breastfed babies are more likely to be overfed than	3.5±1.3	34(25.4)	27(20.1)	73(54.5)
formula fed babies ^b				
11. Fathers feel left out if a mother breastfeeds ^b	3.6±1.2	30(22.4)	13(9.7)	91(67.9)

12. Breast milk is the ideal food for babies	4.8±0.5	131(97.8)	3(2.2)	0(0)
13. Breast milk is more easily digested than formula	4.3±0.9	116(86.6)	13(9.7)	5(3.7)
14. Formula is as healthy for an infant as breast milk ^b	4.4±0.9	9(6.8)	7(5.3)	117(88.0)
15. Breastfeeding is more convenient than formula feeding	3.3±1.5	72(53.7)	11(8.2)	51(38.1)
16. Breast milk is less expensive than formula	4.7±0.6	131(97.8)	2(1.5)	1(0.7)
17. A mother who occasionally drinks alcohol should not breastfeed her baby ^b	2.1±1.3	97(72.9)	12(9.0)	24(18.0)
Total	64.1±7.0°	72(53.8)	12(9.1)	50(37.0)

^a Attitude scale includes statements of a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Attitude scores can range from 17 to 85 (Iowa Infant Feeding Attitude Scale). These scores were grouped into the following three categories: disagree/positive towards formula feeding (scores1and2), neutral (score3), and agree/positive towards breastfeeding (scores 4 and 5). ^b This was reversed when calculating the score.

^c Overall participants had a neutral breastfeeding attitude. Classification based on a score of 17-52 indicates a strong positive attitude toward formula feeding, 53-59 indicates positive attitude toward formula feeding, 60-75 indicates neutral attitude, 76-82 positive attitude toward breastfeeding, and 83-85 strong positive attitude toward breastfeeding. (Charafeddine et al, 2016)

A. Breastfeeding Intention

Table 6 presents breastfeeding intention scores during the third trimester among the MINA cohort participants. Breastfeeding intention scores ranged between 2 and 16 in the studied sample, with a mean score of 13.2±3.6, which indicates strong intentions for breastfeeding. Many of the participants (94%) agreed that "I am planning to at least give breastfeeding a try" (question 2). The intentions to exclusive breastfeeding continuation dropped from 87% to 56% during the first 6 months of age (questions 3, 4, and 5).

Table 6 Breastfeeding intentions during the third trimester among the MINA Cohort Participants (total sample size=134)

The Infant Feeding Intentions (IFI) Scale ^a	Mean±SD	Agree	Unsure	Disagree
1. I am planning to only formula feed my baby (I will not breastfeed at all) b	3.8±0.7	4(3.0)	5(3.7)	125(93.3)
2. I am planning to at least give breastfeeding a try	3.8±0.8	126(94.0)	2(1.5)	6(4.5)
3. When my baby is 1 month old, I will be breastfeeding without using any formula or other milk	3.6±1.1	116(86.6)	6(4.5)	12(9.0)
4. When my baby is 3 months old, I will be breastfeeding without using any formula or other milk	3.1±1.4	96(71.6)	16(11.9)	22(16.4)
5. When my baby is 6 months old, I will be breastfeeding without using any formula or other milk	2.7±1.5	75(56.0)	28(20.9)	31(23.1)
Total	13.2±3.6°	104(77.8)	14(10.6)	49(36.6)

^a Intention scale includes statements of a 5-point Likert-type scale ranging from 0 (very much disagree) to 4 (very much agree). Intention scores can range from 0 to 16 (The Infant Feeding Intentions Scale). These scores were grouped into the following three categories: disagree/negative intentions towards breastfeeding (scores 0 and 1), unsure (score 2), and agree/positive intentions towards breastfeeding (scores 3 and 4).

^b This was reversed when calculating the score.

^c Overall participants had strong breastfeeding intention. Classification based on: A score of 0 to 7.5 indicates weak breastfeeding intention, 8 to 11.5 indicates fair intentions, 12 to 15.5 indicates strong intentions, and greater than 16 very strong intentions (Yehya et al, 2017)

B. Breastfeeding Practice

Postpartum breastfeeding initiation and infant feeding practices at 4 and 6 months among the MINA Cohort participants are presented in Table 7. Almost 61% of the participants have initiated breastfeeding within less than one hour and 97% have breastfeed their children after birth. As for breastfeeding practices at 4 months, 41% of the studied sample was exclusive breastfeeding and 68% were giving combined/mixed feedings. At 6 months, the rates of exclusive breastfeeding have dropped to 26% and combined feeding had increased to 76% at 6 months.

Table 7 Postpartum breastfeeding initiation and infant feeding practices at 4 and 6 months among the MINA Cohort Participants (total sample size= 100)

	n(%)	
Breastfeeding initiation		
Breastfeeding initiation		
≤1 hour	62(60.8)	
>1 hour	40(39.2)	
Infant feeding practices		
Breastfed after birth		
Yes	99(97.1)	
No	3(2.9)	
Exclusive breastfeeding at 4 months ^a		
Yes	41(41)	
No	59(59)	
Combined/mixed feeding at 4 months b		
Yes	67(67.7)	
No	32(32.3)	
Exclusive breastfeeding at 6 months		
Yes	13(26)	
No	37(74)	
Combined/mixed feeding at 6 months		
Yes	50(75.8)	
No	16(24.2)	

a Exclusive breastfeeding includes infants who received no other food or drinks, not even water, other than breastmilk (including expressed milk) and specific medications (WHO- Global Data Bank definition)

b Combined/mixed feeding includes infants who received breastmilk and formula milk

C. Study Characteristics and Breastfeeding Scores

Table 8 presents simple linear regression analyses for the association of the sociodemographic, economic, and geographic characteristics of the MINA cohort participants with breastfeeding exposure, knowledge, attitude, and intention scores. The results indicated that among all characteristics considered in this study, being a participant from MGH was the sole determinant for lower breastfeeding exposure score (β = -0.2, 95% CI -0.4 to -0.0) and knowledge score (β = -2.1, 95% CI -3.0 to 1.2), that is, being recruited from MGH decreases the mean exposure score by 0.2 and knowledge score by 2.1. As for the breastfeeding knowledge scores, the results also showed that having a maternal age greater than 30, education of university degree or higher, being employed, and having a high household monthly income were determinants for better breastfeeding knowledge. Whereas, having a non-health-related degree decreases the mean knowledge score by 1.6.

Participants who were not pregnant with their first child and had a household crowding index of greater than or equal to one person per room had significantly lower mean intention scores to exclusive breastfeeding by 1.3 and 1.7, respectively. On the contrary, women who were residing in the South, Nabatiyeh, North, and Bekaa had a significantly higher mean breastfeeding intentions scores by 2.0 than those who were residing in Beirut or Mount Lebanon.

Table 8 Simple linear regression analyses for the association of characteristics with breastfeeding exposure, knowledge, attitude, and intention scores among the MINA cohort participants

	Exposure	Knowledge	Attitude	Intentions
	B (95% CI)	B (95% CI)	B (95% CI)	B (95% CI)
Site				
AUBMC	Ref	Ref	Ref	Ref
MGH	-0.2(-0.4, -0.0)	-2.1(-3.0,1.2)	0.6(-2.1, 3.4)	0.3(-1.09, -0.1)
Maternal Age (years)				
18-24.9	Ref	Ref	Ref	Ref
25-29.9	-0.1(-0.3, 0.1)	0.6(-0.5, 1.7)	0.2(-3.0, 3.4)	-1.5(-3.1, 0.1)
≥30	0.0(-0.2, 0.3)	1.3(0.2, 2.4)	-0.8(-4.1, 2.4)	-1.5(-3.2, 0.2)
First Child				
Yes	Ref	Ref	Ref	Ref
No	-0.0(-0.19, 0.2)	0.5(-0.4, 1.4)	-1.7(-4.2, 0.8)	-1.3(-2.6,-0.0)
Number of Children				
<2 children	Ref	Ref	Ref	Ref
≥2 children	0.2(-0.0, 0.4)	-0.2(-1.5,1.1)	-0.1(-0.1, 3.5)	0.3(-16, 2.2)
Crowding Index				
<1 persons/room	Ref	Ref	Ref	Ref
≥1 persons/room	0.1(-0.1, 0.3)	-0.6(-1.6,0.4)	-2.0(-4.7, 0.8)	-1.7(-3.1,-0.3)
Mother's education level				
Up to high school	Ref	Ref	Ref	Ref
University or more	-0.0(-0.3,0.2)	1.9(0.8, 3.0)	2.3(-0.5, 5.2)	0.5(-1.0, 2.0)
Health Related Degree				
Yes	Ref	Ref	Ref	Ref
No	-0.2(-0.4, 0.1)	-1.6(-2.5,-0.7)	-1.0(-3.7, 1.8)	-0.1(-1.5,1.3)
Mother's Employment				
Status				

Housewife	Ref	Ref	Ref	Ref
Employee	-0.1(-0.3, 0.1)	1.4(0.6, 2.2)	1.6(-0.9, 4.1)	0.6(-0.7, 1.9)
Maternity Leave				
49 days (Old	Ref	Ref	Ref	Ref
legislation)				
70 days (New	-0.1(-0.6, 0.3)	0.1(-1.6, 1.9)	-3.2(-9.0, 2.6)	-0.2(-3.0, 2.5)
legislation)				
Other	-0.2(-0.7, 0.3)	0.9(-1.1, 2.8)	-0.5(-6.5, 5.5)	1.5(-1.4,4.3)
Related to husband				
Yes	Ref	Ref	Ref	Ref
No	-0.1(-0.4, 0.3)	0.5(-1.1, 2.2)	2.6(-1.6, 6.8)	-0.2(-2.3, 2.1)
Father's education level				
Up to high school	Ref	Ref	Ref	Ref
University or more	0.0(-0.2, 0.2)	1.7(0.8, 2.6)	1.9(-0.6, 4.5)	0.1(-1.3, 1.4)
Area of residence				
Beirut	Ref	Ref	Ref	Ref
Mount Lebanon	-0.2(-0.4, 0.0)	-0.1(-1.0,0.9)	-0.2(-0.9,2.5)	-0.1(-1.4, 1.3)
Other districts ^b	-0.1(-0.4, 0.2)	0.8(-0.6, 2.1)	-0.4(-4.2, 3.4)	2.0(0.0, 3.9)
Monthly income				
Low	Ref	Ref	Ref	Ref
Medium	0.1(-0.3, 0.4)	1.5(-0.0, 3.0)	2.1(-2.1, 6.3)	0.6(-1.6, 2.8)
High	-0.0(-0.3, 0.3)	2.2(0.8, 3.7)	3.0(-0.8, 6.8)	0.1(-1.9, 2.1)
Does not know	0.2(-0.1, 0.5)	0.9(-0.5, 2.4)	0.8(-3.3, 4.8)	-0.2(-2.3, 2.0)

D. Breastfeeding Scores and Practices

The correlates of breastfeeding initiation and exclusive breastfeeding at 4 and 6 months were examined among the study participants, using simple logistic regression (Table 9). Results showed the mean breastfeeding intention score (OR 1.4, 95% CI 1.1 to 1.7) were associated with significantly higher odds of exclusive breastfeeding at 4 months. Also, having a higher mean breastfeeding exposure score was associated with significantly lower odds of exclusive breastfeeding at 6 months (OR 0.1, 95% CI 0.0 to 0.7).

Table 9 Simple logistic regression analysis for the association of breastfeeding scores with breastfeeding practices among MINA cohort participants

Breastfeeding Scores	Early Breastfeeding Initiation	Exclusive Breastfeeding at 4 Months	Exclusive Breastfeeding at 6 Months
	OR (95% CI)	OR (95% CI)	OR (95% CI)
Exposure	1.1 (0.5, 2.42)	0.8 (0.4, 1.7)	0.1 (0.0, 0.7)
Knowledge	1.0 (0.8, 1.3)	1.1 (1.0, 1.4)	1.3(0.9, 1.7)
Attitude	1.5(1.0, 1.1)	1.1 (1.0, 1.1)	1.0(0.9, 1.1)
Intention	1.1 (1.0, 1.2)	1.4 (1.1, 1.7)	1.5(0.8, 2.7)

CHAPTER VI

DISCUSSION

This present study examined breastfeeding exposure, knowledge, attitude, and intentions among pregnant women in their third trimester with the impact of these constructs on postpartum breastfeeding practices. The data represent the characteristic of the Lebanese women, a small Middle Eastern country, who were part of the "Mother and Infant Nutrition Assessment Cohort Study". As noted earlier, Lebanon has low rates of exclusive breastfeeding and continuation, which is considered a public health concern (Al-Sahab, Tamim et al. 2008, UNICEF 2010). This study will help us to determine the gaps leading to the low breastfeeding practices in Lebanon and to plan public health interventions aiming at supporting breastfeeding and protecting future generations. Evidence from the literature suggests that maternal breastfeeding knowledge, attitudes, and intentions during pregnancy highly influence postpartum optimal breastfeeding practices (Yehya, Tamim et al. 2017, Zhu, Zhang et al. 2017). For this reason, the investigation of maternal exposure, knowledge, attitude, and intentions to breastfeeding during pregnancy will help to develop context-specific interventions and address the determinants of breastfeeding in the MENA region aiming to improve breastfeeding initiation, exclusivity, and continuation according to the international guidelines and recommendations.

The results showed a significant positive association between high levels of breastfeeding knowledge and older age, higher education, health-related major, high-income levels, and being recruited from AUBMC. Overall, the participants had a good breastfeeding knowledge with a mean score of 12.74±2.10. This breastfeeding

knowledge score is consistent with evidence from previous studies conducted by Saudi Arabian mothers (Saied, Mohamed et al. 2013) and Lebanese pregnant women (Tamim, Ghandour et al. 2016). Our results also showed that participants who were older than 30 years had higher BFK scores, which was also examined in the literature. Studies conducted on undergraduate students in Malaysia and Lebanon/Syria showed lower BFK scores than those reported among women (Hamade, Naja et al. 2014, Hamid and Yahya 2018) (Figure 4). This variation in breastfeeding knowledge between mother's age could be related to higher education status and higher intentions/readiness to breastfeed.

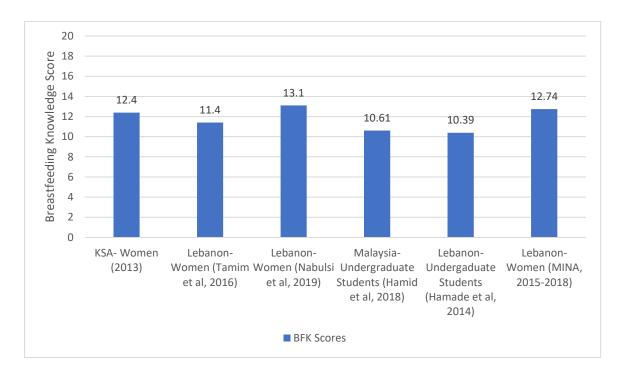


Figure 4 Breastfeeding Knowledge Scores Across and Within Countries

Most of the high-scoring items on the knowledge scale related to breastfeeding benefits and alcohol contraindication were similarly reported in a study conducted in 2016 (Tamim, Ghandour et al. 2016). In this study, a group of researchers has used the

BFK to validate and measure breastfeeding knowledge on 417 Lebanese pregnant women in two university hospitals in Beirut. Moreover, both studies have stated that return to work was not perceived as a barrier for mothers to initiate or continue breastfeeding. However, the results in a qualitative study in 2011 were contradictory as they showed that return to work was the main barrier to breastfeeding continuation (Nabulsi 2011). An explanation for this could be because the qualitative study conducted in 2011 was before the update of the maternity leave legislation in 2014, which gives the working mother 70 days paid leave instead of 40 days. In our study, 63% of the mothers were employed and the results showed statistical significance between breastfeeding knowledge and maternal employment status, higher paternal/maternal education, and higher income levels. The results indicate that those indicators are interrelated as higher educational levels provide more stable employment opportunities with consistent and higher salaries. Also, higher education allows the parents to search and rely on credible resources to allow them to better choose the optimal infant feeding practice for their newborn. The results from this study highlight the importance of the proper implementation of the maternity leave legislation by the organizations.

Major knowledge gaps identified among the Lebanese mothers were related to the duration for breastmilk completeness, breastmilk adequacy, breastfeeding misconceptions, and concerns. Breastfeeding misconceptions and concerns stated in this study were similar to the ones presented among previously conducted studies on youth and mothers in Beirut (Osman, El Zein et al. 2009, Nabulsi 2011, Hamade, Naja et al. 2014). A longitudinal study conducted in Lebanon showed that common beliefs and concerns related to having inadequate amounts of milk, changes in the milk quality, and

concerns for lack of infant satisfaction (Osman, El Zein et al. 2009). Consistent with our results, a qualitative study in Lebanon has found that most mothers perceived breastfeeding to have a negative effect of breastfeeding on their breasts (sag), figure (gain weight), pain, and tiredness (Nabulsi 2011).

Another concern was related to having bad or harmful milk and a lack of infant satisfaction. In addition to that, having six or more wet diapers in 24 hours was a poorly known marker for adequate infant nutrition among undergraduate students, pregnant mothers (Hamade, Naja et al. 2014, Tamim, Ghandour et al. 2016), and MINA the cohort participants. This confirms that breastfeeding is still considered a taboo and a lot of misconceptions and concerns are still embedded within the local Lebanese context and across generations. To address those cultural misconceptions and to increase breastfeeding knowledge in Lebanon it is important to start planning breastfeeding education programs at a young age (Hamade, Naja et al. 2014).

The findings for this study showed a neutral breastfeeding attitude among the participated Lebanese pregnant women. This neutral breastfeeding attitude was also not found to be associated with any postpartum breastfeeding behavior. Similar results were examined among previously conducted studies in Lebanon (2019), but higher results than those conducted among Japanese, Saudi, and Lebanese (2016) women (Inoue, Binns et al. 2013, Saied, Mohamed et al. 2013, Charafeddine, Tamim et al. 2016, Cotelo, Movilla-Fernández et al. 2018, Nabulsi, Tamim et al. 2019) (Figure 5). The results also showed that 55% agreed with breastfeeding in public. Despite this slight improvement in the attitudes towards breastfeeding in public places, it remains low as it is considered culturally inappropriate. Also, this concern has been previously cited in the Saudi literature, but to our knowledge, no specific research has been made related to

this topic in our context (Saied, Mohamed et al. 2013). The negative attitudes towards breastfeeding in public places observed in the studied population arise from the cultural unacceptability and stigmatization of mothers who breastfeed in public. Cultural views coupled with the lack of breastfeeding-friendly places in the region are the main barriers hindering successful breastfeeding practices in public places.

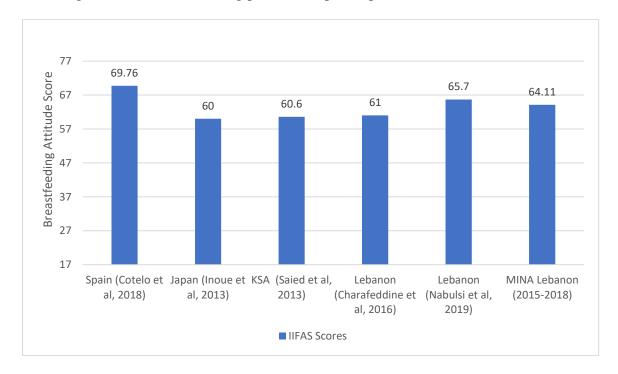


Figure 5 Breastfeeding Attitude Scores Across and Within Countries

A negative attitude is seen towards breastfeeding among working mothers, which was not explored among their knowledge, as 27% of the mothers believed that formula feedings should be introduced if the mother plans to work. This finding is worrisome, although it is low, especially that the percentage of working mothers is increasing in Lebanon, as 63% of the MINA cohort participants were employed and 68% gave combined/mixed feedings for the first 4 months of age. In Lebanon, formula feeding is common as it is introduced within the first 15 days and concerns related to the early return to work and/or inadequate work schedule are still present (Nabulsi 2011, Mattar,

Hobeika et al. 2019). The findings from this study and previously conducted highlight the need for organizational policies to support breastfeeding at the workplace that can be done through giving pumping breaks, providing breastfeeding education to working mothers, and flexible time schedules.

The results also pointed out that breastfeeding knowledge and attitude during pregnancy was not associated with breastfeeding initiation within the first hour nor breastfeeding behavior at 4 months and 6 months and the breastfeeding intention score was associated with exclusive breastfeeding for the first 4 months only. A cohort study conducted on Malaysian women has found a weak association between breastfeeding intentions during pregnancy with breastfeeding initiation and exclusivity postpartum (Ismail, Alina et al. 2016). Interestingly, an explanation for this might be because actual decisions cannot be made during pregnancy and that it is not a real or a practical decision to be sustained for the next 6 months and that there are many external and environmental barriers affecting the compliance to breastfeeding behavior.

The study findings showed that the MINA participants had strong intentions to breastfeed, as the mean breastfeeding intention score was 13.2±3.6. Most of the participated mothers (94%) agreed that "I am planning to at least give breastfeeding a try". According to the TPB, intentions are important predictors to establish the desired behavior (Ajzen 1991). This is seen in our studied sample, as 97% of the participants have started breastfeeding after birth, similar rates were examined in KSA, regardless of the breastfeeding continuation rate (Ahmed and Salih 2019). Similar results were presented in a cross-sectional study conducted on Lebanese infants and toddlers, as they stated that 66% of the infants did not receive formula milk at all right after birth (Issa, Hobeika et al. 2019). It is also worth mentioning that lower breastfeeding intention

scores were examined among individuals with $a \ge 1$ crowding index, due to embarrassment, and who were multiparous, due to preoccupation.

In this cohort, 61% of the participants have initiated breastfeeding within less than one hour, as it was more prevalent among those who had a non-health-related degree [2.576 (1.038, 6.397)]. The rates for breastfeeding initiation are higher than the global or regional rates, but lower than the previous national rates (Collective, Unicef et al. 2017, Ahmed and Salih 2019) (Figure 6). The results show that breastfeeding initiation according to the WHO recommendation is experiencing some positive progress as more people are applying this recommendation without any significant differences among the population subgroups. This confirms that the studied hospitals are properly enforcing and applying the laws to have a supportive baby environment.

EBF rates for the first 6 months reported in this cohort are lower than the global, regional, and nationally reported rates (Victora, Bahl et al. 2016, Yehya, Tamim et al. 2017) (Figure 6). Mothers in this cohort study showed higher commitment to breastfeeding when compared to the exclusive breastfeeding practices at 6 months in 2013 (UNICEF 2013) but lower than the practices in 2017 and 2019 (Yehya, Tamim et al. 2017, Mattar, Hobeika et al. 2019). The trend from BF initiation and exclusivity is on decreasing pattern, which is similar to that previously reported in Lebanon and around the globe (Victora, Bahl et al. 2016, Yehya, Tamim et al. 2017, Issa, Hobeika et al. 2019).

To sum up, this cohort examined that there are low rates of breastfeeding initiation and exclusivity although the participants had strong breastfeeding intentions and have breastfed after birth. For this reason, supporting mothers during the postpartum period is important to address the low breastfeeding rates in Lebanon. In this cohort, the

assessment of breastfeeding exposure, knowledge, attitude, and intentions during pregnancy helped to identify the gaps leading to the poor breastfeeding practices in Lebanon. This confirms that planning the recommended interventions will save the breastfeeding rates in Lebanon and improve public health.

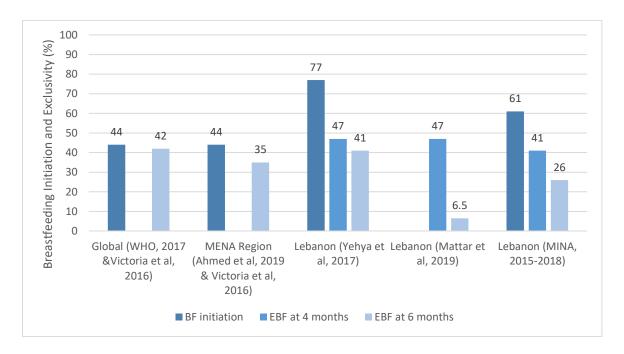


Figure 6 Breastfeeding Practices Across and Within Countries

There are certain aspects of this study that makes it strong. First, the cohort longitudinal design of this study allows it to have a temporal relationship meaning that breastfeeding exposure, knowledge, attitudes, and intentions occurred during pregnancy and can predict postpartum breastfeeding practices. In addition to that, the scales and tools that were used to measure breastfeeding exposure, knowledge, attitudes, and intentions were used internationally and were adapted, translated to Arabic, and validated to make them more reliable in our context (Charafeddine, Tamim et al. 2016, Tamim, Ghandour et al. 2016, Yehya, Tamim et al. 2017).

Lastly, the study results showed that the participants had high breastfeeding

intentions but low breastfeeding initiation and continuation. As it also allowed us to pinpoint and identify gaps leading to these low breastfeeding rates in the country that will help in planning and developing future interventions to promote and support breastfeeding among Lebanese mothers.

Despite those advantages, this study has few limitations. First, causality related to the determinants of breastfeeding cannot be established since this is an observational study. Also, the study participants consisted of a small sample that represents the highly educated, urban, and employed women. Moreover, we lost to follow-up many participants as the postpartum infant feeding practices were only collected from a subsample. All the previously mentioned factors limit our ability to make the information generalizable to the entire Lebanese population and were the reason for the lack of significant associations for certain variables. Lastly, it is important to note that all the assessments conducted in this cohort were carried out before the occurrence of the economic crisis in Lebanon. So, the values for the employment status and the monthly household income levels might not represent the current situation in Lebanon.

Future recommendations for this study might include combing the results for breastfeeding scores and practices for both countries, which will help us to see the difference across both countries and to identify the gaps. In addition to that, this will be increasing the sample size and the statistical power of the results. We also recommend for future studies to examine the breastfeeding scores among influencing others- the husband, her mother, and mother-in-law- to allow greater support for breastfeeding continuation and to limit the cross of concerns/misconceptions to future generations.

CHAPTER VII

CONCLUSION AND RECOMMENDATIONS

The results from this study provide valuable information related to breastfeeding exposure, knowledge, attitude, intentions during pregnancy along with postpartum breastfeeding initiation, practices, and determinants in the MENA region. The study highlighted major concerns and misconceptions in knowledge and attitude that could be related to the duration for breastmilk completeness, breastmilk adequacy, and breastfeeding effects on breast shape/size. Those factors are important since they influence breastfeeding intentions which predict breastfeeding exclusivity at 4 months postpartum.

Interestingly, the findings showed some disparities for the predictors of breastfeeding knowledge scores as they were more prevalent among older age, higher education, health-related degree, and higher-income individuals. We recommend providing breastfeeding education sessions to youth and pregnant women aiming at increasing breastfeeding knowledge and readiness in our society. In addition to that, postpartum peer and professional support groups can be beneficial to encourage mothers to continue breastfeeding. The peer support intervention, which can be given my other pregnant women or mothers, will provide the mothers with emotional support and will build the mother's social capital. Whereas professional support will assist the mothers through the technical aspects of breastfeeding and will correct the misconceptions and concerns that pass across generations. A randomized control trial conducted in Lebanon has indicated that the intervention group, who received prenatal breastfeeding education and postpartum professional lactation support, were six times more likely to exclusively

breastfeed their infants for the first six months than those who received standard care (Nabulsi, Tamim et al. 2019). In both groups, breastfeeding knowledge and attitude increased significantly from baseline to follow-up at 6 months, with the intervention group having much higher scores at the end of the intervention.

Previous efforts have stated that the determinants of breastfeeding should not be linked to a single level involving maternal knowledge and skills, but to a wider community, organizational, and public policy levels (Akik C 2015). Organizational policies must be set in place that addresses the breastfeeding issue for working mothers. Those policies must include details related to educating staff, flexible work schedules, private rooms, and storage space to ease the process of breastmilk express and storage (Shealy, Li et al. 2005). A study conducted in California has shown that 75% of mothers, who were supported for breastfeeding at the workplace, have continued to breastfeed for 6 months of age (Cohen and Mrtek 1994). This study has provided valuable information related to breastfeeding behavior in Lebanon. Further investigations are needed to influencing others to identify the barriers to breastfeeding and plan effective evidence-based interventions for breastfeeding promotion in the MENA region.

APPENDICES

APPENDIX A **CONSENT FORM (ENGLISH)**

Institutional Review Board American University of Beirut
Research Consent Form 1: Protocol Number: NUT.FN.12

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It is important that you read the below information carefully to understand the objectives, procedures, benefits, and risks related to the project, before agreeing to participate in the study. While you are reading, please feel free to ask any questions if you need any clarification about what is stated in this form or if you need any additional information.

1. Title of Research

Mother and Child Cohort: Towards Curbing the Epidemic of Non-communicable Diseases in Lebanon

2. Principal Investigators

. Dr. Farah Naja, American University of Beirut

3. Why Are We Inviting You to Join this Research?

The investigators at AUB are conducting this research at the American University of Beirut Medical Center (AUBMC), the Makassed General Hospital and at 8 Primary Health Centers (PHC) in Beirut.

We are inviting you to join because you are in your first trimester of pregnancy and are visiting the obstetrics and gynecology (OBGYN) clinics at the AUBMC, MGH or PHC.

4. What Should You know about the Invitation?

You have been offered a letter of introduction about this study by registration personnel at the OBGYN's private clinics at AUBMC or Makassed General Hospital or the Primary Health Centers included in this study. When approached by the research assistant about your interest in this study, you have indicated that you'd like to know further information about it. Now we will tell you more about our research and answer your questions.

