



Contents

CONTENTS

CHAPTER No.	TITLE	PAGE No.
	LIST OF TABLES	
	LIST OF FIGURES	
	LIST OF PLATES	
	LIST OF APPENDICES	
I	INTRODUCTION	1
II	REVIEW OF LITERATURE	14
	A. Significance of Spices in Human Nutrition	14
	B. Effect of Spices on Hyperlipidemia	23
	C. Effect of Spices on Diabetes Mellitus	29
	D. Role of the Selected Spices of the Study	36
III	METHODOLOGY	50
	PHASE I	
	A. Selection of Locale and Adults	50
	B. Eliciting the Background Information of the Hyperlipidemic and Diabetic Adults	51
	C. Assessment of Nutritional Profile of the Selected Adults	52
	D. Selection and Nutrient Analysis of Spices	64
	E. Preparation of Capsules of Spice Powders and Food Costing	66
	PHASE II	
	F. Conduct of the Supplementation Study	68
	G. Evaluation of the Supplementation Study	69
	H. Analysis of Data	69

IV	RESULTS AND DISCUSSION	72
	A. Demographic and Lifestyle Pattern of the Selected Adults	72
	B. Dietary Pattern and Medical History of the Selected Adults	84
	C. Nutritional Awareness on the Consumption of Spices Among the Selected Adults	93
	D. Nutrient Analysis of the Selected Spices and Cost of the Spice Capsules	95
	E. Mean Food and Nutrient Intake by the Hyperlipidemics and Adults with Hyperlipidemia and Diabetes Mellitus	98
	F. Effect of Supplementation of the Selected Spices on the Symptoms Experienced by the Hyperlipidemics and Adults with Hyperlipidemia and Diabetes Mellitus	101
	G. Effect of Supplementation of the Selected Spices on the Nutritional Status of the Hyperlipidemics and Adults with Hyperlipidemia and Diabetes Mellitus	104
	H. Effect of Supplementation of the Selected Spices on the Biochemical Profile of the Hyperlipidemics and Adults with Hyperlipidemia and Diabetes Mellitus	109
V	SUMMARY AND CONCLUSION	141
	BIBLIOGRAPHY	
	APPENDICES	

LIST OF TABLES

TABLE No.	TITLE	PAGE No.
I	AGE AND SEX WISE DISTRIBUTION OF THE ADULTS	73
II	EDUCATIONAL STATUS OF THE ADULTS	74
III	OCCUPATIONAL STATUS OF THE ADULTS	75
IV	TYPE AND SIZE OF THE FAMILY OF THE ADULTS	76
V	MONTHLY INCOME OF THE ADULTS	77
VI	YOGA PRACTICE BY THE ADULTS	78
VII	EXERCISE PATTERN OF THE ADULTS	79
VIII	SMOKING PATTERN AND ALCOHOL ONSUMPTION BY THE SELECTED MALE ADULTS	81
IX	HABIT OF CHEWING BY THE SELECTED ADULTS	83
X	FOOD CONSUMPTION PATTERN OF THE SELECTED ADULTS	84
XI	COOKING METHODS AND TYPES OF FATS AND OILS USED BY THE SELECTED ADULTS	86
XII	CONSUMPTION OF BEVERAGES BY THE SELECTED ADULTS	87
XIII	FOODS INCLUDED AND AVOIDED BY THE SELECTED ADULTS	88
XIV	DURATION OF THE DISEASE AND FAMILIAL TRAIT OF THE SELECTED ADULTS	91
XV	TYPE AND DURATION OF TREATMENT OF THE SELECTED ADULTS	93
XVI	AWARENESS ABOUT SPICES BY THE SELECTED ADULTS	94
XVII	NUTRIENT CONTENT OF THE SELECTED SPICES AS ANALYSED	95
XVIII	COST COMPARISON OF SPICE CAPSULES	97
XIX	MEAN FOOD INTAKE BY THE SELECTED ADULTS	98
XX	MEAN NUTRIENT INTAKE BY THE SELECTED ADULTS	100
XXI	SYMPTOMS EXPERIENCED BY THE HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SUPPLEMENTATION	101

