

BIRTH WEIGHT IN RELATION TO MATERNAL HEALTH

THESIS

Submitted For The Partial Fulfillment of Master Degree  
Childhood Studies

BY

EMAD MOSTAFA SHAKIR AL-ANSARY

(M.B.B.Ch.)

6/8/2012

L.Y

Supervised BY

Prof. Dr. MAHASEN ABD EL-FATTAH

Prof. of Public Health and Preventive Medicine

faculty of Medicine

Cairo University &

Former Head of Medical Department

Institute of Post-Graduate Childhood Studies

Prof. Dr. DIAIY HUSSEIN

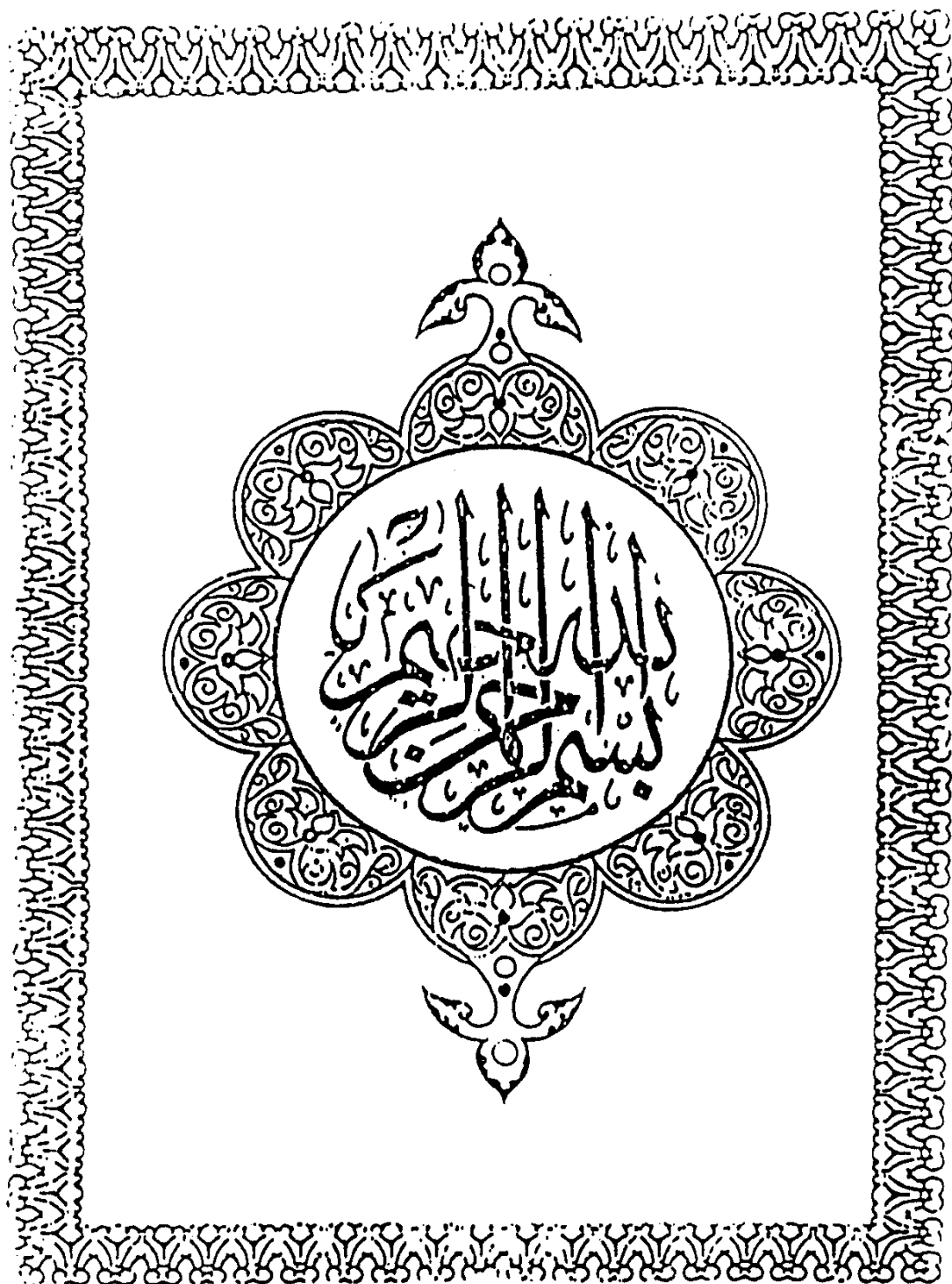
Head of Paediatric Department

Maadi Hospital

Military Medical Academy

1988







#### ACKNOWLEDGEMENT

I wish to express my sincerest gratitude to Prof. **Dr. MAHASEN ABD EL-WATTAN**, who provided the material and put me on the first step for her kind guidance and kind encouragement and support throughout the work. She nearly discussed with me, every sentence so that meanings could be clear and precise.

I am deeply indebted to Prof. **DR. DIANA HUSSEIN**, for his kind supervision and patient attitude which could not be denied.

I would like to offer my warmest thanks to Dr. **NAFFOSA ALI ABIFI**, who spent much time and effort to review the topic and renewish most of references.