- Whether or not you join is your decision (you can accept or refuse no matter who is inviting you to participate)
- You are free to ask any questions you want before deciding
- You can say yes but change your mind later
- You can say no and your decision will not affect, in any way, your relationship with your physician and the healthcare team of this hospital or health care center.

5. Who Can You Talk To?

 If you have questions or concerns, or if you think the research has hurt you in any way, you can contact: Dr. Farah Naja

Tel: 009611350000, ext: 4504 Email: fn14@aub.edu.lb

If you have questions about your rights as a volunteer, or you want to talk to someone outside the research team, please contact:

Biomedical Sciences Institutional Review Board, American University of Beirut, Lebanon Tel: 00961:1374374, ext: 5445 Tel: 00961 1 374374, ext: 5445 American University of Beirra it University of British Review Roard Email: irb@aub.edu.lb

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6. Why Are We Doing this Research?

Obesity, diabetes, hypertension, cancer and other non-communicable diseases are increasing in Lebanon. We would like to know what the effect is of dietary intake early in life (starting in the womb and up to the age of two) on childhood growth patterns and obesity, as these affect the risk of non-communicable diseases later in life.

7. How Long Will the Research Take?

You will be in the research throughout your pregnancy and until your child becomes 2 years old. The study will last for the next 3 years.

8. How Many People Will Take Part?

We plan to recruit 250 participants by direct approaching. The research will include 125 subjects from AUBMC and 125 subjects from Makassed General Hospital and 8 PHCs included in this research study (the Makassed Horj Medical Center, Zarif Medical Center, the Child and Mother Welfare Medical Center, Dar Al Fatwa Health Care Center, the Makhzoumi Medical Center Al Mazraa as well as the 3 PHCCs under the supervision of the Health Directorate Rafik Hariri Foundation: Tariq Ididi, Zarif and Ras El Nabe'.

9. What Happens if You Take Part?

If you agree to join this study, a total of 9 visits with one of our research team members will take place throughout the 3-year study period. These visits will be distributed according to the timeline below.

During Pregnancy: We will see you for a total of 3 times while you are at your routine visits to your obstetrician. Each visit should not take longer than 30 to 45 minutes, while you are waiting in the OBGYN clinic waiting room.

Visit 1: During your 1st trimester

We will assess your:

- Weight, height, and waist circumference
- Blood pressure
- Pre-pregnancy weight, dietary intake (FFQ), and supplement use
- Current dietary intake (24hr), supplement use, and lifestyle practices (smoking and alcohol intake)

We will also ask you some questions relating to your household such as:

- Education, occupation, etc.
- Household food security

Also, during one of your 1st trimester visits to the laboratory to conduct routine blood tests, we will withdraw an additional blood sample (15 ml) to assess your micronutrient status of:

- nstitutional Review Board hemoglobin and ferritin
- vitamins: A, D, B9 (folate) and B12nerican University of Beirm Institutional Review Board
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We will also request from you to provide us with a urine sample (20 ml) to assess the levels of iodine and creatinine in urine.

Before visit 2, we will call you by phone at a time convenient for you to conduct a 24-hour dietary recall, which should not take more than 15-20 minutes.

Visit 2: During your 2nd trimester

We will measure your:

- Weight
- Blood pressure
- Current dietary intake (FFQ and 24h), supplement use, and lifestyle practices (smoking, alcohol intake, and physical activity)

After visit 2, you will be contacted by phone at a time convenient for you to collect three 24-hour dietary recalls (one 24-hour recall per week for 3 consecutive weeks), with each not taking more than 15-20 minutes.

Visit 3: During your 3rd trimester

We will measure your:

- Weight
- Blood pressure
- Current dietary intake (FFQ and 24h), supplement use, and lifestyle practices (smoking and alcohol
- Exposure, knowledge, attitudes, and intentions towards infant feeding practices

Just After Delivery; We will visit your physician at the hospital and ask him/her to provide the research team with the below information, which will be accessed only by your physician from your medical records and/or from each physician's private clinic records.

We will obtain information about your:

- Pre-and post-delivery weights
- Oral glucose tolerance test results
- Baby's birth outcomes (sex, gestational age, birth date, weight, length, and head circumference)
- Delivery method
- Occurrence of complications during pregnancy
- Occurrence of complications during delivery

After Delivery: We will see you and your child for a total of 6 visits.. Visits will be scheduled at your convenience and will take place in your home. Each visit should not take longer than 30 to 45 minutes.

Visits 4: At 4 months post-partum

We will measure your:

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American University of Beirut Weight, waist circumference, and percent body fat

Dietary intake (FFQ and 24hr) and percent pody fat Americ Institutional Review of Edit University of Behrut American University of Behrut

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We will also measure your child's:

- · Weight, length, head circumference, and mid-upper arm circumference
- Feeding practices
- · Dietary intake and supplement use

Visit 5: At 6 months post-partum

We will measure your:

- · Weight, waist circumference, and percent body fat
- Dietary intake (24hr), supplement use, lifestyle practices (smoking and alcohol intake)
- · Household food insecurity

We will also measure your child's:

- · Weight, length, head circumference, and mid-upper arm circumference
- Feeding practices
- Dietary intake and supplement use

Visit 6: At 9 months post-partum

We will measure your:

· Weight, waist circumference, and percent body fat

We will also measure your child's:

- · Weight; length, head circumference, and mid-upper arm circumference
- Feeding practices
- · Dietary intake and supplement use

Visit 7: At 12 months post-partum

We will measure your:

- · Weight, waist circumference, and percent body fat
- · Dietary intake (24hr) and supplement use
- lifestyle practices (smoking, alcohol intake, and physical activity level)

We will also measure your child's:

Institutional Review Board

- Weight, length, head circumference, and mid-upper arm circumference at University of Beirga
- Feeding practices
- Dietary intake and supplement use

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We will also assess the eating environment at home.

Visit 8: At 18 months post-partum

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We will measure your:

- · Weight, waist circumference, and percent body fat
- Dietary intake (FFQ and 24hr) and supplement use

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We will also measure your child's:

- · Weight, length, head circumference, and mid-upper arm circumference
- Feeding practices
- · Dietary intake and supplement use

We will also assess the eating environment at home.

Visit 9: At 24 months post-partum

We will measure your:

- · Weight, waist circumference, and percent body fat
- Dietary intake (24hr) and supplement use
- · Lifestyle practices (smoking, alcohol intake, and physical activity)

We will also measure your child's:

- Weight, length, head circumference, and mid-upper arm circumference
- Feeding practices
- Dietary intake and supplement use

We will also assess the eating environment at home.

10. Could the Research Be Bad for You?

There are no foreseeable risks resulting from your participation in this study. Your participation will not cause you any physical or emotional harm. Some of the questions we will ask may bother you, but you can choose not to answer if you feel that your personal/family privacy is being invaded.

Also, although blood samples will be withdrawn once during the 1st trimester, the frequency and magnitude of this risk are considered no greater than minimal ("minimal risk means that the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests"). AUBMC will cover the cost of treating, on its premises, medical adverse events resulting directly from the medication and/or medical procedures of this research study. Otherwise, it will not cover for the costs of medical care for any medical condition or issue.

Note that in case the researchers encounter a significantly abnormal result with one of the blood tests that are not usually done as part of routine care; they will alert the treating physician and subjects of this matter.

11. Could the Research Be Good for You?

We cannot promise any major benefit to you or to your child from your participation in this study.

If you agree to take part in this research, we will provide you with monetary compensation for transport and your time spent during the research visits. You will receive \$ 15 on each of visits 1, 3, 7, and 9. During visit 1 upon consenting, you will also receive one gift (toy) for your child.

At the end of the 3 year study period, and based on the findings of the study, we will develop a nutrition education manual which will help increase matrition knowledge and enhance health for both mothers and

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young children. We will contact you to provide you with a copy of this manual.

Your overall participation in this study will help in gathering important data on the nutritional status of pregnant women in Lebanon, as well as information on the nutritional status and growth patterns of young children. This information will help us understand the factors increasing the risk of non-communicable diseases in the country. This information will, therefore, also help us in planning diet-related interventions for the prevention of these diseases.

12. What Happens to the Collected Information about You?

The data you provide us for this study will be kept strictly confidential. We will use a code to identify you in our records instead of using your name. Your records will be monitored and may be audited without violating confidentiality. We will not identify you personally in any reports or publications arising from this research.

The filled consent forms will be locked in a cabinet at the principal investigator's office, while the questionnaires will be kept in a locked cabinet in a research office for this study. Electronic versions of the data will also be secured and locked by a password. Access to your collected information will be limited to the following people:

- · Study investigators and members of the research team
- Representatives of the Institutional Research Board (IRB) at AUB who make sure the study is done
 properly and that your rights and safety are protected
- We would like to obtain your consent to contact you by phone for conducting the multiple 24-hour recalls during your 2rd trimester of pregnancy. You may join this study even if you do not allow us to contact you for conducting the multiple 24-hour recalls. Please indicate your choice on the appropriate line below:

I ALLOW you to contact me for conducting the multiple 24-hour recalls

I DO NOT ALLOW you to contact me for conducting the multiple 24-hour recalls

- We would also like to obtain your consent to access the following information from your physician:
 - · Your pre-and post-delivery weights
 - · Your oral glucose tolerance test results
 - Your baby's birth outcomes (sex, gestational age, birth date, weight, length, and head circumference)
 - · Your delivery method
 - Occurrence of complications during pregnancy
 - · Occurrence of complications during delivery

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Please indicate your choice on the appropriate line below:

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__I ALLOW you to access my information from my physician

DO NOT ALLOW you to access my information from my possessian ROVED

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• We may use <u>part</u> or <u>all</u> of the collected information from this study in other projects in the future. This might include sharing the collected information with other researchers, in or outside AUB. Before doing

so, we will make sure to destroy all links between your identity and the data about you.

You may join this study even if you do not allow the use of your collected information to be shared with other researchers and/or used in future research. Please indicate your choice on the appropriate line below:
I ALLOW the use of my collected information (biochemical, anthropometric, dietary, lifestyle sociodemographic/economic, household food security, etc.) to be shared with other researchers and/o used in future research
I DO NOT ALLOW the use of my collected information (biochemical, anthropometric, dietary lifestyle, sociodemographic/economic, household food security, etc.) to be shared with other researchers and/or used in future research
13. What if You Don't Want to Join?
Please acknowledge that your participation in this study is voluntary. If you do not wish to participate in this study, you are free to say no. Refusing to take part in this study will not affect, in any way, your relationship with your physician and the healthcare team of this hospital.
14. What if You Join but Change Your Mind?
You are free to stop participating at any time during the course of the study. If you decide to stop participating, please contact us. We will ask you if you would like to share with us the main reasons behing your decision. Please note that once you decide to stop participation, we will destroy all data and blood samples connected to you, unless they have been already analyzed or de-identified (i.e. having removed any link between them and your identity).
15. What Else Should You Know?
This research is being funded by the Qatar National Research Fund. If you are willing to participate in this study, and if your pregnancy proceeds normally, you can continue to participate in this study.
16. Additional Choices
During the study, your blood samples will be analyzed at the AUBMC. If you allow us to, we would like to keep any samples left over by the end of the study for the purpose of future research related to the prevention and treatment of noncommunicable diseases and/or sharing them with other researchers who were not part of this study. We will store these leftover samples at the Nutrition and Food Sciences Department at AUB. You can change your mind about allowing the use of your left over samples in future research and/or sharing with other researchers at any time. If you do not allow us to store your left-over samples for later use, we will destroy them and they will not be used for any purpose. American Latiners Machine Machine Review Boand Review Board
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You may join this study even if you do not allow the use of your left-over samples for future research and/or sharing with other researchers. Please indicate your choice on the appropriate line below:
I PERMIT the storage and use of my left-over samples for future research and/or sharing with other researchers
I PERMIT the storage of my leftover samples but request to be contacted to seek permission of use for future research and/or sharing with other researchers
DO NOT ALLOW the storage nor the use of my left-over samples for future research and/or sharing with other researchers
We would also like your permission to contact you about participating in future studies. You may still join this study even if you do not permit future contact beyond the study period. You may also change your mind about this choice. Please indicate your choice on the appropriate line below:
YES, you may contact me
NO, you may NOT contact me

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	Signature Page for a Capable Adult
Participant	
have read and understood the a voluntarily agree to join this coh	
Full Name of Participant	
Signature of Participant	Date Time
Telephone Number	
Person Obtaining Consent	
	he research team) have fully explained this research to the volunteer d the volunteer's understanding of the research and obtained their voluntary
Full Name of Person Obtaining C	insent
Signature	Date Time
Witness (if applicable)	
I document that the information i the participant, who appears to h	this form (and any other written information) was accurately explained to ave understood and freely given consent to join the research.
Full Name of Witness	
Signature of Witness authoral R American University 14 AU	American University of Beiras Institutional Review Boo American University of Beiras Institutional Review Boo American University of Bo
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	Signatures: Research with (Children
Mother or Father		
l voluntarily agree for my child to	join the research described in this	s form
Full Name of Mother/Father	ia.	
Signature of Mother/Father	Date Time	
Person Obtaining Consent		
	ental understanding of the research	this research to the parent(s). ch and obtained their voluntary agreement.
Full Name of Person Obtaining Co	insent	
Signature	Date Time	
Witness (if applicable)		
		n information) was accurately explained to onsent.
I document that the information in the parent(s), who appear(s) to he Full Name of Witness		

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CONSENT FORM (ARABIC)

Institutional Review Board American University of Beirul تموذج (1) للموافقة على الإشتراك ببحث علمي، رقم البرونوكول: NUT.FN.12

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من المهدِّ أن تقرأى المعلومات المذكورة أدناه يعناية قبل الموافقة على المشاركة في الذراسة، من أجل فهم الأهداف والإجراءات والفواند والأخطار المرتبطة بمشاركتك بهذا المشروع لا تترندي في طرح الأستلة إذا كثت بحلجة إلى توضيح حول ما يرد في هذه الاستصارة أو إذًا كنت يحاجة إلى أي معلومات إضافية.

1. عنوان البحث

دراسة مُتَابِعة للأم والطَّقل: بهدف تقليل نسبة خطر الإصابة بالأمراض غير المعدية في لبنان

- 2. الباحث الرنيسي
- د. فرح نجاء الجامعة الأميركيّة في بيروت
- 3. لماذا تدعوك للإنضمام إلى هذا البحث؟

الباحثون في الجامعة الأميركيّة في بيروت يلوون اجراء هذا البحث في مستشفى الجامعة الأميركيّة في بيروت أو مستشفى المقاصد أو 8 من مر اكر شبكة الرعاية الصحية الأولية في منطقة بيروت.

أنت مدعوة للمشاركة لأنك حامل في الفصل الأول وتعملين على زيارة عيادات الأمراض النسانية والتوليد في مستشفى الجامعة الأميركيَّة في بيروت أو مستشفى المقاصد أو إحدى مراكز الرعاية الصحية الأولية المشاركة في هذه الدراسة

- 4. ما الذي يجب أن تعرفية عن هذا البحث؟
- لقد تم تقديم لك رسالة مقدمة حول هذه الدراسة من قبل العمال على مكتب تسجيل العيادات الخاصة في الجامعة الأموركية في بيروت أو ممتشفى المقاصد أو إحدى مراكز الرعاية الصحية الأولية المشاركة في هذه الدراسة. عندما سأتتك المساعدة الباحثة عن اهتمامك بهذه الدراسة، أشرت إلى انك ترغيين في معرفة المزيد من المعلومات حول هذا الموضوع. لذلك، فسوف نعمل على شرح دراستنا لك وسوف نجاويك عن اسالتك.

 - قرار اتخمامك المشاركة بهذا البحث أو عدمه يعود لك (يمكنك قبول أو رفض المشاركة بغض النظر عن من يدعوك
 - لك مطلق الحرية بأن تسألي أي سوال قبل اتخاذ قرارك
 - إذا والغنت على المشاركة، بإمكانك أن تغيري رأيك لاحقاً وبأي وقت
- يمكنك رفض المشاركة في الدراسة و قرارك أن يؤثر، بأي شكل من الأشكال، على علاقتك مع طبيبك، وفريق الرعاية الصحية في المستشفى أو المركز.

5. مع من يمكنك التحدث؟

د. فرح نجاء الجامعة الأميركيَّة في بيروت

Institutional Review Board

/115/4504/34/643 0096 £1350000 : 434

American fh14@aubedu.lb? البريد الإلكتوراني

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إذا كان لديك أسئلة حول حقوقك كمشاركة بالبحث، أو كلت تر غيين في التحدث مع شخص من خارج فريق البحث، يرجى الإتمسال ب:

مجلس لجنة الأخلاقيات للعلوم الطبية

الجامعة الأميركية في بيروت، لبذان

البريد الإلكتروني: irb@aub.edu.lb هتف: 009611374374 تحويلة: 5445

6. لماذا تقوم بهذا البحث؟

إن امراض البدانة والضغط والسرطان وأمراض غير معدية الحرى على تزايد في أبذان.

نر غب في معرفة علاقة المأخوذ الغذائي في المراحل المبكرة من الحياة (بداية في الرّحم ولغاية المناتين من العمر) مع العاط النمو والبدانة عاد الأطفال، لأن هذه العوامل تؤثر على خَطر الإصابة بالأمراض غير المعدية.

7. كم من الوقت سيستغرق هذا البحث؟

ستكونين مشاركة في هذا البحث طوال فترة الحمل ولغاية السّنتين من عمر طقك. هذا البحث سوف يدوم ثلاث سنوات.

8. كم عدد الأشخاص الذين سيشاركون بهذا البحث؟

نر غب الحصول على 250 مشاركة بصفة مباشرة سوف يتضمن البحث 125 مشاركة من مستشفى الجامعة الأميركيّة في بيروت و 125 مشاركةً من مستشفى المقاصد أو إحدى مراكز الرعاية الصحية الأولية الثمانية المشاركة في هذه الدراسة (مركز الحرج المقاصدي - مركز الطَّريف الطبي - مركز المناية بالطِّق والأم - دار الفتوى المسحى - مركز مخزومي الطبي المزرعة –المراكز المسحية الثلاث لمديرية المسحة في مؤسسة رفيق الحريري: طريق الجديدة و الظريف و رأس اللبع.)

9. ما الذي سيحدث اذا قررت المشاركة في هذا البحث؟

إذا وافقت على الانضمام إلى هذه الدراسة، مشَّجري 9 زيارات مع واحد من أعضاء فريق العمل لدينا على مدار فترة الدراسة لمدة 3 منوات. وميتم توزيع هذه الزيارات وفقا الجنول الزمني أنناه

أثناء فترة الحمل: موف نقابلك 3 مرات أثناء زيار اتك الروتينية الطبيب التوليد الخاص بك يجب على كل زيارة الأ تستغرق أكثر من 30 إلى 45 دقيقة أثناء انتظارك في عيادة طبيبك النساني والتوليد. Institutional Review Board

الزيارة 1: خلال الثاث الأول من الحمل

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سلقوم بتقييم:

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- وزناك وطولك ومحيط خصرك
- الوزن قبل الحمل، المأخوذ الغذائي قبل الحمل، واستهائك المكتلات الغذائية قبل الحمل 4 المأخوذ الغذائي الحالي، الاستهلاك الحالي للمكملات الغذائية، والعادات الغذائية الحالية (التدليخ الالتختيل الاطلاعة الحالي المتعدلات العدائية العادات العدائية الحالية والتدليخ العالمة العدائية العالمة العدائية ا American University of Beirm

موف نعمالك أيضا بعض الأمثلة المتعلقة بأهل البيت مثل:

ه التعليم، المهنة، الخ ه الأمن الغذائي الأنشر؟ Institutional Review المحال القدام المحالية Laversity of Review ارتضاء خلال لحدي زيار الك إلى المخار لإجراء أخطار الى الدم الروتينية أثناء الأشهر 0.8 AUG 2018

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إضافية (15 مل) لتقييم حالة الفيتامينات والمعادن الخاصة بك:

- ه الهيمو غلوبين والفيريتين
- 4 القرنامونات: B9 ،D ،A (حمض الفرايك) و B12
 - **4** معدن الرصناص
 - ۽ زينك

سنطلب منك أيضاً تزويدنا بعينة البول (20 مل) لتقييم معدل اليود و الكرياتينين في البول.

قِل الزيارة 2، سوف نتصلُ بك في وقت يلائمك من أجل الحصول على مأخوتك الغذائي خلال الأربع و عشرين ساعة الأخيرة، وأن يستغرق ذلك أكثر من 15 إلى 20 دقيقة.

الزيارة 2: خلال الثلث الثاني من الحمل

سنقرم بقياس:

- ۽ وزنك
- 4 ضغط الدم
- المأخوذ العُذائي الحالي، الإستهلاك الحالي للمكتلات الغذائية، والعادات الغذائية الحالية (التدخين، تداول الكحول، وممارسة التشاط

بعد الزيارة 2، سوف نتصل بك في وقت يلائمك من أجل الحصول على مأخونك الغذائي خلال الأربع وعشرين ساعة الأخيرة على 3 ايام (مأخوذ غذائي واحد في الأسبوع أمدة 3 أسابيع ملتالوة)، على أن لا يستغرق كل منهم أكثر من 15 إلى 20 دقيقة

الزيارة 3: خلال الثلث الثالث من الحمل

سنقوم يقيلون

- ۽ رزنك
- المأخوذ الغذائي الحالى، الاستهلاك الحالي المكملات الغذائية، والعادات الغذائية الحالية (التدخين وتفاول الكحول) ه مدى تعرضك للرضاعة ومعرفتك بالرضاعة، وموقفك، وتوايك تجاء المعارسات المتطَّقة يتغنية الرضع

عند الولادة؛ سوف تقوم يزيارة طبيبك في المستشفى وسوف تطلب منه/ها أن يوافر لفريق البحث المطومات الواردة أنذاه وهذه المعلومات ستُرفر فقط من قبل طبيبك وذلك من سجلاتك الطبية أو من السجلات المتواجدة في الحيادة الخاصة لطبيبك.

سوف نجمع معلومات حول:

- ♦ وزنك قبل وبعد الولادة
- Institutional Review Board American University of Beirut
 - نتائج اختبار فحص الجلوكوز عن طريق الفم
 - هِ نَدَاتُج ولادة الطفل (جنس الطفل، عمر الحمل، عمر الطفل، الوزن، الطول، ومحيط الرأس)

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- طريقة الولادة
- عدوث مضاعفات أثناء الحمل
- مضاعفات أثناه الولادة

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يعد الو الافتر بهوي بقه إلله و بإذاك 6 مرزات بو وبيدم إجرام هذه الزيارات في منزلك في وقت يناسبك. يجب على كل زيارة آلا تستخرق أكثر Institutional Review Board من 30, الي 45, American University 45 American University of Beirut

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الزيارة 4: في الشهر الرابع بعد الولادة

سنقوم بقياس:

- هِ وِزِنكَ، محيط خصر ك، ونسجة الدهون في جسمك
- المأخوذ الغذائي الك واستهلاكك للمكتلات الغذائية

وسوف تقوم أيضا بقياس:

- 4 وزن، طول، محيط الرأس، ومحيط منتصف الجزء الأعلى من دراع طفاك
 - العادات الغذائية لدى ملظك
 - المأخوذ الغذائي لطظك، واستهلاكه المكتلات الغذائية

الزيارة 5: في الشهر السادس بعد الولادة

ستقوم بقياس:

- 4 ورُنك، محيط خصرك، ونسية الدهون في جسك
- المأخوذ الغذائي لك، استهلاكك للمكتلات الغذائية، وعاداتك السلوكية (التدخين وتناول الكمول)
 - 4 الأمن الغذائي للأسرة
 - وسوف تقوم أيضًا بقياس:
 - وزن، طول، محيط رأس، ومحيط منتصف الجزء الأعلى من ذراع طفاك
 - العادات الغذائية أدى طفلك
 - هِ المَلْحُودُ الغَدَاتِي لطَقَالُك، واستَهلاكه للمكتلات الغَدَائية

الزيارة 6: في الشهر التاسع بعد الولادة

سنقوم بقياس:

- 4 وزنك، محيط خصرك، ونسية الدهون في جسك
 - وسوف نقوم أيضا بقياس:

4 وزن، طول، محيط رأس، ومحيط منتصف الجزء الأعلى من دراع طفك

- العادات الغذائية لدى طقلك
- المأخوذ الغذائي لطغالا، واستهلاكه المكتلات الغذائية

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الزيارة 7: في الشهر الثاني عشر بعد الولادة

سنقوم بقيلس:

- وزنك، محيط خصرك، ونسبة الدهون في جسمك،
- المأخوذ الغذائي لله، استهلاكك المكتلات الغذائية، وعاداتك الغذائية (التدخين، تناول الكحول، وممارسة النشاط البدني)

وسوف نقوم أيضا بقياس:

- وسوف تعوم عيمنا بديس: ه وزن، طول، محيط رأس، ومحيط منتصف الجزء الأعلى من ذراع طناك ما تعلم المعاند قادر الناك.
- American University of Beirut
- المأخوذ الغذائي لطفاك، واستهلاكه المكتلات الغذائية

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وسوف فقوم أيأمننا بدراأمة بيئة لثاؤل الطعابا قتى المتزال

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نموذج (1) للموافقة على الاشتراك بيحث علمي، رقم البروتوكول: NUT.FN.12



الزيارة 8: في الشهر الثامن عشر بعد الولادة

سنقوم بقياس:

وزنك محيط خصرك، ونسبة الدهون في جسمك

هِ الْمَأْخُودُ الْعَدُائِي اللهِ و إستهلاكك للمكتلات العَدَائية

وسوف نقوم أيضا بقياس:

وزن، طول، محيط رأس، ومحيط منتصف الجزء الأعلى من ذراع طفك

العادات الغذائية لدى طفلك

المأخوذ الغذاتي لطفاك، واستهلاكه للمكتلات الغذائية

وسوف نقوم أيضا بدر اسة بيئة تتاول الطعام في المنزل.

الزيارة 9: في الشهر الرابع والعشرون بعد الولادة

ه وزُفك، محيط خصر الله ونسبة الدهون في جسمك

هِ المأخودُ الغذائي الله وإستهلاكك للمكتلاتُ الغذائية

عاداتك الغذائية (التدخين، تناول الكحول، وممارسة النشاط البدني)

وسوف تقوم أيضا بقياس:

وزن، طول، محيط رأس، ومحيط منتصف الجزء الأعلى من ذراع طفك

العادات الغذائية لدى طفلك

المأخوذ الغذائي لطقاك، واستهلاكه للمكملات الغذائية

وسوف نقوم أيضا بدراسة بيئة تتاول الطعام في المنزل.

10. هل يمكن ثهذا البحث أن يضرك؟

ليس هذاك مخاطر متوقعة ناتجة عن مشار كتك في هذه الذراسة. إن مشار كتك أن تؤذي إلى أي أذى جمدي أو عاطفي. قد تزعجك بعض الأمثلة التي منطرحها عليك ويمكنك أن لا تُجبِبي عليها إذا احسمت أنها تتدخل في خصوصيتك الشخصية العاللية على الرّ غمّ من انه سيتم سحب عيثات دم مرة وأحدة في الفصل الأول من الحمل، الأ ان وتيرة وحجم الخطر الذّائج لا يتعذيان الحد الأدنى ("الحد الأدنى من الخطر يعني أن احتمال وحجم الضرر أو عدم الراحة المتوقعة في البحث ليست أكبر في حد ذاتها من ثلك التي تُواجهينها عادة في الحياة اليومية أو أثناء إجراء الفحوصات الروتينية البدنية أو النَّمية "). أن المركز الطّبي في الجامعة الأميركية في بيروتُ سوف يغطّي تكاليفُ العلاجُ في المركز العوارض الطبيّة السّابية الناجمةُ مبشّرة عن اللادويّة و او الإجراءات الطبية االّخاصةُ بهذه الدراسة البحثية، في ما عدا نلك، لن يقوم المركز الطبي بتعطية تكاليف العناية الطبية لأيّة حالة أو مُشكلة مزضية.

من المهم الملاحظة أنه في حالة وجد الباحثين نتيجة غير طبيعية بشكل ملحوظ مع واحدة من اختيار ات الدم التي لا تتم عادة كجزء من الرعاية الروتينية، سوف يَتم تنبيه الطبيب المعالج والمشاركة.

1.1. هل يمكن لهذا البحث أن يفيدك؟

لا نستطيع أن نجيكِ بأو بطَعَالِهَ إبأي خَاتِمَ الإِينَ مَا تَمَا اللَّهِ اللَّهِ اللَّهِ الدَّر اسة. بذا كنت و التقوير على المشاركة على بعد المحمد عدد الله التحويد بالمدى الله المختلف الذي الذي المتعالم الكالي وال المدن. المحدث American University

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سوف تحصلين على 15\$ عند كل من الزيارات التالية: زيارة رقم 1 و 3 و 7 و 9.

بعد الموافقة على المشاركة في هذه الدراسة خلال الزيارة الأولى، سوف تتلقى أيضا هدية واحدة (لعبة) لطظك.

وفي نهاية فترة الدراسة الممتذة على 3 منوات، واستئدا إلى النتائج التي سوف تتوصل اليها الدراسة، سنعمل على تطوير دليل التوعية المذائيّة والذي سوف يساعد على زيادة المعرفة وتعزيز التغذية الصبحية لدى كل من الأمهات والأطفال الصغار . سوف نتصل بك لتوفير نسخة من هذا الدليل.

