EPIDEMIOLOGICAL FEATURES AND QUALITY OF LIFE IN SCHOOL AGE ASTHMATIC CHILDREN IN CAIRO (COMMUNITY-BASED STUDY)

Thesis

Submitted for Fulfillment of Master Degree in Pediatrics

By

Alshaimaa Salama El-Attar
M.B.B.Ch
Faculty of Medicine, Cairo University

Under Supervision of

Prof. Dr. Zeinab Mohamed Radwan

Professor of Pediatrics
Faculty of Medicine, Cairo University

Prof. Dr. Dalia Ahmed Mohamed

Assistant Professor of Public Health
Faculty of Medicine, Cairo University

Dr. Mohamed Saad Elbaz

Assistant Professor of Pediatrics
Faculty of Medicine, Cairo University

Faculty of Medicine
Cairo University

2013

Acknowledgment

I would like to express my deepest gratitude and respect to **Prof. Dr. Zeinab Radwan** Professor of Pediatrics, for her professional comments thorough this study from the birth of the idea to the final print delivery. She was the maestro for this teamwork symphony.

This study was a chance to meet and collaborate with **Prof. Dr. Dalia Ahmed,** Assistant Professor of Public health. She is a valuable scientist and even more valuable human.

I must also express my deepest appreciation for **Prof. Dr. Mohamed Elbaz,** Assistant Professor of Pediatrics for his sincere advices and patience while revising again and again each word and letter.

Dedication

This work is dedicated to …

My beloved father, to whom I owe everything I ever did in my life and will achieve

My mother for always being there for me

My brother and my sisters for their support

Finally my husband and my lovely sons **(Ziad and Anas)** for being the light of my life

بسم الله الرحمن الرحيم
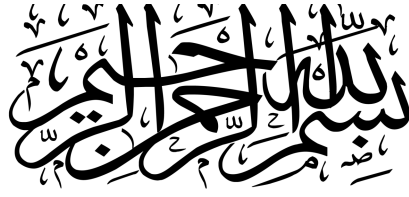
{ اقرأ باسمِ ربِّكَ الَّذي خَلَقَ (1) خَلَقَ الإنسانَ من
عَلَق (2) اقرأ وربُّكَ الأكرم (3)الَّذي علَّمَ بالقَلَم (4)
علَّم الإنسانَ ما لم يعلم (5) }

صَدَقَ اللهُ العَظيمُ

العلق

وفي صحيح مسلم من حديث أبي هريرة رضي الله عنه أن رسول
الله صلى الله عليه وسلم قال:

إذا مات ابن آدم انقطع عمله إلا من ثلاث؛ صدقة
جارية، أو علم ينتفع به أو ولد صالح يدعو له.

LIST OF CONTENTS

Title	Page No.

LIST OF TABLES

LIST OF TABLES (Cont…)

LIST OF FIGURES

LIST OF FIGURES (Cont…)

LIST OF FIGURES (Cont…)

LIST OF ABBREVIATIONS

Abbrev.	Full term
AAAAI	American academy of allergy and immunology
ACE	Angio-tensin-converting enzyme [ACE] inhibitors
ADAM33	A disintegrin and metalloprotease
B2	Beta adrenergic receptors
BA	Bronchial asthma
BHR	Bronchial hyper-responsiveness
BM	Basement membrane
BMI	Body mass index
CAPMAS	Central Agency for Public Mobilization and Statistics
CME	Continuous medical education
CT	Computed tomography
DNA	Deoxyribonucleic acid
DPI	Dry powder inhaler
EAACI	European academy of allergy and clinical immunology
ED	Emergency department
ETS	Environmental tobacco smoke
FeNO	Fraction of exhaled nitric oxide
FEV1	Forced expiratory volume in 1 s
FVC	Forced vital capacity
GINA	Global Initiative for Asthma
HRQoL	Health-related quality of life
ICSI	Institute for clinical systems improvement
ICU	Intensive Care Unit
IgE	Immunoglobulin E
IL	Interleukin
IPCRG	International primary care respiratory group
ISAAC	International study of asthma and allergies in childhood
MDI	Metered dose inhaler
NAEPP	National Asthma Education and Prevention Program
NHANES III	National Health and Nutrition Examination Study III
NHLBI	National heart, lung and blood institute
NO	Nitric oxide
PACQLQ	Paediatric Asthma Caregiver's Quality of Life Questionnaire
PEF	Peak expiratory flow
PEFM	Peak expiratory flow-meter
PEFR	Peak expiratory flow rate
PFMs	Peak flow-meters
QOL	Quality of life
TH1	T Helper cell1
TH2	T Helper cell 2
TTT	Treatment
WHO	World Health Organization

Abstract

The aims of work were to determine the prevalence of childhood asthma, associated risk factors, and to assess the quality of life of the children and caregivers.

The sample was randomly chosen from Nasr-City in Cairo governorate.

1461 families participated with 2394 school age children. 250 children were asthmatic with prevalence of 10.4%. Statistically significant relations were detected between the quality of life and each of maternal age, maternal education, maternal occupation, crowding index, house ventilation, Hospital admission for asthma, and Medical information by medical team about asthma.

Key words:
Epidemiology, Quality of life, School age, Asthma, Nasr-city Cairo, Community-based study.

INTRODUCTION

A llergic diseases are among the most common health disorders of childhood *(Lenney, 1997).* Twenty percent of the world population suffers from allergic diseases *(WHO, 2007).*

Asthma is an historic disease recorded clearly in ancient times by the Chinese and the Greeks *(Lenney, 2009).* Asthma is a chronic disease characterized by recurrent attacks of breathlessness and wheezing, which vary in severity and frequency from person to person. Symptoms may occur several times in a day or week in affected individuals, and for some people become worse during physical activity or at night. According to WHO estimates in 2007, 300 million people suffer from asthma and 255,000 people died of asthma in 2005 *(WHO, 2007)*.

Asthma is the most common chronic disease among children. It is not just a public health problem for high income countries, it occurs in all countries regardless of level of development. Over 80% of asthma deaths occur in low and lower-middle income countries. Asthma is under-diagnosed and under-treated, creating a substantial burden to individuals and families and possibly restricting individuals' activities for a lifetime *(Fischer et al., 2005).*

There is increase in asthma symptoms prevalence in Africa *(Pearce et al., 2007).* In Cairo the overall prevalence of wheeze ever, wheeze during the last year and physician-diagnosed asthma were 26.5%, 14.7% and 9.4% respectively *(Georgy et al., 2006).* In Egypt up to one in four children with asthma is unable to attend school regularly because of poor asthma control *(Bassili et al., 2000).*

Children with asthma are at higher risk for psychological problems *(Calam et al., 2005).*

Researchers agree that healthcare must focus on quality of life (QOL). This is particularly important in patients with chronic conditions where the treatment is directed toward symptom control rather than cure, QOL instruments measure the impact of disease on a patient's daily activities and life *(Williams and Williams, 2003).*

AIM OF THE WORK

The Aim of this Work is to:

- Study the prevalence of bronchial asthma in school age children in Cairo, Egypt.

- Describe the socio-demographic features and associated risk factors of the asthmatic children.

- Assess quality of life of asthmatic children and their caregivers.