

UNIVERSITI TEKNOLOGI MARA

**EATING HABITS IN CHILDREN WITH DOWN
SYNDROME IN MALAYSIA**

HAFIZAH BINTI HUSSAIN

**Dissertation submitted in partial fulfillment of the requirements for the
Bachelor of Pharmacy (Hons.)**

Faculty of Pharmacy

2013

ACKNOWLEDGEMENTS

In the first place, I would like to convey my greatest gratitude to Allah S.W.T who has given me strength, ability, and ideas to complete this study. I gratefully thank to my supervisor, Mdm Maziana Binti Mahamood for her supervision, advice, comment and guidance from the very early stage of this thesis until I had complete it. Her valuable ideas, suggestions and precise advices, comments and help throughout the process of preparing this thesis are really appreciated.

Special dedication goes to Dr. Mohd Shihabuddin Ahmad Nordeen as course coordinator who always giving information and guidance in completing this thesis successfully. I would also like to express my special thanks to my beloved parents, Hussain Bin Wannik and

Without their encouragement and blessing, I would not have finished degree.

Thank you to all my friends for their support, help and encouragement in completing this thesis.

Hafizah Binti Hussain

TABLE OF CONTENTS

TITLE	Page
APPROVAL SHEET	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vii
LIST OF FIGURES	viii
LIST OF ABBREVIATIONS	x
ABSTRACT	xi
CHAPTER 1 (INTRODUCTION)	
1.1. Overview	1
1.2. Objective	2
1.2.1. General objective	2
1.2.2. Specific objectives	2
1.3. Problem statement	3
1.4. Research question	3
1.5. Hypothesis	4
CHAPTER 2 (LITERATURE REVIEW)	
2.1 Eating Behavior	5
2.1.1 Age of introduction of solid food	6
2.1.2 Variety of food intake in Down syndrome	8
2.1.3 Food refusal among Down syndrome children	9

ABSTRACT

Down syndrome is the most common genetic disorder in which individuals with Down syndrome carried 47 total number of chromosome compared to 46 in normal individual. Down syndrome children are expected to have poor eating habit as they have weaker immunity system, lower IQ and weak muscle tone. The aims of this study are to research eating behavior, determine nutritional status and study the breastfeeding pattern in children with Down syndrome in Malaysia. The data was collected via questionnaires. Some questionnaires were distributed via post and some were directly distributed to respondents in place. In this study, out of 170 set of questionnaires distributed, only 91 were response. The statistical analyses used were descriptive statistics test, Chi-square test and Kruskal-Wallis test. Based on the result, 96.7% respondents agreed that eating behavior was one of important factor that contribute to Down syndrome children's development. Incidence of choking among Down syndrome children was not frequently occurred (n=53). There was negative correlation between the first solid food introduced in 6 to 10 months and BMI range ($r=-0.129$). There were no correlation between BMI range and number of different kinds of food introduced ($p=0.35$). (58.2%) of respondents believed that underweight common problem in Down syndrome children. Chi-square test showed a significant difference between BMI range and supplementation for children with Down syndrome ($p=0.038$). About 86.8% of mothers care about child positioning during breastfeeding.

Keywords: Down syndrome, Chi-square test, Kruskal-Wallis test, BMI range.

CHAPTER 1

INTRODUCTION

1.1 Overview

Down syndrome is a genetic disorder in which susceptible individual is having 47 chromosome instead of 46 chromosome carried by a normal individual. Specifically, it is caused by the presence of third copy in chromosome number 21 in all or part of body cells. It is also known as Trisomy 21 disorder. Down syndrome is the most common birth defects. Down syndrome can be characterized by mental retardation and stunted physical growth. Individual with Down syndrome can be easily recognized by their facial characteristics. Individual with Down syndrome has face and nose which are flattened, a short neck, a small mouth with protruding tongue because of small oral cavity, small ears, upward slanting eyes that may have small skin folds at the inner corner. Until now, there are no specific treatments for Down syndrome. But with some improvement in medication and healthcare, a better quality of life for Down syndrome's individual and also their family can be realized (R.Henry, 1986).