

**Comparing Nutritional Knowledge to Actual Dietary
Intake among a Group of Kasr Al-Ainy Antenatal
Care Clinic's Attendants**

Thesis

**Submitted for Partial Fulfillment of Master Degree in
Public Health & Community Medicine**

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2012

وَمَا تُوفِّقِي إِلَّا بِاللَّهِ عَلَيْهِ تَوَكَّلْتُ وَإِلَيْهِ أُنِيبُ...

سورة هود (88)

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Acknowledgments

*First of all, I would like to express my gratitude to **Allah**. Without his guidance and help, this study would not be finished.*

*I would like to express my appreciation to my supervisor, **Prof. Dr. Maha El Rabbat**, whose expertise, understanding, and patience, added considerably to my study.*

*A great thanks goes out to my supervisor **Prof. Dr. Hanaa Abdullah**. She provided me with direction and technical support. She took much time out from her busy schedule to serve my study.*

*I must also acknowledge my supervisor **Prof. Dr. Hesham Kandeel**, for his valuable suggestions to enrich this study, and for providing facilitation to its practical part.*

*Appreciation also goes out to **all the physicians and nursing staff** at Kasr Al Ainy outpatient ANC clinic for which their assistance helped me along the practical part of the study.*

*Thanks also for the contribution of **the pregnant women** who participated willingly in the study.*

*I would also like to thank **my family** for the support they provided me through my entire life. Without their love and encouragement, I would not have finished this study.*

List of Acronyms & Abbreviations

ANC: Ante Natal Care

BMI: Body Mass Index

CDC: Centers for Disease Control and Prevention

EDHS: Egypt Demographic Health Survey

FAS: Fetal Alcohol Syndrome

FSA: Food standards Agency

FDA: Food and Drug Administration

IOM: Institute of Medicine

IRB: Institutional Review Board

ISBN: International Standard Book Number

IU: International Units

JPMA: Journal Pakistan Medical Association

lb: Pound

MED: Ministry of Economic Development **MOHP:** Ministry of Health and Population

NLM: National Library of Medicine **NUHS:** National University Health System **OTC**

drugs: Over-The-Counter Drugs **PEM:** Protein Energy Malnutrition

PHC: Primary Health Care

PIH: Pregnancy-Induced Hypertension

PMID: Pub Med Unique Identifier

PNSS: Pregnancy Nutrition Surveillance System

RDA: Estimated Average Recommended Dietary/Daily Requirements

RE: Retinol Equivalents

SPSS: Statistical Package of Social Science Software

UN: United Nations

UNDP: United Nations Development Program **UNICEF:** The United Nations Children's Fund **US:** United States of America

Washington, D.C.: Formally the District of Columbia and commonly referred to as *Washington*, "the District", or simply *D.C.*, is the capital of the United States

WHO: World Health Organization

WIC: Women, Infants and Children

Glossary

Abortion: Termination of pregnancy before the fetus is viable and capable of extra- uterine existence.

Antenatal care: The medical and nursing supervision and care given to the pregnant woman during the period between conception and the onset of labor.

Conception: Fertilization; the joining together of the female sex cell and the male sex cell.

Craving: This is a strong desire for a certain type of food, usually carbohydrates like ice- cream. Some cravings focus on salty foods, such as pickles.

Fetus: The child in utero from about the seventh to ninth week of gestation until birth.

Gestation: The period of intrauterine development from conception through birth; pregnancy.

Gravida: A pregnant woman; refers to any pregnancy regardless of duration.

Hyperemesis gravidarum: Severe nausea and vomiting that lasts beyond the fourth month of pregnancy.

In utero : Within the uterus.

Lactation: The production of milk by the mammary glands.

Low Birth weight: A weight of less than 2,500 grams (5.5 pounds) at birth.

Miscarriage: Lay term for spontaneous abortion.

Morning sickness Refers to nausea and vomiting usually in the morning during the first weeks of pregnancy.

Multi-gravida: A woman who has been pregnant more than once.

Multi- para A woman who has delivered two or more fetuses past the age of viability.

Nulli- gravid: A woman who has never been pregnant.

Nulli-para: A woman who has not delivered a child who reached viability.

Nutrition *and* pregnancy: refers to the nutrient intake, and dietary planning that is undertaken before, during and after pregnancy.

Nutritional deficiency disease: disease caused by a deficiency of a particular nutrient in the feed. Includes the micro- and macronutrients of minerals, vitamins, carbohydrates, fats and proteins.

Nutritional supplement: addition of a nutrient to an existing diet to make good what might be only a temporary shortfall. May be made available in a salt or mineral mix or block, or may be mixed in with a feed or even in drinking water. For pastured animals other means are used but foliar dusting comes close to being a nutritional supplement.

Obstetrics: The branch of medicine concerned with the care of a woman during pregnancy, childbirth, and the postpartal period.

OTC drugs: Over-the-counter (*OTC*) *drugs* are medicines that may be sold directly to a consumer without a prescription from a healthcare professional

Percentile: The percent of individuals in a population who's measurements are below that of a given measurement. For example, the child's BMI-for-age being at the 80th percentile means that 80% of children his age in the reference population have a BMI lower than his.

