

## Methodology of Research, Data Collection and Analysis

This part contains a discussion of the methodologies used to collect and analyse data for the study with the aim of determining whether mainstreaming and inclusion of children with ADHD is the best option or if alternative options are available for parents and schools that would allow special children to achieve their maximum potential.

The objectives that would allow the aim of the research study to be achieved are the following:

- (1) To conduct semi-structured surveys involving the following target respondents:
  - a. Special education teachers handling students with ADHD
  - b. General education teachers in mainstreamed classes
  - c. Parents of children with ADHD
  - d. Parents of children without ADHD but whose children attend classes with children with ADHD
  - e. Classmates of children with ADHD
- (2) To answer the following research questions to be adapted in the most appropriate manner according to the nature of the respondent (teacher, parent, or schoolmate):
  - a. How effective is mainstreaming in dealing with ADHD students?
  - b. How prepared are teachers in dealing with ADHD students?
  - c. What other alternatives are they aware of or have been tried to deal with ADHD students?
- (3) To analyse and evaluate the data collected to find the answer(s) to the research aim as to whether mainstreaming is the best option, or if there are better alternatives, and the different conditions for the effectiveness of these alternatives.

## Theoretical Research Frameworks

Positivism recognizes “working with an observable social reality and that the end product of such research can be law-like generalisations similar to those produced by the physical and natural scientists” (Remenyi et al., 1998, cited in Saunders et al., 2003, p.83). Interpretivism approach argues that there is far too much, ever changing complexity to be defined by “laws” (Saunders et al., 2003, p.84). The dissertation will consider both philosophies since “the practical reality is that research rarely falls neatly into only one philosophical domain” (Saunders et al., 2003, p. 85) as well as the combination of both is common in research.

Inductive reasoning is when data is collected first and then theories developed as a result of the data analysis. This associates mostly with interpretivism. Deductive reasoning is the development of a theory and hypothesis (or hypotheses) and design of a research strategy to test the hypothesis” (Saunders et al., 2003, p.85). This mainly associates with positivism. The dissertation will consider both processes of reasoning.

## Exploratory Studies

Exploratory studies are a valuable means of finding out what is happening; to seek new insights; to ask questions and to assess phenomena in a new light (Robson, 2002, cited in Saunders et al., 2003, p.96) and will be considered for the purpose of this study. This is particularly useful as the researcher wishes to clarify the understanding of a problem, namely the best option for intervention with children exhibiting conditions of ADHD.

There are three basic types of questions that a research project can address: **causal** (to determine whether a variable causes or affects another), **relational** (to look at the relationships between two or more variables), or **descriptive** (to describe what is going on or what exists).

This dissertation will be an exploratory study to find out whether mainstreaming and inclusion are the best options for schooling children with ADHD.

## Methods of Data Collection

Having provided a theoretical framework upon which this dissertation is based to guide the research investigation, two forms of data will be gathered:

- (1) Primary research data in the form of semi-structured survey results from various respondents – teachers, parents, and students; and
- (2) Secondary research data in the form of reference literature on the research topic.

## Survey Questionnaire Design and Respondents

The Appendices (A to C) contain the questionnaires used for the cross-sectional survey and interviews to collect data for the purpose of estimating the characteristics of a large school population of interest based on a smaller sample from that population (Creswell, 1994).

The survey questionnaire design was based on the survey type, the population to be surveyed, the sample size, and the survey method to be used (Mason, 1996). Since the objectives of the study are to determine from three perspectives – teachers, parents, and students – the effectiveness of inclusion and mainstreaming, the awareness and level of preparedness of those surveyed, and the possible alternatives to inclusion and mainstreaming, three questionnaires were designed. Each questionnaire looks at the research problem from its own perspective.

Questionnaire A (Q.A) is for teachers and was designed to be accomplished in 25 minutes at the most; Questionnaire B (Q.B) is for parents (15 minutes); and Questionnaire C (Q.C) is for children (7 minutes) (SPSS, 2006, p. 14).

