



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

**Development and implementation of nutrition strategies to improve the application of
a food-based dietary guideline for use by crèche caregivers in Thulamela, Limpopo
Province, South Africa**

PFANANI CHARLOTTE KWINDA

June 2010



**DEVELOPMENT AND IMPLEMENTATION OF NUTRITION STRATEGIES TO IMPROVE
THE APPLICATION OF A FOOD- BASED DIETARY GUIDELINE FOR USE BY CRÈCHE
CAREGIVERS IN THULAMELA, LIMPOPO PROVINCE, SOUTH AFRICA**

by

PFANANI CHARLOTTE KWINDA

Dissertation submitted in partial fulfilment of the requirements for the degree

Master's in Consumer Science

in the

Faculty of Natural and Agricultural Sciences

Department of Consumer Science

University of Pretoria

Supervisor: Mrs HH Van der Spuy

Co-Supervisor: Dr AT Viljoen

June 2010



This study is dedicated to my beloved family, my husband Fulufhelo Sydney, my daughters Vele and Phuluso, my son Ramudzuli, my brother Dakalo as well as my entire extended family for their love and support throughout, not forgetting my late mother Matodzi Thifhelimbilu Grace and sister Eunice who regretfully did not live to see the accomplishment of this work which in no small way resulted from their gift of inspiration and many years of love shown to me.

DECLARATION

I, **Pfanani Charlotte Kwinda** hereby declare that the dissertation for a **Master of Consumer Science** degree at the University of Pretoria hereby submitted by me has not previously been submitted for a degree at this university or any other university and that it is my own work in design and execution and that all reference material contained herein has been acknowledged.

PFANANI CHARLOTTE KWINDA

15 June 2010

ACKNOWLEDGEMENTS

My sincere gratitude and appreciation to the following people:

- Mrs HH Van der Spuy and Dr AT Viljoen, my study leaders who were sources of help, encouragement and support throughout my studies
- Mrs Jaqui Sommerville for the statistical analysis of this study and her patience and willingness to clarify any statistics-related questions
- The Limpopo Department of Education, Vhembe District, Mutshindudi and Mutale Circuits who enabled me to gain access to the crèches to meet with the prospective respondents
- The managers and staff of the crèches for allowing me to use them for my study
- My husband and children (Phuluso in particular) for their moral support and tolerating my absence over the weekends and holidays and my late stay at work during the week to complete my studies
- My husband for always believing in me and encouraging me to pursue all my studies
- Prof Joan Fairhurst for editing the language
- Trudie Erasmus for technical editing
- Above all I would like to thank God who has given me insight, patience, perseverance and the ability to complete my studies

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Co-Supervisor: Dr AT Viljoen
Department: Consumer Science
Degree: Masters in Consumer Science

Many of the world's children, particularly those living in developing countries, subsist on diets that seldom vary and often do not allow for an adequate intake of the complete range of nutrients required for healthy living. Of concern is the absence of regular consumption of fresh vegetables and fruit that provide vitamin A which, if deficient, impairs children's growth and development. In South Africa about 21% of children under the age of six years attend crèche facilities on a daily basis. The nutritional state of meals provided to children at many crèches tends to lack micronutrients, particularly vitamin A. Vitamin A deficiency is the main nutritional problem facing crèche children in South Africa today. Underlying causes are unsatisfactory diets restricted in variety and minimal knowledge of optimal dietary practices, a situation exacerbated by a high incidence of food insecurity. Limpopo is a province seriously affected by vitamin A deficiency.

A South African study, based on a quantitative research paradigm, was undertaken (April-September 2007) in Thulamela municipality with the aim of developing and implementing nutrition strategies to improve crèche children's consumption of vitamin A-rich vegetables and fruit, as advocated by an officially recognised food-based dietary guideline. Through convenience sampling, 100 caregivers from 20 crèches in the study area responded to questionnaires and participated in a game. Ongoing observation continued. Information about the participants, their nutrition knowledge and the meals provided was collected following the triple-A cycle approach (assessment, analysis and action). The research process was structured in three phases.

Phase one involved a situational assessment and analysis that provided baseline information. Limitations contributing to the problem under investigation were identified and data showed that the children's intake of vitamin A from vegetables and fruit at crèches was low. This was found to be due to a lack of knowledge and information about vitamin A, coupled with the unavailability and inaccessibility of food primarily due to non-production and affordability. Food preparation, storage and preservation also posed challenges to caregivers.