Pica: This is an intense craving for and ingestion of nonnutritive substances such as clay, laundry starch, raw flour, and rice. For these actions to be considered pica, they must persist for more than one month at an age where eating such objects is considered developmentally inappropriate. This type of craving is characteristic of but is not limited to lower socioeconomic groups, ethnic groups, and regional areas, which prefer certain substances. Even though the cause is unknown, it interferes with good nutrition. There are different variations of pica, as it can be from a cultural tradition, acquired taste or a neurological mechanism such as an iron deficiency -as either a cause or an effect-, or chemical imbalance.

Placenta: A specialized disk-shaped organ that connects the fetus to the uterine walls for gas and nutrient exchange; also referred to as the afterbirth.

placental abruption: Premature separation of a normally implanted placenta.

placenta previa: A placenta that is implanted in the lower uterine segment so that it adjoins or covers the internal os of the cervix.

Pregnancy: The condition of having a developing embryo or fetus in the body after fertilization of the female egg by the male sperm.

Preterm Infant: infant born alive before 37 weeks gestation.

Primi- gravid: A woman pregnant for the first time.

Primi- para A woman who has delivered one child after the age of viability.

Pound (mass): (abbreviation: **lb**) is a unit of mass used in the imperial, United States customary and other systems of measurement. The unit is descended from the Roman *libra* (hence the abbreviation "lb"); the name *pound* is a Germanic adaptation of the Latin phrase *libra pondo*, 'a pound weight'.

Reproduction: The process by which an offspring is formed.

Risk: Probability of event. A woman with a health risk factor is more likely to suffer ill health than a woman without a risk factor.

Term pregnancy: A gestation of 38 to 42 weeks.

Trimester: A time period of three months.

Abstract

Aim: To compare the nutritional knowledge especially towards proper nutrition during pregnancy, to actual food intake& dietary pattern among a group of pregnant women attending the antenatal care (ANC) outpatient clinic of Kasr Al-Ainy; one of the top University hospitals.

Study Design and Methods: A cross sectional study employing a questionnaire with a convenience sample of pregnant women ($N=132$).

Results: The study pregnant women 'knowledge about nutrition was generally satisfactory. Nonetheless, their dietary pattern revealed that they did not consume a wider variety of nutritious foods during the current pregnancy, mostly of plant origin. In addition, Food intake information showed that many of these women failed to meet the current nationally recommended levels of intake, including that of proteins, dietary fibers, and other key macronutrients, micronutrients and vitamins. The study clinic did not provide comprehensive satisfactory nutritional health services for the study women.

Conclusions: More nutritional awareness is probably not the merely key to guarantee adequate food intake during pregnancy. Poorly provided nutritional care services and low social level may be contributing factors.

Recommendations: Further research is needed in Kasr Al Ainy's ANC outpatient clinic to develop effective strategies designed to promote adequate nutritional intake among pregnant women. Till date, reinforcing consistent individualized nutritional assessment and counseling during pregnancy could provide a foundation for the beginning of the road for adequate nutrition during pregnancy and possibly throughout the woman's reproductive life

Key words: Antenatal care, Kasr Al Ainy, food intake, dietary pattern, nutritional knowledge

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Background & Rationale

A healthy diet during pregnancy is essential to provide all the nutrients needed by a mother and her growing baby. Even though pregnant women are eating for two there is no need to eat twice as much. It is the quality of the food not the quantity which matters most. In fact, most of the additional nutrients needed during pregnancy can be obtained by selecting appropriate foods and eating high quality nutrient dense diet (*Imdad and Bhutta, 2011*).

Malnutrition is a dominating problem among millions of pregnant women especially in developing countries which affect their health and the outcome of pregnancy. Inadequate maternal diet leads to maternal depletion and impeding normal fetal growth and development. Over or subclinical malnutrition exposes the women, the fetus and the infant to a significant risk of morbidity, disability and even mortality (*Yakoob et al., 2009 & Mehta et al., 2010*)

It is well recognized that mother's nutritional knowledge has a positive impact on nutritional intake during pregnancy. It is argued that the nutritionally knowledgeable pregnant women are more aware of their nutritional requirements during pregnancy, use this knowledge more effectively to maintain or achieve good nutritional status, know more about malnutrition health problems and know more about the availability of nutritional health care services (*Christiaensen and Alderman, 2001; Fowles, 2002; Bonvecchio et al., 2007*).

Whereas several research studies have already investigated the nutritional knowledge, food intake, dietary pattern and nutritional services among the pregnant women attending different primary health care facilities (*AbouZeina, 1998 & Nasr-Aldeen, 2002*), almost no recent evidence based studies have dealt with same issues in the ANC outpatient clinic affiliated to Kasr Al- Ainy (*Kandeel, 2010*).

In an outpatient ANC clinic affiliated to one of the top University hospitals, this study hypothesized that; nutritional knowledge particularly related to pregnancy among the attendant pregnant women would be good enough to be matched with satisfactory food intake and dietary pattern.