

Universiti Teknologi MARA

**Diet Recommendation for Children with
Failure to Thrive (FTT) using Fuzzy
Expert System**

Nurul Syakirah Binti Suliman

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ABSTRACT

Parents with children that are diagnosed with FTT need to meet dietitian once in 3 months to check their children's growth. In between the consultation time, parents need to plan their own dietary plan in order to maintain the growth of their children. Without having a proper nutrition, children may get variety of medical or psychosocial problems. A recommendation system using fuzzy expert system is proposed to support parents in making right dietary plan for their own children. Incremental model is used to develop the proposed work. Five core phases which are preliminary study, data preparation, knowledge acquisition, implementation and evaluation are followed to make sure the system produce proper dietary plan. This system is evaluated by an expert who verify on dietary plan recommended by the system for 10 selected case studies. The evaluation results on 40% correct output with another 60% falls into the grey area. It shows that using fuzzy expert system for diet recommendation system can produce correct dietary plan. For future work, to produce diet recommendation system that are more reliable and widely used, the fuzzy range need to recalculated back and adding more data about children which can be used by children with FTT in different age.

TABLE OF CONTENTS

CONTENTS	PAGE
SUPERVISOR APPROVAL	II
STUDENT DECLARATION	III
ACKNOWLEDGEMENT	IV
ABSTRACT	V
TABLE OF CONTENTS	VI
LIST OF FIGURES	IX
LIST OF TABLES	X
LIST OF ABBREVIATIONS	XI
CHAPTER ONE: INTRODUCTION	
1.1 BACKGROUND OF STUDY	1
1.2 PROBLEM STATEMENT	4
1.3 PROJECT OBJECTIVES	4
1.4 PROJECT SCOPE	5
1.5 PROJECT SIGNIFICANCE	5
1.6 PROJECT METHODOLOGY FRAMEWORK	6
1.7 SUMMARY	7
CHAPTER TWO: LITERATURE REVIEW	
2.1 HEALTHCARE	8
2.1.1 CATEGORIES OF HEALTHCARE	9
2.1.2 DIET RECOMMENDATION AND TYPE OF DIET	10
2.1.3 FAILURE TO THRIVE	11
2.2 EXPERT SYSTEM	12
2.2.1 APPLICATION OF EXPERT SYSTEM	15
2.2.2 TECHNIQUES IN EXPERT SYSTEM	16
2.3 FUZZY EXPERT SYSTEM	17
2.3.1 OVERVIEW OF FUZZY EXPERT SYSTEM	17
2.3.2 COMPONENT OF FUZZY EXPERT SYSTEM	20

2.4	RELATED WORK	25
2.4.1	RELATED WORK IN DIET RECOMMENDATION	25
2.4.2	RELATED WORK IN RECOMMENDATION SYSTEM USING FUZZY EXPERT SYSTEM	27
2.5	DIET RECOMMENDATION USING FUZZY EXPERT SYSTEM	28
2.6	SUMMARY	29
CHAPTER THREE: METHODOLOGY		
3.1	INTRODUCTION	30
3.2	PROJECT METHODOLOGY FRAMEWORK	31
3.3	INPUT PHASE	32
3.4	PROJECT DESIGN AND IMPLEMENTATION PHASE	34
3.4.1	KNOWLEDGE ACQUISITION AND DATA REPRESENTATION	34
3.4.2	SYSTEM DESIGN	36
3.5	OUTPUT PHASE	38
3.6	SUMMARY	39
CHAPTER FOUR: RESULT AND DISCUSSION		
4.1	FTT DIET RECOMMENDATION FRAMEWORK	41
4.2	DATA DESCRIPTION FOR REPRESENTATION	42
4.3	IMPLEMENTATION RESULT	45
4.4	RESULT EVALUATION	51
4.5	SUMMARY	53
CHAPTER FIVE: CONCLUSION AND RECOMMENDATION		
5.1	INTRODUCTION	54
5.2	CONTRIBUTION	55
5.3	LIMITATION	55
5.4	FUTURE WORK AND RECOMMENDATION	55
5.5	SUMMARY	56