TABLE No.	TITLE	PAGE No.
XXII	SYMPTOMS EXPERIENCED BY ADULTS WITH HYPERLIIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION	103
XXIII	CHANGES IN THE MEAN BODY WEIGHT OF THE SELECTED ADULTS	105
XXIV	CHANGES IN THE BODY MASS INDEX OF THE SELECTED ADULTS	106
XXV	CHANGES IN THE WAIST HIP RATIO OF THE SELECTED ADULTS	108
XXVI	CHANGES IN THE BLOOD PRESSURE OF THE SELECTED ADULTS	108
XXVII	CHANGES IN THE MEAN BLOOD HAEMOGLOBIN VALUES OF THE SELECTED ADULTS	110
XXVIII	CHANGES IN THE MEAN TOTAL CHOLESTEROL LEVELS OF THE SELECTED ADULTS	112
XXIX	CHANGES IN THE MEAN TRIGLYCERIDE LEVELS OF THE SELECTED ADULTS	115
XXX	CHANGES IN THE MEAN HDL CHOLESTEROL LEVELS OF THE SELECTED ADULTS	118
XXXI	CHANGES IN THE MEAN LDL CHOLESTEROL LEVELS OF THE SELECTED ADULTS	121
XXXII	CHANGES IN THE MEAN VLDL CHOLESTEROL LEVELS OF THE SELECTED ADULTS	124
XXXIII	CHANGES IN THE MEAN FASTING BLOOD SUGAR LEVELS OF THE SELECTED ADULTS	127
XXXIV	CHANGES IN THE MEAN POST PRANDIAL BLOOD SUGAR LEVELS OF THE SELECTED ADULTS	129
XXXV	CHANGES IN THE MEAN GLYCOSYLATED HAEMOGLOBIN LEVELS OF THE SELECTED ADULTS	130
XXXVI	COMPARISON OF THE SELECTED SPICES ON THE BIOCHEMICAL PROFILE OF THE HYPERLIPIDEMIC ADULTS	132
XXXVII	COMPARISON OF THE SELECTED SPICES ON THE BIOCHEMICAL PROFILE OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS	135

LIST OF FIGURES

FIGURE No.	TITLE	PAGE No.
1	PROCESSING OF SPICES INTO CAPSULES	67
2	RESEARCH DESIGN	70
3	SUPPLEMENTATION STUDY	71
4	TOTAL CHOLESTEROL LEVELS OF HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SPICE SUPPLEMENTATION	113
5	TOTAL CHOLESTEROL LEVELS OF ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SPICE SUPPLEMENTATION	113
6	TRIGLYCERIDE LEVELS OF HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SPICE SUPPLEMENTATION	116
7	TRIGLYCERIDE LEVELS OF ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SPICE SUPPLEMENTATION	117
8	HDL CHOLESTEROL LEVELS OF HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SPICE SUPPLEMENTATION	119
9	HDL CHOLESTEROL LEVELS OF ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SPICE SUPPLEMENTATION	120
10	LDL CHOLESTEROL LEVELS OF HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SPICE SUPPLEMENTATION	122
11	LDL CHOLESTEROL LEVELS OF ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SPICE SUPPLEMENTATION	123
12	VLDL CHOLESTEROL LEVELS OF HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SPICE SUPPLEMENTATION	125
13	VLDL CHOLESTEROL LEVELS OF ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SPICE SUPPLEMENTATION	126
14	FASTING BLOOD SUGAR LEVELS OF ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SPICE SUPPLEMENTATION	127
15	POST PRANDIAL BLOOD SUGAR LEVELS OF ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SPICE SUPPLEMENTATION	129
16	GLYCOSYLATED HAEMOGLOBIN LEVELS OF ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SPICE SUPPLEMENTATION	131

LIST OF PLATES

PLATE No.	TITLE	PAGE No.
1	MEASUREMENT OF HEIGHT	56
2	MEASUREMENT OF WEIGHT	56
3	MEASUREMENT OF WAIST CIRCUMFERENCE	56
4	MEASUREMENT OF HIP CIRCUMFERENCE	56
5	MEASUREMENT OF BLOOD PRESSURE	56
6	DRAWING BLOOD SAMPLE	56

LIST OF APPENDICES

APPENDIX NO	TITLE
I	QUESTIONNAIRE TO ELICIT DETAILS REGARDING SOCIO-ECONOMIC BACKGROUND, LIFE STYLE, FOOD CONSUMPTION PATTERN AND HEALTH STATUS OF THE SUBJECTS
II	BODY MASS INDEX OF THE HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SUPPLEMENTATION
III	BODY MASS INDEX OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
IV	WAIST HIP RATIO OF THE HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SUPPLEMENTATION
V	WAIST HIP RATIO OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
VI	BLOOD HAEMOGLOBIN OF THE HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SUPPLEMENTATION
VII	BLOOD HAEMOGLOBIN OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
VIII	TOTAL CHOLESTEROL OF THE HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SUPPLEMENTATION
IX	TOTAL CHOLESTEROL OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
X	TRIGLYCERIDES OF THE HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SUPPLEMENTATION
XI	TRIGLYCERIDES OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
XII	HDL CHOLESTEROL OF THE HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SUPPLEMENTATION
XIII	HDL CHOLESTEROL OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
XIV	LDL CHOLESTEROL OF THE HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SUPPLEMENTATION
XV	LDL CHOLESTEROL OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
XVI	VLDL CHOLESTEROL OF THE HYPERLIPIDEMIC ADULTS BEFORE AND AFTER SUPPLEMENTATION

APPENDIX NO	TITLE
XVII	VLDL CHOLESTEROL OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
XVIII	FASTING BLOOD SUGAR OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
XIX	POST PRANDIAL SUGAR OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
XX	GLYCOSYLATED HAEMOGLOBIN OF THE ADULTS WITH HYPERLIPIDEMIA AND DIABETES MELLITUS BEFORE AND AFTER SUPPLEMENTATION
