THE EVALUATION OF THE EFFECTIVENESS OF THE DIRECTLY OBSERVED TREATMENT SHORT COURSE (DOTS) STRATEGY FOR CONTROL OF PULMONARY TUBERCULOSIS

by

TANDEKA VVICTORIA MKUZO

submitted in fulfilment with the requirements

for the degree of

MASTER OF ARTS

in

Nursing Science

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: MRS JE SMITH

JOINT SUPERVISOR: MRS M M VAN DER MERWE

February 2005

)

DIRECTLY FOR CONT	ROL OF PULMO es that I have use	EATMENT SHO NARY TUBER	RT COURSE (I CULOSIS is my e been indicated	NESS OF THE DOTS) STRATEGY y own work and that d and acknowledged
SIGNATURE (T V MKUZO)				DATE

SUMMARY

THE EVALUATION OF THE EFFECTIVENESS OF THE DIRECTLY OBSERVED TREATMENT SHORT COURSE (DOTS) STRATEGY FOR CONTROL OF PULMONARY TUBERCULOSIS IN THE NORTH SOUTH CENTRAL HEALTH DISTRICT OF KWAZULU-NATAL PROVINCE

STUDENT: T V MKUZO

DEGREE: MASTER OF ARTS

DEPARTMENT: Health Studies, University of South Africa

SUPERVISOR: Mrs J E Smith

JOINT SUPERVISOR: Mrs M M van der Merwe

KEY TERMS: Multi-drug resistant tuberculosis, treatment supporter,

ACKNOWLEDGEMENTS

I wish to acknowledge the important role played by all people whose support and encouragement enabled me to complete this study. In particular I would like to express my gratitude, especially to the following:

- My supervisors Mrs JE Smith and my co-cupervisor Mrs M M van der Merwe who were very dedicated in assisting me in my study.
- My family for helping me financially, especially my children who were responsible for typing my dissertation, Anele Mkuzo in particular.
- Mrs Rina Coetzer for the typing of the final copy of the dissertation.
- Mrs TA Burger the Subject Librarian of Unisa for the literature search.
- The Kwazul0Natal Provincial Government, for granting me permission to conduct this research
- Members of staff of the North South Central health District in KwaZulu-Natal who granted me permission to do the research.
- All the participants in the research who were willing to take part in this research.

Table of contents

Page

Chapter I

Orientation to this research

1.1	INTRODUCTION	1
1.2 1.2.1 1.2.2 1.2.3	BACKGROUND OF THIS RESEARCH	5 5
1.3	RATIONALE OF THE RESEARCH	6
1.4	THE SIGNIFICANCE OF THE RESEARCH	7
1.5 1.5.1	THE AIM OF THE RESEARCH	
1.6	STATEMENT OF THE PROBLEM	8
1.7	OPERATIONAL DEFINITIONS	8
1.8 1.8.1 1.8.2 1.8.3 1.8.4 1.8.5	RESEARCH METHODOLOGY The research approach: quantitative research Research design	9 0 0 0
1.9 1.10	AN OVERVIEW OF THE ETHICAL CONSIDERATIONS OF THIS RESEARCH	
1.11	LIMITATIONS OF THIS RESEARCH	2
1.12	LAYOUT OF THE DISSERTATION	2
1.13	SUMMARY	2

LITERATURE REVIEW

2.1	INTRODUCTION	13
2.2	TUBERCULOSIS AS A HEALTH PROBLEM	13
2.3	THE EXTENT OF THE HEALTH PROBLEM	15
2.4	THE IMPACT OF HIV/AIDS ON THE HEALTH PROBLEM	16
2.5	TREATMENT OF TUBERCULOSIS	
2.5.2	Theories why the method of treatment of TB in the past did not succeed	2 2
2.6	THE DIRECTLY OBSERVED TREATMENT SHORT COURSE (DOTS) STRATEGY	23
2.6.1	What makes the DOTS strategy work?	
2.6.2	Patient management	
2.6.2.	1 Effectiveness measures	
2.6.2.2	2 Treatment outcome	
2.6.2.	Mortality rate	
2.6.3	Getting the work done	
2.6.4	Threats ro the effectiveness of the dots strategy	٠.
2.7	REVIEW OF PREVIOUS STUDIES	25
2 Q	SIIMMARY	20

RESEARCH METHODOLOGY

3.1	INTRODUCTION	30
3.2	DELIMITATION OF THE RESEARCH	30
3.2.1	Geographical area	31
3.3	RESEARCH DESIGN	32
3.3.1	Quantitative research approach	32
3.3.1.	1 The characteristics of quantitative research approach	32
3.4	THE RESEARCH POPULATION	32
3.5	SAMPLING	34
3.5.1	The sampling mehtod	34
3.5.2	The advantages of the purposive sampling method	34
3.5.2	Disadvantages of the purposive sampling method	35
3.5.3	Criteria set for a responded to be included in the sample	35
3.6	DATA COLLECTION	37
3.6.1	The research instrument	37
3.6.2.	1 The studying of records	38
3.6.2.	2 Interview method	38
3.6.2.	3 Advantages of the interview method	39
3.6.2.	4 Disantages of the interview method	41
3.6.2.	5 The interview method schedule	42
3.7	ANALYSIS OF THE DATA	42
3.8	RELIABILITY AND VALIDITY OF THE RESEARCH	43
3.8.1	Pretesting of the instrument	44
3.8.2	Reliability of the research instrument	44
3.8.3	Validity of the research instrument	44
3.8.4	Reliability and vailidity of the research	
3.9	ETHICAL CONSIDERATIONS OF THIS RESEARCH	45
2 40	CLIMMADV	40