Using evidence from documented studies and the findings from phase one, nutrition strategies were developed and implemented in phase two. Caregivers were shown how to increase the availability and use of foods rich in vitamin A and were encouraged to grow, and use, both cultivated and non-cultivated vitamin A-rich vegetables and fruit. Furthermore, the concept of the food-based dietary guideline *"eat plenty of vegetables and fruits everyday"* was introduced to the caregivers and became part of the developed nutrition strategies.

Follow-up data collected in phase three showed substantial advancement in caregivers' knowledge and skills. Access, availability and utilisation of vitamin A-rich vegetables and fruit had improved markedly. Flourishing vegetable gardens, planned menus and well prepared meals were concrete evidence, and vegetables and fruit were more frequently served to children. Implementation of the developed nutrition strategies epitomised the envisaged outcome of this study. Based on the research results, important recommendations are made to enhance the appropriate consumption of vegetables and fruit rich in vitamin A, leading to a reduction in disease and death caused by vitamin A deficiency among children.

KEYWORDS: nutrition strategies, food-based dietary guideline, vitamin A (beta carotene), nutrition knowledge, food production from gardening, dietary diversity and menu planning.



TABLE OF CONTENTS

DECLARATION.....	i
ACKNOWLEDGEMENTS	ii
ABSTRACT	iii
LIST OF TABLES.....	x
LIST OF FIGURES.....	xii
LIST OF ADDENDA	xiv
CHAPTER 1 - BACKGROUND AND JUSTIFICATION OF THE STUDY	1
1.1 INTRODUCTION AND BACKGROUND	1
1.2 JUSTIFICATION	4
1.3 RESEARCH PROBLEM.....	6
1.4 THE OUTLINE OF THE STUDY.....	6
1.5 SUMMARY	7
CHAPTER 2 - LITERATURE REVIEW	9
2.1 INTRODUCTION.....	9
2.2 VITAMIN A – A NUTRIENT ESSENTIAL FOR HUMAN HEALTH	11
2.2.1 Vitamin A – Essential for children.....	13
2.2.2 The prevalence of vitamin A deficiency in South Africa and other countries.....	14
2.2.3 Causes and consequences of vitamin A deficiency.....	16
2.2.3.1 Causes.....	16
2.2.3.2 Consequences	17
2.2.4 Urgency to address vitamin A deficiency.....	18
2.3 FOOD-BASED DIETARY GUIDELINES	20
2.3.1 A food-based dietary guideline for increased fruit and vegetable consumption	22
2.4 STRATEGIES TO IMPROVE THE APPLICATION OF A FOOD-BASED DIETARY GUIDELINE.....	24
2.4.1 Food rich in vitamin A access and availability.....	24
2.4.1.1 Homestead food production (gardening).....	25
2.4.1.2 Food gathering giving access to indigenous vegetables.....	27
(i) Indigenous vegetables	28
(ii) Gathering indigenous vegetables	29



(iii)	Domestication of indigenous vegetables.....	29
(iv)	Reintroducing the gathering of indigenous vegetables	30
(v)	Nutritional benefits of indigenous vegetables.....	31
2.4.2	Dietary diversity	31
2.4.3	Nutrition education and information	33
2.4.4	Utilisation of food rich in pro-vitamin A.....	36
2.4.4.1	Storage and preservation of food.....	36
2.4.4.2	Menu planning and food preparation	37
2.5	SUMMARY	39
CHAPTER 3 - RESEARCH METHODOLOGY		41
3.1	INTRODUCTION.....	41
3.2	RESEARCH DESIGN	41
3.3	AIM OF THE STUDY	42
3.4	OBJECTIVES AND SUB-OBJECTIVES	42
3.5	CONCEPTUAL FRAMEWORK.....	43
3.6	CONCEPTUALISATION.....	45
3.6.1	Situational analysis	45
3.6.2	Food-based Dietary Guidelines	45
3.6.3	The food-based dietary guideline “Eat plenty of vegetables and fruit”	45
3.6.4	Access	45
3.6.5	Availability	46
3.6.6	Food gathering	46
3.6.7	Food production (gardening).....	46
3.6.8	Dietary diversity	46
3.6.9	Food utilisation	47
3.6.10	Food storage	47
3.6.11	Food preservation.....	47
3.6.12	Food preparation methods.....	47
3.6.13	Nutrition strategies	47
3.6.14	Training caregivers	48
3.6.15	Caregiver	48
3.6.16	Nutrition knowledge.....	48
3.6.17	Menu planning.....	48
3.7	OPERATIONALISATION AND MEASURING INSTRUMENTS.....	48
3.7.1	Questionnaires	49
3.7.2	Observation	51
3.7.3	Game	52



