

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ





شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغييرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار





بعض الوثائق الأصلية تالفة





بالرسالة صفحات لم ترد بالأصل



ASSESSMENT OF NUTRITIONAL STATUS AND SOME SOCIO-ECONOMIC AND HEALTH FACTORS FOR TEENAGER STUDENTS

THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
M. SC. IN HOME ECONOMICS NUTRITION AND
FOOD SCIENCE

BY

VIOLET SOBHY OUSSA AWAD

B.Sc. OF HOME ECONOMICS

DEPARTMENT OF NUTRITION AND FOOD SCIENCE

HELWAN UNIVERSITY

1976

SUPERVISORS

PROF. Dr.

ISIS AZER NAWAR

Professor Of Home Economics, *ISIS NAWAR*
Department Of Home Economics

Faculty Of Agriculture

Alexandria University
ISIS

ASS. PROF. Dr.

SHADIA A. EL-SHAFIE *shadia elshafie*

Assistant Professor,

Department Of Hotel Studies

Faculty Of Tourism And Hotels

Alexandria University

DEPARTMENT OF NUTRITION
AND FOOD SCIENCE
FACULTY OF HOME ECONOMICS
MENOUFIA UNIVERSITY

1995

B-11790

ASSESSMENT OF NUTRITIONAL STATUS AND SOME SOCIO-ECONOMIC AND HEALTH FACTORS FOR TEENAGER STUDENTS

THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
M. SC. IN HOME ECONOMICS NUTRITION AND
FOOD SCIENCE

BY

VIOLET SOBHY OUSSA AWAD

B.Sc. OF HOME ECONOMICS

DEPARTMENT OF NUTRITION AND FOOD SCIENCE

HELWAN UNIVERSITY

1976

SUPERVISORS

PROF. Dr.

ISIS AZER NAWAR *ISIS NAWAR*

Professor Of Home Economics,
Department Of Home Economics
Faculty Of Agriculture
Alexandria University

ASS. PROF. Dr.

SHADIA A. EL-SHAFIE *shadia elshafie*

Assistant Professor,
Department Of Hotel Studies
Faculty Of Tourism And Hotels
Alexandria University

DEPARTMENT OF NUTRITION
AND FOOD SCIENCE
FACULTY OF HOME ECONOMICS
MENOUFIA UNIVERSITY

1995

SUPERVISORS

**TITILE OF THESIS : ASSESSMENT OF NUTRITIONAL STATUS AND
SOME SOCIO-ECONOMIC AND HEALTH
FACTORS FOR TEENAGER STUDENTS**

**DEGREE : M. Sc. IN HOME ECONOMICS
DEPARTMENT OF NUTRITION AND FOOD
SCIENCE**

NAME OF STUDENT : VIOLET SOBHY OUSSA AWAD

SUPERVISORS :

**PROF. Dr.
ISIS AZER NAWAR
Professor Of Home Economics,
Department Of Home Economics
Faculty Of Agriculture
Alexandria University**

ISIS Nawar

**ASS. PROF. Dr.
SHADIA A. EL-SHAFIE
Assistant Professor,
Department Of Hotel Studies
Faculty Of Tourism And Hotels
Alexandria University**

shadia elshafie

APPROVAL SHEET

TITILE OF THESIS : ASSESSMENT OF NUTRITIONAL STATUS AND
SOME SOCIO-ECONOMIC AND HEALTH FACTORS
FOR TEENAGER STUDENTS

DEGREE : M. Sc. IN HOME ECONOMICS
DEPARTMENT OF NUTRITION AND FOOD
SCIENCE

NAME OF STUDENT : VIOLET SOBHY OUSSA AWAD

THIS THESIS HAS BEEN APPROVED BY

PROF. Dr. : ISIS AZER NAWAR

ISIS NAWAR

PROF. Dr. : MOHAMED SAMIR EL DASHLOUTY

M. Samir El Dashlouty

PROF. Dr. : ABD EL RAHMAN M. AETIA

A. M. Aetia

COMITTE IN CHARGE

Date / / 1995

CONTENTS

| CHAPTER I | Page |
|---|-------------|
| Introduction | 1 |
| Aim of The study | 3 |
| CHAPTER II | |
| REVIEW OF LITERATURE | |
| A- Characterestics of adolescence | 3 |
| 1- Physiological changes | 3 |
| 2- Psycological changes | 5 |
| 3- Sexual maturity rating | 6 |
| B- Nutritional assessment | 6 |
| Methods used in nutritional assesment | 7 |
| 1- The twenty four hour recall | 7 |
| 2- Food frequency questionnaire | 7 |
| 3- Dietary history | 8 |
| 4- Food diary or record | 8 |
| 5- Observation of food intake | 9 |
| 6- Household food consumption | 9 |
| 7- Clinical appearent signs | 9 |
| C- Food habits | 11 |
| 1- Snacking | 11 |
| 2- skipping meals | 11 |
| 3- Fast food | 12 |