DATA ANALYSIS AND INTERPRETATION OF RESEARCH FINDINGS

4.1	INTRODUCTION	55
4.2	OBJECTIVES OF THIS RESEARCH	55
4.3	SAMPLING	56
4.4 4.4.1	DISCUSSION OF THE RESEARCH FINDINGS	
4.5 4.5.1 4.5.2	DISCUSSION OF THE FINDINGS	
4.4.3		
4.4.4		
4.4.5		
4.4.6		
4.4.7		
4.4.8		
4.4.9		
4.4.10)	
4.5	SUMMARY	

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

5.1	INTRODUCTION	151
5.2.4.1 5.2.4.2 5.2.4.3 5.2.4.4 5.2.4.4	Background of the research and literature study Objectives of the research Research design and Method Analysis of the data Biographical data of respondents Knowledge of TB Respondents as TB patient (previous infection) The current infection The stigmatisation of TB Information about the treatment supporter	151 151 152 153 154 155 155 156 156
5.2.4.7		157
5.2.4.8		158
5.4	CONCLUSION	158
5.5	RECOMMENDATION FOR THE IMPROVEMENT OF DOTS STRATEGY	161
5.6		161
5.6	LIMITATION	162
5.7	SUMMARY	163
5.6	SUMMARY OF CHAPTER 5	167
BIBLI	OGRAPHY	163
5.3	CONCLUSIONS	• • •
5.4 5.4.1 5.4.2	RECOMMENDATIONS	
5.5	LIMITATIONS	

5.6	SUMMARY
6	BIBLIOGRAPHY

ANNEXURE

Annexure A: A copy of the interview schedule

Annexure B: Letter requesting permission to do research in KZN

Annexure C: Letter or permission received from

Annexure D: Written consent

Annexure E: Copy of green card

Annexure F: Map of North Sounth Central Health Disctict

Annexure G: TB register

LIST OF TABLES

Table 1.1:	
Table 2.2:	
Table 4.1:	Age categories of respondents56
Table 4.2:	Respondents' type of work59
Table 4.3:	Patients' knowledge of what Tb stand for60
Table 4.4:	TB as an infectious disease61
Table 4.5:	Fatality of TB62
Table 4.6:	Causses of TB
Table 4.7:	Respondents' opinion on how to recognise a person with TB
Table 4.8:	The most serious of listed conditions64
Table 4.9:	The respondents' understanding on how drug resistance develops
Table 4.10:	Reasons for interruptinh treatment76
Table 4.11:	The extent to which HIV positive people can be successfully treated for TB
Table 4.12:	The respondents' opinion on how TB is prevented78
Table 4.13:	Reasons why the respondents were not cured85
Table 4.14:	Respondents' frequency in consulting health professionals 94
Table 4.15:	Respondents' frequency
Table 4.16:	Reasons why respondents might defaul treatment before completion in current infection99
Table 4.17:	Medication taken by respondents99

Table 4.18:	Side effects patients can expect when taking TB drugs 102
Table 4.19:	The frequency in which respondents are taking their medicine 103
Table 4.20:	The knowledge of co-workers on patients' TB status 106
Table 4.21:	Support from other people
Table 4.22:	Knowledge of the treatment supporter about the symptoms of TB 8
Table 4.23:	When have you heard about the DOTS strategy the first time
Table 4.24:	People from where the patient learned about the DOTS strtegy 125
Table 4.25:	Respondents' knowledge about what DOTS strategy is 126
Table 4.26:	The respondents' reasons why DOTS strategy should continue128

LIST OF DIAGRAMS

Figure 4.1:	Gender of respondents57
Figure 4.2:	Cultural groups of respondents58
Figure 4.3:	Marital status of respondents59
Figure 4.4:	Coughing as one of the first symptoms of TB 67
Figure 4.5:	Weight loss as one of the first symptoms of TB68
Figure 4.6:	Night sweats as one of the first symptoms of TB69
Figure 4.7:	Opinion of the respondents on the importance of completing TB treatment73
Figure 4.8:	The knowledge of respondents about what MDR TBmeans 4
Figure 4.9:	The respondents' opinion why TB patients in general default79
Figure 4.10:	Sources where respondents obtained their knowledge of TB from the state
Figure 4.11:	Support received by the respondents from family 88
Figure 4.12:	Support received by the respondents from friends89
Figure 4.13:	Support received by the respondents from employer90
Figure 4.14:	Support received by the respondents from community90
Figure 4.15:	Support received by the respondents from nurses91
Figure 4.16:	Support received by the respondents from medical practitioners92
Figure 4:17:	The duration of the current infection93
Figure 4.18:	Explanation of the side effects of drugs to the respondents 101
Figure 4.19:	The patients' opinion on the stigmatisation of TB 105
Figure 4.20:	Knowledge of the treatment supporter about the symptoms of TB7
Figure 21:	Importance of taking treatment regularly 118