3.8	SAMPLING AND STUDY POPULATION.....	53
3.9	DATA COLLECTION.....	53
3.10	DATA ANALYSIS.....	57
3.11	ETHICAL CONSIDERATION.....	57
3.12	METHODS TO COMBAT ERROR.....	58
3.12.1	Validity threats.....	58
(i)	Content validity.....	58
(ii)	Theoretical validity.....	58
(iii)	Construct validity.....	59
(iv)	Face validity.....	59
3.12.2	Reliability threats.....	59
3.13	SUMMARY.....	60
CHAPTER 4 - RESULTS AND DISCUSSION.....		61
4.1	INTRODUCTION.....	61
4.2	DESCRIPTION OF THE STUDY AREA.....	61
4.3	PHASE ONE.....	62
4.3.1	Demographic profile.....	63
4.3.1.1	Demographic profile of the caregivers.....	63
4.3.1.2	Demographic profile of children.....	65
4.3.2	Assessment and analysis of the nutrition strategies.....	67
4.3.2.1	Dietary diversity.....	67
(i)	Meals and snacks served to children at crèches.....	67
(ii)	Frequency of vegetables and fruit consumption.....	70
4.3.2.2	Availability and accessibility of vegetables and fruit.....	74
(i)	Availability of vegetable gardens at crèches.....	75
(ii)	Gathering of indigenous vegetables and fruit.....	78
4.3.2.3	Utilisation of vegetables and fruit.....	80
(i)	Menu planning and training.....	81
(ii)	Purchasing.....	82
(iii)	Preparation of the vegetables and fruit.....	83
(iv)	Storage and preservation of vegetables and fruit.....	85
4.3.2.4	Nutrition knowledge.....	86
(i)	Children’s consumption of vegetables and fruit.....	86
(ii)	The importance of vitamin A to children.....	89
(iii)	Knowledge of vegetables and fruit rich in vitamin A.....	89
4.3.2.5	Summary.....	91
4.4	PHASE TWO.....	92



4.4.1	Nutrition strategies	93
4.4.1.1	Nutrition education and training	94
4.4.1.2	Promoting the production and gathering of vegetables and fruit.....	95
4.4.1.3	Cultivation of vegetables and fruit.....	96
4.4.2	Summary	97
4.5	PHASE THREE	98
4.5.1	Reassessment of the nutrition strategies	98
4.5.1.1	Dietary diversity	98
(i)	Meals and snacks served to children at crèches	99
(ii)	Frequency of vegetables and fruit consumption	103
4.5.1.2	Availability and accessibility of vegetables and fruit.....	111
(i)	Availability of vegetable gardens at crèches	111
(ii)	Gathering of indigenous vegetables and fruit.....	113
4.5.1.3	Utilisation of vegetables and fruit rich in vitamin A.....	116
(i)	Menu planning	116
(ii)	Purchasing	116
(iii)	Preparation of vegetables and fruit	117
(iv)	Storage of vegetables and fruit	119
(v)	Preservation of vegetables and fruit.....	120
4.5.1.4	Nutrition knowledge	121
(i)	Children’s consumption of vegetables and fruit	121
(ii)	The importance of vitamin A to children.....	125
(iii)	Knowledge of vegetables and fruit rich in vitamin A.....	125
4.5.1.5	Relationship between caregivers' educational background and their nutrition knowledge	127
4.5.1.6	Summary.....	129
CHAPTER 5 - CONCLUSIONS AND RECOMMENDATIONS		130
5.1	INTRODUCTION	130
5.2	PHASE ONE REVIEWED	131
5.2.1	Demographic profile	131
5.2.2	Dietary diversity	1311
5.2.3	Availability and access to vitamin A-rich vegetables and fruit	132
5.2.3.1	Gardening	133
5.2.3.2	Gathering of indigenous vegetables and fruit.....	1333
5.2.4	Utilisation	1344
5.2.4.1	Menu planning	134
5.2.4.2	Food preparation.....	134