سوف تساعدنا مشار كثك العامة في هذه الدراسة في جمع مطومات هامة عن الحالة الخذائية للنساء الحوامل في لبتان؛ فضلا عن مطومات عن الحالة الغذائية والماط النمو لدى الأطفال الصغار . سوف تساعدنا هذه المعاومات على فهم العوامل التي تزيد من مخاطر الأمراض غير المعدية في البلاد. ولذلك، متساعدتا هذه المعلومات أيضا على التخطيط للقيام بالإجراءات ذات الصلة بالنظام الغذائي الوقاية من هذه الأمراض.

12. ما الذي سيحدث للمطومات المجموعة عنك؟

سنحرص على حماية المعلومات المتعلقة بك واعتماد السرزية المطلقة. سوف تستخدم رمز للتعرف عليك في سجلانتنا بدلاً من استخدام اسمك. ومبرتم مراقبة سجلاتك وقد يتم التدقيق بها من دون إنتهاك السرية. أن نحدد هويتك في أي تقارير أو مطبوعات ناتجة عن هذا المحث.

سيئة حفظ نموذج الموافقة في خزانة مقللة في مكتب الباحث الرئيسي، بينما سيئم حفظ الإستبيانات التي ثمّ ملؤها في خزانة مقللة في مكتب مخصص لهذا البحث كما سيئة حفظ نسخ إلكترونية من البيانات والتأمين عليها بكلمة سريّة. سيتمكن بعض الأشخاص فقط من الوصول/المصول على مطوماتك وهؤلاء الأشخاص هم:

- ياحثى هذه الدراسة وأفراد فريق البحث
- معثلي مجلس مراجعة مؤسس العلوم الإجتماعية والمتلوكية، والذين يحرصون على قيام الدراسة بشكل صحيح ومن حماية حقوقك وسلامتك

نود الحصول على موافقك للإتصال بك من اجل الحصول على ملفونك الغذائي خلال الأربع وعشرين ساعة الأخيرة لحدة أياب يمكنك المشاركة في هذا البحث حتى إذا كنت لا تسمدين لنا الإتصال بك من اجل الحصول على مأخوذك الغذائي خلال الأربع وعشرين ساعة الأخيرة لعدة أيام. يرجى الإشارة إلى اختيارك بعلامة على الخط المناسب أهناه:

الاخيرة لعدة ايام	ع وعشرين ساعة	غذالي خلال الارد	لى ماخودي ا) المصبول ع	تصال ہي من اجل	اسمح لكم الإ	_
بة الأخيرة لعدة أ	ريم ۽ عثو بن بياء	الغذائي بغلال الأ	، على مأذو ذع	جل الحصول	الإنصال بي من ا	لا أسمح لكم	

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نود الحصول أيضاً على موافقتك للتومثل إلى المطومات الثالية عن طريق طبيبك:

- وزنك قبل وبعد الولادة

- نتقج اختبار فحص الجلوكوز عن طريق اللم - نتائج و لادة طفك (عمر الحمل، الوزن، الطول، ومح<u>لي Institutional Review</u> - طريقة الولادة

- مريعه الولادة - حدوث استمامتك التكال Institutional الكال

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- حدرت مضاعفات التاورالولادة الرادة مضاعفات

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	رجى الإشارة إلى اختيارك بعلامة على الخط المناسب انتاه:
عن طريق طبيبي	أسمح بالتوسئل إلى السطومات الستعاكة يالو لادة
ادة عن طريق طبيبي	لا أمسح بالتوصال إلى المعلومات المتعلقة بالولا
راسات أخرى في المستقبل. وقد يستدعي ذلك مشاركة المطومات م ان نفعل ذلك، سوف نتخلص من اي روابط بين هويتك والمعلومات	لد نستخدم يعض أو جميع المعلومات التاتجة عن هذه الدراسة في د باحثين آخرين، داخل أو خارج الجامعة الأميركية في بيروت. قبل ا المجموعة مثك.
المعلومات الخاصة يك التي ثم جمعها لمشاركتها مع باحثين أخرين	بمكانك المشاركة في هذا البحث حتى إذا كلت لا تسمحون باستخدام و اأو الإستخدامها في بحوث مستقبلية.
	يرجى الإشارة إلى اختيارك بعلامة على الخط المناسب أدناه:
يوكيميائية، اللقيامات الأنثروبولوجية، العلاات الغذائية والماخوذ ديمغراقية، الأمن الغذائي، الخ.) لمشاركتها مع بلحثين آخرين و / أو	أسمح باستخدام المعلومات التي تم جمعها على (البه الخذاتي، العادات المُتبعة كأسلوب حياة، خصائص اجتماعيّة و لإستخدامها في بحوث مستقبارة
(البيوكوموانية، القياسات الأنثر وبولوجية، العادات الغذائية والملخوذ ديمغرافية، الأمن الغذاتي، إلخ) لمشاركتها مع بلحثين أخرين و / أو	لا أممح باستخدام المعلومات التي تم جمعها على (الغذاتي، العادات المُتبعة كأسلوب حياة، خصماتص اجتماعيّة و، لاستخدامها في بحوث مستقبلية.
	13. ماذا لو كنت لا تريدين المشاركة؟
 ت لا ترغبين في المشاركة في هذه الدراسة، لديك حرية الرفض. على علاقتك مع طبيبك وفريق الرعاية الصحية في هذا المستشفى. 	رجاة أن تعرفي بأن مشاركتك في هذه الدراسة هي طوعية. إذا كند رفضك للمشاركة في هذه الدراسة أن يؤثر، بأي شكل من الأشكال،
[2] 中国大型中国的基础系统	14. ماذا لو انضمت الأن ولكن بذلت رأيك لاحدًا؟
. إذا قررت التوقف عن المشاركة، يرجى منك الاتصال بنا. سوف رك يُرجى الملاحظة إلى أنه عنما تقررين التوقف عن المشاركة، قد تم تطولها أو إلغاء الروابط بينها وبين هويتك.	بمكلك التوقف عن المشاركة في هذا البحث يأي وقت إثناء الدراسة نسألك ما إذا كنت ترغيين في مشاركتنا الأسباب الرئيسة وراء ازرام سوف تدمر جميع المعلومات وعينات الدم المتصلة بك، ما لم يكن ة
	15. ما الذي يجب أن تعرفيه أيضاً؟
- cg-r	يتم تمو يل هذا البحث من قبل الصندوق القطري لرعاية البحث العلم
بشكل طبيعي، يمكنك المشاركة في هذه الدراسة	إذًا كنت على استعداد المشاركة في هذه الدراسة، وإذا سار حملك،
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rsion Date: August 14, 2017 usent Form 1, This consent refers to recruitment strategy 1	

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16. خيارات إضافية

أثناء الدراسة، سيتم تحليل عينات الدم الخاصة بك في مستشفى الجاسعة الأميركيّة. إنا كنت تسمحين لناء نود أن لحقفظ بأي بقايا من عينات الدراسة، سيتم تحليل عينات الدراسة عينات الدراسة على المعارض على المعارض الدراسة على المعارض المعارض المعارض المعارض المعارض المعارض المعارض المعارض المعارضة الأميركية في بيروث يمكنك وكروا جزءا من هذه العينات في بيروث يمكنك عبدال المعارض المعارض المعارضة المعار

يمكنك الانضمام إلى هذه الدراسة حتى إذا كنت لا تسمحين لنا باستخدام بقايا من عيفات الدم في يحوث مقبلة و /أو امشاركانها مع باحثين أخرين. يرجى الإشارة إلى اختيارك بعلامة على الخط المناسب أدناه:

أسمح بحفظ وإستخدام بقايا من عينات الدم في بحوث مقيلة و/أو بمشاركتها مع باحثين تخرين
أسمح بتخزين بقايا من عينات الدم لكن اطلب أن يتم الاتصال بي للتصريح بإذن لاستخدام هذه العينات في بحوث مقبلا وأو بمشاركتها مع بلحثين أخرين
لا أسمح بحفظ وإستخدام بقايا من عينات الدم في بحوث مقبلة واأو لمشاركتها مع بلحثين أخرين

تود الحصول أيضاً على إننك للاتصال بك من أجل المشاركة في دراسات مستقلية. بامكانك الانضمام لهذه الدراسة حتى ولو لم تسمحي بأن تتصل بك في المستقبل. كما ويمكنك أيضا أن تبتلي رأيك في هذا الموضوع. يرجى الإشارة إلى اختيارك بعلامة على الخط المناسب أهناه:

> ____ تعم، او افق على معاودة الإتصال بي كلاء اد فض معاددة الإتصال بي

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ع للمشاركة البالغة المؤخلة	صفحة الثرة	
		امتاركة
البحث المشروح في هذا التموذج.	ت أعلاه, أوافق طوعاً على الانضمام الى	لقد قرأت وفهمت المطوم
		الاسم الكامل للمشاركة
	التاريخ التوقيت	توقيع المشاركة
		رقم الهائف
	Section 12 Control of the Section 12 of the Sect	الشخص الحاصل على ا
	. أعضاء قريق البحث} بشرح البحث بشكا للييم فهم المشاركة في البحث والحصول اصل على الموافقة	
	التاريخ التوقيت	التوقيع
		الشاه (عند الضرورة)
ومات أخرى مكاوية) بدقة للمشاركة في البحث، والتي ثبيّن أنها فهمت البحث Institutional Review Board	مات الواردة في هذه الإستمارة (وأية مط مام إليه.	أصرّح أنه ثم شرح المطو ووافلت طوعياً على الإلط
American University of Belvia		الإسم الكامل للشاهد
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صفحة التوقيع: البحوث مع الأطفال
والدارائي الدة
افق طو عاً على انضمام طقلي إلى البحث المذكور في هذه الإستمارة.
صم الكامل للوالدة إلا الدة إلا
بقيع الوالدة الإلوائد التاريخ التوقيت
شخص الحاصل على الموافقة
سرّح على التالي: قمت أنا (أو أحد أعضاء قريق البحث) بشرح البحث بشكل كامل لوالدالوالدة الطفل المشارك في البحث قمت شخصياً يتقيم فهم والداروالدة الطفل المشارك في البحث والحصول على موافقة الما الطوعية.
أسم الكامل للشخص الحاصل على الموافقة
توقع - التاريخ - التوقيت
نناه (عند الضرورة).
سرّح أنه ثم شرح المعلومات الواردة في هذه الإستمارة (وأية معلومات أخرى مكتوبة) بدقة الوالداللوالدة. ببدو أن الوالدالاوالدة قد فهمات البحث وافق اواقلت طوعيّاً على إنضام الطفل لهذا البحث.
إصم الكامل للشاهد
ِفَع الشَّاهِ التَّرْيِخُ التَّوْقِتُ التَّوْقِت
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SCREENING SHEET

Mother and Infant Nutrition Assessment (MINA) cohort study

Inclusion and Exclusion Criteria for Participants - Screening

Date	Interviewer's Name	Health Care Center
_ _ - _ - _ - _ DD - MM - YY		

Mark the number of people you contact in total in the space below (in the format of as ## II)

iviark the number of people you contact in total in the space below (In the format of as ## II)	
To include a participant in this study,	
 All inclusion criteria must be "YES", and all exclusion 	n criteria must be "NO"
Inclusion criteria	
1. Aged between 19 and 40 years at the time of	Yes
enrollment	No
2. Within the 1st trimester of pregnancy (between 0-13	Yes
weeks of gestation)	No
3. Pregnant with a singleton	Yes
	No
 Lebanese nationality or Syrian/Palestinian living in 	Yes
Lebanon for more than 5 years	No
Not planning on permanently leaving the country	Yes
during the timeframe of the study	No
Absence of chronic illness <u>preconception</u> (diabetes,	Yes
hypertension, kidney disease, cancer, and other	
chronic diseases or infections such as autoimmune	No
disorders, HIV, and hepatitis)	
Residing in Beirut (partial or full residency)	Yes
Exclusion criteria	
Carrying twins or multiple babies	Yes
	No
2. History of a chronic illness (preconception)	Yes
	No
3. History of multiple gestations (twins or triplets)	Yes
	No
 History of miscarriage (spontaneous abortion) and/or 	Yes
stillbirth	No
History of giving birth to babies with physical	Yes
malformations, mental retardations, and/or inborn	No
errors of metabolism	1
If ELIGIBLE (all inclusion criteria are YES), what are th	ne reasons for refusal to participate in the research project?
•	
•	
•	
•	
•	

Version 6: Date: 29-9-2016

STUDY TIMELINE

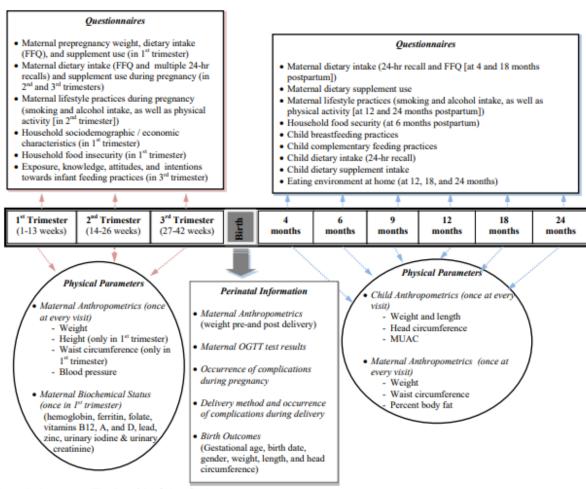


Figure 1. Assessment Timeline of the Cohort Study

APPENDIX B VISIT 1 QUESTIONNAIRE (ENGLISH)



Faculty of Agricultural and Food Sciences Department of Nutrition and Food Sciences

Mother and Child Cohort: **Towards Curbing the Epidemic of** Noncommunicable Diseases in Lebanon

VISIT 1 (1st Trimester of Pregnancy)

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VISIT 1- QUESTIONNAIRE

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Interviewer's Name:	Date (DD/MM/YYYY):/
Subject ID Number:	Day of the Week:
Health-Care Center (AUBMC / RHUH)	Interview Start Time:

TABLE OF CONTENTS	PAGE
I. Anthropometric Measurements during Pregnancy	3
II. General Information about the Current Pregnancy	3
III. Dietary Practices and Supplement Use before and during Pregnancy	4
IV. Lifestyle Practices before and during Pregnancy	6
V. Dietary Intake before Pregnancy	7
VI. Dietary Intake during Pregnancy	15
VII. Household Food Security	17
VIII. Socio-Demographic/Economic and Geographical Characteristics of he Household	19

VISIT 1- QUESTIONNAIRE

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· · · ·

1.	Weight: Kg	
2.	Height:Cm	
3.	Waist Circumference: cm	
4.	Blood Pressure (SBP/DBP):/mmHg	
G	ENERAL INFORMATION ABOUT THE CU	RRENT PREGNANCY
5.	In which gestational week are you?weeks	
	OT 183818 - 21	
6.	In which gestational week are you?weeks What was your pre-pregnancy weight?Kg Which of the following symptoms are you current apply)? 1. Nausea 2. Vomiting 3. Heartburn 4. Constipation	ly experiencing (circle all tl
6.	In which gestational week are you?weeks What was your pre-pregnancy weight?Kg Which of the following symptoms are you current apply)? 1. Nausea 2. Vomiting 3. Heartburn	

	u pregnant with your <u>first</u> child? 1. Yes (go to section III) 2. No
	tou had previous miscarriages? 1. Yes, please specify how many: 2. No
10. How m	any children do you have?
11. When v	was your last delivery (MM/YYYY)?/
12. Do you	RY PRACTICES AND SUPPLEMENT USE BEFORE AND REGNANCY have an allergy to any of the following foods (circle all that apply)?
2 3	. Wheat 2. Cow milk 3. Eggs 4. Fish
6. 7.	. Shellfish (shrimp, crab, lobster, etc.) . Corn . Peanuts
9.	Other nuts Soy products Other, please specify:
2. 3.	ny times per week did you eat breakfast <u>before getting pregnant</u> ? Everyday 3-6 times a week < 3 times a week Never
/ISIT 1- QUEST	IONNAIRE VERSION DATE: BUY 26 2013 2013

14. How man	ıy times per	week do you <u>currently</u> eat breakfast (dur	ing your 1 st trimester
or pregna	incy)?		agyon I minester
1.	Everyday		
2.	3-6 times a	week	
3.	< 3 times a	week	
4.	Never		
15. Prior to b	ecoming pr	egnant, were you taking any vitamin/mine	ral/herbal
suppleme	nts?		
1.	Yes, please	specify brand and dose/day:	
2.	No		
16. During vo	our 1 st trime	ster of pregnancy, did you continue/start (
mineral /	herbal supp	dements?	aking any vitamin /
1.	Yes please	specify brand and dose/day:	
2.	No		
17 Douber	est	ar a sec	
17. During yo	its to you?	ster of pregnancy, who prescribed the vita	min/mineral/herbal
		201 1 1 1	
1.	OBGYN N	YN physician	
	Dietitian	urse	
		0.000	
	Family me	mber	
100	Friend		
	Self		
7.	Other, plea	se specify:	
18. Is your OF	CVN nhuci	cian aware that you are taking supplemen	
pregnancy	9	cian aware that you are taking supplemen	ts during
	Yes		
	No		
2.	140		
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		frentis compression thend	
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IV. LIFESTYLE PRACTICES BEFORE AND DURING PREGNANCY

	 1 uo not smo: 	KC		you usually smok	5.50
2	. Cigarettes:	per day;	per week;_	per month	
	Cigars.	per day:	ner week	nor month	
4.	Narghili:	per day;	per week;	per month	
	6500				24
20. During v	our 1st trimest	er of pregnancy.	how many of the	following do you	
smoke?			non many or the	: ronowing do you	usually
Ι.	I do not smok	ce			
2.	Cigarettes:	per day:	per week;	per month	
10.0	Cigars:	per day:	ner week:	more mountly	
4.	Narghili:	per day;	per week;	_ per month	
	E HAROCOCCIO			per intenti	
			how many drink	s of the following	do you
1.	I do not drink Beer:	(bottles/day)	(hottles/mode)		
1. 2. 3.	I do not drink Beer;(Wine:	(bottles/day);	(bottles/week)	;(bottles/m	onth)
1. 2. 3. 4.	I do not drink Beer:(Wine: Champagne:	(bottles/day); (glasses/day); (glasses/day	(bottles/week); (glasses/week); (elasses/w	;(bottles/m	onth)
1. 2. 3. 4.	I do not drink Beer:(Wine: Champagne: _ Liquor, please	(bottles/day); (glasses/day); (glasses/day specify:	(bottles/week); (glasses/week); (glasses/w (type)		onth)
1. 2. 3. 4.	I do not drink Beer: (Wine: Champagne: Liquor, please (bo	(bottles/day); (glasses/day); (glasses/day) (glasses/day) specify: ottles or glasses/day	(bottles/week); (glasses/week); (glasses/w (type)	;(bottles/m	onth)
1. 2. 3. 4.	I do not drink Beer; (Wine: Champagne: Liquor, please (bo	(bottles/day); (glasses/day); (glasses/day); (glasses/day); specify: ttles or glasses/w	(bottles/week); (glasses/week); (glasses/w (type) yy)	;(bottles/m	onth)
1. 2. 3. 4. 5.	I do not drink Beer:(Wine:(Champagne:(bo(bo(bo(bo(bo(bo(bo	(bottles/day); (glasses/day); (glasses/day); specify: ttles or glasses/wittles or glasses/wittles or glasses/mottles	(bottles/week); (glasses/week); (glasses/w (type) uy) eek)	;(bottles/m	onth)
1. 2. 3. 4. 5.	I do not drink Beer: (Wine: Champagne: Liquor, please (bo (bot) (bot) Other, please s	(bottles/day); (glasses/day); (glasses/day); specify: sttles or glasses/dattles or glasses/wottles or glasses/mospecify:	(bottles/week); (glasses/week); (glasses/w (type) uy) eek) inth) (type)	;(bottles/m	onth)
1. 2. 3. 4. 5.	I do not drink Beer:(Wine:(Champagne:(bo(bo(bot Other, please s(bo	(bottles/day); (glasses/day); (glasses/day); specify: sttles or glasses/weitles or glasses/weitles or glasses/mospecify: ttles or glasses/da	(bottles/week); (glasses/week); (glasses/w (type) uy) eek) mith) (type)	;(bottles/m	onth)
1. 2. 3. 4. 5.	I do not drink Beer:(Wine:(Champagne:(bo(bo(bot(bot(bot(bot(bot	(bottles/day); (glasses/day); (glasses/day); specify: ottles or glasses/weitles or glasses/mospecify: ttles or glasses/dattles or glasses/dattles or glasses/weitles or glasses/weitles or glasses/weitles or glasses/weitles	(bottles/week); (glasses/week); (type) (type) eek) muth) (type) y) ek)	;(bottles/m	onth)
1. 2. 3. 4. 5.	I do not drink Beer:(Wine:(Champagne:(bo(bo(bot(bot(bot(bot(bot	(bottles/day); (glasses/day); (glasses/day); specify: sttles or glasses/weitles or glasses/weitles or glasses/mospecify: ttles or glasses/da	(bottles/week); (glasses/week); (type) (type) eek) muth) (type) y) ek)	;(bottles/m	onth)
1. 2. 3. 4. 5.	I do not drink Beer:(Wine:(Champagne:(bo(bo(bot(bot(bot(bot(bot	(bottles/day); (glasses/day); (glasses/day); specify: ottles or glasses/weitles or glasses/mospecify: ttles or glasses/dattles or glasses/dattles or glasses/weitles or glasses/weitles or glasses/weitles or glasses/weitles	(bottles/week); (glasses/week); (type) (type) eek) muth) (type) y) ek)	;(bottles/m	onth)
1. 2. 3. 4. 5.	I do not drink Beer:(Wine:(Champagne:(bo(bo(bot(bot(bot(bot(bot	(bottles/day); (glasses/day); (glasses/day); specify: ottles or glasses/weitles or glasses/mospecify: ttles or glasses/dattles or glasses/dattles or glasses/weitles or glasses/weitles or glasses/weitles or glasses/weitles	(bottles/week); (glasses/week); (type) (type) eek) muth) (type) y) ek)	;(bottles/m	onth)
1. 2. 3. 4. 5.	I do not drink Beer:(Wine:(Champagne:(bo(bo(bot(bot(bot(bot(bot	(bottles/day); (glasses/day); (glasses/day); specify: ottles or glasses/weitles or glasses/mospecify: ttles or glasses/dattles or glasses/dattles or glasses/weitles or glasses/weitles or glasses/weitles or glasses/weitles	(bottles/week); (glasses/week); (type) (type) eek) muth) (type) y) ek)	;(bottles/m	onth)

V. DIETARY INTAKE BEFORE PREGNANCY

22. Food-Frequency Questionnaire. Please think about your eating patterns during the year before you got pregnant. Please indicate your usual intake of each of the following food items per day, week, or month. Please be as precise as you can in your recall. The accuracy of the study results depends on the accuracy of your answers.

CODE	FOOD ITEM	REFERENCE PORTION	USUAL		FREQ	FREQUENCY OF CONSUMPTION	OF
-	CEREALS AND CEREAL-BASED PRODUCTS	SED PRODUCTS					
1.1	White bread	1 large Arabic loaf/ 1 medium Arabic loaf/ 1 baguette		O.D	W	M	n Never
17	Brown/whole wheat bread	I large Arabic loaf/ I medium Arabic loaf/ I baguette		Q D	W o	M	□ Never
1.3	Ka'ak products	1 finger sized		O D	M [Mo	n Never
1.4	Toast and crackers	l regular toast		Q.D	M	M	D Never
1.5	Regular breakfast cereals	Side A/ 1 small box (35 g)		Q ₀	W o	Mo	n Never
9.1.6	Bran or whole grain breakfast cereals	Side A/ I small box (35 g)		OD	M o	N o	n Never
- 2	PASTA AND OTHER CEREALS	LS		n	88	O'D	The Local
2.1	Bulgur, cooked	Side A		do:	Mo	N	n Never
27.7	Pasta/noodles, cooked	Side A		Q o	3	N C	D Newser
2.3	Rice and rice-based products	Side A		Q D	MO	N	News
3	POTATOES AND POTATO- BASED PRODUCTS	BASED PRODUCTS					200
3.1	French Fries	Side A		Q D	W.C	M	n Novoe

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13.2	Potato	1 portion, medium	1		L	1
3.3	Potato chips, regular	S/M/I has	an an	-	O M	□ Never
3.4	Potato chine light	S. M. L. Dag	O D	M o	υM	n Never
4	VEGETABLES	S/M/L bag	Q D	M o	O M	D Never
4.1	Vegetables, canned (mixed)	A spire		- 1		
4.2	Vegetables, raw	Side A	Q D		O M	D Never
4.3	Salad, green	Cida A	OD.	1	D M	□ Never
w	FRUITS	V anic	On .	M D	M	o Never
5.1	Fresh fruits	Side A/ I medium portion	Q D	W D	Mo	□ Never
5.2	Canned fruits	Side A/ I medium portion	Q o	W	Mo	D Never
5.3	Dried fruits	Side A	C	An or	1	
5.4	Fruit-based desserts (cocktails)	Side A			W D	O Never
9	FRUIT JUICES		an an	* O	OM	D Never
6.1	Fruit Juices, Canned	Side A/	0.0	W.	X	2
6.2	Fruit Juices, Fresh	Side A	1		N D	II INCVC
7	MEAT- Cured Meat		(an	M O	M o	□ Never
7.1	Cured meat, except ham (lunchcon meat, hotdog)	Side B/ Regular cured Meat slice/ Hotdog size	d o	W D	M O	O Never
7.2	Ham	Regular cured ham slice	1		1	
7.3	Meat (beef), cooked, low fat	Side B	do:	M D	W O	D Never
7.4	Meat (beef), cooked, medium - high fat	Side B	d d d	M M	W N	D Never
7.5	Meat (lamb), cooked, high fat	Side B	-	/M =		E Inches

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80	MEAT-Offals					
8.1	Organ meat (liver, heart, brain, etc.)	Side B	ПD	W o	M	□ Never
6	MEAT-Poultry					
9.1	Poultry	Leg/thigh/breast/ Side B	Q.D	W o	Mo	n Never
9.2	Poultry, breaded (nuggets, escalope)	Nuggets/ Side B	Q.D	M D	M o	n Never
10	MEAT- Eggs	THE PARTY OF THE P	HEAT TO THE			
10.1	Eggs, whole	l egg	OD	Mo	Mo	n Never
=	MEAT- Fish and Seafood					
11.1	Fish	Side B	O.D	Mo	Mo	n Never
11.2	Fish, canned with oil (tuna, sardines)	l large can/ l small can	αп		M	□ Never
11.3	Fish, canned without oil (in water)	l large can/ I small can	Q D	W o	M	□ Never
11.4	Shellfish	Shrimp: 1 medium Calamari: 1 medium Crab stick: 1 stick	Q D	W D	M	O Never
12	PULSES, NUTS AND SEEDS	THE PERSON NAMED IN COLUMN NAM	all like	No. of	Mel	THE OWNER OF THE OWNER OWNER OF THE OWNER OW
12.1	Beans, Chickpeas, Fava Beans, Lentils, Seeds	Side A	Q D /	≥ 0	Mo	□ Never
12.2	Nuts	Side A	ПD	M o	M	n Never
12.3	Falafel	I falafel piece	ОD	W o	Mo	□ Never
12.4	Olives	1 medium olive	Q D	Mo	M	n Navae

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13	MILK AND DAIRY PRODUCTS	STS				
13.1	Cheese (low fat / light/white)	1 square/triangular portion/ Side A or B	Q D	W D	O M	a Never
13.2	Cheese (high fat/yellow)	l square/triangular portion/ Side A or B	Q o	W	M	n Never
13.3	Cheese (processed, creamy)	l square/triangular portion/Side A or B	Ωū	Wo	MD	D Never
13.4	Full fat milk, milk-based beverages	Side A/ I carton of flavored milk	d D	W D	Mo	D Never
13.5	Low fat milk, milk-based beverages	Side A/ I carton of flavored milk	d a	W D	M	
4	YOGURT AND YOGURT- BASED PRODUCTS	SED PRODUCTS	-			
14.1	Labneh, regular	Side A	0.0	3	N	N.
14.2	Labneh, low fat and skim (0-2%)	Side A	d d d	M 0	W E	D Never
14.3	Yogurt, regular	Side A/ I regular avran bottle	Q _D	W o	Wo	Never
14.4	Yogurt, light	Side A/ I regular ayran bottle	GD	W o	Mo	n Never
15	PIZZAS AND PIES					
15.1	Pies, 'Manaeesh'	1 large/	Ġ	A c	1	
15.2	Pies, small (e.g.: fatayer spinach, sambousek)	1 small	Q Q	× 0	N N	D Never
15.3	Pizza	Side A or B/	Q.D	W D	Mo	Never

