New Zealand Primary School Teachers’ Knowledge and Perceptions of Attention-Deficit/Hyperactivity Disorder (ADHD)

A thesis presented in partial fulfilment of the requirements for the degree of

Master
in
Educational Psychology

at Massey University, Albany,
New Zealand.

Alia Dilaimi

2013
Copyright © 2013

by

Alia Dilaimi
ABSTRACT

Attention-deficit/hyperactivity disorder (ADHD) is one of the most common, unremitting, and controversial childhood disorders, which affects between 1% and 7% of New Zealand children. It leads to impairments in the individual’s key life activities, including social relations, academic, family, and vocational functioning, self-sufficiency, as well as adherence to social regulations, norms, and laws. Teachers play a central role in the referral, diagnosis, treatment, and monitoring of students with ADHD. Research examining teachers’ knowledge of ADHD, however, has led to some uncertainty as to whether teachers have the level of knowledge about the disorder needed to support ADHD learners. The present study had two main objectives. It examined the knowledge and perceptions of attention-deficit/hyperactivity disorder held by primary school teachers in New Zealand and sought to determine whether teacher characteristics, such as demographic variables and experiences of students with ADHD, are associated with teachers’ knowledge of ADHD. Eighty-four primary school teachers completed a postal survey containing demographic information and the Knowledge Of Attention Deficit Disorders Scale (KADDS). Results indicated that teachers answered an average of 35% of questions correctly on the KADDS. Teachers’ scored significantly higher on the Symptoms/Diagnosis subscale compared to the Associated Features and Treatment subscales. All teachers in the present study reported that they believed ADHD impacts on the educational experiences of students diagnosed with the disorder. Most teachers had received no pre-service or in-service training about ADHD, and 90% of teachers wanted more training on ADHD. The majority of teacher characteristics examined were unrelated or only weakly related to teachers' knowledge of ADHD. However, the number of students with ADHD teachers’ had
taught, participation in an individual behaviour plan (IBP), and participation in an individual education plan (IEP), were significantly and moderately related to higher KADDS total and Symptoms/Diagnosis scores. The results of this study suggest that New Zealand primary school teachers do not in fact have the level of knowledge about the disorder required to effectively participate in the referral, diagnosis, treatment, or monitoring of students with ADHD. Implications for educational psychology practice and directions for future research are discussed. Strengths and limitations of the study are also considered.
TABLE OF CONTENTS

ABSTRACT ..................................................................................................................... ii
LIST OF TABLES ............................................................................................................... ix
LIST OF FIGURES ............................................................................................................. x
ACKNOWLEDGEMENTS ................................................................................................. xi
CHAPTER 1-INTRODUCTION ......................................................................................... 1
  Background of the Study ............................................................................................. 1
    Students with ADHD ................................................................................................. 2
    Knowledge and Perceptions of ADHD .................................................................... 5
    Teachers’ Knowledge about ADHD ......................................................................... 7
  Statement of the Problem ............................................................................................... 11
  Purpose of the Study ..................................................................................................... 13
  Significance of the Study .............................................................................................. 13
  Definition of Terms ...................................................................................................... 14
    Attention-Deficit/Hyperactivity Disorder (ADHD) ................................................. 14
    Teacher Knowledge ................................................................................................... 15
    Perceptions and Misperceptions ............................................................................. 15
    Primary School Teachers .......................................................................................... 15
    Full Primary, Contributing, and Intermediate Schools ........................................ 15
  Research Questions ..................................................................................................... 16
CHAPTER 2-LITERATURE REVIEW ............................................................................... 18
  Diagnosis of ADHD .................................................................................................... 18
    Current Definition ..................................................................................................... 18
      Subtypes .................................................................................................................... 20
    Differential Diagnosis ............................................................................................... 21
  Prevalence .................................................................................................................... 21
  Comorbidity ................................................................................................................. 23
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aetiology</td>
<td>25</td>
</tr>
<tr>
<td>Development, Course, and Prognosis of ADHD</td>
<td>26</td>
</tr>
<tr>
<td>Differences between Subtypes</td>
<td>27</td>
</tr>
<tr>
<td>Associated Characteristics and Outcomes</td>
<td>28</td>
</tr>
<tr>
<td>Families of Children with ADHD</td>
<td>29</td>
</tr>
<tr>
<td>Assessment</td>
<td>30</td>
</tr>
<tr>
<td>Treatment</td>
<td>31</td>
</tr>
<tr>
<td>Biological Approaches</td>
<td>32</td>
</tr>
<tr>
<td>Stimulant Therapy</td>
<td>33</td>
</tr>
<tr>
<td>Limitations of Stimulant Therapy</td>
<td>34</td>
</tr>
<tr>
<td>Anti-depressants</td>
<td>36</td>
</tr>
<tr>
<td>Psychological Approaches</td>
<td>36</td>
</tr>
<tr>
<td>Limitations of Psychological Approaches</td>
<td>39</td>
</tr>
<tr>
<td>Multimodal Approach</td>
<td>40</td>
</tr>
<tr>
<td>ADHD in Schools</td>
<td>40</td>
</tr>
<tr>
<td>The Roles of Teachers</td>
<td>44</td>
</tr>
<tr>
<td>Referral</td>
<td>44</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>46</td>
</tr>
<tr>
<td>Treatment</td>
<td>46</td>
</tr>
<tr>
<td>Informing Parents</td>
<td>47</td>
</tr>
<tr>
<td>Teachers’ Knowledge of ADHD</td>
<td>47</td>
</tr>
<tr>
<td>Symptoms/Diagnosis</td>
<td>50</td>
</tr>
<tr>
<td>Associated Features of ADHD</td>
<td>52</td>
</tr>
<tr>
<td>Treatment</td>
<td>54</td>
</tr>
<tr>
<td>Misperceptions and Gaps in Knowledge about Treatment</td>
<td>56</td>
</tr>
<tr>
<td>Teacher Characteristics that are Related to their Knowledge of ADHD</td>
<td>58</td>
</tr>
<tr>
<td>Demographic Variables</td>
<td>58</td>
</tr>
<tr>
<td>The Influence of Teaching Experience</td>
<td>59</td>
</tr>
</tbody>
</table>
Teacher Pre-Service and In-Service Training ................. 60
Self-directed Study .......................................................... 62
Prior Exposure to and Experience of Students with ADHD ... 63
Teacher Self-efficacy .......................................................... 64
Summary ............................................................................. 65
Rationale ............................................................................ 66
CHAPTER 3-METHOD ............................................................ 67
Selection of Participants ...................................................... 67
Instrumentation ................................................................. 69
The Knowledge Of Attention Deficit Disorders Scale ........... 70
  Scale Development ......................................................... 70
  Scoring Procedure .......................................................... 71
  Reliability ........................................................................ 71
  Validity ............................................................................ 72
Procedure ........................................................................... 72
  Ethical Considerations .................................................... 73
Data Analysis ........................................................................ 74
  Data Screening .................................................................. 75
CHAPER 4-RESULTS ............................................................ 77
Psychometric Properties of the KADDS ......................... 77
  Scale and Subscale Distributions ...................................... 77
  Reliability ........................................................................ 78
Demographic Characteristics of the Sample ..................... 79
Teachers’ Experiences with ADHD ................................. 81
Teachers’ Perceptions of ADHD ........................................ 83
Teachers’ Education and Training about ADHD ................ 84
KADDS Assessment of ADHD Knowledge ....................... 86
  Performance per KADDS Item .......................................... 86
LIST OF TABLES

