Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.
THE EFFECT OF A NUTRITION AND HEALTH EDUCATION PROGRAMME ON THE DIETARY CHOICES AND BODY COMPOSITION MEASURES IN 10-12 YEAR OLD NEW ZEALAND CHILDREN

A thesis presented in partial fulfillment of the requirements for the degree of Masters of Science in Nutritional Science at Massey University, Albany New Zealand.

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July 2004
DECLARATION

The work presented in this thesis is the original work of the author except as acknowledged in the text. I hereby declare that I have not submitted this material either in part or whole for a degree at this or any other institution.

Christina Denton
ABSTRACT

Childhood dietary patterns are formed at a young age and influenced by a number of factors including the media, family members and school environment. With the increasing prevalence of childhood overweight and obesity it is therefore important to educate children on appropriate dietary and lifestyle behaviours.

This research aimed to investigate: (1) the effects of a 12-week nutrition and health education programme on the dietary intakes of children aged 10-12 years; and (2) the effects of the education programme on children’s body composition measures including height, weight and body mass index values.

Two New Zealand intermediate schools were chosen for the study and consisted of two hundred and forty four children (aged 10-12 years) in the intervention school and one hundred and six children in the control school. At baseline and at 3 months, dietary intake and body composition was assessed in the children. The intervention school also received a 12-week health and nutrition education programme taught by class teachers and consisting of nine different modules looking at healthy lifestyle and nutrition behaviours. Dietary intakes were measured by a food frequency questionnaire (FFQ) that collected information on the daily frequency of foods consumed within the last 4 weeks. Height and weight measurements were collected and this allowed body mass index (BMI) values to be calculated. The food frequency questionnaire has been previously validated against twenty four hour dietary records and the New Zealand Food Composition Database 2000 (NZFCD).

There were no significant differences between the two groups for body composition values. Both groups displayed some significant differences (p<0.05) among dietary intake between baseline and follow-up with changes in median number of servings per day. A larger number of changes were seen among intervention subjects and may have been attributed to the school education intervention programme however no definite conclusions can be made. Other influences such as ethnicity, socioeconomic status and other lifestyle factors may have affected results but these were not investigated. Although results were inconclusive, significant findings from the study are encouraging for future studies. Limitations and future recommendations are provided.
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DEDICATION

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# TABLE OF CONTENTS

DECLARATION ........................................................................................................... ii  
ACKNOWLEDGMENTS ....................................................................................... iv  
TABLE OF CONTENTS .................................................................................. vi  
LIST OF TABLES ............................................................................................. x  
TABLE OF FIGURES .................................................................................... xi  
LIST OF APPENDICES .................................................................................. xiii  
CHAPTER ONE ................................................................................................. 1  
INTRODUCTION ............................................................................................... 3  
CHAPTER TWO ................................................................................................. 3  
REVIEW OF LITERATURE ............................................................................... 3  
  Introduction .................................................................................................... 3  
  Childhood dietary intake ................................................................................ 4  
    Sugar intake .................................................................................................. 6  
    Food guide pyramid ..................................................................................... 8  
    Fruit and vegetable consumption ............................................................... 10  
    Breakfast meals .......................................................................................... 10  
    Lunch meals ............................................................................................... 11  
  Family environment ....................................................................................... 14  
  Changes in portion sizes of foods .................................................................. 15  
  Summary of childhood diet worldwide ....................................................... 15  
  New Zealand and Australian data on childhood diet .................................... 15  
Influences on childhood dietary intake ........................................................... 17  
  Parental influences on eating patterns ......................................................... 17  
  Media influence on eating patterns ............................................................... 19  
Childhood overweight and obesity ................................................................. 21  
  Overview/Prevalence .................................................................................... 21  
  New Zealand prevalence of childhood overweight and obesity .................. 21  
  Summary of childhood overweight and obesity prevalence ....................... 23  
Education intervention programmes ............................................................... 24
REFERENCES ................................................................. 103
APPENDICES ................................................................. 114
APPENDIX A ................................................................. 115
APPENDIX B ................................................................. 116
APPENDIX C ................................................................. 117
LIST OF TABLES

TABLE 1: SUMMARY OF THE FOUR MAIN DIETARY ASSESSMENT METHODS .................. 35
TABLE 2: SUMMARY OF THE VALIDATION METHODS USED IN DIETARY ASSESSMENT ........ 38
TABLE 3: MEDIAN ANTHROPOMETRIC VALUES FOR CONTROL AND INTERVENTION GROUPS AT BASELINE AND FOLLOW-UP ................................................................. 55
TABLE OF FIGURES