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	16	MIXED DISHES					
	16.1	Artichoke, eggplant, cauliflower cooked	Side A	Q D	M 0	M	n Never
	16.2	Chicory, fried with onions	Side A	OD	M	Mo	n Never
	16.3	Eggplant, zucchini, cabbage, grape leaves * stuffed with rice & meat	Side A/ I medium portion	Q ₀		M	n Never
	16.4	Stew (Jews mallow, okra, peas, spinach) *without rice	Side A	ПD	W o	M	n Never
	17	FATS AND OILS (ADDED ON BREADS)	BREADS)				
	17.1	Butter/ghee	Side A	Q D	Mo	Mo	n Never
	17.2	Mayonnaise, regular	Side A	пр	M o	M	o Never
	17.3	Olive oil	Side A	ПD	W o	Mo	n Never
	17.4	Tahini	Side A	Q.D	W o	M	D Never
- 15	17.5	Vegetable oil	Side A	ПD	M	M	o Never
	18	FATS AND OILS (USED IN FRYING)	VING)	100000000000000000000000000000000000000			
	18.1	Butter/ghec	Side A	O D	W O	M	D Never
-	18.2	Olive oil	Side A	Qυ	M □	Mo	D Never
-	18.3	Vegetable ghee	Side A	OD	W o	Mo	D Never
_	18.4	Vegetable oil	Side A	OD	M a	Mo	o Never
	19	SUGAR AND SUGAR DERIVATIVES	TIVES	THE PERSON	la l		
tstituriona 1	19.1	Sugar	Side A	O.D.	W o	Mo	o Never
merican Univ	19.2	Candy	1 small	Q D	M o	M	o Never
50	19.3	Chocolate	1 medium bar/ Side B	Q D	Mo	M	D Never
	19.4	Chocolate spread	Side A	Q.D	Mu	Me	n Newer

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Cakes and pastries Side B Arabic sweets Side B Biscuits I medium Croissant I large Side B Doughnuts I large Side B Doughnuts I medium HONEY, JAM, MOLASSES AND HALAWAH Jam Side A Crocam, regular I stick I ce cream, low fat I stick Pudding, regular I stick Pudding, low fat I medium container Pudding, low fat I medium container Pudding, low fat I medium container Side A ALCOHOLIC BEVERAGES Seer Side A Spirit drinks Spirit drinks Side A Spirit drink	20	CAKES AND PASTRIES					
Biscuits Side B	20.1	Cakes and pastries	Side B	C t	W.	1	1
Side B/ I medium Side B/ I large Side B/ I medium Side A Side A I scoop/ I stick I scoop/ I stick Side A/ I medium container Side A/ Side A/ Side A/ Side A/ I medium container Side A/ Side A/ Side A/ Side A/ I medium container Side A/ I medium container Side A/ I medium container	20.2	Arabic sweets	Side B	a de	1 10	E N	O Never
Croissant Side B/ I large Side B/ I large Side B/ I medium HONEY, JAM, MOLASSES AND HALAWAH Side A Sugar derivatives Side A I scoop/ I stick I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/ I medium container Side A/		Biscuits	Side B/	do do	8 0	W O	D Never
Doughnuts HONEY, JAM, MOLASSES AND HALAWAH Jam Sugar derivatives (molasses, halawa, honey) Ice cream, regular Ice cream, low fat Ice cream, low fa		Croissant	Side B/ 1 large	Q o	WD	M D	D Never
HONEY, JAM, MOLASSES AND HALAWAH Jam Sugar derivatives (molasses, halawa, honey) Ice cream, regular Ice cream, low fat Inedium container Pudding, regular Side A ALCOHOLIC BEVERAGES Beer Spirit drinks Side A Spirit drinks Side A		Doughnuts	Side B/ I medium	Q0	M o	O M	n Never
Side A Sugar derivatives (molasses, halawa, honey) Ice cream, regular Ice cream, low fat Inedium container Side A ALCOHOLIC BEVERAGES Beer Spirit drinks Side A Spirit drinks Side A Spirit drinks Side A		HONEY, JAM, MOLASSES	IND HALAWAH				
Sugar derivatives Side A Ice cream, regular 1 stoop/ Ice cream, low fat 1 stick Pudding, regular Side A/ Custard, mhalabiye) 1 medium container Pudding, low fat 1 medium container ALCOHOLIC BEVERAGES Beer Side A Spirit drinks Side A Spirit drinks Side A Side A Spirit drinks Side A Side A Spirit drinks Side A		Jam	Side A		-	1	
lce cream, regular Ice cream, low fat Ice cream, low fat I stick I medium container ALCOHOLIC BEVERAGES Beer Side A Spirit drinks Spirit drinks Side A Spirit drinks Side A Spirit drinks Side A Side A Side A Spirit drinks Side A		Sugar derivatives molasses, halawa, honey)	Side A	GB GB	M M	N N	D Never
Ice cream, low fat		ce cream, regular	1 scoop/ 1 stick	Q D	W D	Mo	D Never
Pudding, regular Side A/ (custard, mhalabiye) I medium container Pudding, low fat Side A/ I medium container ALCOHOLIC BEVERAGES Beer Side A Spirit drinks (c.g.Whiskey, Rum, Vodka.) Side A		ce cream, low fat	1 scoop/ 1 stick	Qu	W D	Mo	□ Never
Pudding, low fat I medium container ALCOHOLIC BEVERAGES Beer Side A Side A Spirit drinks (c.g. Whiskey, Rum, Vodka.) Side A	-	'udding, regular custard, mhalabiye)	Side A/ I medium container	Q.D	0 ₪	Mo	n Never
ALCOHOLIC BEVERAGES Beer Spirit drinks (c.g. Whiskey, Rum, Vodka.) Side A		udding, low fat	Side A/ I medium container	Q.D	W D	Mu	D Never
Side A Spirit drinks (c.g. Whiskey, Rum, Vodka.) Side A		ALCOHOLIC BEVERAGES					
Spirit drinks (e.g. Whiskey, Rum, Vodka.) Side A		eer	Side A	do.	N o	2	Now
	1	pirit drinks g. Whiskey, Rum, Vodka.)	Side A	9) N	N N	Never D
Side A		ine	Side A	Q.	Wo	Mo	November

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	Coffee instant, Nescafe,					
23.2 Tea 23.3 De-caff		Side A	Q D	W o	M o	o Never
		Side A	O.D	MO	M	n Novem
	De-caffeinated coffee or herbal tea	Side A	a D		M	9.00
23.4 Energy	Energy & sports drinks	Side A/ 1 can (330 mL)	d o	W o	M	o Never
23.5 Soda, Regular	egular	Side A/ 1 can (330 mL)	Q D	W a	M D	D Never
23.6 Diet Soda	da	Side A/ 1 can (330 mL)	OD	W o	D M	□ Never
23.7 Water		Side A/ 1 Liter	ОD	M □	Mo	n Never
24 MISCE	MISCELLANEOUS		はないのの	16		
24.1 Ketchup		Side A	O.D	W o	Mu	n Never
24.2 Mustard		Side A	Q.D	Mo	M	D Never
24.3 Zaatar (t	Zaatar (thyme & sesame)	Side A	Q.D	W o	Mo	O Never
24.4 Pickles		1 medium cucumber/ Side A	Q D	M D	M	□ Never

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23. Are there any other foods and/or be you usually eat at least once per we	everages that were not me ek?	entioned above that
 Yes, please specify: 		
(food/beverage),	(serving size),	(serving/ week
(food/beverage),	(serving size),	(serving/ week)
(food/beverage),	(serving size),	(serving/ week)
(food/beverage),	(serving size),	(serving/ week)
(food/beverage),	(serving size),	(serving/ week)
2. No		

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VI. DIETARY INTAKE DURING PREGNANCY

24. 24-Hour Dietary Recall. Please recall what you are and drank the previous day from the time you woke up until the next morning.

Time	Food eaten	-	Amount	Method of preparation
	1507			
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			Instit Americ	ntional Review Board an University of Beint 16 AUG 2013

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Time	Food eaten	Amount	Method of preparation
			action of preparation
1	1		
	1		
	1		
1	*		1
			1
	1		
	1		1
- 1			
1			
			1
- 1			
1			
1			1
1			
	1		
1.			
	1		
1	1		1

 Was yesterday a us Yes 	ual day?	
No, pleas	e specify:	
	American University	w Dound of Reine
	16 208 208	
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VII. HOUSEHOLD FOOD SECURITY

26. Household Food Insecurity Access Scale (HFIAS) Measurement Tool

NUMBER	QUESTION	RESPONSE OPTIONS
HFIAS_1	In the past 4 weeks, did you worry that your household would not have enough food?	1. No 2 VARE
HFIAS_2	How often did this happen?	Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks) Other (more than 10 times in the past 4 weeks)
HFIAS_3	In the past 4 weeks, were you or any household member not able to eat the kinds of food you preferred because of a lack of resources?	1. No 2. Yes
HFIAS_4	How often did this happen?	Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks) Other (more than 10 times in the past 4 weeks)
HFIAS_5	In the past 4 weeks, did you or any household member have to cat a limited variety of food due to a lack of resources?	1. No
HFIAS_6	How often did this happen?	
HFIAS_7	In the past 4 weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	1. No 2. Yes
merican University of	How often did this happen?	Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks) Often (more than 10 times in the past 4 weeks)

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nriA3_y	In the past 4 weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	1.4	1. No 2. Yes
HFIAS_10		i ~i .	Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks)
HFIAS_11	In the past 4 weeks, did you or any household member have to cat fewer meals in a day because there was not amount food?	م نــا د	Orien (more than 10 times in the past 4 weeks) No
HFIAS_12	HFIAS_12 How often did this happen?	4-61	Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks)
HFIAS_13	In the past 4 weeks, was there ever no food to eat of any kind in your household because of lack of recommendations of the state of the	ń – i	Often (more than 10 times in the past 4weeks) No
HFIAS_14		4-4.	Yes Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks)
HFIAS_15	In the past 4 weeks, did you or any household member go to sleep at night hungry because there was not accorded food?	ń -i e	Orien (more than 10 times in the past 4 weeks) No
IFIAS_16	HFIAS_16 How often did this happen?	4-11	Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks)
IFIAS_17	HFIAS_17 In the past 4 weeks, did you or any household member go a whole day and night without eating anything because there was not enough food?	4-4	Orten (more than 10 times in the past 4 weeks) No Yes
HFIAS_18	FIAS_18 How often did this happen? 1. Rarely (1 or 2 times in the past 4weeks) 2. Sometimes (3 to 10 times in the past 4weeks) 3. Often fraces that 10 times in the past 4weeks)	- 4	Rarely (1 or 2 times in the past 4weeks) Sometimes (3 to 10 times in the past 4weeks) Other past 4weeks)

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VIII. SOCIO-DEMOGRAPHIC/ECONOMIC AND GEOGRAPHIC CHARACTERISTICS OF THE HOUSEHOLD

27. What is	your date of birth (DD/MM/YYYY)?//_		
20 372				
28. What is	the highest educational level that y	ou have achieved?		
	No schooling			
2.	Primary school			
	Intermediate school			
	High school			
	Technical diploma			
0.	University degree Refused to answer			
/.	Refused to answer			
29. Did you :	specialize in a health-related major y, etc.) (skip if woman did <u>not</u> rece	(medicine, biology	, public health,	
degree ar	nd go to question 32)	- reminent dipi	omm or universit	,
	Yes			
2.	No			
1. 2.	d of work do you do? Housewife/homemaker (go to ques Employee, full-time	ction 32)		
3.	Employee, part-time			
4.	Self-employed, please specify:			
5.	Other, please specify:		_	
31. If you wo	rk, how soon after your delivery de	you expect to retu	rn to work?	
1.	After 49 days (~1 month and a half))	Dollar Walter	
	After 70 days (~2 months and a half	f)		
	After 3 months	· hours on the		
	Don't know	Institutions	I Review Box	
5.	Not planning to return to work	American U	niversity of the	
			AUS 2013	
		APPI	ROVER	
SIT 1- QUESTIC	ONNAIRE VERSION DATE: JULY 20		PAGE 19 OF	

32. Which area of l	Lebanon do you live in?	
1. Bein	it	
2. Mour	nt Lebanon	
3. South		
Naba	tiveh	
North	1	
6. Beka	a	
33. Are you related	to your husband of the second	
ties, etc.)?	to your husband (i.e first cousins, second cou	sins, distant family
and analys	please specify:	
2. No	nease specify.	*****
24 What is		
54. What is your nu	sband's age? years	
		112
35. What is the high	ert educational land d	
1. No sch	est educational level that your husband has a	chieved?
2. Primar	ry school	
3. Interm	ediate school	
4. High s		
5. Techni	ical diploma	
6. Univer	rsity degree	
7. Refuse	ed to answer	
36. What kind of wor	rk does your husband do?	
1. Not wo	rking	
2. Not wo	orking, but looking for a job	
3. Employ	yee, full-time	
4. Employ	yee, part-time	
5. Self-en	ployed, please specify	
6. Other, p	please specify:	
37. What is the total i	number of individuals living in your house (the	ie includes selecteres
or family member	s that frequently live with you on a semi-peri	manent basis)?
	Inestruct	
	Institution (Providence)	
	WASTISTES AND TO THE PERSON OF	
VISIT 1- QUESTIONNAIRE	VERSION DATE: JULY 26, 2013, 2013	Page 20 of 21
× .	APPROVED	

38. How many hallways, g	rooms are there in your house (this excludes the kitchen, bathrooms, arage, and open balconies)?
39. Do you and 1. 3 2. 1	
40. How many your husba	cars does your household own (this includes cars owned by yourself, nd, and any of your children)?
the woman from rentin 1. L 2. 6 3. 1 4. 1 5. 2 6. 2 7. G 8. D	monthly income of the family (L.L.) (this includes the sum of salaries of and her husband, income coming from relatives, and income coming g a house, land, or other assets)? ess than 600,000 (less than \$ 400) 600,001 – 999,999 (\$401 – \$666.9) 600,000 – 1,499,000 (\$ 667 – \$999.9) 6500,000 – 1,499,000 (\$ 1,000 - \$1,332.9) 600,000 – 2,499,000 (\$ 1333 - \$ 1,666.9) 6500,000 – 2,999,000 (\$1,667 - \$1,999.9) freater or equal to 3,000,000 (greater or equal to \$ 2,000) 600 t know/Not sure 6efused to answer
Thank you very m	such for answering the above questions.
laboratory to hav nurse to collect a	ally ask you about the date and time of when you will visit the e a routine blood test done, as I need to be with you to ask the n additional blood sample for our study.
Time:	<i></i>
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VISIT 1 QUESTIONNAIRE (ARABIC)

اِستَبِيانَ ليحث علمي، رقم البرواتوكول: NUT.FN.12



كلهة الزراعة والطوم الغذانية دانرة التغنية وطوم الغذاه

دراسة مُتابعة للأم والطَّفل: بهدف تقليل نسبة خطر الإصابة بالأمراض غير المعدية في لبنان

الزيارة 1 (الثلث الأول من الحمل)

> Institutional Review Board American University of Beleut

> > 18 AUG 200

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//(DD/MM/YYYY)	إسم البلحث:
اليوم من الأسبوع:	رقم الشخص المشارك:
وقت البدء بالعقابلة:	نوع المركز الصحي (AUBMC / RHUH)

القهرس	
القياسات الأنثروبولوجية خلال الحمل	.1
مطومات عامة حول الحمل الحالي	л
العادات الغذانية وتشاول المكملات الغذائية قبل وخلال المحمل	.111
العادات المُتَهِمَة كأسلوب هياة قبل وخلال الممل	.IV
الملقوذ الغذائي قيل الحمل	.v
المأخوذ الغذاني خلال الحمل	.vı
الأمن الغَاني للخَسرة	.vii
خصائص اجتماعيَّة وديمغرافيَّة وإقتصاديَّة وجغرافيَّة للأسرة	.vm

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القياسات الأتثروبولوجية خلال الحمل .1

- 1. الوزن: ___ كلغ
- 2. الطول: __ سنتم
- مصطالخمس: ستم
- 4. شقط الدم (الضغط الإنقباشي /الضغط الإلبساطي): ا ملم من الزنيق

ال. مطومات عامة حول الحمل الحالي

- في أي أسبوع من الحمل أنت الآن؟ ------ أسبوع
 - ما كان وزنك قبل الحمل؟ ----- كلغ
- ما هي العوارض التي تختيريها حالياً (ضع دائرة على كل ما ينطيق)؟
 - 1. 445
 - 2. كتيوء
 - عرقة في المعنة

PAGE 3 OF 21

- 4. إكتام 5. تورم (الأبدي والأرجل)
- إشتهاء بعض ألواع الطعام 7. إشتهاء أشياء ليست يطعام (لا تؤكل) (طين، ثلج، صابون وغيرها)
 - 8. كره بعض الأطعمة
 - و. نقان الثبية
 - 10. شهية زائدة
 - 21.11 احد مما سيق

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	<u>لأول:</u> ؟ إلى القسم III)	 هل أنت حامل بمولودك إ 1. نعم (إنتقل 2. لا
	قا؟ ، تحيد عدد المرات:	 هل اختیرتی اجهاضاً ساء الحه الرجا الاجا
-		10. كم عدد إولادك؟
	ردة تك (الشهر√لسلة)؟	11. متى كان تاريخ آخر وآ
	ناول المكملات الخذانية قبل وخلال الحمل	III. العادات الغذائية ودّ
كل ما يلطبق))؟	ي غير القول السوداني في الطيو مويا	1. القمح 2. حليب البقر 3. البيض 4. الممك 5. أمار اليحر (6. الأرة 7 اصتة، عمد ال
	كنت تتناولين وجبة الفطور فيل الحم <u>ل</u> ؟	13. كم عدد العرات الذي 1. كل يوم
	F mild.	
	Act to the same of	H3/H/⊞ 3
(i)	oscileari aixersity of Beirut	د. سان د مر 4. ابدا
VISIT 1- QUESTIONNAIRE	VERSION DATE:	
- Association and a	VERSION DATES JULY 26, 2013	PAGE 4 0# 21

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ر1. كم عدد العرات التي تتفاولين وجهة الفطور <u>حاليًا</u> (خلال الثلث الأول من حملك)؟
1. كان يوم
2. 3-6 مرات في الأسبوع
3 اقل من 3 مرأت في الأستوع
4. ابدا
155.330
وو. قبل فترة المصل، هل كنت تتشولين أي من المكملات الخانية من فيتمينات أو معادن أو أعشاب طبيًّا
1. نعم، عددي النوع والكمايَّة في البوم:
y .2
200 A 200 E200 12 F
 خلال الثالث الأول من حملك، على بدأت أو تابعت تفاول المكملات الطَّاليَّة من فيتاميذات أو معانن أو
اعشب طبية؟
1. نعبه ، حندي النوع والكماقية في اليوم:
У ,2
17. خلال الثلث الأول من حملك، من وصف لك هذه المكملات الغذائية؟
17. <u>خلال الثلث الأول من حملت.</u> من وصف على هذه المحمدات القالية: 1. طبيلك النسائي
2. ممرضة طبيبك الاسائي 2. ممرضة طبيبك الاسائي
2. اخصائية الثلاثية 3. اخصائية الثلاثية
4. فرد من العائلة
و. صديقة
6. اثا ينفسي
7. غور، مندي:
18. هل طبيبك التسائي على علم يأتك تتناولين المكملات الغائبية خلال الحمل؟
1. ئم
У .2
(0.04)

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العادات المتبعة كأسلوب حياة قبل وخلال الحمل

Sec. 15 150	
	ú
	3

				يكنين
_ في الشير في الشير في الشير	_ في الأسبوع، _ في الأسبوع، في الأسبوع،	، التائية كلت لتخفين؟ في اليوم، في اليوم، في اليوم،	ر العمل، كم من الأصناة 1. لا ادخن 2. سجائر: 3. سيجار: 4. الترجيلة:	<u>قل</u> .19
في الشهر في الشهر في الشهر في الشهر	ة تشغلين؟ _ في الأستوع، في الأستوع، في الأستوع،	ي، كم من الأصناف الذليا في اليوم، في اليوب في اليوب في اليوب	<u>من فشت الأول من حملتا</u> 1. لا انخن 2. سجائز: 3. سجائز: 4. الارجبلة:	.20 <u>غاد</u>
(قنينة / الشهر) (كأس / الشهر) (كأس / الشهر)	_ (قنينة / الأسورخ)، _ (كاس / الأسيوع)، _ (كاس / الأسيوع)، _ (المسيوع)، (المسيوع) وع)	_ (فلينة / اليوم)، _ (كاس / اليوم)، _ (كاس / اليوم)، لازة، ملندي: إقنينة أو كاس/ اليوم) (قنينة أو كاس/ الأمبوع) (قنينة أو كأس/ الأمبوع)	ينخ الثلث الأول من هم 1. لا اشرب الك 2. شيرة: 3. اشيدة: 4. شابباليا: 5. المصرر المرة	ناول الكمو 21. <u>خ</u>

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بستييان ليحث طفي، رقم البروتوكول: NUT.FN.12

CODE	-	2	2	13	7	1.5	1.6	2	2.1	22
الظمام	العبوب والمتنجان المركزة طي العبوب	at lues	خيز لسرا فسة كاملة	ملترجات الكمك	نوست وكم الكور	هيوب الفطور المادية	هوب الطور المستوحة من التخلة أو الموب الكفلة	المغارونة والعبوب الأغراق	of the sales	distant therein See
مثال عن هجم العصنة		ر عيف هزر حرين گيير/ رخيف هنز حرين وسط/ هنز فرنجي (baguette)	ر شهد خز حربی کند/ رغیف خز حربی رسد/ خز فرنجی (Suguetto)	Salt yang Want	ئرست رسط	Side A/ Side A/	Side AV (4.35 £ mode, 4.)		Side A	Side A
الحصنة الإعتيادية وغيرة الإستهائك										
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إستييل ليحث ظمي، رقم البروتوكيل: NUT.FN.12

2.3	3	3.1	3.2	3.3	3.4	-	4.1	4.2	4.3		5.1	5.2	6.4	2 5		6.1	6.2	-	7.1	7.2
الأرز والمنتجك المرتكزة طي الأرز	اليفاطا ومنتجانها	CALL CALL	LIMITA.	رقتق البطاطاء ملاي	رفاق البطاطاء لايت	CALL.	Ather sales (A. A.)	dated . table	alali, seed to	ales,	اللكية المازجة	(ななよう はんむ)	Line, hardin	「大きになっている	Sandy (Miller)	حسائر اللاكية المقية	مصدار للاكهاد المازجة	اللحوم - اللحوم الباردة والمحابة	لمرم بال دة يائستثناء تقم الخازين (مرائيلة - gobood)	Los sign - maH
Side A		Side A.	حمثة والحثة ومط	SM/L S/M/L	S/M/L DA	San	Side A	Side A	Side A		Side A	Side A	Side A	Side A	THE STREET STREET	Side A/	Side A		Side BV hear, flag, light figured hearding was	هجم للمرم البارية الوسط
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إسقوان ئيمث طمي، رقم البروي كوليد NUT.FN.12

7.3	7.4	7.5	*	8.1	6	9.1	9.2	10	10.1	11	11.1	11.2	11.3	= 4	12	12.1
لم (يل) ملوع، قل العون	لمم (بقر)، مطيوع، مخال/خص الدهون	لمم (طم)، مطورج، غني بالشعون	اللحوم - لحوم الأعضاء	Laga Wasials	الموم - النواجن	دوليون، ذات لمم	در اون، مثلة بالطمين أو الكمك (agoles - escalope)	اللحوم - البيض	ment State	اللحوم - الأسماق وتمار البحر	No.	الأسماق المطية بالأريت (توية - سرفان)	الأسمال المقابة من غير زيت (معاب	مار قبر	پلول، مكسّرات، ويڌور	فلصولياء هتمن فرآء حاس، بأور
Side B	Side B	Side B		Side B		Side B	Nuggets per Side B		بهضة ولحدة		Side B	11.25 Apr. 1/ 11.25 maning, 2	سکة کير ام سکة سمير ة	Egines I good Stables I good School I boung		Side A
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يىشىل ئېچى خلىي، رقم قىروتۇنگىڭ: NUT.FN.12

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VENSION DATE: JULY 26, 2013

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استهول ليحث طعي، رقم البرونوكول: NUT.FN.12

16	16.1	16.2	16.3	16.4	11	17.1	17.2	17.3	17.4	17.5	18	18.1	18.2	18.3	18.4	19	161	19.2	19.2	19.3
Republic	الرحس شوكي، باللجال، قرائيط مطوع	هلدياه مقاية مع الرصان	يائليمان، كرسي، طويف، ورق هاب المحشي بالأرز والمم	يخدة (ملو علاد يامياه بالرلاد، مجالع) * دون رز	الدهون والزيون (التحاقة إلى الغزل السلطات، الخ)	: calloant	algist, also	545 5450	Ladi	ز چان نباکی	الداون والزيوت (المستخدمة للقي)	(july mart)	くいさくない	سعن نياتي	Colt of the	link catifics	- N	428	Ledy	کرپیدا شوکولا (chocolate spread)
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بىتىيان ئېمت خىمى، رقم قىرونوكول: NUT.FN.12

30	20.1	20.2	203	20.4	20.5	31	21.1	212	21.3	21.4	21.5	2	21.6	55	22.1	22.2	27.3
الكيكات والحاويات	44	本方 大流	and the same of th	Agenti	كمال الدرتش	Alle services carried	3.7	مدهد المكر (سين ملاوة عمل)	برظة، عاني	Agilit Shift Shamp	برداغ، مادي	(Aut to 144)	The state of the s	and the land of	*:	المشروبات الكمولية أن هير البيوة. بلمثلتاء البيرة (ريسكي، زيء الونكا)	3
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23	13.	23.2	23,3	23.4	23.5	23.6	23.7	24	24.1	24.2	24.3	23.4
المشوريات القير كحوابية	گهرة سريمة التحضير ، نسكاتيا» قهرة تركية	عاني	کیو د خالیة من الکافین او شای بالا همابان هور ات	مشروب الطاقة أو الرياضة	مشرويات خازية	شروبات خارية دايت خانية جن الشكر	3	المشوريات القبر كحولية	Miles	400	L'all quand	Amo
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23. على هذاك أي أطعمة أو مشروبات تتناوليلها عادة وثم تأثي على ذكرها؟ 1. نعم، حددي

ψ γ ·	-1
(المتعام/الشراب) (حجم الوجية) (عند الوجيات أسبرعيا)	
(الطعام الثير أب) (حجم الرجية) (عدد الرجيات أسير عيا)	
(الطعام/الشراب) (حجم الرجية) (حد الرجبات أسيرعيا)	
(الطعار/الشراب) (حجم الوجبة) (عند الوجبات أسبوعياً)	
(الطعام/الشراب) (حجم الرجبة) (عند الوجبات أسيرعباً)	
Y .	2
	(الطعام/الشراب) (حجم الوجية) (عدد الوجيات أحبرعوًا)

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VI. المأخوذ الغذاني خلال الحمل

24. المأخوذ الغذائي خلال الأربع وعشرين ساعة الأخيرة. ترجو ملك أن تتذكري ما تناولتِه من طعام أو شراب في الأمس منذ نهوضك في الصجاح وحتى اليوم التقي.

, seine	طريقة الا	الكبرة	الطعام الذي تناولته	الوقت
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		ستبيان ليحث علمي، رقم ال		
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		عديا؟	2. هل كان الأمس يوماً 1. تعم	
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IV. الأمن الغذائي للأسرة

26
100
3
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3
3
3
-3

الرام ا	HFIAS 1	HFTAS_2	HFIAS 3	HFIAS 4	HFIAS_5	HFIAS_6	HFIAS_7	HFTAS_8
السوال	في الأسلين الأربعة السابلة، هل اللقت بأن منز لك لا يحقر على الطعام الكافر ؟	AFIAS_2 AFIAS_2	في الأسابيع الأربعة السابقة، على لنت أو أحد أقراد الأسرة ثم يتمكن من تقابل أبو أم الأطبعية المتضلة لتبه لحم وجود الموارد الكافية؟	كم مرة حدث ذلك؟	في الأسابيع الأربعة السابقة، هل أنت أو أحد أقراد الأمرة وجب خابه تتاول أنواع محتودة من الطعام أحدم وجود الموارد؟	كم مرة هنث ذالكأ	في الأسليم الأريمة المايلة، في الت أو أحد الرك الأسرة وجب طية. تقول فرع من الطعام لم ركن يريد تقوله لعدم وجود الموارد الحصول. على أنه أخ لمو ي من الطعام؟	كم مرة هنث ذلك!
غيارات الاجوية	¥-1.	 الموال (قرة أو مراقل في الأسابيع الأربعة السابقة) أحيانا (3 إلى 10 مرات في الأسليم الأربعة السابقة) خالها (أكثر من 10 مرات في الإنسابيع الأربعة السابقة) 	N-1 2-cm	1- نادرا (مرة أو مرتين في الأسابيع الأربعة السابقة) 2- أميانا (3 إلى 10 مرات في الأسابيع الأربعة السابقة) 3- عاليا (أكثر من 10 مرات في الأسابيع الأربعة السابقة)	Y-1 2-Lin	1- ناتر ؟ (مرة أو مرتين في الأسليق الأريمة السابلة) 2- أهوانا (3 إلى 10 مرات في الأسابيق الأريمة السابلة) 3- عالماً (أكثر من 10 مرات في الأسابلق الأريمة السابلة)	Y-1	 ادر اور او مرتبن في الأسابيع الأربعة السابئة) اخياتا (3 إلى 10 مرات في الأسابيع الأربعة السابئة) عالماً (أكثر من 10 مرات في الأسابيع الأربعة السابئة)

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HFIAS_14 HFIAS_16 HFIAS_17 HFIAS_17	### APTAS_14 كم مرة حست اللك/ هي الأسابيع الأريمة السابقة، هل الت أو لحد أفراد الأسرة تعب إلى اللوم الله المراة حست اللك/ هي الأسابيع الأريمة السابقة، هل الت أو لحد أفراد الأسرة بقي 24 ساعة من الأسابيع الأريمة السابقة، هل الت أو أحد أفراد الأسرة بقي 24 ساعة ####################################	2. مازی (اگفر من 10 مرات آنی الاساس الاریمهٔ السابقاً) 2. مم 2. مم 3. امیدا (مرد او مراین فی الاساس الاریمهٔ السابقاً) 3. امیدا (اگفر من 10 مرات فی الاساس الاریمهٔ السابقاً) 4. مم 4. مرا (مرد او مراین فی الاساس الاریمهٔ السابقاً) 5. مم 5. میدا (مرد او مراین فی الاساس الاریمهٔ السابقاً) 5. میدا (مرد او مراین فی الاساس الاریمهٔ السابقاً) 5. میدا (کفر من 10 مرات فی الاساس الاریمهٔ السابقاً)
HFIAS_14	April Species and the 14	1- مَكُورُ (مِرةُ او مِرافِقُ مِن السَّمِينَ الرَّيمَةُ السَّمِينَ } 2- أهيلُكُ (ق إلى 20 مراتُ في الأسامِينَ الأربعةُ السَّمِيةُ) 3- عَلَيْ (أَكُمُّرُ مِنَ 10 مراتُ في الأسامِينِ الأربعةُ السَّامِيّةُ
HFIAS_13	في الأسابيق الأربعة السابقة، هل، في أي وقت، لم يتواجد أي نرع من الطماء في المنزل لحم وجود الموارد للحصول على الطماع؟	Y-1
HFTAS_12	21 AFTAS المثلثة	1- نكوراً (مرة او مرتين في الأسطيع الاريمة السابقة) 2- أهوكا (3 إلى 10 مرك في الأسابيع الأريمة السابقة) 3- طلياً (لكثر من 10 مرات في الأسابيع الأريمة السابقة)
HFIAS_11	في الأسابين الأربعة السابقة، هل الت أو أحد أفراد الأسراء وجب عليه تقال ، حداث أقل في البرم لعدم وجود كنية كالية من الطعام؟	y-1
HFIAS_10	Andiacidht HFIAS_10	 ناتر ا (مرة لو مرتين في الأسابق الاربعة السابقة) لعبات (3 إلى إ1) مرف في الأسابق الأربعة السابقة) مقال (كثر من 10 مرات في الأسابق الأربعة السابقة)
HFIAS 9	في الأسابيق الأربعة السابقة، هل أثنت أو أحد أفراد الأسراء وجهد طبه و الأسابق من المالية لحد وجود تكنية كاقبة من الطمابة	Y-1

REBINING Costs, Januaria, Arm Teleschik, and Posts Michael Williams Program from Profess, Some Jones (MYSQ) do distinguant of Final Assass Sediment Goods, vo. 1.
Final and Marchine Sediment Program Profess, Washington, DC - USASD.