| | |
|--|----|
| Factors Influencing Food Habits | 12 |
| 1- Culture influences | 12 |
| 2- social problems related to food habits | 13 |
| 3- Believes | 13 |
| 4- Economic | 14 |
| 5- Religious | 14 |
| 6- Emotional effects | 14 |
| D- Nutritional requirements of adolescences | 15 |
| 1- Energy | 16 |
| 2- Protein | 17 |
| 3- Vitamins | 17 |
| Vitamin A | 17 |
| Vitamin D | 18 |
| Vitamin C | 18 |
| Folate | 18 |
| Thiamin, Riboflavin, Niacin | 18 |
| Vitamin B ₁₂ | 19 |
| 4- Minerals | 19 |
| Calcium | 19 |
| Zinc | 19 |
| Iron | 20 |
| Iodine | 21 |
| Magnesium | 21 |
| Influences of the adolescent diet on later life | 23 |
| Malnutrition and mental development..... | 24 |
| E- Anthropometric measurements | 25 |
| 1- Weight for age..... | 26 |
| 2- Height for age | 27 |
| 3- Weight for height..... | 27 |
| 4- Body Mass Index | 27 |
| 5- Muscles mass | 28 |
| 6- Body fat | 28 |

| | |
|---|----|
| Methods of body fat estimation..... | 28 |
| 1- Estimation of fat from body denisty..... | 28 |
| 2- Estimation of fat from total body potassium..... | 29 |
| 3- Estimation of fat from total body water..... | 30 |
| 4- Subcutaneous fat | 30 |
| Triceps skinfold thickness | 30 |
| Biceps skinfold thickness | 31 |
| Supscapular fold thickness | 31 |
| Supra - iliac skinfold thickness | 31 |
| Midaxillary | 31 |
| Skinfold thickness | 31 |
| Midhigh | 32 |
| F- Nutritional problems of adolescents | 32 |
| 1- Obesity in adolescents | 33 |
| 2- Underweight | 34 |
| 3- Nutritional anemia | 35 |
| 4- Dental caries | 36 |
| 5- Hypertension | 36 |
| 6- Growth failure | 36 |
| 7- Anorexia nervosa | 36 |
| 8- Bulimia | 37 |
| 9- Acne | 37 |
| 10- Pregnancy during adolescentce | 37 |

CHAPTER III

MATERIALS AND METHODS

| | |
|------------------------------|----|
| Research definitions | 39 |
| Population and sample | 40 |
| Data collection | 41 |
| Nutritional assessment | 42 |
| Scoring system | 45 |
| Statistical analysis | 47 |

| | |
|-------------------------------------|-----------|
| CHAPTER IV | |
| RESULTS AND DISCUSSION | 48 |

PART ONE

| | |
|--|----|
| Socio - Economic Characteristics | 49 |
| 1- Mother education and employment | 49 |
| 2- Father education | 50 |
| 3- Father employment | 51 |
| 4- Family size | 51 |
| 5- Rooms number | 52 |
| 6- Home ownership | 53 |
| 7- Age of students | 53 |

PART TWO

| | |
|-----------------------------------|----|
| Nutritional Status | 54 |
| A- Nutritional intake level | 55 |
| 1- Food habits | 55 |
| a- Number of meals | 55 |
| b- Main meal | 56 |
| c- Breakfast intake | 56 |
| d- Food between meals | 57 |
| e- Beverages between meals | 57 |
| 2- Dietary intake | 58 |
| a- Macronutrients intake | 59 |
| Carbohydrates | 60 |
| Fat | 60 |
| Protein | 60 |
| Animal protein | 61 |
| b- Energy input | 62 |
| c- Fiber intake | 63 |
| d- Micronutrient | 64 |

| | |
|--|----|
| B- Nutritional assessment | 66 |
| a- Height and weight | 66 |
| b- Triceps skinfold thickness | 66 |
| c- Mid - upper arm circumference | 67 |
| d- Body Mass Index | 67 |
| 3- Health status | 68 |
| a- Family health History of diseases | 68 |
| b- Students symptoms of physical signs | 69 |
| c- Students incidents of parasitic diseases | 71 |
| d- Students practicing exercise | 71 |
| e- Sleeping hours | 72 |
| f- Scholastic performance | 72 |
| Teachers opinion | 72 |
| Absenteeism | 73 |
| Studying hours..... | 73 |
| Summmary of socio - economic health and nutritional characteristics of the sample | 74 |

PART THREE

| | |
|--|----|
| 1- Simple correlation statistical analysis | 77 |
| a- Significant correlation at the level (0.01)..... | 79 |
| B- Significant correlation at the level (0.05) | 80 |
| Summmary of the sample correlation analysis | 82 |
| 2- Multiple regression analysis | 83 |
| Model 1- Socio-economic & health status and protein consumption | 83 |
| Model 2- Socio-economic & health status and iron consumption | 83 |
| Model 3- Socio-economic & health status and vitamin A consumption | 84 |
| Model 4- Socio-economic & health status and calcium consumption | 84 |

| | |
|--|----|
| Model 5- Socio-economic & health status and phosphorus consumption | 84 |
| Model 6- Socio-economic & health status and sodium consumption | 84 |
| Model 7- Socio-economic & health status and potassium consumption | 84 |
| Model 8- Socio-economic & health status and vitamin C consumption | 85 |
| Model 9- Socio-economic & health status and thiamin consumption | 85 |
| Model 10- Socio-economic & health status and riboflavine consumption | 85 |
| Model 11- Socio-economic & health status and niacin consumption | 85 |
| Summary of multiple regression analysis | 87 |
| Summary | 88 |
| Recommendation | 93 |
| Abstract | 94 |
| References | 95 |
| Arabic summary | |
| Appendix | |