

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.

**Attention-Deficit/Hyperactivity Disorder in Children: A Comparative  
Study on Current Assessment, Diagnosis and Treatment Practices in  
Malaysia and New Zealand**

A thesis presented in partial fulfillment of the requirements for the degree of  
Master of Arts  
in  
Psychology  
at Massey University, Palmerston North,  
New Zealand.

**Nurul S. Sa'ari**

**2004**

## *Abstract*

Diagnosis and treatment of attention-deficit/hyperactivity disorder (ADHD)—one of the most common neurobehavioural disorders of childhood and the most chronic childhood disorder—remain controversial because of concern about inappropriate practices among mental health practitioners. The purpose of this study was to examine the current diagnostic assessment procedures and treatment interventions applied in diagnosing and treating ADHD children in Malaysia. The study also addressed the issues of ethnic diversity and age differences among these children that may affect the implementation of such procedures and interventions. This study, then, represents the first effort to compare and contrast the diagnosis and treatment practices for the disorder in Malaysia and in New Zealand. As a replication of a previous study by Kingi (2000) in New Zealand, the study was conducted in 2 phases. First, a random sample of 40 children with ADHD, aged from 3 to 16 years, was surveyed in 2 areas in Malaysia. Then 4 practitioners who provided data for 5 children in the first phase were screened. Each parent completed Kingi's Parent/Guardian Survey and each practitioner completed Kingi's Treating Practitioner Survey. Responses indicated that the majority of Malaysian children were assessed and treated for ADHD with inconsistent application of current scientific recommendations. Ethnic diversity and age differences influenced the use of some types of assessment procedures and treatment interventions for these affected children. The results of a comparison with Kingi's findings indicated that there were significant differences in the utilisation of diagnostic procedures for Malaysian and New Zealand children. However, no differences were detected in the application of treatment interventions in these 2 countries. The diagnosis-country association and treatment-country associations were moderated by the age of the children. Some types of diagnosis and treatment procedures used for ADHD children, varied considerably across Malaysia and New Zealand and age differences also affected the use of some types of procedures in these 2 countries. Overall, these findings add to a growing literature supporting the notion that many ADHD children are inappropriately diagnosed and therefore inaccurately treated.

### *Acknowledgements*

Completion of this thesis would not have been possible without help and support from a number of people. I am highly indebted to my thesis supervisor, Dr Christine Stephens, for her invaluable support and guidance throughout my thesis work. I thank her for her enlightening conversations and clever ideas. I am also grateful for her patience and understanding when all was not well and nothing good seemed to happen.

I would also like to extend my appreciation to staff of the Kiwanis Club of Taman Tun Dr. Ismail, Malaysian Family Support Group for ADHD/LD and C.H.A.P Education Sdn. Bhd. for the incredible amounts of time and effort they contributed to this thesis. I would also like to thank Karen Stanley for her efforts in introducing me to the mysteries of the English language while proof-reading this thesis.

Finally, my special thanks are due to my parents, Sa'ari and Wan Zainun, my husband, Effendy, and my daughter, Anneesa for their confidence, patience and love. They have always been beside me in time of need, urging me on. Thank you!

Approval for this research was obtained from the Massey University Ethics Committee.

## TABLE OF CONTENTS

Abstract.....	ii
Acknowledgements.....	iii
Table of Contents.....	iv
List of Tables.....	viii
List of Figures.....	x
<b>Chapter One: Introduction.....</b>	<b>1</b>
Overview of Attention-Deficit/Hyperactivity Disorder (ADHD).....	1
Introduction to the Study.....	1
<b>Chapter Two: Literature Review.....</b>	<b>6</b>
The Aetiology of ADHD.....	6
Neurological Factors.....	6
Genetic Inheritance.....	6
Environmental Toxins.....	7
Food Additives.....	8
Psychosocial Factors.....	8
The Epidemiology of ADHD.....	10
Prevalence.....	10
Ethnic and Cultural Diversity.....	10
Age and Gender.....	11
Socioeconomic Status.....	12
Diagnosis and Treatment of ADHD.....	12
Assessment of ADHD.....	13
Clinical Interviews.....	14
Behaviour Rating Scales.....	15
Behaviour Observation.....	16
Psychological and Psychoeducational Assessment.....	16
Diagnostic Process.....	16