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IIIV. الخصائص الديمغرافية والإجتماعية والإقتصادية والجغرافية للأمرة

	27. ما هو تاريخ ميلانك (اليوم/الشهر/السنة)؟
	28. ما هو أعلى مستوى من التحصيل الطمي الذي وصلت إليه؟
	1. لم النَّحق بالمدرسة
	2 المرحلة الإبتدائية
	3 المرحلة المتوسطة
2.0	
	 دیلوم تعلیم تقابی/فایی
	6. شهادة جاسعية
	7. رفضت الإجابة
ة، علم الصيدلة أو غيرها) (التقل إلى الجامعة)؟	29. هل تخصصت في مجال الصحة (الطب، علوم الأحياء، الصحة العام السوال 32 إذا لم تحصل المرأة على ديلوم تطيم تقني/فتي أو شهادة
******	1. نعم
	У .2
	30. ما نوع العمل الذي تقومين به؟
	 رية منزل (إنكال إلى السؤال 32)
	 موظفة بدوام كامل
	 موظفة بدوام جزئي
	4. مىلحبة عمل خاصريه هددي:
	5. غير، هدي:
	31. إذا كنت تعلين، متى تتوقعين إستنتاف دوام العل بعد الولادة؟
	1. بعد 49 بوماً (شهر ونصف تاريباً)
	2. بعد 70 يوماً (شهرين ونصف تقريبا)
	 بعد ثلاث آشهر
	4. لا أطم
	5. لا أحترم استثناف العمل
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	32. في اي منطقه/محافظه في نيدان نقصين:
	1. سروت
	2. حيل لبنان
	ق الجارب
	هُ. الليطية
	ه. ميسو 5. الثمال
	6, البقاع
24.221	the same of the sa
ي، افارپ من مجون اسمي، سب عرب	 33. هل هنك أي صلة قرابة بينك وبين زوجك (أقارب من الجيل الأوا
	الإنبي
	. بنم
	35 2
	22 .2
	34_ ما هو طُمر زوچك ٢ سنة
5	35. ما هو أعلى مسلوى من التحصيلِ الطمي الذي وصل إليه زوجك
	1. لم يذهب إلى المدرسة
	1. مرسب بي 2. المرحلة الإبتدائية
	7 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2
	 الحرحلة المتوسطة
	4. المرحلة الثانوية
	 دبلوم تعایم تقتی/فنی
	6. شهادة جامعية
	7. رفضت الإجابة
	36. ما توع العمل الذي يقوم به زوجك ؟
	36. ما يوع العن الدي يعوم به روبيت .
***	L Y pub
	 لا يعمل، ولكن بيحث عن عمل
	 موظف بدوام كامل
	4. موظف بدوام جزائي
	5 مىلىپ مىل خاص، خدى:
	عبر ذلك، حندين.
بلق أن أقرار الملتلة الذين يسكنون محك	37. ما هو عدد الاشخاص الذين يمكنون في متزلكم (يما في ثلث ا
	37. ما هو عدد الاشخاص الدين يستفون في متربتم ويف مي ست
	پشکل جزائی)؟
	Institute of the same of
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server v. Grieblin waktike	VERSION DATE: JULY 26, 2013 PAGE 20 OF 21
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ت والكراج والشرفات المفتوحة)؟	38. كم عدد الغرف في منزلكم (ياستثناء المطبخ والحمامات والعمرا
	39, هل تمثلكون قت والو زوجك المنزل الذي تسكنون قيه؟ 1. نعم 2. نعم
	У .2
وسيارة زوجك او إي من سيارات	40. كم عدد السيارات التي تمتلكونها؟ (بما في ذلك سيارتك الخاصة أولائكم)؟
According to the control of the control	
، مجموع رواتب المراة وزوجها ر غيرها من مصادر الدخل)؟	41. ما هو المشخول الشهري للعائلة (بالثيرة الثبتائية) (بما في ذلك والمناخيل التي ترد إلى المنزل عن طريق الاقارب أو الأرض أو
	1. أقل من 600,000 (أقل من 400\$)
22	(\$ 666.9 - 401) 999,999 - 600,001 .2
(\$	999.9 - 667) 1,499,000 - 1,000,000 .3
	32.9 - 1,000) 1,999,000 - 1,500,000 .4
	66.9 - 1,333) 2,499,000 - 2,000,000 .5
(\$1,	6. 2,500,000 – 2,500,000 (1,667 – 999 7. 3,000,000 أو أكثر (2,000 \$ أو أكثر)
	7. 3,000,000 و اهر (2,000,2 و اسر) 8. لا اطر/غير ملكدة
	و. رفضت الإجابة
	**
	شكراً لإجابتك على هذه الأسئلة.
اب فيه إلى مختير المستشفى ب من المعرضة سحب عيَّة دم	اريد أن أسألك الأن عن القاريخ والوقت الذي توثين الذه الإجراء فحوصات الدم، لأنني أود أن أكون متواجدة الأطا إضافية لهدف هذه الدراسة.
	القاريخ://
	الوقت::
قيت تهاية الإستمارة:	Institutional Review Board
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VISIT 3 QUESTIONNAIRE (ENGLISH)

RESEARCH QUESTIONNAIRE; PROTOCOL NUMBER, NUT. FN.12



Faculty of Agricultural and Food Sciences Department of Nutrition and Food Sciences

Mother and Child Cohort: Towards Curbing the Epidemic of Noncommunicable Diseases in Lebanon

VISIT 3 (3rd Trimester of Pregnancy)

Institutional Person Penal American University of Report

VISIT 3- QUESTIONNAIRE

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Interviewer's Name:	Date (DD/MM/YYYY): / /
Subject ID Number:	Day of the Week:
Health-Care Center (AUBMC / RHUH)	Interview Start Time:

TABLE OF CONTENTS	PAGE
I. Anthropometric Measurements during Pregnancy	3
II. General Information about the Current Pregnancy	3
III. Dietary Practices and Supplement Use during Pregnancy	4
IV. Lifestyle Practices during Pregnancy	4
V. Dietary Intake during Pregnancy	5
VI. Maternal Exposure, Knowledge, Attitudes, and Intentions Regarding Infant Feeding Practices	14

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I.	ANTHROPOMETRIC	MEASUREMENTS	DURING	PREGNANCY
-	THE PERSON OF THE PERSON	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT	TO CONTINUE	LINEAGIAMIAC I

- 1. Weight: _____ Kg
- 2. Blood Pressure (SBP/DBP): ___/ mmHg

II. GENERAL INFORMATION ABOUT THE CURRENT PREGNANCY

- 3. In which gestational week are you? _____weeks
- 4. Which of the following symptoms are you currently experiencing (circle all that apply)?
 - Namser
 - 2. Vomiting
 - 3. Hearthurn
 - 4. Constipation
 - 5. Edema (swelling of hands or feet)
 - 6. Food cravings
 - 7. Non-food cravings (clay, ice, soap, etc.)
 - 8. Food aversions
 - 9. Loss of appetite
 - 10. Increase in appetite
 - 11. None of the above

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III. DIETARY PRACTICES AND SUPPLEMENT USE DURING PREGNANCY

5.	How many times per week do you <u>currently</u> eat breakfast (during your 3 rd	ı
	trimester of pregnancy)?	
	1 Exercidar	

- 2. 3-6 times a week
- 3. < 3 times a week
- 4. Never

6,	During your 3rd trimester of pregnancy,	did you continue/start taking any vitamin	,
	mineral / herbal supplements?	, common start taking any vitamin	f

- 1. Yes, please specify brand and dose/day:
 - 2. No

IV. LIFESTYLE PRACTICES DURING PREGNANCY

Smoking

smoke?	er of pregnance	y, how many of th	e following do you usus	Шу
1. I do not smok	0			
Cigarettes:	per day;	per week;	per month	
3. Cigars:	per day;	_ per week;	per month	
4. Narghili:	ner dage	more manades		

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a. 2

V. DIETARY INTAKE DURING PREGNANCY

 Food-Frequency Questionnaire. Please think about your eating patterns during your 3rd trimester. Please indicate your usual intake of each of the following food items per day, week, or month. Please be as precise as you can in your recall. The accuracy of the study results depends on the accuracy of your answers.

CODE	E FOOD ITEM	REFERENCE PORTION	PORTION	-	CONS	FREQUENCY OF CONSUMPTION	5 S
-	CEREALS AND CEREAL-BASED PRODUCTS	ASED PRODUCTS					
17	White bread	1 large Arabic loaf/ 1 medium Arabic loaf/ 1 baguette		Q.D	Wo do	a M a Never	
12	Brown/whole wheat bread	1 large Arabie loaff 1 medium Arabie loaff 1 baguette		Q.D	9 0	Mu	n Never
2	Ka'ak products	1 finger sized		QD	MΠ	Mu	D Never
1.4	Toast and crackers	I regular toust		Q D	MΠ	Ma	D Never
21	Regular breakfast cereals	Side A/ 1 small box (35 g)		g o	W u	N D	o Never
97 Revi	Bran or whole grain breakfast cereals	Side A/ 1 small box (35 g)		Q.D	W o	M D	D Never
2	PASTA AND OTHER CEREALS			0.0	5	-	
2.1	Bulgur, cooked	Side A		Q II	W.O.	Ma	n Never
13	Pasta/noodles, cooked	Side A		O D	MO	Ma	D Never
2.3	Rice and rice-based products	Side A		Q o	MO	D M	n Never
en.	POTATOES AND POTATO- BASED PRODUCTS	BASED PRODUCTS					
3,1	French Fries	Side A		Qo.	W a	DM DNever	0

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2	Potato	1 portion, medium	G c	A C	18.	- 4
3.3	Potato chips, regular	S/M/Lhas		1	N C	D Never
3,4	Potato chine, lighe	0.000	an	* 0	M O	D Newer
4	VEGETARIES	S/M/F pag	OD	M D	D.M.	n Never
7	Vegetables, canned (mixed)	4 -55				
4.2	Vegetables, raw	Side A	Q D		Mu	O Never
4.3	Salad orners	Side A	Qu		D M	a Never
	FRUITS	SideA	Qu.	%	Mu	D Never
-	Fresh fruits	Side A/ I medium portion	d D	W	Mo	n Never
3.2	Canned fruits	Side A/ I medium portion	Q.D	W D	M	n Never
2	Dried fruits	Side A	g	Wa	Ma	Manage
5.4	Fruit-based desserts (cocktails)	Side A	2 1		NO.	D Never
9	FRUIT JUICES		an a	8	M I	D Never
6.1	Fruit Juices, Canned	Side A/ I regular (240 m.l.)	Q.D	30	Mo	o Never
6.2	Fruit Juices, Fresh	Side A	0.0	191	1	
	MEAT- Cured Meat		200	2	E 0	D Never
17	Cured meat, except ham (luncheon meat, hotdog)	Side BV Regular cared Meat slice/ Hotdos size	Q.D	≱	Mo	o Never
7.2	Ham	Regular cured ham elico	9		1	
7.3	Meat (beaf), cooked, low fat	Side R	300		D M	D Never
7.4	Meat (beef), cooked, medium - high fat	Side B	g g	M M	Mo Mo	D Never
7.5	Meat (lamb), cooked, high fat	Side B	Q.	me		

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90	MEAT. Offish					
	Organ meat (liver, heart, brain, etc.)	Side B	Q D	W D	Mu	n Never
6	MEAT- Poultry					
9.1	Poultry	Leg/thigh/breast/ Side B	QD	Μ□	M o	n Never
9.2	Poultry, breaded (nuggets, escalope)	Nuggets/ Side B	go	W o	Mo	n Never
10	MEAT- Eggs		OHITE	1		
10.1	Eggs, whole	1 egg	Qu	Mo	MD	D Never
=	MEAT- Fish and Seafood					
11.1	Fish	Side B	OD	M o	Mu	n Never
11.2	Fish, canned with oil (tuna, sardines)	1 large can/ 1 small can	α¤		M O	n Never
11.3	Fish, canned without oil (in water)	1 large can/ 1 small can	αp	WI	M	O Never
11.4	Shellfish	Shrimp: 1 medium Calamari: 1 medium Crab stick: 1 stick	Q o	Μū	Mo	n Never
17	PULSES, NUTS AND SEEDS		THE STREET	8	i	1
171	Beans, Chickpeas, Fava Beans, Lentils, Seeds	Side A	Q D.	No.	Ma	D Never
12.2	Nuts	Side A	Qo	M O	Mu	n Never
12.3	Falafel	I falafel piece	Q D	Mα	Ma	n Never
12.4	Olives	1 medium olive	O.D.	Mu	Mo	O Never

brooff walvast teneductions makes to variational necleanity this stay \$1 PAGE 7 or 20

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	13	MILK AND DAIRY PRODUCTS	CTS			l	
	13.1	Cheese (low fat / light/white)	1 square/triangular poetion/ Side A or B	Q D	W D	Mu	n Newer
	13.2	Cheese (high fat/yellow)	I square/triangular portion/ Side A or B	d D	W	Mo	□ Never
	13.3	Cheese (processed, creamy)	I square/triangular portion/Side A or B	Qα	W o	Mu	D Never
	13.4	Full fat milk, milk-based beverages	Side A/ Learton of flavored milk	do.	W u	N O	n Never
	13.5	Low fat milk, milk-based beverages	Side A/ I carton of flavored milk	ФD	M 0	N D	D Never
	41	YOGURT AND YOGURT. BASED PRODUCTS	SED PRODUCTS				
	14.1	Labneh, regular	Side A	Q0	Mπ	Mo	o Never
	14.2	Labrich, low fat and skim (0-236)	Side A	a.D	Wo	Mu	a Never
In	14.3	Yogurt, regular	Side A/ 1 regular ayran bottle	d D	W o	MD	o Never
1,967.75	14.4	Yogurt, light	Side A/ I regular ayran bottle	d D	W o	Mo	o Never
15	15	PIZZAS AND PIES					
wer	115.1	Pies, 'Manaeesh'	1 large/	do.	Wo	No	r Nevons
DA TIR		Pies, small (e.g.: fatayer spinach, sumbousek)	I small	a D	3	M	D Never
11000	18.3	Pizza	Side A or B/ 1 small bouchee	QO	M D	Mu	n Never

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· . V ..

91	MIXED DISHES					
16.1	Artichoke, eggplant, castiflower cooked	Side A	do.	Mα	No.	O Never
16.2	Chicory, fried with onions	SideA	OO	W o	Mo	o Never
16.3	Eggplant, zuschini, cabbage, grape leaves * stuffed with rice & meat	Side A/ 1 medium portion	ďρ	W a	M	n Never
16.4	Stew (Jews mallow, okra, peas, spinach) *without rice	Side A	пр	. □	N	D Newer
17	FATS AND OILS (ADDED ON BREADS)	BREADS)				
17.1	Butter/ghee	Side A	ПD	W.O	Mu	D Never
17.2	Mayonnaise, regular	Side A	Qu	No.	Mu	D Nevar
17.3	Olive oil	Side A	QO	W a	Mu	a Never
17.4	Tahini	Side A	QQ	M o	M o	D Never
17.5	Vegetable oil	Side A	OD	W a	MD	a Never
18	FATS AND OILS (USED IN FRYING)	VING)				
18.1	Butten/ghee	Side A	Qo	Mα	Mo	n Never
18.2	Olive oil	Side A	Qo	Mα	Ma	o Never
18.3	Vegetable ghee	Side A	Q o	W a	n M	O Never
18.4	Vegetable oil	Side A	Q D	W o	D.M.	D Never
61	SUGAR AND SUGAR DERIVATIVES	TIVES	end or			
19.1	Sugar	Side A.	Q0	W o	Mu	D Never
19.2	Candy	1 small	Qu	MO	Mu	n Never
19.3	Chocolate	1 medium bar/ Side B	QD	W o	Ma	D Never
19.4	Chocolate spread	Side A	Q.D	M o	D.M.	n Never

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50	CAKES AND PASTRIES					
20.1	Cakes and pastries	Side B	0.0	1	1	1
20.2	Arabic sweets	Side B	000		NO NO	D Never
20.3	Biscuits	Side B/	QD QD	0	N N	D Never
20.4	Croissant	Side B/	Q0	1	Mo	o Never
20.5	Doughauts	Side B/	Q.D	Wo	Mo	T News
77	HONEY, JAM, MOLASSES AND HALAWAH	ND HALAWAH			100	- Carre
21.1	Jam	Side A	-	1		
21.2	Sugar derivatives (molasses, halawa, honey)	Side A	QB QB	≱ 0	M D	O Never
21.3	Joe cream, regular	1 scoop/ 1 stick	Qo	Wo	Mo	n Never
21.4	Ice cream, low fat	1 scoop/ 1 stick	Q.D	WO	Mo	D Never
21.5	Pudding, regular (custard, mhalabiye)	Side A/	Q.D	W D	MD	O Never
21.6	Pudding, low fat	Side A/ I medium coetainer	Q.D	W a	Mo	D Never
22	ALCOHOLIC BEVERAGES					
22.1	Beer	Side A	deb	3	70	Men
22.2	Spirit drinks (e.g. Whiskey, Rum, Vodka.)	Side A	Q0	*	N N	D Never
22.3	Wine	Side A	000	9	No	

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23	NON-ALCOHOLIC BEVERAGES	ES				
23.1	Coffee instant, Nescafe, Turkish,	Side A.	OD	W	Mu	n Never
23.2	Tea	Side A	OD	W II	Mo	O Never
23.3	De-caffeinated coffee or herbal tea	Side A	d n		N o	3.7
23.4	Energy & sports drinks	Side A/ 1 can (330 mL)	d _D	W a	o M	D Never
23.5	Soda, Regular	Side A/ I can (330 mL)	d n	W o	M	D Newer
23.6	Diet Soda	Side A/ I can (330 mL)	Q.D	W o	Mu	n Never
23.7	Water	Side A/ 1 Liter	Q D	W o	Mo	n Never
24	MISCELLANEOUS					
24.1	Ketchup	Side A	Q.D	W o	Mo	a Never
24.2	Mustaed	SideA	Qo	W a	Mo	O Never
24.3	Zastar (thyme & sesame)	Side A	Q D	M D	Mu	o Never
24.4	Pickles	I medium cucumber/ Side A	Q D	W o	M o	n Never

 Yes, p 	lease specify:		
	_ (food/beverage),	(serving size),	(serving/ week)
	(food/beverage),	(serving size),	(serving/ week)
		(serving size),	
		(serving size),	
	_ (food/beverage),	(serving size),	(serving/ week)
2. No			
		Institutional Parks	e, Cound
		America 13 del	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		APPRO	TED:
		APTRIL	A BURD

 24-Hour Dietary Recall. Please recall what you ate and drank the previous day from the time you woke up until the next morning.

Time	Food eaten	Amount	Method of preparation
			a province Boot

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Time	Food eaten	Amount	Method of preparation
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			1
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			1
			1
	2		
	1		
1.			
	1		

Was yesterday a usual day? Yes No, please specify:	
	Institutional Review Pound American University of Beingt
	NO LINE FIRE

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VI. Maternal Exposure, Knowledge, Attitudes, and Intentions Regarding Infant Feeding Practices

Exposure to Breastfeeding [Adapted from: Tarrant and Dodgson, 2007; Kavaragh et al., 2012]

12. Were you ever breastfed as a child?

13. Do you know anyone who has breastfed? Yes, please specify:
 No

14. Have you ever witnessed a woman breastfeeding?

1. Yes 2. No 3. Unsure.

I. Yes

- 14 14 14 14 14 14 14 14 14 14 14 14 14		
Knowledge about Breastfeeding [Adapted from: Grossman et al. [1990]]		
The Infant Feeding Knowledge Test	Yes	No
15. Breastfeeding cuts down on the mother's bleeding after delivery		-
16. Breast milk makes up a complete diet for a baby. No extras (food, vitamins, etc. are needed until the baby is close to one year of age.	3)	
17. If your breasts are small, you might not have enough milk to feed the baby		
 When a mother is sick with the flu or a bad cold, she can usually continue to breastfeed her baby 		

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19. Babies who are breastfed tend to get fewer allergies than babies who get formula 20. The pill is the best way to keep from getting pregnant while you are breastfeeding 21. You shouldn't try to breastfeed if you are planning to go back to work or school

since you won't be able to be with your baby for feedings

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22. The more often you breastfeed, the more milk you will have for your baby	
23. Babies who are breastfed tend to get fewer infections than babies who get formula	\dashv
24. Many women are not able to make enough milk to feed their baby	\dashv

25. The best food for a newborn baby is:

- 1. Breast milk
- 2. Formula
- 3. Breast milk and water

26. Because babies may get a bad reaction to certain foods, breastfeeding mothers should never eat:

- 1. Pizza or other spicy foods
- 2. Coffee, tea, or other drinks with caffeine
- 3. All of the above
- 4. None of these are correct

27. After a baby loses weight following birth, he/she will probably gain it back faster if:

- 1. He/she is breastfed
- 2. He/she is bottle-fed
- 3. Neither is correct

28. You shouldn't try to breastfeed if you:

- 1. Have twins
- 2. Have a c-section
- 3. Drink a lot of alcoholic beverages

29. Breastfeeding mothers' nipples get sore if:

- The baby's feeding position is not right
 The mother has light-colored skin
 This is the first baby she has breastfed

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30. When you breastfeed, the best way to tell if the baby is getting enough milk is by:

- 1. He'she does not suck on his/her fist after he/she is done nursing
- He/she does not cry
 He/she has 6 or more wet diapers in 24 hours

31. When you breastfeed:

Wall

- You may get your figure back easier
 You nearly always gain weight
- 3. You may feel weak when you feed your baby

32. If you breastfeed:

- 1. No one else can help her with the baby since you have to feed him/her
- 2. More of your time will be taken up by the baby than if you bottle-feed
- It will be very difficult to feed the buby in public places
 None of the above are correct

33. Breastfeeding will probably make:

- 1. Your breasts sag
- 2. Your breasts larger after you stop breastfeeding your baby
- 3. No difference in the size or shape of your breasts

34. Breastfed babies need:

- 1. Only breast milk for the first 4 to 6 months
- 2. A bottle of formula every day or so
- 3. Extra water on a daily basis

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Attitudes towards Breastfeeding [Adapted from: De La Mora et al. (1999)]

The Iowa Infant Feeding Attitude Scale	SD	D	N	A	SA
35. The nutritional benefits of breast milk last only until the baby is weaned from breast milk	5	4	3	2	1
36. Formula-feeding is more convenient than breastfeeding	5	4	3	2	1
37. Breastfeeding increases mother/infant bonding	1	2	3	4	5
38. Breast milk is lacking in iron	5	4	3"	2	1
 Formula fed babies are more likely to be overfed than are breastfed babies 	1	2	3	4	5
 Formula feeding is the better choice if the mother plans to work outside the home 	5	4	3	2	1
 Mothers who formula feed miss one of the great joys of motherhood 	1	2	3	4	5
 Women should not breastfeed in public places such as in restaurants 	5	4	3	2	1
 Babies fed breast milk are healthier than babies who are fed formula 	1	2	3	4	5
 Breastfed babies are more likely to be overfed than formula fed babies 	5	4	3	2	1
15. Fathers feel left out if a mother breastfeeds	5	4	3	2	1
6. Breast milk is the ideal food for babies	1	2	3	4	5
7. Breast milk is more easily digosted than formula	1	2	3	4	5
8. Formula is as healthy for an infant as breast milk	5	4	3	2	1
9. Breastfeeding is more convenient than formula feeding	1	2	3	4	5
Breast milk is less expensive than formula	1	2	3	4	5
A mother who occasionally drinks alcohol should not breastfeed her baby	5	4	3	2	1

SD= Strong Disagreement; D= Disagreement; N= Neutral; A= Agreement; SA= Strong Agreement

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Intentions to Breastfeed [Adapted from: Normmon-Rivers and Dewey (2009)]

	The Infant Feeding Intentions (IFI) Scale	Very much agree	Somewhat agree	Unsure	Somewhat disagree	Very much disagree
52.	I am planning to only formula feed my haby (I will not breastfeed at all)	0.	1	2	3	4
53.	I am planning to at least give breastfeeding a try	4	3	2	i	0
54.	When my baby is 1 month old, I will be breastfeeding without using any formula or other milk	4	3	2	ĩ	0
55.	When my baby is 3 months old, I will be breastfeeding without using any formula or other milk	4	3	2	1	. 0
56.	When my baby is 6 months old, I will be breastfeeding without using any formula or other milk	4	3	2	1	0

57. What is/are the primary reason (s) for not intending to breastfeed your child?

Primary Reason (s)	Yes	No
Don't like breastfeeding		8
2. Breastfeeding is embarrassing		3
3. Breastfeeding is painful and discomforting		7
4. Cannot breastfeed when tired and fatigued		7
5. Cannot breastfeed when lacking sleep		
6. Lack of breastfeeding-friendly public places		
7. Lack of support from husband		-
 Lack of support from others (family members, friends) 		
9. Infant formula is healthier than breastmilk		
10. Have a history of problems with milk production		
11. Breastmilk is insufficient to adequately satisfy my baby		
12. Cannot breastfeed due to my medical problems		
13. Baby will not accept my breast		
14. Need to go back to work		
15. Other, please specify:		

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58. What is/are the primary reason (s) that is/are encouraging you to breastfeed your child?

Primary Reason (s)	Yes	No
 Breastfeeding is beneficial to the child 		. 210
Breastfeeding is beneficial to the mother		-
3. Previous breastfeeding experience encourages it further		-
4. Doctor's advice		_
5. Husband's advice	-	-
Advice from others (family, friends)		
7. High cost of formula milk	-	
8. Breastmilk is healthier/more nutritious than formula milk	-	-
9. Other, please specify:	_	_

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VISIT 3 QUESTIONNAIRE (ARABIC)

إستبيان ليحث علمي، رقم البروتوكول: NUT.FN.12



كلية الزراعة والطوم الظانية داترة التعدية وطوم العداء

دراسة مُتابعة للأم والطّفل: بهدف تقليل نسبة خطر الإصابة بالأمراض غير المعدية في لبنان

الزيارة 3 (الثلث الثالث من الحمل)

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NUT.FN.12	رقم البروتوكول:	استبيان ليحث طميء
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التاريخ (DD/MM/YYYY):/	(سم الباحث:
اليوم من الأسبوع:	رقم الشخص المشارك:
وقت اليدء بالمقابلة:	ثوع المركز الصحي (AUBMC / RHUH)

ladi	الفهرس	
3	القياسات الأنثروبولوجية خلال الحمل	J
3	معلومات عامة حول الحمل الحالي	.11
حمل	العادات الغذائية وتشاول المكملات الغذائية خلال ال	.11
4	العادات التُنتِعة كأستُوب حياة خلال الحمل	n,
5	الملخوذ الغذائي غلال الحمل	.v
الرشاعة وتظرتها للرضاعة وعزمها	مدى تعرض الأم للرضاعة ومدى معرفتها بأمور على إرضاع طفلها	.vı

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اِسْتَبِيانَ لَيْحَتْ عَلَىنِ، رَقِّمَ الْبِرُولُوكُولُ: NUT.FN.12

القياسات الأتثروبولوجية خلال الحمل I.