DEDICATION

This Work is Dedicated to:

- My Teachers who taught me A,B,C.
- My Brothers.....The real frinds  
Essam, Adel And Enayat.
- The sun that shines on my life:
  - \* My wife
  - \* My daughter, Abeer

CONTENTS

|  | <u>PAGE</u> |
|--|-------------|
| Chapter I                                |             |
| INTRODUCTION                             | 1           |
| Chapter II                               |             |
| REVIEW OF LITERATURE                     |             |
| FACTORS AFFECTING BIRTH WEIGHT           |             |
| MATERNAL FACTORS                         |             |
| (A) Biological Factors                   | 3           |
| . Age                                    | 3           |
| . Weight of the mother                   | 5           |
| . Height of the mother                   | 7           |
| . Parity                                 | 7           |
| . The effect of spacing on birth weight  | 9           |
| (B) Enviromental factors                 | 10          |
| . Socio-economic status and income level | 10          |
| . Nutritional status                     | 11          |
| . Antenatal care                         | 13          |
| . Employment.                            | 14          |
| . Smoking.                               | 15          |
| . Alcoholism                             | 16          |
| . High altitude                          | 17          |
| . Infections                             | 18          |
| . Radiation and drugs                    | 18          |

|                                      | <u>PAGE</u> |
|--------------------------------------|-------------|
| . Diseases associated with pregnancy | 19          |
| Toxaemia                             | 19          |
| Heart disease                        | 21          |
| . Diseases aggravated by pregnancy   | 23          |
| Diabetes Mellitus                    | 23          |
| Fetal Factors                        | 25          |
| . Race and genetic factors           | 25          |
| . Sex                                | 25          |
| . Multiple Birth                     | 25          |
| . Small for date infants             | 27          |
| . Prematurity                        | 30          |
| Characters of the premature infants  | 32          |
| Growth of the premature infants      | 33          |
| Incidence and Prognosis              | 34          |
| Complications of prematurity         | 35          |
| The oversized foetus.                | 39          |
| Chapter III                          |             |
| AIM OF THE WORK                      | 41          |
| Chapter IV                           |             |
| MATERIAL AND METHODS                 | 42          |
| Chapter V                            |             |
| RESULTS                              | 47          |

|                       | <u>PAGE</u> |
|-----------------------|-------------|
| Chapter VI            |             |
| DISCUSSION .....      | 62          |
| Chapter VII           |             |
| RECOMMENDATIONS ..... | 79          |
| Chapter VIII          |             |
| SUMMARY .....         | 81          |
| Chapter IX            |             |
| REFERENCES .....      | 83          |
| APPENDIX .....        | 99          |
| ARABIC SUMMARY        |             |



LIST OF TABLES

|   | <u>PAGE</u> |
|---|-------------|
| Table (1) Distribution of mothers according to No. and % by Age.                              | 47          |
| Table (2) Distribution of mothers according to No. and % by Parity.                           | 48          |
| Table (3) Distribution of mothers according to No. and % by Weight.                           | 49          |
| Table (4) Distribution of mothers according to No. and % by Height.                           | 50          |
| Table (5) Distribution of mothers by weight & standard weight/hight                           | 51          |
| Table (6) No. and % of mothers provided by an Antenatal care.                                 | 52          |
| Table (7) Distribution of newborn infants according to birth weight and sex.                  | 53          |
| Table (8) Distribution of the newly born infants according to Apgar scoring and Birth weight. | 54          |
| Table (9) The relationship between Maternal age and birth weight.                             | 55          |
| Table (10) Outcome of pregnancy in the examined mothers (present and past obst. history).     | 56          |
| Table (11) The relationship between Gastational age and Birth weight.                         | 57          |

|   | <u>PAGE</u> |
|---|-------------|
| <b>Table (12)</b> The relationship between Parity and Birth weight.                             | 58          |
| <b>Table (13)</b> The relationship between Duration of interpregnancy spacing and Birth weight. | 59          |
| <b>Table (14)</b> Maternal Health and Birth Weight.   | 60          |

It is clearly observed that:



Small sized mothers are more likely to have tiny babies



and mothers who are tall and heavy tend to have  
big sized infants

## **INTRODUCTION**

## INTROCUCTION

The mean birth weight is regarded as one of the indices of health in a country; under developed countries, in which malnutrition is common have a lower mean brith weight than countries with high nutritional status (Rink,1985).

Low birth weight is an important neonatal health problem associated with many health hazards. Low birth weight remains the major determinant of neonatal mortality (McCormic,1985).

Low birth weight infants are five times more likely than normal birth weight infants to die in the 1st year (Rink,1985).

In developing countries, low birth weight accounts for less than half of post-neonatal deaths.

Maternal health is a very important factor in determining the birth weight of the offspring.

Diseases affecting the mother such as toxaemia, hypertension, anaemia, heart diseases, chest diseases, hepatic disorders, diabetes mellitus, as well as deficiency diseases have been shown to influence fetal growth and participate in delivery of low birth neonates (Lubchenco, 1981).

The aim of the work is to study the relationship between the maternal factors that might affect weight at birth and the child's maturity.

## **REVIEW OF LITERATURE**