Table 1. Results of Kolmogorov-Smirnov Test for Normality for Teachers’ Scores on KADDS Scales ............................................................. 78
Table 2. Cronbach’s Alpha and Descriptive Statistics for the Knowledge Of Attention Deficit Disorders Scale (KADDS) ....................... 79
Table 3. Demographic Characteristics of the Sample .......................... 80
Table 4. Teachers’ Education and Training about ADHD ................. 85
Table 5. Mean Correct, Don’t Know and Incorrect Responses per KADDS Item for Full and Subscales ................................................. 86
Table 6. Frequency Distribution of Correct, Don’t Know and Incorrect Responses for Items Assigned to the Associated Features Subscale ...... 88
Table 7. Frequency Distribution of Correct, Don’t Know and Incorrect Responses for Items Assigned to the Symptoms/Diagnosis Subscale .... 90
Table 8. Frequency Distribution of Correct, Don’t Know and Incorrect Responses for Items Assigned to the Treatment Subscale ........... 92
Table 9. Most Common Correct Responses on the KADDS ................ 96
Table 10. Teacher Incorrect Scores (Errors) on the KADDS Subscales ...... 98
Table 11. Differences Among Teachers’ Incorrect Scores on the Three subscales of the KADDS ........................................................... 98
Table 12. Most Common Incorrect Responses on the KADDS ............ 99
Table 13. Teachers’ Don’t Know Scores on the KADDS Subscales ........ 101
Table 14. Most Common Don’t Know Responses on the KADDS .......... 102
Table 15. Correlations for Teachers Demographic Characteristics .......... 103
Table 16. Gender Differences in Teachers’ Knowledge of ADHD ........ 104
Table 17. Differences in Teachers’ Knowledge as a Result of the Type of School in which they Taught .................................................. 104
Table 18. Relationships between Teachers’ Knowledge of ADHD, as Measured by the KADDS Scales and their Experiences and Perceptions of ADHD ............................................................ 108
Table 19. Teachers’ Knowledge of ADHD According to the Educational Setting they Felt was Most Appropriate for Students With ADHD ...... 110
LIST OF FIGURES

Figure 1. Age of respondents ......................................................... 81

Figure 2. Participants’ responses to the question “If you have had students with ADHD in your classroom, have you ever participated in developing an individual behaviour plan (IBP)?” ................................. 82

Figure 3. Participants’ responses to the question “If you have had students with ADHD in your classroom, have you ever participated in developing an individual education plan (IEP)?” ................................. 83

Figure 4. Stacked bar graph showing percentages of correct, don’t know and incorrect responses to the 15 Associated Features subscale questions ...................................................................................... 89

Figure 5. Stacked bar graph showing percentages of correct, don’t know and incorrect responses to the nine Symptoms/Diagnosis subscale questions ..................................................................................... 91

Figure 6. Stacked bar graph showing percentages of correct, don’t know and incorrect responses to the 12 Treatment subscale questions .......... 93
ACKNOWLEDGEMENTS

First and foremost, I would like to acknowledge and thank my supervisor, Professor James Chapman for guiding me every step of the way, stepping in when I needed him the most, and ensuring I live up to my potential. I would also like to thank my other supervisor, Professor Michael Townsend, for giving me constructive feedback, and persisting when I was too stubborn to listen.

This thesis would not be possible without the support, love and care of my parents Dr Wafa Shakir and Dr Akram Dilaimi. They instilled in me a passion for learning from a young age, which motivated me throughout this process, and were always there to listen and give me their opinions as I rambled on about this thesis.

I would also like to express my gratitude towards Professor Mark Sciutto, for granting me permission to use his scale and providing me with unpublished material relating to it. Ethical approval for the survey research described in this thesis was obtained from Massey University’s Human Ethics Committee.
I dedicate this thesis to my beautifully ‘diffabled’ nephew Akram, and all students with ADHD. I hope this research improves their quality of life.