- 1. الوزن: كلغ
- 2. ضغط الدم (الضغط الإلقباضي الضغط الإنبساطي):

معلومات عامة حول الحمل الحالى п.

- 3. في أي أسبوع من الحمل آلت الآن؟ ------ أسبرع
- هي العوارض التي تختيرينها هائياً (إغتر كل ما ينطبق)؟
 - 1. 440
 - 2. غير،
 - 3 حرقة في المعدة
 - 4. إكثام
 - 5. تورم (الأبدي والأرجل)
- بشتهاء بعض أنواع الطعام
 بشتهاء أشهاء البست بطعام (لا تزكل) (طين، ثلج، صابون وغيرها)
 - 8. كره يعض الأطعمة
 - و. فتان الشيبة
 - 10.شيبة زائدة
 - ٧.11 لحد مما سبق

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إستييان تبحث طمي، رقع اليروتوعول: NUT.FN.12

العادات الغذائية وتناول المكملات الغذائية خلال الحمل

Willen	ARRIANT NOTES LIKE		
· fames Or	ولمين وجهة الفطور <u>حالياً</u> (خلال الثلث الثالث ا	. كم عدد المرات التي تتنا	5
	- 10	1. کل برم	
		2. 3-6 مرات في	
	بهي الإسبوع	3. اقل من 3 مراد	
100		14 .4	
فانية من فيتامينات أو معادن أو	<u>حملك</u> ، هل بدأت أو تابعت تشاول المكملات الغ	أعشاب طبية?	5
	نوح والكمنيَّة في العوم:	1. نعب ، ختادي <i>ال</i> 2. لا	
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			100
74	حملك، كم من الأصناف الثالية تدخلين؟	7. خلال الثلث الثالث من	
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	to t		
في الشهر	في اليوم، في الأسبوع،	2. سوائر:	
في الشهر	في اليوم، في الأستوع،	3. سيجار:	
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في الشهر	في اليوم، في الأسبوع في الأسبوع في الأسبوع في الأسبوع في الأسبوع في الأسبوع Attac.	3. سيطر: 4. الفرجيلة: prostoment (Ecvlew I rican University of 16 ALE 203	150
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بىتىيان ئېمك ملس، رقم الېروغوكول: NUT.FN.12

المأخوذ الغاني خلال العمل

eó.
8. استثمال وتبرة إسا في اليوم أو الأسا
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ة إستهلاك الطعام, يرجي مك التكثير بالمط الخا الأسهرع أو الشهر لكل من المواد الخافية الثالية.
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CODE	-	2	12	1.3	1.4	1.5	1.6	2	2.1	2.2
(Trans	المهرب والمتلجات المرتكزة على المهوب	*	خبز لسرا فيمة كالمة	ملترجات الكمال	توست وكوالكراز	هيوب الشفور العائية	هورب للطور المستوعة من للشفلة أو الجورب لكفلة	المعلرونة والحبوب الأغرى	いまいません	ممكر وتكالودائل مسلوقة
طال عن هجم الحصاة		ر غیف خبار حرین کاند/ ر غیف خبار حرین وسط/ خبار تراخی (baguette)	ر عيف خوز حرين گيور/ رخيف خوز جرين وسط/ خوز فرنجي (haguette)	Salls yang (Kang	توسك وسط	Side A/	Side A/ 3 Sth Alt and 3 St		Side A	Side A
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		20	7	3	30	3	The Constant		10	0 15

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استينان ئيمث طمي، رقم البروتوكول: NUT.FN.12

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7.3	1,4	7.5	90	8.1	6	9.1	9.2	10	10.1	=	11.1	11.2	11.3	11.4	13	12.1
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12.2	12.3	12.4	=	13.1	13.2	13.3	13.4	13.5	14	14.1	14.2	14,3	14.4	15	15.1	15.2	5.53
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91	16.1	162	16.3	16.4	17	17.1	17.2	17.3	17.4	17.5	18	18.1	18.2	100.0	18.4	19	19.1	19.2	192	19.3
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23	23.1	23.2	23.3	23.4	23.5	23.6	23.7	77	24.1	24.2	24.3	23,4
المشوريات القير كحولية	قهرة سريمة التحضير ، تسكاليات قهرة تركية	ವಿಗ್ರ	قهر د خالیة من الكافيين أو شاي بالأخشاب از هورات	مشروب الملافة أو الرياضة	شروبات خارية	شرويات طرية دايت خالية من السكر	1	المشوريات القرر كحولية	SELLY	大力	Call grand	Attec
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و. هل هذا أي أطعمة أو مشروبات تقتاولينها عادة و لم تأثي على نكرها؟ 1. Lay aling

(الطمار)الثراب) ------ (حجم الوجبة) ----- (عند الوجبات أميرعياً) ------

(الطعام/الثعراب) ------ (حجم الرجية) ------ (خد الوجيك أسهرجياً) ------

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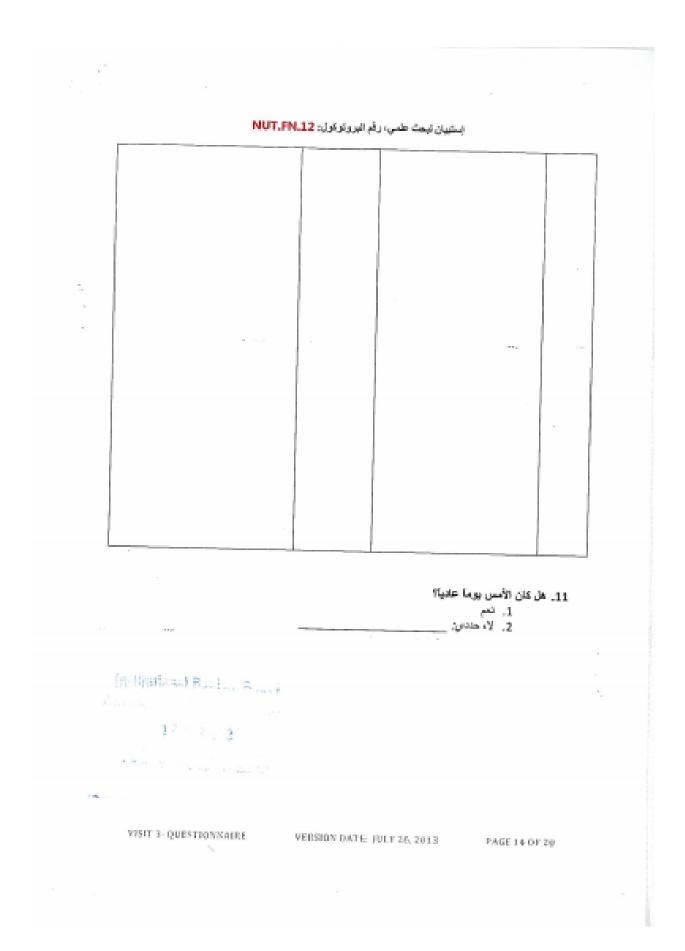
10. المأخوذ الخالي خلال الأربع وعشرين ساعة الأخيرة. نرجو منك أن تتذكري ما الناواته من طعام أو شراب في الأمس منذ تهوضك في الصباح وحتى اليوم التألي.

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مدى تعرض الأم للرضاعة ومدى معرفتها بأمور الرضاعة ونظرتها للرضاعة وعزمها على إرضاع طظها

تَعرَضَ الأم اللرضاعة (مقيس عن Tarrant and Dodgen, 2007 وKavanagh et al, 2012 (Kavanagh et al, 2012

12. هَلَ تُمْ إِرْضَاعُكَ عَنْدُمَا كُلْتَ طَقَلَةً؟

1. نم 2. Y

غير متاكدة

13. عل تعرفين أي امرأة قد أرضعت سابقا؟

1. نس حسي:_ 2. لا

14. هل سبق أن شاهنت إمرأة تقوم بالرضاعة؟

المعرقة بأمور الرضاعة (ماتيس عن Grossman et al., 1990)

Ä	نعم	تطهيم مدى معرفة الأم بأسائيب إطعام الطلق خلال العام الأول
		15. تساعد الرضاعة على إيقاف التزيف بعد الولادة
		16. وشكل حليب الأم غذاء كاملا للطفل و لا حلجة لأية إضافات من الطعام أو الفيتامينات الى أن يصبح الطفل على مقرية من عامه الأول
		 إذا كان التديين مسفيرين قد لا تستطيع الأم إنتاج ما يكفي من الحليب للطقال
		 عندما تصاب الأم بالزكام أو الرشح بإمكانها الإستمرار بإرضاع الطفل
		19. قاما يصداب الأطفال الذين يرضعون من الثني بأمرانس الحساسية بالمقارنة مع الاطفال الذين يتقارفون الطبب المخصص للأطفال
		20. أفضل وسيلة لعنع المحل خلال الرضاعة هي حيوب منع الحمل
		21. إذا كانت تحرّ مين إستناف العمل يجب أن لا تحاولي إرضاع الطفل من الثني لأنك لن

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استطيعين التواجد معه لإطعامه
22. كلما قمت باز ضماع الطقل بتكرار اكثر كلما تضاعت كميه المعليب علي تسجيب
23. إن إحتمال إصابة الإطفال الذين يرضعون من اللذي بالإلتهابات هي أقل من الإطفال الذين يتتاولون الحابب المخصص للأطفال
 24. الكثير من النساء لا يمتطبعون إنتاج ما يكفي من الحليب الأطفالين

25. الطعام الأفضل لطفل حديث الولادة هو:

- طبب التي 2. الطبب المخصص الأختال
 - مايب اللدي والماء

26. يما أن يعض الاطفال لله يتعرضون لردة قط ستبية لبعض الأطعمة، على الأم المرضعة عدم تقاول الأطعمة التلية:

- أيبئز او الأطعمة الحارة
- القهوة والشاي وغيرها من المشروبات المنشطة
 - 3. الخيارين السابقين مسجعين
 - الغيارات المنكورة غير صحيحة

27, علما يتقص وزن الطفل بعد الولادة، قد يسترجع الطفل هذا الوزن لاحقاً بشكل أسرع إذا:

- 1. كان يرضع من اللدي
- 2. كان يتناول الطيب المخصص للأطفال
 - الخيارات المذكورة غير سنديجة

28. يجب أن تتجنبي الرضاعة في الحالات الدَّلية:

- الديك توام .
- 2. كانت ولادة الطفل ولادة فيصرية
 - تشربين الكثير من الكحول

29. تصاب حلمة الله ي عند الأمّ المرضعة بالتقرح في الحالات التالية:

- إذا كانت طريقة جلوس الطفل غير صحيحة

 - إذا كان لون بشرة الأم قائع اللون
 إذا كان هذا أول طفل ترضعه الأم

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30. علدما ترضعين، أفضل مؤشر لكون الطقل يحصل على ما يكفي من الحليب هو:

- عندما لا يمتص الطفل كانيه بعد الرضاعة
 - 2. عندما لا بيكي
- عندما يتم إستيدال 6 أو أكثر من الحفاضات المبلولة خلال 24 ساعة

31. عندما تقومين بالرضاعة:

- أسترجعين شكل جستك السابق بسهولة
 - 2 سزيد وزنك بشكل سكمر تقريبا
- قد تشعرين بالضعف عندما ترضعين الطفل

32. إذا قنت بالرضاعة:

- أن يستطيع أحد أن يقدم لك العون في اطعام الطفل الأنك مازمة باطعامه
- سيستهلك الطفل وقت أكثر منك بالعقارنة مع أذا كان يلتاول الحليب المخصص للأطفال
 - 3. سيكون إطعام الطفل صبعاً في الاملكن العامة
 - 4. الغيارات المذكورة غير صحيحة

33. قد تؤدي الرضاعة إلى:

- 1. تهنال الكنيين
- زيدة في حجم الثنيين بعد إيداف الرضاعة
 - لا فرق في حجم التدبين أو شكلهما

- 34. يحتاج الأطفال اللين برضعون الى: 1. حليب الأم حصريا خلال الاشهر 6-4 الأولى
- قنينة من الطيب المخصص للأطفال كل يوم أو نحو ذلك
 - 3. ماء أكثر بوميا

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لَظِرَةَ الأَم لِلرَضَاعَةَ (سَتَبِس عن 1999_De La Mora et al.,1999)

	مقياس أيوا لتقييم وجهة نظر الأم نحو الرضاعة	أواق		لا أوافق	موقف محايد	أوافق	او افق پشدهٔ
الغوائد الغذائية للرضاعة من الثاني تدوم فقط لحين القطام	إند الغذائية للرضاعة من الثدي تدوم فقط لحين اللط	5	5	4	3	2	1
ضاع الطقل الطيب المخصص للأطفال ملاءم أكثر من الرضاعة		5	5	4	3	2	1
اللذي يد الرضاعة من الثدي من قوة الإرتباط بين الطفل والأم	ي لرضاعة من قلدي من قوة الإرتباط بين الطفل والأم 	1	1	2	3	4	. 5
نقر حليب اللدي للحديد	حثيب الثدي للحديد	5	5	4	3	2	1
ضباع الأطفال الطيب المخصيص لهم يجعلهم أكثر حرضة ثلاظ اطافي لعام (الشعور بالتخمة) يالمقارنة مع الأطفال الذين يرضعون حليب الأم	الله من بالتخمة المقارنة مم الإطفال الدين يرا	- 61	1	2	3	4	5
رضاع الحليب المخصص للأطفال هو الخيار الافضل إذا كانت الام نظرم د ادة تا بدرادا ان	اع الطيب المقسمين للأطفال هو الخيار الأفضان إذ ادة عاد دامانا (, 10	5	4	3	2	1
ن الإمهات اللوائي يطعن أطفالهن الحليب المخصص للاطفال بخسران	(مهات اللوائي يطعمن أطفالهن الحايب المخصص للا ومات الدوائي يطعمن		1	2	3	4	5
من منعه من منع موجود جب على الأم أن تمثلع عن الرضاعة في الأماكن العامة مثل المطاعم	منعه من منع الرحاطة عن الرحاطة في الأماكن العامة على الأم أن تمثلع عن الرحاطة في الأماكن العامة		5	4	3	2	1
لأطفال اللذين يرضعون من الذي يتمتعون بصحة أفضل من الأطفال الذين نفرلون الحليب المخصص تلاطفال	دل اللذين يرضعون من الذي يتنذعون بصحة أفضا و الدارس الدارس الأطاران	الذين	1	2	3	4	5
روون معلوب ن الأطفال الذين يرضعون من الثني هم لكثر عرضة المنافر اطاقي الطعام الشعور بالتخمة) بالمقارنة مع الأطفال الذين يرضعون الطيب المخصص	الطفا والقيار واضبعون من الثدي هو لكثر عرضه ا	مام ك	5	4	3	2	1
شعر الأب بالإهمال إذا ارضعت الأم طفلها من الثدي شعر الأب بالإهمال إذا ارضعت الأم طفلها من الثدي	ور بشخصه الآب بالإهمال إذا ارضعت الأم طفلها من الثدي		5	4	3	2	1
طيب الثدي هو الطيب الأقضل للأطفال	به لثندي هو الحليب الأقضل للأطفال		1	2	3	4	5
يستطيع الطفل هضم حليب الأم يسيولة أكثر من الحليب المخصص للأطفال	طبع الطفل همنم حليب الأم بسهولة أكثر من الحليب	طفال	1	2	3	4	5
إن الطيب المتصمن للأطفال بوازي بفرائده الصحية حايب اللدي	الطيب المقصص للأطفال بوازي بفوائده الصنحية ح	1	5	4	3	2	1
الرضاعة من الذي مناسبة/صالة أكثر من الطيب المقصص للأطفال	ضاعه من الله ي مناسبة/صليَّة أكثر من الحليب المعد		1	2	3	4	5
حثيب الثدي أقل كافة من الحليب المخصص تلأطفال	ب اللذي أقل كافة من الطيب المخصص للأطفال		1	2	3	4	5
الأم التي تشرب الكمول أحياتا يجب أن تمتنع عن إرضاع طفلها	الله. تشرب الكمول أحياناً يجب أن تمقع عن إرضا	+	5	4	3	2	

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عزم الأم على الرضاعة (متنيس عن Nommsen-Rivers and Dewey, 2009)

لا أواقق يشدة	بعضا مالا أوافق	غير مثاكدة	أواقق بعضا ما	اوافق بشدة	عزم الام على الإرضاع
4	3	2	1	0	52. اذا أعازم اعطاء طفلي فقط الحليب المقصص للأطفال (لن أقوم بالرضاعة من الثدي إطلاقاً)
0	1	2	3	4	53. اذا أعازم على الأقل تجربة الرضاعة من الثدي
0	1	2	. 3	4	54. عندما يبلغ طفلي الشهر الأول، سوف أكون أرضع دون إستعمال الحليب المخصص للأطفال
0	1	2	3	4	55. عندما يبلغ طفلي الشهر الثالث، سوف أكون أرضع دون إستعمال الحايب المخصص للأطفال
0	1	2	3	4	56. علتما يبلغ طقلي الشهر السادس، سوف أكون أرضع دون إستعمال الحايب المخصص للأطفال

57. ما هو السبب أو الأسباب الرئيسة لإعتزامك عدم ارضاع طفتك؟

4	pei	المبه أو الأمياب الرئيسة
4		1. لا أحب الرضاعة
	-	2. الرضاعة تصملي بالفجل والحرج
		 الرضاعة مؤلمة ومزعجة
		 لا أستطيع إرضاع طفلي عند الشعور بالإرهاق أو التحب
	3	 لا أستطيع إرضاع طفلي عندما تعاني من قلة النوم
		 عدم توفر اماكن عامة مواتية الرضاعة
		7. عدم دُوفر الدَّح من الزوج
		 عدم توفر الدعم من الاخرين (أعضاء الأموة، الأصدقاء)
	/	 الطيب المخصص للأطفال بفرق بفرائده الصحية حابب اللدي
		10. إختيرت في السابق منعوبات في صنع الحليب
33		11. حليب الله ي خير كاقب لإشباع حاجات طفلي
		12. لا يمكنني الرضاعة لأني أعلى من مرض معين
		13. أن ينقبل الطفل الكدي
		14. شيرورة إستثناف دوام العمل
	- 1	15. غير نالك، حددي

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58, ما هو المبي أو الأمياب الرئيسة التي <u>تشجح</u> على الرضاعةً؟

¥	in	المنها أو الأسياب الرئيسة
_		و. الريشامة مليدة الطفل
_		2 الرحداعة مفيدة للأم
_	_	 الخبرة السابقة في الرضاعة تشجع عليها أكثر
_		4. تصرحة الطبيب
-		5. نصيحة الزوج
_	-	6. السبحة الأخرين (العائلة، الأصنقاء)
-	-	1 200 H along the decree of the ball to th
-		 مليب اللدي يغوق بفرائده الخائية والمسحية الحليب المخصص للأطفال
_	_	و. غير ذلك، جندي:

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VISIT 4 QUESTIONNAIRE (ENGLISH)



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Faculty of Agricultural and Food Sciences Department of Nutrition and Food Sciences

Mother and Child Cohort: Towards Curbing the Epidemic of Noncommunicable Diseases in Lebanon

VISIT 4 (4 Months Postpartum)

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Interviewer's Name:	Date (DD/MM/YYYY): / /
Subject ID Number:	Day of the Week:
Health-Care Center (AUBMC / RHUH)	Interview Start Time:

TABLE OF CONTENTS	PAGE
I. Anthropometric Measurements of Mother	3
II. Anthropometric Measurements of Child	3
III. General Information	4
IV. Feeding Practices of Child	5
V. Dietary Intake of Child and Supplement Use	11
VI. Dietary Intake of Mother and Supplement Use	13

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	ENTS OF MOTHER
1. Weight:Kg	
2. Waist Circumference: Cm	
3. Percent Body Fat:%	
	46
I. ANTHROPOMETRIC MEASUREM	IENTS OF CHILD
4. Weight: Kg	
5. Length: Cm	
6. Head Circumference:Cm	
7. Mid-Upper Arm Circumference:	Cm
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	240-225	
8. H	ow old is your child? _	months
9. Af int	fter delivery, did you a fant bathing technique 1. Yes, please specify 2. No	ttend any hospital sessions on breastfeeding techniques, s, postpartum physical activity work outs, etc.? ::

10. Sir	nce delivery, who has e	iven you breastfeeding recommendations, advice, and t
(ci	rcle all that apply)?	even you or east eeoing recommendations, advice, and t
100000	 OGBYN physician 	
	OBGYN Nurse	
	Dietitian	4
	4. Pediatrics physician	n
	5. Lactation consultan	it .
	6. Family members	
	7. Friends	
	 Other, please specij No one 	0:
bre	astmilk, did your infar 1. Formula milk 2. Other liquids 3. None 4. Don't know	your stay in the hospital, what liquids, other than nt receive?
		suddentificant Valve 1980
/ISIT 4	- QUESTIONNAIRE	Version Date: JULY 26 2013 PAGE 4 of 22
	5	1.5 2

IV. FEEDING PRACTICES OF CHILD

- 12. Since giving birth, have you breastfed your child?
 - Yes (go to question 14)
 No

.

13. What is/are the primary reason(s) for not breastfeeding? (ask question then go to question 19)

Primary Reason(s)	Yes	No
Don't like breastfeeding		-
2. Breastfeeding is emberrassing		
3. Breastfeeding is painful and discomforting		
 Could not breastfeed when tired and fatigued 		
5. Could not breastfeed when lacking sleep		
6. Lack of breastfeeding-friendly public places		
7. Lack of support from husband		
8. Lack of support from others (family members, friends, etc.)		
9. Promotion of infant formula feeding at the hospital/clinic		
10. Had problems with breastmilk production		
11. Insufficient supply of milk to adequately satisfy my baby		
 Medical problems (e.g. mastitis, diabetes, etc.) 		
13. Baby did not accept the breast		
14. I had to go back to work		
15. Other, please specify:		

	14. How long did you wait after deliver	y before putting your child to the breast?
--	---	--

- 1. Immediately (< 1 hour)
- 2. 1 hour 3. < 24 hours (hours)
- 4. ____days

15. Since birth,	bow	long	was	your	child:
------------------	-----	------	-----	------	--------

- Exclusively breastfed: weeks or months
- Mixed (breast & formula milk) fed: ______ weeks or months
- 3. Exclusively formula fed: weeks or months

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16. How did/does your child receive your breast milk?

- Directly from breast
 Expressed breast milk in a bottle
- 3. Both from breast and expressed in bottle

17. During the period of breastfeeding, what happened to your menstrual cycle?

- 3. Did not stop

18. What is/are the primary reason(s) for stopping breastfeeding?

Primary Reason(s)	Yes	No
1. I am still breastfeeding	-	
Didn't like breastfeeding		
3. Breastfeeding was embarrassing		
4. Breastfeeding was painful and discomforting		
Could not breastfeed when tired and fatigued		
Could not breastfeed when lacking sleep		
7. Lack of breastfeeding-friendly public places		
8. Lack of support from husband		
9. Lack of support from others (family members, friends, etc.)		
10. Had problems with breastmilk production		
 Milk supply was insufficient to satisfy the baby (i.e baby was not getting full 		
12. Medical problems (e.g. mastitis, diabetes, etc.)		
13. Baby did not accept the breast		
14. Baby was old enough		
15. I had to go back to work		
16. Other, please specify:		

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19. From the list of liquids I will call out, please indicate if your child has started consuming any and please tell me how many times per day or per week these liquids are consumed

LIQUIDS	YES	0 N	DK	Frequency (per day or week)
1. Plain water		Γ	Γ	/day or week
 Water with added sugar, rose water, honey, etc., please specific. 	-	Γ		/day or week
 Plain infant formula milk (Similac, Nestlé, Enfamil, etc.) 				/day or week
 Infant formula milk with added sugar, honey, etc., please specify: 		Ī	Ī	/day or week
5. Cow milk (powdered or liquid), please spectfy:			T	/day or week
6. Yogurt			Ī	speak or spek
7. Sweetened milk drinks (full fnt)				Aday or sawk
8. Sweetened milk drinks (reduced fat)		T	T	Way or seed
9. Clear broth and soup	Ī		T	Adam or week
 Teatherbal drinks (such as anis, chamomile, caraway), please specify. 			Ī	/day or week
11. 100% fruit Juice (includes homemade)			Ī	/day or week
12. 100% vegetable julce (includes homemade)			Ī	/day or week
13. Sweetened fruit drink or juice (with natural or artificial sweeteners)				/day or week
14. Regular soft drinks			Γ	year or week
15. Diet soft drinks sweetened by no- or low-calorie sweeteners			Ī	/day or week
16. Other liquids, please specify:				/day or week

Institution: Adapted from: World Health Organization (WHO), 2010. Indicators for assessing infant and young shild feeding practices. Part II Measurement. American University of Beirut

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	20. Have you introduced 1. Yes 2. No (go to q	any foods (solid, semi-solid, or soft food westion 28)	s) to your child?
	21. What was the first fo	od introduced?	
7	22. How old was your chi	ld when you gave him/her this first food ks/mooths	-
	23. What was/were the m that apply)?	ain reason(s) for introducing foods to yo	ur child (circle all
	3. Child was of 4. Child was of 5. Child could 6. Child was no 7. Child was si 8. Child refuse 9. Child seeme	ill hungry after milk feeds ontinuously crying ld enough start holding his/her head up straight of sleeping through the night ck d milk feedings d interested in food / weaned him/herself gs were incompatible with work schedule pregnancy enson	
		Institutional Review there!	
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24. From the list of foods I will call out, please indicate if your child has started consuming any and please indicate your child's age at first introduction

FOODS	YES	NO	DK	Age (months)
 Bread, wheat, burghul, rice, noodles, or other foods made from grains 				
2. Baby cereals (Cérélac, Blédine, etc.)				
 Carrots, squash, sweet potatoes (yellow or orange inside) or pumpkin 				
4. White potatoes, or any other foods made from roots			70	
5. Dark green-leafy vegetables (spinach, moulkhieh, etc.)				
6. Ripe mangoes, grapefruit, tomatoes, watermelon				
7. Other fruits and vegetables				
8. Organ meat (liver, kidney, heart, etc.)				
9. Meat (beef, pork, lamb, goat, chicken, or duck)				
10. Eggs (whole, egg yolk, egg whites)				
11. Fresh or canned fish, shellfish, or seafood				
12. Legumes (beans, chickpeas, lentils, etc.)				
13. Nuts or seeds				
14. Dairy ('labneh', cheese, yogurt, milk-based products)				
15. Family foods (stews, stuffed vegetables, etc.)				
16. Oils, fats, butter, or foods made with any of these			3 1	
 Sugary foods (chocolate, candies, pastries, cakes, biscaits, etc.) 				
18. Arabic sweets (baklava, maamool, aumora, etc.)				
 Other Arabic sweets (mughleh, rice pudding, mhalbieh) 				
20. Jams and jellies				
21. Honey				
 Condiments for flavor, such as chilies, spices, herbs, ketchup, mustard, vinegar, soy sauce, etc. 				
 Iron-fortified commercial foods (baby cereals, milk, etc.) 				

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25. From the list of foods I will call out, please indicate the frequency of your child's consumption (per day, per week or per month)

FOOD ITEM		FREQU	ENCY	
	Times /day	Times/ week	Times/ month	Never
1. Potato chips				
2. Chocolate				-
 Soft lollipops and hard candy 		-		
 Biscuits/cookies (chocolate chips, oreo cookies, etc.) 		10.		
5. Ice-cream/ice-blocks		-		
6. Prench Fries	+			
7. Hot dogs		-		
S. Hamburgers				
). Pizza				
Cake, muffins, cupcakes				
1. Pancakes	+	_		
2. Doughnuts				
3. Sweetened cereals	-	-		

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V. DIETARY INTAKE OF CHILD AND SUPPLEMENT USE

 24-Hour Dietary Recall. Please recall what your child ate and drank the previous day from the time he/she woke up until the next morning.

Time	Food enten	Amount	Method of preparation
-			

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	your child's usual cating pattern? . Yes		
	No, please specify:		
28. Is your 1.	child currently taking any vitamin Yes, please specify brand and dose	or mineral supplements?	
2.	No		

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. . . .

VI. DIETARY INTAKE OF MOTHER AND SUPPLEMENT USE

29. Food-Frequency Questionnaire. Please think about your eating patterns thring the past 4 months since giving birth.
Please indicate your usual intake of each of the following food items per day, week, or month. Please be as precise as you can in your recall. The accuracy of the study results depends on the accuracy of your answers.