FIGURE 1: DIAGRAM SHOWING LAYOUT OF THE STUDY .................................................. 47
FIGURE 2: SET-UP OF EQUIPMENT FOR BODY COMPOSITION MEASUREMENTS .................. 48
FIGURE 3: ETHNIC GROUPS OF ALL CHILDREN PARTICIPATING IN THE STUDY .................. 54
FIGURE 4: BODY MASS INDEX REPRESENTATION OF SUBJECTS AT BASELINE AND FOLLOW-UP
                                 COMPARED TO THE 2002 NATIONAL CHILDREN’S NUTRITION SURVEY .......... 56
FIGURE 5: WEIGHT FOR AGE PERCENTILES FOR BOYS AGED 2-20 YEARS .......................... 58
FIGURE 6: HEIGHT FOR AGE PERCENTILES FOR BOYS AGED 2-20 YEARS ........................ 59
FIGURE 7: WEIGHT FOR AGE PERCENTILES FOR GIRLS AGED 2-20 YEARS ...................... 60
FIGURE 8: HEIGHT FOR AGE PERCENTILES FOR GIRLS AGED 2-20 YEARS ...................... 61
FIGURE 9: MEDIAN SERVINGS PER DAY OF FRUIT AND VEGETABLES IN THE INTERVENTION
                                 AND CONTROL GROUP ............................................................................. 63
FIGURE 10: SERVINGS PER DAY OF FRUIT AND VEGETABLES IN THE INTERVENTION AND
                                        CONTROL GROUPS COMPARED TO THE 2002 NATIONAL CHILDREN’S NUTRITION SURVEY
                                                                 ................................................................. 65
FIGURE 11: MEDIAN SERVINGS PER DAY OF MEAT DISHES, RED MEATS, POULTRY AND FISH IN
                                THE INTERVENTION AND CONTROL GROUP .................................................. 67
FIGURE 12: PROPORTION OF CHILDREN CONSUMING ≥2 SERVINGS/DAY OF MEATS, POULTRY,
                                FISH AND EGGS IN COMPARISON TO THE 2002 NATIONAL CHILDREN’S NUTRITION
                                 SURVEY RESULTS ..................................................................................... 68
FIGURE 13: MEDIAN SERVINGS PER DAY OF TAKEAWAY FOODS IN THE INTERVENTION AND
                                CONTROL GROUP .................................................................................... 69
FIGURE 14: MEDIAN DAILY CONSUMPTION OF BREADS, CEREALS, RICE AND PASTAS IN THE
                                INTERVENTION AND CONTROL GROUP .................................................................. 70
FIGURE 15: PROPORTION OF CHILDREN WHO CONSUME ONE OR MORE SERVINGS OF BREADS
                                AND CEREALS PER DAY IN COMPARISON TO THE NATIONAL CHILDREN’S NUTRITION
                                 SURVEY RESULTS .......................................................................................... 71
FIGURE 16: MEDIAN SERVINGS PER DAY OF EGGS AND DAIRY FOODS IN THE INTERVENTION
                                AND CONTROL GROUP .................................................................................. 72
FIGURE 17: MEDIAN DAILY SWEET FOOD CONSUMPTION AMONG THE INTERVENTION AND CONTROL GROUPS ................................................................. 75

FIGURE 18: MEDIAN DAILY CONSUMPTION OF HOT AND COLD DRINKS IN THE INTERVENTION AND CONTROL GROUP. ................................................................. 77

FIGURE 19: MEDIAN DAILY CONSUMPTION OF OTHER FOODS INCLUDING SOUPS, SPREADS AND SAUCES AMONG THE INTERVENTION AND CONTROL GROUP. ................................................................. 78
LIST OF APPENDICES

Appendix A: Consent forms and participant information sheets

Appendix B: Food frequency questionnaire (FFQ)

Appendix C: Intervention education programme (class modules)
GLOSSARY

The following terms and abbreviations are used throughout the thesis:

- **DEXA**: dual energy x-ray absorptiometry
- **BMI**: body mass index
- **SF's**: skinfolds
- **mg/d**: milligrams per day
- **mg**: milligrams
- **g**: grams
- **kg**: kilograms
- **kcal**: kilocalories
- **cm**: centimetre
- **m²**: metres squared
- **HDL**: high density lipoprotein
- **LDL**: low density lipoprotein
- **RDI**: recommended daily intake
- **FFQ**: food frequency questionnaire
- **NZFCDB**: New Zealand Food Composition Database
- **USA**: United States of America
- **UK**: United Kingdom
- **NZ**: New Zealand
- **MISH**: Millennium Institute of Sport and Health
- **NZEO**: New Zealand European and Other
- **CNS**: National Children’s Nutrition Survey