5.2.4.3	Storage and preservation of food.....	1355
5.2.5	Nutrition knowledge.....	1355
5.3	PHASE TWO REVIEWED	136
5.3.1	Nutrition education	136
5.3.2	Gardening	137
5.3.3	Gathering of indigenous vegetables and fruit.....	137
5.3.4	Menu planning and food preparation.....	138
5.4	PHASE THREE REVIEWED	138
5.4.1	Dietary diversity	138
5.4.2	Availability and access to vitamin A-rich vegetables and fruit	139
5.4.2.1	Gardening	140
5.4.2.2	Gathering of indigenous vegetables and fruit.....	140
5.4.3	Utilisation.....	141
5.4.3.1	Menu planning	141
5.4.3.2	Food preparation.....	141
5.4.3.3	Storage and preservation of food.....	142
5.4.4	Nutrition knowledge.....	142
5.5	RECOMMENDATIONS.....	143
5.5.1	Recommendations to caregivers.....	143
5.5.2	Recommendations to health workers and programme planners	144
5.5.3	Recommendations to policy makers.....	145
5.5.4	Recommendations for future research	145
5.6	EVALUATION OF THE STUDY	145
5.6.1	Reliability and validity	146
5.6.2	Data collection methods and their usefulness to the research.....	146
5.6.3	Achievement of the objectives of the study	146
5.6.4	Benefit to caregivers and the children.....	146
5.6.5	The success of the study	147
5.7	THE SIGNIFICANCE OF THE STUDY.....	148
5.8	LIMITATIONS OF THE STUDY	148
5.9	CONCLUDING REMARKS.....	149
REFERENCES	150	

LIST OF TABLES

TABLE 2.1:	VITAMIN A CONTENT OF A 100g EDIBLE PORTION OF COOKED VITAMIN A-RICH VEGETABLES (Faber et al., (2006:120))	12
TABLE 3.1:	SUMMARY OF OPERATIONALISATION AND MEASURING INSTRUMENTS	49
TABLE 4.1:	CHILDREN'S LIKING FOR VEGETABLES (n=100)	72
TABLE 4.2:	MENU PLANNING AS PART OF UTILISATION (n=100)	81
TABLE 4.3:	KNOWLEDGE ON VEGETABLES AND FRUIT CONSUMPTION AND THE IMPORTANCE OF VITAMIN A (n=100)	87
TABLE 4.4:	NUTRITION EDUCATION AND TRAINING	94
TABLE 4.5:	A COMPARISON OF MEALS SERVED IN PHASES ONE AND THREE (n=100)	99
TABLE 4.6:	PHASE ONE AND THREE MORNING SNACK (n=100)	99
TABLE 4.7:	PHASE ONE AND THREE AFTERNOON SNACK (n=100)	100
TABLE 4.8:	FOOD SERVED TO CHILDREN FOR BREAKFAST (n=100)	101
TABLE 4.9:	FOOD SERVED TO CHILDREN FOR LUNCH (n=100)	102
TABLE 4.10:	SNACKS SERVED TO CHILDREN (n=100)	102
TABLE 4.11:	THE FREQUENCY OF VEGETABLES ON THE MENU (n=100)	104
TABLE 4.12:	VEGETABLES SERVED TO CHILDREN IN PHASE ONE AND THREE (n=100)	105



TABLE 4.13: THE DIFFERENCE OF CARROTS SERVED IN PHASE ONE AND THREE (n=100).....	106
TABLE 4.14: CHILDREN'S LIKING OF VEGETABLES (n=100).....	108
TABLE 4.15: VEGETABLES LIKED BY CHILDREN (n=100)	110
TABLE 4.16: FRUIT SERVED TO CHILDREN AT CRECHES (n=100).....	110
TABLE 4.17: AVAILABILITY OF VEGETABLE GARDENS AT CRÈCHES (n=100).....	111
TABLE 4.18: VEGETABLES AND FRUIT TREES THAT WERE PLANTED (n=100).....	112
TABLE 4.19: THE GATHERING OF INDIGENOUS VEGETABLES (n=100)	1144
TABLE 4.20: PLACES WHERE TRADITIONAL VEGETABLES WERE OBTAINED (n=100).....	115
TABLE 4.21: PHASE ONE AND THREE USE OF OWN VEGETABLES (n=100)	117
TABLE 4.22: FREQUENCY OF PURCHASING VEGETABLES AND FRUIT (n=100)....	117
TABLE 4.23: ADDITIVES ADDED TO THE VEGETABLES (n=100).....	119
TABLE 4.24: STORING SURPLUSES AND LEFTOVERS (n=100)	120
TABLE 4.25: KNOWLEDGE OF THE IMPORTANCE OF VITAMIN A AND VEGETABLES AND FRUIT CONSUMPTION (n=100)	122
TABLE 4.26: NOT EATING VEGETABLES AND FRUIT AND NUTRIENT DEFICIENCY (n=100)	123
TABLE 4.27: NOT EATING VEGETABLES AND FRUIT AND GROWTH FALTERING (n=100)	1233
TABLE 4.28: KNOWLEDGE OF VITAMIN A-RICH VEGETABLES (n=100).....	127