CODE FOOD ITEM	I CEREALS AND	1.1 White bread	I.2 Brown/whole wheat bread	1.3 Ka'ak products	1.4 Toast and crackers	1.5 Rogular breakfast cereals	1.6 Bran or whole grain breakfast cereals	2 PASTA AND OTHER CEREALS	2.1 Bulgur, cooked	2.2 Pasta/noodles, cooked	2.3 Rice and rice-based products	3 POTATOES AND	
EM	CEREAL-BA		bread			reals	breakfast	IER CEREA		pa	products	POTATO-	
REFERENCE PORTION	CEREALS AND CEREAL-BASED PRODUCTS	1 herge Arabic loaf I medium Arabic loaf I baguette	I large Arabic loaf I medium Arabic loaf I baguette	1 finger sized	I regular toast	Side A/ 1 small box (35 g)	Side A/ I small box (35 g)	ST	Side A	Side A	Side A	POTATOES AND POTATO- BASED PRODUCTS	
USUAL													
+ 0		g n	Q D	QO	QO	QD	d n	9	Qu;	qu	OD		
FREQU		≱ 0	» a	W.D	W a	W O	W.o.		Wo	W o	W D		
FREQUENCY OF CONSUMPTION		M	M	Mo	Mo	Mo	M D	9	Ma	Mo	Mo		
ON		n Never	D Never	O Never	O Never	n Never	n Never		O Never	o Never	O Never		

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1		Portion, medium	00	The same		
en.	Potato chips, regular	S/M/I have	2 1	1	1	I Never
3.4	Potsto chine light	Section 15 and 15	Q D	W o	OM	n Never
*	VEGETABLES	S/M/Lbag	ПD	W O	II M	D Never
4	Vegetables, canned (mixed)	6,4. 4		- 1		
4.2	Vegetables, raw	V anie	OD	0	DM	D Never
4.3	Salad oreen	Vanie	Q D	M C	D.M	
	man in the control	Side A	O P	MO	Mu	1
10	PRUITS					1
2	Fresh fieits	Side A/	go	Wu	O.M.	D Never
5.2	Canned fruits	Side A/ I medium rootion	Qn	W o	Mo	O Nove
2	Dried fruits	Side A	G	100		
5,4	Fruit-based desserts (cocktails)	Side A	000		NO.	D Never
9	FRUIT JUICES		an l	8	u M	D Nevar
6.1	Fruit Juices, Canned	Side A/	g o	30	23.0	1
6.2	Fruit Juices, Fresh	Side A	9 6	1	E .	Janani D
-	MEAT- Cured Meat		nn l	* 0	E D	D Never
7	Cured mest, except ham (Iuncheon meat, hotdog)	Side By Regular oured Ment slice/ Hordon sime	o D	≱ □	Mo	o Newer
7.2	Ham	Regular carnel ham clica				
7.3	Mest (beed), cooked, low fat	Side B	do:	M D	D M	D Nevor
7.4	Meat (beef), cooked,	Side B	du de		Wo :	O Never
7.5	Meat Gamb), cooked high fee	0.450	9		I W	O Newer

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8	MEAT-Offsis					
8.1	Organ meat (liver, heart, brain, etc.)	Side B	d o	u w	Mo	o Nover
6	MEAT-Poultry					
9.1	Poultry	Leg/thigh/breast/ Side B	Q0	W II	M	n Never
9.2	Poultry, breaded (maggets, escalope)	Nuggets/ Side B	O.D	W O	M D	n Never
10	MEAT- Eggs		No.	1	E	
10.1	Eggs, whole	1 cgg	Q D	MO	Mu	n Never
11	MEAT- Fish and Seafood					
Ξ	Fish	Side B	OD	W a	Mo	o Never
11.2	Fish, carned with oil (tuns, sardines)	I large can/ I small can	OD	1	Mp	a Never
11.3	Fish, canned without oil (in water)	I large can' I small can	G.D	W o	υM	n Never
11.4	Shellfish	Shrimp: 1 medium Calamari: 1 medium Crab stick: 1 stick	d D	W o	MD	n Never
11	PULSES, NUTS AND SEEDS		f	è	÷	
12.1	Benns, Chickpeas, Fava Benns, Lentils, Seeds	Side A	Q Di	W II	M	O Never
12.2	Nuts	Side A	do	W o	Mo	D Never
12.3	Falafel	I falafel piece	Q0	W II	n M	D Never
12.4	Olives	1 medium olive	DD	M D	Mo	r Never

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Cheese (low fat / light/whise) I square/triangular portion/ Side A or B n D n N n M Cheese (high fat/yellow) 1 square/triangular portion/ Side A or B n D n N n M Cheese (procursed, creamy) 1 square/triangular portion/ Side A or B n D n N n M Full fat milk, milk-based 1 carton of flavored milk n D n N n M Low fat milk, milk-based 1 carton of flavored milk n D n N n M Low fat milk, milk-based 1 carton of flavored milk n D n N n M Low fat milk, milk-based 1 carton of flavored milk n D n N n M Low fat milk, milk-based 1 carton of flavored milk n D n N n M Low fat milk, milk-based 1 carton of flavored milk n D n N n M Low fat milk, milk-based 1 carton of flavored milk n D n N n n n n n n n n n n n n n n n n	13	MILK AND DAIRY PRODUCTS	TS				
Cheese (high fat/yellow) 1 square/triangular portion Side A or B	13.1	Cheese (low fat / light/white)	I square/triangular poetion/ Side A or B	d n		пМп	11 Never
Chocse (processed, creamy) 1 squarefrisingular portion/Side A or B I of portion/Side A or B I of box of B I of B I ow IM	13.2	Cheese (high fat/yellow)	1 square/triangular portion/ Side A or B	Q D		180	D Never
Full far milk, milk-based Side A/beverages I carron of flavored milk DOD DW DW Low fat milk, milk-based I carron of flavored milk DD DW DW VOGURT AND YOGURT- BASED PRODUCTS DD DW DW Laboreh, regular Side A DD DW DW Laboreh, low fat and skim Side A DD DW DW Yogurt, light I regular ayran bottle DD DW DW Yogurt, light I regular ayran bottle DD DW DW Pies, 'Manaeush' I houchee Pies, small (e.g.: flatayer) I bouchee Pies, small (e.g.: flatayer) I small Pizza DD DW DW	13.3	Choese (processed, creamy)	1 square/triangular portion/Side A or B	Q D	W o	Mu	D Never
Low fat milk, milk-based beverages Side A/ beverages OD OURT - BASED PRODUCTS OD OUR OW OM OW OM OW	13.4	Full fat milk, milk-based beverages	Side A/ I carton of flavored milk	Q D	90	D M	n Nevar
VOGURT AND YOGURT- BASED PRODUCTS Side A DEPT OF DEPT	13.5	Low fat milk, milk-based beverages	Side A/ I carton of flavored milk	Q D	3	Mo	D Never
Laboneh, regular Side A D	77	YOGURT AND YOGURT- BA	ASED PRODUCTS	-			
Labrach, low fat and skim Side A OD OW OM Yogurt, regular 1 regular ayran bottle OD OW OM Yogurt, light 1 regular ayran bottle OD OW OM Pitz, Manacesh* 1 large* OD OW OM Pies, small (e.g.: fatayer 1 small Pizza Side A or B* OD OW OM Pizza L small bouchee	The fost	Laboeh, regular	Side A	Q D	30	Mo	a Nevar
Yogurt, regular Side AV a D a W a M Yogurt, light I regular ayran bottle a D a W a M PIZZAS AND PIES Side AV a D a W a M Pies, "Manaeush" 1 larget a D a W a M Pies, "Manaeush" 1 bouchee a D a W a M Pies, small (e.g.: fatayer 1 small a D a W a M Pizza Side A or BV a D a W a M	4 64	Labrach, low far and skim (0-2%)	Side A	Q o	Wu	Mo	D Never
Yogart, light Side AV OD OW OM PIZZAS AND PIES 1 large/ jn D o W o M Pies, 'Managersh' 1 bouchee jn D o W o M Pies, small (e.g.: fatayer 1 small o D o W o M Pizza Side A or BV o D o D o W o M	43	Yogurt, regular	Side A/ I regular ayran bottle	g n		Mu	D Never
PIZZAS AND PIES 1 large/ 1 bouchee 1 large/ 2 bies, small (e.g.: fatayer 1 bouchee	24.4	Yogurt, light	Side A/ I regular ayran bortle	QO	W D	WO	n Never
Pies, "Manaeush" 1 large! ;n D o W n M Pies, small (e.g.: fatayer 1 small n D o D o M spinach, sambousek) Side A or B! o D o W o M Pizza 1 small bouchee o D o W o M	15	PIZZAS AND PIES					
Pies, small (e.g.: fatayer I small small o D a W o M Side A or BV and bouchee I small bouchee a D a W a M	3.1	Pies, 'Manaeush'	1 large/ I boucher	du,	M O	Mu	U Newar
Pizza Side A or BV and I small bouchee a D a W a M	22	Pies, small (e.g.: fatayer spinach, sambousek)	1 small	Qu	W D	Mo	o Never
	53	Pizza	Side A or B/ 1 small bouchee	Q o	W o	Mo	O Never

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91	MIXED DISHES					
191	Artichoke, eggplinnt, cauliflower cooked	Side A	d D	30	Mo	O Never
16.2	Chicary, fried with onions	Side A	go	W D	Mo	o Never
163	Eggplant, zucehini, cabbage, grape leaves * stuffed with rice & ment	Side A/ I medium portion	qο	1220	Mo	o Never
16.4	Stew (Jews mallow, okra, peas, spinach) *without rice	Side A	O.D	W a	Mu	n Never
11	FATS AND OILS (ADDED ON BREADS)	BREADS)				
17.1	Butten/ghee	Side A	O D	MO	M.O	n Never
17.2	Mayonnaise, regular	Side A	O D	W O	Mo	o Never
17.3	Olive ail	Side A	OD	Mo	Mo	O Never
17.4	Tahini	Side A	Qo	W n	Mo	O Never
17.5	Vegetable oil	Side A	QO	W o	MD	n Never
118	FATS AND OILS (USED IN FRYING)					200
18.1	Butten/ghee	Side A	Q D	M.O	Mo	n Newer
18.2	Olive oil	Side A	QD	MO	Ma	n Never
18.3	Vegetable gliee	Side A	Q.D	M o	Mo	n Never
18.4	Vegetable oil	Side A	Q D	W D	Mo	o Never
19	SUGAR AND SUGAR DERIVATIVES	TIVES	The state of			
161	Sugar	Side A	Q.D	W u	Mo	D Never
19.2	Candy	I small	Q.D	W o	Mo	D Never
19.3	Chocolate	1 medium bar/ Side B	Q D	W o	Mo	D Never
19.4	Chocolate spread	Side A	Q E	30	ME	r Marine

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	20	CAKES AND PASTRIES					
-	20.1		Side B	O.D.	Wr	Mu	r Manne
-	20.2	Arabic sweets	Side B	O.D.	1	ME	o Manner
-	203	Biscuits	Side By 1 medium	QO		No	D Never
	20.4	Croissant	Side B/	Q D	W o	Mu	D Never
	20.5	Doughnuts	Side By	Q.D	30	Mo	r. Neuro
- 1	21	HONEY, JAM, MOLASSES AND HALAWAH	AND HALAWAH				
	21.1	Jam	Side A	do.	W. C.	Ma	a Man
3.00	21.2	Sugar derivatives (molasses, halawa, honey)	Side A	Q0	3 0	Ma	D Never
erien	1213	fee cream, regular	1 scoop/ 1 stick	Qu	W D	Mo	o Never
	221.4	Ice cream, low fat	1 scoop/ 1 stick	Q.D	30	M a	n Newer
(Vet	21.5	Pudding, regular (custard, mhalabiye)	Side A/ I medium container	Q D	W D	Mo	o Never
-3	216	Padding, low fat	Side A/ I medium container	Q.D	W	Mo	O Never
4	8	ALCOHOLIC BEVERAGES					
in the	22.1	Beer	Side A.	d di	WD	Wo	n Nevee
	22.2	Spirit drinks (e.g. Whiskey, Rum, Vodka.)	Side A	Q0	≥ 0	Mu	n News
	22.3	Wine	Side A	Q E	W o	No	None

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	The second secon					
13.1	Coffee instant, Nescafe, Turkish,	Side A	go	W a	Mo	n Never
23.2	Tea	Side A	Q.D	W C	Mu	n Never
23.3	De-caffeinated coffee or herbal tea	Side A	d n		Mu	D Never
23.4	Energy & sports drinks	Side A/ 1 can (330 mL)	Q o	W O	M o	n Never
23.5	Sods, Regular	Side A/ 1 can (330 mL)	пD	% 0	O M	o M o Never
23.6	Diet Soda	Side A/ 1 can (330 mL)	Q D	M □	Mo	O Never
23.7	Water	Side A/ 1 Liter	Q o	W o	Mu	n Never
24	MISCELLANEOUS					
24.1	Ketchup	Side A	Q D	A 0	Mo	o Never
24.2	Mustard	Side A	QD	W.D	M II	O Never
24.3	Zastar (thyme & sesame)	Side A	αp	W o	Mo	a Never
24.4	Pickles	1 medium cucumbee/ Side A	Q.D	W D	Mo	n Never

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 Yes, pleas 	re specify:		
		(serving size),	
		(serving size),	
		(serving size),	
(f	ood/beverage),	(serving size),	(serving/ week)
(f	ood/beverage),	(serving size),	(serving/ week)
2. No			
subbacaments:	th, did you continue	e/start taking any vitan and dose/day:	un / mineral / herbal
1. Yes, p			uin / múneral / berbal
1. Yes, p			tin / mineral / herbal
1. Yes, p			uin / mineral / herbal
1. Yes, p			uin / máneral / herbal
1. Yes, p			tin / mineral / herbal
1. Yes, p			tin / mineral / herbal
1. Yes, p			tin / mineral / herbal

32. 24-Hour Dietary Recall. Please recall what you are and drank the previous day from the time you woke up until the next morning.

Time	Food eaten	Amount	Method of preparatio
- 1			
			1
-			
		Institution	Review Burns
		American	Review in
		THE PERSON LAND	di Review Green
		1.0	In an in the same

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Time	Food eaten	Amount	Method of proporation
- 10		1	
- 11		1	
- 91		1	
- 4			
	400	1	-
		1	1 2 2 2
- 1			
- 1		100	
		10	
= [10		
100	1		
- N-1			

		usual eatin	g day?		
- 1	Ver				

4.7	100	
2,	No, please specify:	

	Interview E	nd Time:
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VISIT 4 QUESTIONNAIRE (ARABIC)

إستبيان لبحث علمي، رقم البروتوكول: NUT.FN.12



كلية الزراعة والعلوم الغذانية داترة التعذية وعلوم الغناء

دراسة مُتابعة للأم والطفل: بهدف تقليل نسبة خطر الإصابة بالأمراض غير المعدية في لبنان

الزيارة 4 (4 أشهر بعد الولادة)

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التاريخ (DD/MM/YYYY)://	إسم الياحث:	
اليوم من الأسبوع:	رقم الشخص العشارك:	
وقت الهدء بالمقابلة	توع المركز الصحي (AUBMC / RHUH)	

القهرس	
القياسات الأنثرويولوجية للأم	.1
القياسات الأنثروبوالوجية للطقل	J
مطومات علمة 4 معلومات علمة	J
العادات الغائلية لدى الطلقل	J
المأخوذ الغذائي للطقل واستهلاكه للمكملات الغذائية	٠,
المالخوذ الغذائي ثلام واستهلاكها للمكتلات الغذائية	.,

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القياسات الأنثروبولوجية للأم

- 1. الوزن: ___ كلغ
- 2. محيط الخصر: سنتم
 - 3. تسية الدهون: ____ %

القياسات الأتشروبولوجية للطفل

- 4. الوزن: ___ كلغ
- 5. الطول: ____سنتم
- 6. محيط الرأس: ____ سنتم
- 7. محيط منتصف الجزء الأعلى من الدّراع: ___ سلم

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بِسَتِيهَانَ لِيعِثُ طَمِي، رَقَمَ الْيَرُونُوكُولِ::NUT.FN.12

	. معلومات عامة
	8. ما هو عدر طفلك؟أشهر
ن هول طريقة الرضاعة، طريقة الولادة، إلخ.؟	 9. من بعد الولادة، على حضرت أي من الصقوف المُعطات في المستشفر تحميم الطقل المولود، ممارسة تمارين رياضية خاصة لقترة ما بعد ا 1. نعم برجي التحديد:
	10. منذ ولادة طفلك، من أعطاك توصيات وتصانح حول الرضاعة؟ 1. طبيك النساني 2. معرضة الطبيب النساني 3. لخصائية التغنية 4. طبيب الأطفال 5. ليتشاري الرضاعة 6. أفراد من الحائة 7. الأصدقاء 8. غير، حددي:
غير حليب الأم، التي أعطيت تطفلك؟	 خلال فترة بقاؤك في المستشفى من بعد الولادة، ما هي السوائل، شهب الخاص بالأطفل سوائل أخرى سوائل أخرى لا شيء لا أدري لا أدري
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العادات الغذانية لدى الطفل VI.

12. منذ ولادة طفلك، هل أرضعته إها؟ أيم (إنتقل إلى السؤال 14) 35 2

13. ما هو السبب أو الأسياب الرئيسة تحم إرضاع طلك؟ (إسأل هذا السوال ثم إنتقل إلى السوال 19)

¥	pai	المبيب أو الأمنياب الرئومية
		1. لا أحب الرضاعة
		2. الرضاعة محرجة
		 الرضاعة مؤلمة ومزعجة
_		 لا أستطيع أرضاع طقي عند الشعور بالإرهاق أو التعب
-		 لا أستطيع إرضاع طفلي عندما أعاني من قلة النوم
-		 عدم توفر املكن عامة مؤاتية للرضاعة
-		7. عدم توفر الدمم من الزوج
-	_	 عدم توفر الدعم من الاخرين (أعضاء الأسرة الأصدقاء)
-		 التشجيع في المستشفى على استخدام حليب الخاص الأطفال
-1		10. عائبت من مشاكل في إنتاج الحليب
-	_	11. طيب الثدي غير كانب لإشباع حلجات طفاني
-		12 مشاكل طبيَّة (إلتهاب اللَّذي، السكري، الخ.)
4		13. أم يتقبل الطفل اللدي
		14. ضرورة إستنفاف دوام العمل
_		15. غير ذلك، هندي:

14. كم من الوقت إنتظرت قبل أن وضعتِ طَفِكَ عَلَى النَّذِي بعد الولادة؟

مباشرة (خلال أقل من ساعة بعد الولادة)

2 ساعة

3. أقل من 24 ساعة (___ساعة)

: diff	ت قام	, الوة	کم من	واقتك	1513	منڌ	.15
	40 Mar.						

بالرضاعة الطبيعيّة المطالقة.
 بتانول حليب الأم وحليب الخاس بالأطفال:
 بتانول حليب العاس بالأطفال قلط:

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16, كيف كان يحصل أو يحصل حالياً طقلك على حليب الثدي؟

من الكدي مباشرة
 من القنينة

من اللدي والتثنينة

17. خَلَالُ قَتْرَةَ الرَضَاعَةَ، مَانًا حَصَلُ لِنُورِتُكُ الشَّهِرِيةَ؟

ا. توقفت نهائيا

ر. و حد بهدو 2 أوقف لقرة محدودة (____شيرا) وقد عاودت حالياً 3 لم تتوقف

18]. ما هو السبب أو الأصباب الرئيسة <u>للتوقف</u> عن الرضاعة؟

¥	in	السبيب أو الأسباب الرنيمية
-	_	1. مازات آرضع
4		2. لم أحب الرضاعة
4	-	و الرضاعة كانت محرجة
4	-	له الرضاعة كانت مؤلمة ومزعجة
+	-	 لم أستطع ارضاع طفلي عند الشعور بالإرهاق أو التعب
+	-	 ع. الم استطع إرضاع طفالي عندما أعاني من قله النوم
+	-	7. عدم توفر الماكن علمة مواتية تلرضاعة
+	-	ع مدينة الصون الزوج
+	-	 عدم تواور الدعم من الاخرين (أعضاء الاسرة الإصطاع)
+	-	10. عالیت بن بشاکل فی انتاج الحلیب
+	-	11. حليب اللذي كان غير كاف الإشباع جلجات طفلي (لم يكن طفلي ينبيع)
+	-	12. مشاكل طبيّة (اِلتَهاب الثديء السكري، الخ.)
+	-	13 لم يتقبل الملقل الثدي
+	-	14 أصبح طلى في المن العناسب
-	-	15. ضرورة إسكاناف دوام العمل
_		16. غير ذلك، حندي

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و1. من المتوائل التي سلاكورها، حددي تلك التي يتناولها طقلك، وأذكر ي كم مراة في الجوم أو في الأسيوع يتناولها

الوليرة	2 J	×	1	الشؤائل
ني ليوم أو الأستوع				Itals lakes
مي اليوم لو الأسيوع				الماء مع سكر، لو ماه الورد، لو عمل، لهم الرجاه المعاود
في اليوم لو الأسيوع				ملب الخاص بالأطفال مثل: Similac Similac Bestle, Enfamil, Similac
あるからに				
المي البوم إو الأسعوع				على الله (بويرة أو سائل) الراجاء لحديد الترع:
الماليوم لو الأحواج				13
مي المرار الاحوج				الطيب المحلي (كامل المسر)
الما المراد الاحوا				المثيب المحلي (قابل النسم)
مي المور و الاستوع) the shelling show
في الموم و الأسوع				1). الشابي أو الله هورات (مثل البائسون، البابونج، الكراويا)
تي اليوم و الاستوع				 عسير القاكية 100 % طبيعي (بالإخساقة إلى للمصير المحضر في المنزل)
لي اليوم و الأستوع				 21. ame thent 001% days (1)(dails for found thent in fact.)
Lo Tato C King of				13. عمير أو مشروب التواكه المحلي (بمحلي طبيعي أو اصطفاعي)
الما الموم أو الأسعوع				لدار المشروبات الدارية المادية
الما الموج إلى الأستوح				وإ المشروبات الماوية الدارث
في اليوم أو الأستوع				31. 12 - e 11 let 2, 15, 40 lesses.

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. هل قست بادخال الأطعمة (الصلبة، الشبه صلبة، أو الطرية) إلى غذاء طفلك؟	2
1. نعم 2. كلا (انتقل الى السوال 28)	
ر. ما كان أول طعام قدّمته لطقته؟	21
 كم كان عمر طفلك عندما قدّمت لـ إلها الطعام الأول مرة؟ 	22

2. لماذًا بدأت يتقديم الأطعمة لطفلك؟ (اختر كلّ ما يلطيق)	3
 التقليد الماثلي 	
 كان طفلي لا يز ال يشعر بالجوع بعد تناول العليب 	
ق. کان طفلی بیکی باستمرار	
4. أسبيح طفلي في السن المقامب لذلك	
يَ أَسْبِحَ طَعْلَى قَادَرا عَلَى رقع رأسه	
6. ثم یکن طفایی بنام خاتل اللیل	
7. كان طفلي مريضاً	
8. كان طفلي يرقض الحليب	
 كان طفلي مهتمًا بالأطعمة/ قطم ناسه 	
10 لم يكن وقت إطعام طفلي وتلائم مع جدول العمل الخاص بي	
11. حمات ثانية	
12. ما من سبب محلًا	
13 غير، بُرجي التّحديد:	

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24. من الأطعمة التي سوف أذكرها، هندي تلك التي قد بدأت بإدخالها إلى النظام الغذائي الخاص بطقلك. ويُرجى تحديد عمر طقلك عندما بدأت بإدخال هذه الأطعمة

العمر (بالأشهر)	لا أعرف	215	ئعم	الأطسة
				 الفيز، القمح، البرط، الأرز، المعكرونة، أو غيرها من الأطعمة المصنوعة من الحبوب
				 حيوب الإفطار الخاصلة بالأطفال (سيرباتك، بليدين، الخ)
				 الجزر، الكوسى، البطاطا الطوة (الصغراء أو البراغالية من الناخل)، البقطين
				 البطاطاء أو أي أطعمة أخرى مصنوعة من الجذور
	7			 أي من الخضروات الورقية الخضراء الداكنة (السيانخ، الطوخيّة، إلخ.)
). المالجو، الجزيَّاب فروت، البندورات البطيخ
	15			 أي من أنواع اللواكه والشمار الأخرى
				 أ. لحوم الأحضاء (الكارد، الكلي، القلب، إلخ.)
				 اللحوم (لحم البقر، الخنزير، الخروف، الماعز، الذجاج، أو البط)
				10. البيض (الكاملة، الصقار ، البياض)
				11. السطة، محار البحر، أو المأكولات البحرية الطائرجة أو المطبة
				12. البقول (الحس، الممص، القول، الفاصولياء وغير ها)
				13. المكنزات والبذور
				14_ الأجيان و الأثبان (اللبنة، الجينة، اللبن، منتجات الحليب)
				15. أطعمة الأمرة (اليخذات؛ الخضروات المعشوك الخ.)
		1		16. الزيوت، الذهون، أو الزيدة، أو الأطعمة المصنوعة منها
				17. الأطعمة السكرية (الشوكولا، البون بون، الملويات، الكيك، البسكويت، إلخ.)
				18]. الطويات العربية (بقلاوة، مصول، تمورة، إلخ.)
				19. هلويات عربية أخرى (مغلي، الأرز بالحليب، مهلبية)
				20, الشربيات
				21. العمل
				 توابل للتكهة مثل الفلفل الحار، البهارات، الأعشاب، الخردل، الكاتشاب، الخل، أوصاحمة العثوبا
				23. المواد الغنائية التجارية المدخمة بالحديد (حبوب الإقطار، الحليب، الخ.)

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25. من الأطحة التي سوف أذكرها، حددي عدد المرات (في اليوم، في الأسبوع، أو في الشهر) التي يستهلك فيها طفاك أحد الأصفاف الثانية

المواد الغذائية		وتبرة الإه	ىتھلاك	10.3
,	في اليوم	في الأسبوع	في الشهر	lui
1. رقاق البطاطا (شيس)		2500		-
2. شوكرلا			-	-
3. אנגאני		_		-
4. بسكويث/كوكيز				-
ي. بوظة/أيس كريم/ بوظة على النج		_	-	-
6, بطاطأ مقاية				-
7. هوت دوغ				-
8, نسبرغر		-		-
9. بيكرا				-
10. كيك، الماقين، الكابكيك،				-
4,64,11			_	-
12,دونٹس			_	-
 عيوب الافطار المخلاة 				

Togethational above the color of the color o

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المأخوذ الغذائي للطفل واستهلاكه للمكملات الغذائية

26. الملفوذ الظالمي خلال الأربع وعشرين ساعة الأخيرة, نرجو منك أن تتذكري ما تتاوله طفلك من طعام أو شراب في الأمين منذ نهوضه/ها في الصباح وحتى اليوم التالي.

طريقة التحضير	الكمية	الطعام	الواقت
-			

	1 1		
			+
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6 130	SideB	Side B	Side B/ I hay	Side BV	Side B/ I he g		Side A	Side A	I selectivi	l scoop/ l stick	Side A	Site. s	V agric		Side A	Side A	Side A
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إسقابيان ليمث علمي، رقم فيروي كوليارو. NUT.FN.12:

23	23.1	23.2	23.3	23.4	23.5	23,6	23.7	24	24.1	242	24.3	23.4
المشوريات الغير كمولية	قهو تا سريمة التحضير ، تسكافيه ، فهو ة تركية	21/0	قهرة خطية من الكافيين أو شاي بالأعشاب أو هروات	متروب الطلقة أو الريفسة	مقروبات غازية	مشروبات عزية ديت	44	المشوريات الغير عحواية	SELLY	خرط	(all grand	Amou
	Side A	Side A	Side A	Side A	Side A	Side A	Side A		Side A	Side A	Side A	Side A
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المشيبان ليحث علمي، رقم البروتوكوث: NUT.FN.12

30. هل هذك أبي أطعمة أو مشروبات تتقاوليقها عادة ولم تأثن على ذكر ها؟ 1. تعب مددي:

(هجم الرجبة) (عدد الرجبات أسيرعيا)	(الطعام/الشراب)	
(حجم الرجية) (عد الرجيات أميرعيا)	(الطعام/الشراب)	
(حجم الرجبة) (عند الوجبات أسيوعبا)	(الطعام/الشراب)	
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(هجم الوجبة) (عند الوجيات أسبوعياً)	(الطعام/الشراب)	
	У .2	

31. منذ ولادة طفئك. هل بدأت أو تنبعت تفاول المحملات الخاهية من أوتامينات أو معادن أو أعشاب طبية؟ أ. فعن ، علتي اللوع والكمئية في اليوم:
 كلا

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اِسْتِينَ لِيحَتْ طَمِي، رَقْمَ البِرَوْتُوكُولُ: NUT.FN.12

32. العلقوذ الغذائي خلال الأربع وعشرين ساعة الأخيرة. نرجو منك أن تتذكري ما تتاولت من طعام أو شراب في الأسل منذ نهوضك في الصباح وحلى اليوم التأتي.