Treatment Interventions for ADHD.....	18
Psychopharmacological Treatment.....	19
Psychosocial Interventions.....	21
Educating Children about ADHD.....	22
Individual and Group Counselling.....	22
Malaysia, New Zealand and ADHD.....	23
Statement of the Problem.....	25
<b>Chapter Three: Method.....</b>	<b>27</b>
Participants.....	27
Child Sample.....	27
Practitioner Sample.....	29
Procedure.....	29
Overview.....	29
Phase 1.....	29
Phase 2.....	31
Measures.....	32
Parent/Guardian Survey.....	32
Treating Practitioner Survey.....	35
Data Analysis.....	37
<b>Chapter Four: Results.....</b>	<b>39</b>
ADHD in Malaysia.....	39
Description of Parent-Reported ADHD Diagnostic Process and Group Differences.....	39
Description of Parent-Reported ADHD Treatment Practices and Group Differences.....	44
Cultural Issues in Assessment of ADHD.....	54
Description of Practitioner-Reported ADHD Diagnostic Process.....	54
Description of Practitioner-Reported ADHD Treatment Practices....	56
Cultural Issues in Assessment of ADHD.....	56

Comparison of Malaysia and New Zealand Reported Diagnostic and Treatment Practices for ADHD.....	57
Diagnosis and Treatment of ADHD.....	57
Types of Diagnostic Procedures for ADHD.....	60
Types of Treatment Interventions for ADHD.....	63
<b>Chapter Five: Discussion, Limitations and Implications.....</b>	<b>66</b>
ADHD in Malaysia.....	67
ADHD Diagnostic Process.....	67
ADHD Treatment Interventions.....	70
Group Differences.....	71
Comparison of Malaysia and New Zealand Diagnostic and Treatment Practices for ADHD.....	74
Diagnostic and Treatment of ADHD.....	74
Types of ADHD Diagnostic Assessment Procedures.....	75
Types of ADHD Treatment Interventions.....	76
Limitations.....	78
Implications.....	79
<b>References.....</b>	<b>81</b>
<b>Appendices.....</b>	<b>89</b>
A. Letter to Organisation.....	89
B. Agreement Form.....	90
C. Parent/Guardian Information Sheet.....	91
D. Parent/Guardian Information Sheet-Malay Language.....	93
E. Parent/Guardian Survey.....	96
F. Parent/Guardian Survey-Malay Language.....	105
G. Consent Form for the Release of Information.....	115
H. Consent Form for the Release of Information-Malay Language.....	116

I. Optional Request for Study Results Form.....	117
J. Optional Request for Study Results Form-Malay Language.....	118
K. Treating Practitioner Survey.....	119
L. Treating Practitioner Survey-Malay Language.....	126
M. Treating Practitioner Information Sheet.....	133
N. Treating Practitioner Information Sheet-Malay Language.....	135



*List of Tables*

Table 1: Demographic Characteristics of the Sample.....	28
Table 2: Parents' Reports on Diagnostic Criteria and Resources Contributing to the Diagnosis of ADHD.....	41
Table 3: Assessment Instruments of Children with Attention-Deficit/ Hyperactivity Disorder by Pediatrician, General Practitioner and Psychologist.....	43
Table 4: Parents' Reports of Treatment of Attention-Deficit/Hyperactivity Disorder.....	45
Table 5: Prevalence of Parent-Reported Comorbid Conditions and Prevalence of Parent-Reported Treatment Modality for ADHD Children.....	50
Table 6: Frequency of "Dissatisfaction" in the Bumiputera, Chinese and Other Parent Groups.....	53
Table 7: Practitioners' Reports on Diagnostic Criteria and Resources Contributing to ADHD Diagnosis.....	55
Table 8: Practitioners' Reports of Treatment of Attention-Deficit/ Hyperactivity Disorder.....	57
Table 9: The Main Effects of Diagnostic Procedures and Treatment Interventions.....	58
Table 10: Logistic Regression Predicting Types of Assessment from Country and Age.....	62

Table 11: Logistic Regression Predicting Types of Treatment from Country and Age.....	65
--	----

*List of Figures*

Figure 1: Diagnostic Procedures Applied in Malaysia and New Zealand....	59
Figure 2: Treatment Interventions for Children in Malaysia and New Zealand.....	60