LIST OF FIGURES

FIGURE 2.1: APPLIED UNICEF MODEL OF CAUSES OF VITAMIN A DEFICIENCY (Van Lieshout, Chopra & Sanders, 2004: 6)	10
FIGURE 2.2: PREVALENCE OF VITAMIN A DEFICIENCY IN SOUTH AFRICAN 6-71 MONTH OLD CHILDREN [Labadarios et al., 1995 as in Faber et al., (2006:13)].....	15
FIGURE 2.3: THE TRIPLE A CYCLE (Department of Health, 2004:1; Tontisirin & Gillespie (1999:47); UNICEF, 1990)	19
FIGURE 3.1: CONCEPTUAL FRAMEWORK OF THE NUTRITION STRATEGIES TO IMPROVE THE APPLICATION OF A FOOD-BASED DIETARY GUIDELINE	44
FIGURE 4.1: MAP OF THE STUDY AREA	62
FIGURE 4.2: DEMOGRAPHIC PROFILE OF CAREGIVERS (n=100)	64
FIGURE 4.3: DEMOGRAPHIC PROFILE OF CHILDREN (n=100).....	66
FIGURE 4.4: MEALS AND SNACKS SERVED TO CHILDREN (n=100)	68
FIGURE 4.5: CONSUMPTION OF VEGETABLES AND FRUIT (n=100)	70
FIGURE 4.6: AVAILABILITY AND ACCESSIBILITY OF VEGETABLES AND FRUIT (n=100)	77
FIGURE 4.7: FRUIT TREES AT THE CRECHE	78
FIGURE 4.8: A MUHUYU TREE BEARING FRUIT.....	80
FIGURE 4.9: UTILISATION OF VEGETABLES AND FRUIT (n=100).....	82
FIGURE 4.10: FOOD PREPARATION PRACTICES (n=100).....	84



FIGURE 4.11: CHILDREN BEING SERVED PORRIDGE AND SPINACH AT THE CRÈCHE.....	89
FIGURE 4.12: KNOWLEDGE OF VEGETABLES AND FRUIT RICH IN VITAMIN A (n=100).....	90
FIGURE 4.13: IMPLEMENTING THE NUTRITION STRATEGIES	93
FIGURE 4.14: NEWLY ESTABLISHED, IMPROVED AND RESUSCITATED CRECHE GARDENS.....	97
FIGURE 4.15: SLICED COOKED SWEET POTATOES GIVEN TO CHILDREN AS SNACKS.....	103
FIGURE 4.16: VITAMIN A VEGETABLE GARDENS AT CRECHES	107
FIGURE 4.17: CHILDREN ENJOYING PORRIDGE WITH SPINACH FROM THE CRÈCHE GARDEN	108
FIGURE 4.18: VEGETABLES LIKED BY CHILDREN	109
FIGURE 4.19: NEWLY ESTABLISHED VEGETABLE GARDENS	113
FIGURE 4.20: GATHERING OF INDIGENOUS VEGETABLE (n=100).....	114
FIGURE 4.21: A CAREGIVER PREPARING SPINACH BEFORE COOKING	118
FIGURE 4.22: COOKED DRIED SPINACH.....	121
FIGURE 4.23: THREE YEAR OLD CHILDREN EATING PORRIDGE AND SPINACH AT THE CRÈCHE.....	125
FIGURE 4.24: KNOWLEDGE OF VITAMIN A-RICH VEGETABLES AND FRUIT (n=100).....	1266



LIST OF ADDENDA

ADDENDUM A: QUESTIONNAIRE	160
ADDENDUM B: OBSERVATION CHECKLIST SHEET	170
ADDENDUM C: GAME RULES	171
ADDENDUM D: THE GAME SCORE SHEET AND QUESTIONS ASKED	172
ADDENDUM E: ARC GARDENING MANUALS FOR VITAMIN A-RICH VEGETABLES.....	173
ADDENDUM F: RECIPES WITH VITAMIN A.....	177
ADDENDUM G: PERMISSION LETTERS FROM THE DEPARTMENT OF EDUCATION.....	180
ADDENDUM H: STATISTICS COMPARING PHASE ONE (PRE) AND PHASE THREE (POST).....	1822