ضير	طريقة التم	الكنية	الطعام الذي للناواتيه	لرقت
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		,		***	
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VISIT 5 QUESTIONNAIRE (ENGLISH)



RESEARCH QUESTIONNAIRE; PROTOCOL NUMBER: NUT.FN.12

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of Review American University of Being

Faculty of Agricultural and Food Sciences Department of Nutrition and Food Sciences

Mother and Child Cohort: Towards Curbing the Epidemic of Noncommunicable Diseases in Lebanon

VISIT 5 (6 Months Postpartum)

> Institutional Review Ironal American University of Beitte 16 AUG 213 APPROVED

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Interviewer's Name:	Date (DD/MM/YYYY);//
Subject ID Number:	Day of the Week:
Health-Care Center (AUBMC / RHUH)	Interview Start Time:

TABLE OF CONTENTS	PAGE
I. Anthropometric Measurements of Mother	3
II. Anthropometric Measurements of Child	3
III. General Information	4
IV. Feeding Practices of Child	4
V. Dietary Intake of Child and Supplement Use	10
7I. Dietary Intake of Mother and Supplement Use	12
TI. Lifestyle Practices	14
III. Household Food Security	15

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ANTHROPOMETRIC	MEASUREMENTS OF MOTH	IER
I. Weight:Kg		
2. Waist Circumference:	Cm	
3. Percent Body Fat:	_%	
ANTHROPOMETRIC	MEASUREMENTS OF CHILI	D
4. Weight:Kg		
5. Length: Cm		
6. Head Circumference: _	Cm	
7. Mid-Upper Arm Circum	aference: Cm	
	American University 15 AB 733	3
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III, GENERAL INFOR	MATION
8. How old is your child	? months
IV. FEEDING PRACTIC	CES OF CHILD
IMPORTANT NOTE	TO REMEMBER:
At 4 months postparts	m, this mother was
Exclusiv	cly breastfeeding her child
Exclusiv	ely formula-feeding her child (go to appetter to
Mixed fo	redling her child
	fy the age at which you stopped:weeks or months (go to
10. Since birth, how long w	as your child:
Mixed (breast &	stfed: weeks or months formula milk) fed: weeks or months
 Exclusively form 	ula fed: weeks or months
How did/does your child Directly from bres Expressed breast a Both from bresst a	ast
	Institutional Review Incard
VISIT 5- QUESTIONNAIRE	VERSION DATE: (ULA) 26, 2013 Page 4 or 16
	15 00 13

12. Durin	g the period of breastfeeding, v	what happened to your menstrual cycle?
1.	Stopped completely	The state of the s
2.	Stopped for a short while (months) but is back now
	Did not stop	

13. What is/are the primary reason(s) for <u>stopping breastfeeding</u>? (skip if mother is still breastfeeding and go to question 14)

Primary Reason(s)	Yes	No
Didn't like breastfeeding	1	110
2. Breastfeeding was embarrassing		
3. Breastfeeding was painful and discomforting		
4. Could not breastfeed when tired and fatigued		
Could not breastfeed when lacking sleep		
6. Lack of breastfeeding-friendly public places		
7. Lack of support from husband		
Lack of support from others (family members, friends, etc.)		
Had problems with breastmilk production		
 Milk supply was insufficient to satisfy the baby (i.e baby was not getting full) 		
11. Medical problems (e.g. mastitis, diabetes, etc.)		
12. Baby did not accept the breast		_
13. Baby was old enough		
14. I had to go back to work		
15. Other, please specify:		

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14. From the list of liquids I will call out, please indicate if your child has started consuming any and please tell me how many times per day or per week these liquids are consumed

	radums	YES	ON	DK	Frequency
L P	Plain water	1			(per day or week)
2 W	Water with added sugar, rose water honey at-				/day or week
3. P	Plain infant formula milk (Similac Neetle Enfamil acc)	-			/day or week
4. In	Infant formula milk with added super honey etc., infant	-			/day or week
S. C.	Cow milk (powdered or liquid), nlease meritin.	-			/day or week
8. Y	Vogurt.	-			/day or week
7. 5	Sweetened milk drinks (full fat)				/day or week
8. Sy	Sweetened milk drinks (reduced fat)				/day or week
, C	Clear broth and soup	-			/day or week
0. Te	Teatherbal drinks (such as anis, chamomile, caravere), edone	-		1	/day or week
1.10	. 100% fruit juice (includes homemade)	-			/day or week
2.10	12. 100% vegetable juice (includes homemade)	1	1	1	(day or week
3. Su	3. Sweetened fruit drink or juice (with natural or artificial amounts)				/day or week
4. Re	14. Regular soft drinks	-	1		/day or week
5. Di	15. Diet soft drinks sweetened by no- or low-calmin suwateness	-	1		Aday or week
6. Ott	16. Other liquids, please specific	-	1		/day or week
					74

Adapted from: World Health Organization (WHO), 2010. Indicators for assessing infant and young thild feeding practicus. Part II Measurement.

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At 4 months postpartum, this mother: Had started introducing foods Had not started introducing fo	(go to question 19) ods yet
15. Have you introduced any foods (solid, semi-solid, or soft fo L. Yes 2. No (go to question 23)	ods) to your child?
6. What was the first food introduced?	442
e com a se a se a marine de la composition della	
17. How old was your child when you gave him/her this first f	ood?
8. What was/were the main reason(s) for introducing foods to that apply)? 1. Tradition in family 2. Child was still hungry after milk feeds 3. Child was continuously crying 4. Child was old enough 5. Child oould start holding his/her head up straight 6. Child was not sleeping through the night 7. Child was sick 8. Child refused milk feedings 9. Child seemed interested in food / weaned him/herse 10. Child feedings were incompatible with work schedu 11. Subsequent pregnancy 12. No specific reason 13. Other, please specify:	if le
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- STREET ACTUAL	0 AUS [13

 From the list of foods I will call out, please indicate if your child has started consuming any and please indicate your child's <u>age at first introduction</u>

FOODS				AGE
1. Bread, wheat, burghul, rice, noodles, or other foods	YES	NO	DK	(months)
made from grains				
2. Baby cereals (Cérélac, Blédine, etc.)				
 Carrots, squash, sweet potatoes (yellow or orange inside) or pumpkin 				
4. White potatoes, or any other foods made from roots			***	
Dark green-leafy vegetables (spinach, moulkhigh, etc.)	-	_		
Ripe mangoes, grapefruit, tomatoes, watermelon	-		-	
7. Other fruits and vegetables	_		-	
8. Organ ment (liver, kidney, heart, etc.)		-		
Meat (beef, pork, lamb, goat, chicken, or dook)		-	-	
10. Eggs (whole, egg volk, egg whites)	_	-	-	
11. Fresh or canned fish, shellfish, or seafood	-	-	-	
12. Legames (beans, chickpeas, lentils, etc.)	-	_		
13. Nuts or seeds		_	-	
14. Dairy ('labneh', cheese, yogurt, milk-based products)	-	-	-	
 Family foods (stews, staffed vegetables, etc.) 	_	-		
16. Oils, fats, butter, or foods made with any of these	-	_	-	-
 Sugary foods (chocolate, candies, pastries, cakes, biscuits, etc.) 		+	+	
18. Arabic sweets (baklava, maamool, numora, etc.)		-	-	
19. Other Arabic sweets (mughleh, rice pudding, mhalbieh)	7	+		
20. Jams and jellies		_	-	
21. Honey	_	_	_	
 Condiments for flavor, such as chilies, spices, herbs, ketchup, mustard, vinegar, soy sauce, etc. 	+	+	+	-
3. Iron-fortified commercial foods (baby cereals, milk, etc.)	+	+	+	

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ATTIMES VIET

 From the list of foods I will call out, please indicate the frequency of your child's consumption (per day, per week or per month)

FOOD ITEM	FREQUENCY				
	/day week month	Times/ month	Never		
1. Potato chips					
2. Chocolate					
 Soft lollipops and hard candy 					
 Biscuits/cookies (chocolate chips, oreo cookies, etc.) 					
Joe-cream/ice-blocks					
6. French Fries					
7. Hot dogs					
8. Hamburgers					
9. Pizza					
10. Cake, muffins, cupcakes					
11. Pancakes					
12. Doughnuts					
13. Sweetened cereals					

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V. DIETARY INTAKE OF CHILD AND SUPPLEMENT USE

24-Hour Dietary Recall. Please recall what your child ate and drank the previous day from the time he/she woke up until the next morning

Time	Food eat	OH .	Aressent	Method of preparation
	32			74.

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- 1 St. 1

1 W	no currently taking any	vitamin or mineral supplements?
	s, please specify brand an	f dose/day;
2. No		
		Institutional Review Bound
		DESTRUBIONAL REVIEW BOOKS

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VI. DIETARY INTAKE OF MOTHER AND SUPPLEMENT USE

24. 24-Hour Dietary Recall. Please recall what you are and drank the previous day from the time you woke up until the next morning.

Time	Food caten	Amount	Method of preparation
	8 3		74
			-

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. * 1 20 1 -

Time	Food eaten	Amount	Method of preparation
- 1			
		1	
	20 6		200
		1	
		1	1
		1	
			1

25. Was yeste	rday a usual day?	
1,	Yes	
2.	No, please specify:	

Are you <u>currently</u> taking any vitamin / mineral / herbal supplements?
 No No

2. No
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Smoking		
2. 3.	I do not smoke Cigarettes: per day; per week; per month Cigars: per day; per week; per month	
4.	Narghili:per day;per week;per month	
Alcohol Intake	700	
2. 3. 4. 5.	y drinks of the following do you currently drink? I do not drink Beer:(bottles/day);(bottles/week);(bottles/meck);(glasses/day);(glasses/week);(glasses/meck);(glasses/week);(glasses/week);(glasses/day);	

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VIII. HOUSEHOLD FOOD SECURITY

29. Household Food Insecurity Access Scale (HFIAS) Measurement Tool

NUMBER	QUESTION	RESPONSE OPTIONS
HFIAS 1	In the past 4 weeks, did you worry that your household would not have enough food?	I. No 2 Ves
HFTAS_2	How often did this happen?	Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks) Often (more than 10 times in the past 4 weeks)
HFIAS_3	In the past 4 weeks, were you or any household member not able to eat the kinds of food you preferred because of a lack of resources?	1. No 2. Yes
HFIAS_4	How often did this happen?	Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks) Often (more than 10 times in the reast 4 weeks)
HFIAS_5	In the past 4 weeks, did you or any household member have to est a limited variety of food due to a lack of resources?	1. No 2. Ver
HPIAS_6	How often did this happen?	Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks) Often (more than 10 times in the nort 4 weeks)
Institutional Review p	In the past 4 weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	1. No 2. Yes
16 dig 201	How often did this happen?	Rarely (1 or 2 times in the past 4 weeks) Sometimes (3 to 10 times in the past 4 weeks) Often (more than 10 times in the past 4 weeks)

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RESEARCH QUESTIONNAIRE, PROTOCOL NUMBER: NUT.FN.12

HFIAS_10 How often did this happen? HFIAS_11 In the past 4 weeks, did you or any household member have to est fewer meals in a day because there was not enough food? HFIAS_12 How often did this happen? HFIAS_13 In the past 4 weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food? HFIAS_14 How often did this happen? HFIAS_15 In the past 4 weeks, did you or any household member go to sleep at night hungry because there was not enough food? HFIAS_15 In the past 4 weeks, did you or any household member go to sleep at night hungry because there was not enough food?	T Deed by the Carlo
AS_11 AS_12 AS_14 AS_14 AS_16 US_16	 Sometimes (3 to 10 times in the past 4 weeks)
AS_12 AS_14 AS_14 AS_16 US_16	-
AS_13 AS_14 AS_16	ni ni
AS_14 NS_16 NS_16	ri -i
AS_16 AS_16	4-4
AS_16	-
-	N N
whole day and night without eating anything because there was	MB 42 1-1-33
HFIAS_18 How often did this happen?	Rarely (1 or 2 times in the past 4weeks) Sometimes (3 to 10 times in the past 4weeks)

for, Anne Swiedule, and Peals Billinds; 2007 Bean-And Food Junearity Acres. Soid: (WELAS) for Memorranes of Food Access: Arthuring Golds, vor. 3. Food and Autrition Technical Assistance Program (FAMTA). Weddington, DC: USAID. Interview End Time: Pact 16 or 16

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VISIT 5 QUESTIONNAIRE (ARABIC)

استبیان لبحث طمی، رقم البروتوکول: NUT.FN.12



كلية الزراعة والطوم الغذانية دائرة التغاية وطوم الغذاء

دراسة مُتابعة للأم والطفل: بهدف تقليل نسبة خطر الإصابة بالأمراض غير المعدية في لبنان

الزيارة 5 (6 أشهر بعد الولادة)

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//	إسم الهادث:
اليوم من الأسيوع:	رقم الشخص المشارك:
وقت البدء بالمقابلة:	أوع المركز الصحي (AUBMC / RHUH)

القهرس	
القياسات الأنشروبولوجية للأم	J.
القياسات الأنثروبولوجية للطفل	.11
مطومات علىة	m.
العقات الغالية لدى الطائل	.ıv
المناغوذ الغذاني للطقل واستعلاكه للمكملات الغذانية	.v
المأقودُ الغَنَائي للأم واستغلاكها للمكمكات الغَلَائية	.vı
العلانات التأليعة كأسلوب هواة	.vii
الأمن الغذائي للأسرة	.vm

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اِسْتَبِيانَ تَبِحَثُ عَلَمِي، رَقِّمَ الْبِرُونُوكُولُ: NUT.FN.12

القياسات الأتثروبولوجية للأم

- 1. الوزن: ___ كلغ
- 2. محيط الخصر: ___ مختم
- 3. تسية الدهون: ____ %

القياسات الأنثرويولوجية للطفل

- 4. الوژن: ___ كلغ
- الطول: ____ سنتم
- محيط الراس: ___ سنكم
- 7. محيط منتصف الجزء الأعلى من الأراع: ____ منتم

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	III. مطومات عامة
	8, ما هو عمر طقائك؟أشهر
	IV. العادات الغذانية لدى الطقل
-	79.
ئى السؤال 14) ال	ملاحظة مهمة للتذكّر: على 4 أشهر من بعد الولادة، هذه الأم كانت: مرضع طقلها رضاعة مطلقة معلى المناص للأطفال (إنتقل إلى المناص للأطفال (إنتقل إلى المناص للأطفال
ره: اسارین او اشهر (انتقال البی	9_ على ما زلت ترضعين طفلك؟ 1. نعم 2. كلا، برجي تحديد العمر الذي تواقت عن ارضاع شفك ك العوال 13)
هر استایین او اشهر ع او اشهر	 10. منذ ولادة طفاته، كم من الوقت قام طفاته: 1. بالرضاعة الطبيعية المطلقة: 2. بتناول حليب الأم وحليب الخاص بالأطفال: 3. بتناول حليب الغاص بالأطفال فقط: العاص بالأطفال فقط:
	 كيف كان يحصل أو يحصل حالياً طقلك على حثيب الشي؟ من الشي مباشرة من الشيئة من الشيئة من الشيئة
VISIT 5- QUESTIONNAIRE	Institutional Review Phone? Americal University of themselversion Date: July 26, 2013 PAGE 4 OF 16

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استبیان لیمث علمی، رقم البروتوکول: NUT.FN.12

غلال فترة الرضاعة، منا حصل لدورتك الشهرية؟ توقت لهائيا توقت لفترة محدودة (____ شهرا) وقد عاودت حاليا لم تتوقف

13. ما هو السبب أو الأسياب الرئيسة التوقف عن الرضاعة؟ (الثقل إلى السؤال 14 إذا ما زالت الأم ترضع)

Y	نعم	السبب أو الأضباب الرئيسة
		1. لم أحب الرضاعة
		2. الرضاعة كانت محرجة
		 الرضاعة كالت مؤلمة ومزعجة
		 لم أستطع إرضاع طفلي عند الشعور بالإرهاق أو النجب
4		 لم أمشطع إرضاع طقلي عندما أعاني من قلة النوم
-		 عدم توفر املكن عامة مؤاتية للرضاعة
4		7. عدم توفر الدعم من الزوج
4	_	 عدم توفر الدعم من الاخرين (أعضاء الأسرة الأصنقاء)
-		9. عاتيت من مشاكل في إنتاج الحايب
1	_	10. طيب الذي كان غير كاف لإشباع حاجات طفلي (لم يكن طفلي يشبع)
4		11.مشاكل طبيّة (إلتهاب الكدي، السكري، الخ.)
4	_	12. لم يتقبل الطقل الثدي
-		13. أصبح طقلي في المن المقامت
\perp		14. شعرورة إستثناف دوام العمل
		15. غير ذلك، حدى:

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استييل ئيمن علس، رقم البرونوكول: NUT.FN.12

14. من الستوائل التي سائكرها، حددي تلك التي يتناولها طلقاء والكري كم مرَّة في اليوم أو في الأسيوع يتناولها

	Mark's	ۍ <u>. غ</u>	×	1	شران
	20 March 11.				fully links.
	The state of the state of				الماء مديك ، أو ماه الدون أو عمل المرا الزجاء المعايد:
	The state of the state of				Nestlé, Enfamil, Similac Jacky, Licht, L.
	The last lead of				The state of the s
	The state of the state of				The state of the s
	مي اليوم أو الأسيوع			-	41 12 (15 % 10 mm) 1 4 4 4 1 1 1 1
	do they be though	-		1	3
	ではなりにする		1	+	الطيب المعلى (كامل النمس)
	77.5			1	الملب المحلي (قليل الدسم)
	The state of		Ì	1	Buc is a Electricia
	3 7 7 5 7 4	-	1	1	10 الثالي أو الله هدرات (مثل البالسون، الباليولي، الكرارية)
	3	-			المساولة 100 % طبيعي (بالإصابة إلى المساول المساول في المؤل)
A e	-	1		9	71 mill literal 001% days, (1) (will) by land, throat, by laid.
TACT		-	1		17 يومند ر. مشروب اللواكه النظي (بعطي طبيعي لو احطناهي)
ili.		-	1	1	1 15.00 , J.D. (1.4) 15 (1.4)
di da 1	_	-			A 11 11 11 11 11 11 11 11 11 11 11 11 11
III	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			-	Charles and the same of the sa
20 17	۰				Alband also de sea de s

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زال 19}	ملاحظة مهمة للتذفر: على 4 أشهر من بعد الولادة، هذه الأم كانت: على 4 أشهر من بعد الولادة، هذه الأم كانت: قد بدأت يادخال الأطعمة لطقلها قد لم تبدأ بادخال الأطعمة لطقلها
غذام طنته؟	15. عل قمت بادخال الأطعمة (الصلية، الشبه صلية، أو الطرية) إلى
]. تعم 2. كلا (الثكال الى السوال 23)
	16. ما كان أول طعام قدّمته لطفته!
أسابيع/ النهر	17. كم كان عمر طَقَالُك علدما قَدْمت لَه لِلهَا الطَّعَامُ لأُولُ مرَّةً *
	18, لماذًا بدأت يتقديم الأطعمة لطفلك؟ (إختر كلّ ما ينطيق)
	 انتقاید العائلي کان طالي لا يز ال پشعر بالجوع بعد تناول الحايب
	2. کان طقای بیکی باستمرار 3. کان طقای بیکی باستمرار
	4. كان طقلي في السنّ المناسب لذلك
	 أسبح طقلي قادرا على رفع رأسه
	6. لم يكن طفلي بنام خلال الليل
	7. كان طفلي مريضا
	8. كان طفلي يرفض الطيب
13,652	 كان طفلي مهتمًا بالأطمعة، فطم نفسه ألم يكن وقت إطعام طفلي بتلائم مع جدول العمل الخاص
GP.	10/ لم يكن وقت إطعام ططني يتخدم مع جدول العمل الخاص 11/ حملت ثانية
	11. خمسر دارد 12. ما من سبب محلاد
-	13. غير، يُرجي التحدد:
	Institutional Review Board American University of Boirn
	15 ASS EEB
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إستييان ثبحث علمي، رقع اليروكوكول: NUT.FN.12

19. من الأطعمة التي سوف إذكرها، حددي تلك التي قد يدأت بإدخالها إلى النظام الغذائي الخاص بطفك. ويُرجى تحديد عمر طفك عندما بدأت بإدخال هذه الأطعمة

العس	Y			ويرجى تحديد عمر طفت عدما يدان يدهن هذه المصد
(بالأشهر)	أعرف	35	jui	
				. الغبز، اللمح، البرغل، الأرز، المعكرونة، أو غير ها من الأطعمة المصنوعة
		_	_	من العبوب
		-		. حوب الإفطار الخاصلة بالأطفال (سيرياتك، بليدين، الخ.)
		-		. الجزر، الكوسى، البطاطا الحلوة (الصغراء أو البرغالية من الذاخل)، اليقطين
		-		ر البطاطاء أو أي أطعمة أغرى مصنوعة من الجنور
		_		. أي من المضيروات الورقية المضواء التاكلة (السيانخ، العلوخيَّة، إلخ.)
		_	_	ر المانجوء الجريب فروت، البندورة، البطيخ
			_	ً. أي من أنواع الغواكه والمُضار الأخرى
		_		ز لعوم الأعضاء (الكبد، الكِلي، القلب، الخ.)
		_	_	 اللحوم (لحم البقر، الخنزير، الخروف، الماعز، الذجاج، أو البط)
			_][. البيض (الكاملة، الصنفار ، البياض)
		_		 السلك، محار اليحر، أو المأكولات اليحرية الطازجة أو المعلية
		_	_	12. البقول (العدس، الحمص، الفول، الفاصوليا، وغير ها)
		-	_	13. المكنثر ات والبذور
		_		14. الأجبان والألبان (اللبنة، الجينة، اللبن، منتجات الحابيب)
		_		15 لطعمة الأسرة (اليخذات، الخضروات المحقود، الخ.)
				16 الذيوب، اللاهون، أو الزيدة، أو الأطعمة المصطوعة منها
				17. الأطُّعمة السكرية (الشوكولا، اليون بون، الحاويات، الكوك، البسكويت، إلخ.)
	1.			18. الطويات العربية (بقلاوة، معمول، نعورة، الغ.)
				19. طويات عربية أخرى (مغلي، الأرز بالطيب، مهلبية)
				را. را 20 الفريبات
				.11 21
				22. توايل للتكهة مثل الفلفل الحار ، اليهار اث، الأعشاب، الخردل، الكاشاب، الخل،
				او صلعنه العثريا
				23. المواد الطانية التجارية المدعمة بالحديد (حبوب الإفطار ، الحليب، الخ.)

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20, من الأطعمة التي سوف أذكرها، هندي عند المرّات (في اليوم، في الأسبوع، أو في الشهر) التي يستهلك فيها طفلك أهد الأصناف التالية

المواد الغذائية		وثيرة الإستهلاك		
	في تيوم	في الأسبوع	في الشهر	أبدة
 رقائق البطاطا (شيبس) 				
2. شوكولا				
3. پون بون	-	- 8		
 بسکویت/کوکیز 				
 بوظة/أيس كريم/ يوظة على ثانج 		0 = 1		
6, يطلطا مقلية		- 1		
7. ھوت دوغ		7		
8. هنبرغو				
و بيئزا				
10_كوك، المافين، الكابكيك				
11.بانكيك				
12.دونتس		30		
13. حبوب الإفطار المخلاة				

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(ستبيان ليمث علمي، رقم اليرونو كول: NUT.FN.12

المأخوذ الغذاني للطفل واستخلاكه للمكملات الغذانية .V

21. الملقوذ النفائي خلال الأربع وعشرين صاعة الأغيرة. نرجو منك أن تتذكري ما تتاوله طقك من طعام أو شراب في الأمس منذ نهوضه/ها في الصعاح وحتى اليوم التالي.

الطعام الكعية طريقة التحضير	يفت
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American University of Beirat	
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بُسْتِيهَانَ لَيْحَتُ عَلَىنِ، رقَّمَ البِّرِينُوكُولِ: NUT.FN.12

	 على هذا التمط المُعتاد لتشاول الطعام عند طفاك؟ نعم
	2. کلا، لا، مندي:
ومعادن؟	 عل يتفاول طفاك أي من المكتلات الغذائية من فيتاميلات 1. تعم، برجى تحديد الإسم والكمنية في الدوم:
	ا. تمه پرچی تعبید ، رسم رست می حرب

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إستبيان ليمث علمي، رقم البروتوكول: NUT.FN.12

VI. المأخوذ الغذائي للأم واستعلاكها للمكملات الغذائية

24. الماخوذ الغذائي خلال الأربع وعشرين ساعة الأخيرة, نرجو منك أن تتلكري ما تتاواته من طعام أو شراب في الأمس منذ نهوضك في الصباح وحتى اليوم التالي.

طريقة التحضير	الكبية	الطعام الذي تقاولته	الوقت
50		***	
	Judi Azneji	infonal Review Beard can University of Beina	
		1.5 AUG 2009	

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NUT.	علىي، رقم البروتوكول: FN.12	إستييان ليحث	

			2
		ل كان الأمس يوما عاديا؟ 1. نحم 2. كلاء حددي:	
عشب طبیه؟	ية من فيتامينات أو معالن أو أه كمنية في أليوم:	يا <u>ليّا</u> ، هل تتشاولين المكمانات الطاة 1. نعب ، حد <i>دي النوع وال</i> 2. كلا	.26
VISIT 5- QUESTIONNAIRE		tional Review Hand SR, 2013**ETSIV PAGE 13 OF 15 AMS 223	F 16

بستبيان ليحث علمي، رقم البروتوكول: NUT.FN.12

		دات المُلْبِعة كأسلوب هيأة	VI. العاد
			التدكيين
		يًا، كم من الأصناف التالية تدفئين؟	As 27
0.00	40	1. لا ادخن	.27
في الشهر	في الأسبوع،	2. سجائن في اليوما _	
في الشهر في الشهر	قي الأمناوع،	3. سيجار: ابي اليوم،	
في السهر	، في الأسبوع، _	4. الترجيلة: في اليوم	
4	7	**************************************	
		با	تثاول الكحو
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الراع	HFIAS_1	HFIAS_2	HFIAS_3	HFIAS_4	HFIAS_5	HFIAS_6	HFIAS_7	HFIAS 8
السوال	في الإسابين الأربعة السابقة، على قلقت بأن مترك لا يحقو على الطعام الكافرية	AFIAS 2 مرة مثان الله ا	في الأسامع الأربعة السابقة، هل للت أو أحد لتراد الأمرة أم يتمكن من تقارل أثواع الأطعمة المفصلة لديه تحدم وجود الموارد الكافية؟		في الأسابيع الأريمة السابلة، هل الت أو أحد الورد الأسرة وجب عليه تقول لتواع محدودة من الطعام لحم وجود الموارد؟	A reference of the Association o	في الأسابيع الأربعة السابقة، هل لتك لو أحد أفراد الأمرة وجب طبة تقاول نوع من الطعام لم يكن يريد تقاوله لحم وجود المواود للحصول على أتوام لقرى من الطعام!?	
خوارات الأجوية	7-1 2-1mg	1- تادراً (مرة أو مراقباً في الأسابيع الأربعة السابلة) 2- أحواثاً (3 إلى 10 مرات في الأسابيع الأربعة السابلة) 3- غاباً (أكثر من 10 مرات في الأسابيع الأربعة السابلة)	1-1/ 2-1-4	 الدرا (مرة أو مرش في الأسليع الأربعة السابلة) أحيانا (3 إلى 10 مرات في الأسليع الأربعة السابلة) فقل (كثر من 10 مرات في الأسليع الأربعة السابلة) 	7.1. 5.14	 الدرا (مرة لو مرتين في الأسابي الأريمة السابقة) أحيانا (3 إلى 10 مرات في الأسابي الأريمة السابقة) عليا (أكثر من 10 مرات في الأسابي الأريمة السابقة) 	V-1	 تادرا (مرة أو مرتين في الأسليع الأريمة السابلة) أحياتا (3 إلى 10 مرات في الأسليع الأريمة السابلة) مثل (كاتر من 10 مرات في الأسليع الأريمة السابلة)

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HFIAS 18	1	3. مال) (كاثر من 10 مرك في الاسليج الاربعة السابعة)
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HFIAS_17	في الأسابين الأربعة الشابلة، على أنت أو أحد أفراد الأمرة بقي 24 ساعة من اللول أي شيء لحام توفر الطعام الكافي؟	7-1
HFIAS_16	A بردُ هات تلك؟	2. اهوال (3 إلى 10 مرات في الأسابع الأربعة السابقة) 2. ماليا (أكثر من 10 مرات في الأسابع الأربعة السابقة)
HFTAS_15	مي الأسابين الأربعة السابقة، هل فات أو أحد قوله الأسرة ذهب إلى اللوم على الليال جائماً أحدم توفر الطحام الكافئ!	7-1 2-14 3-14 (- 1) an inch. (Kadisa (1) par lands)
HFIAS_14	HPIAS_14 كېمرة هدث الله؟	1. تكوراً (مرة أو مرفق في الأسطيق الرابعة السلية) 2. أميال (3 إلى 10 مرات في الأسطيق الرابعة السلية) 2. عقبًا (كثر من 10 مرات في الأسطيق الرابعة السابئة)
HFIAS_13	مي الأسابيع الأريمة السابقة، هل، في أي وقت، لم يقولها أي نوع من الباعد في الدين الحدود وجود الموارد للحصول على الطعابة	Y-1
HFTAS_12	APTAS_12 APTAS_12	ا مايز (مرد و مرفق مي و سيح 2- لموان (3 إلى 10 مرات في الأسافع الأربعة السافة) 3- مايا (كثر من 10 مرات في الأسافع الأربعة لسافة)
HFIAS 11	في الأسابي الأريمة المنابقة، هل أنت أو أحد أقراد الأسرة وجب عليه تبار إ ، حداث أقل في أنهم لحم وجود كمية كافية من الطعام؟	7-7-7-1 1-7-1
HFIAS_10	AFIAS_10 AFIAS_10	1- تادر! (مرة او مركين في الاسابين الريعة السابة) 2- أجيانا (3 إلى 10 مرات في الاسابين الأربعة السابة) 3- خابا (أكثر من 10 مرات في الاسابين الأربعة السابة)
HFIAS 9	مي الأسابيع الأريدة السابقة، على أنت أو أحد لوراد الأسرة وجب طله 1923 - حدة أسبة من السابقة لعدم وجود كمية كالهاء من الطمارة	1. Z

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