Q.A and Q.B had several similarities as to questions on awareness, preparedness, effectiveness, and in eliciting alternatives and were self-administered, allowing respondents to answer the questions within a two-week time frame. Q.C did not ask questions directly, since the researcher wished to maintain the anonymity of students with ADHD amongst their peers, and was interviewer-administered on-site through a team of volunteers.

The survey site was a UK state school with primary and secondary level students where inclusion and mainstreaming are being practised. It had a large student population of whom an estimated 3.2% of students were identified as having ADHD. The survey was cross-sectional, which meant that three population groups were involved in the research study.

The questionnaire for teachers and parents (Q.A and Q.B) were less than three pages each, whilst that for students was only one page. A purposive sampling technique was used with prior approval from the Headmaster on the condition that the school and the respondents would not be identified. The researcher agreed since this enhanced the objectivity of responses. Besides, approval from the full body of parents and teachers for a survey on a sensitive topic was deemed to be difficult to secure.

A purposive sampling technique as specified below was targeted at the respondents who shared the following key characteristics: they know what ADHD is and who amongst the students have ADHD; they are aware of special education interventions such as inclusion and mainstreaming; and they have had more than five years of experience to pronounce their judgment on the intervention. Students with ADHD were likewise previously identified but were not included in the survey, although their classmates were. Q.C was carefully designed to capture the respondents' views on different people in the class, one of whom had ADHD.

The survey sample size had a total of 30 with 6 non-respondents and was broken down into 10 teachers, 10 parents, and 10 students. Non-respondents were 2 teachers, 3 parents, and 1 student. No reasons were given for non-response, and the research study was clearly voluntary on their part and was designed to give the school administration important feedback on the views of respondents towards the research topic.

The selection process started with the students. First, ten students between the ages 11 and 16 were identified on the basis that they were known to be amongst the leaders of the class

sections having at least one student with ADHD. The ten selected students were requested by the school psychologist to participate in the survey. Then, from amongst the many students with ADHD in these sections, the parents were identified and requested through a letter from the Headmaster to participate in the survey. The last step was to identify, select, and gain the consent of the teachers who taught in the classes where these ADHD students belong. The teachers were divided equally into general and special education teachers.

The questions were concise, easy to understand, and aimed to secure valid and reliable information. Loaded and double-barrelled questions, the use of educational and medical science jargon, and the use of offensive language were avoided. Each question was edited to take out emotionally-charged terminologies with the help of experts. For Q.A and Q.B, questions were either multiple-choice or open-ended, and value statements were measured using a 5-point Likert Scale. Q.C included closed-ended questions that involved checking the appropriate boxes. The main purpose of crafting the questions was to elicit precise quantifiable data from respondents.

Questions were structured according to logical groups as shown in the Appendix. This made it easier for respondents to answer questions more efficiently.

The logical design of the questionnaire followed the deductive method, moving the respondent from the general to the specific. The first part is about professional and personal qualifications and awareness of ADHD and inclusion/mainstreaming, using the format of Askew (1993).

The second part considered the elements and factors following the studies of Birch (1974) and Wilcox & Wigle (1997): awareness of inclusion models and instructional arrangements, parental reaction to inclusion, procedures for identification and inclusion of students with ADHD, preparation of parents and teachers, including orientation of new teachers and upgrading/ updating of skills of experienced teachers, attitudes towards inclusion, and estimated costs and

attitudes to the costs of inclusion. The survey was designed to measure awareness, attitudes, and effectiveness. Awareness had to be established to ensure that the respondent knew what was being solicited from the survey. Attitudes about inclusion were likewise important for the research because of the controversial nature of the issue and may also affect the effectiveness of the intervention. This also would reflect the degree of support that the school administrators extend to the school intervention and would help determine its over-all effectiveness.

Effectiveness of inclusion could be measured at different points and using different indicators, behavioural ones such as degree of socialisation and frequency of disciplinary issues, and academic variables such as learning progress, school marks for specific subjects, and general impressions on class performance from parents, teachers, and peers.

The last portion of Q.A and Q.B dealt with other alternatives to inclusion based on the knowledge and experiences of parents and teachers and involved the use of open-ended questions because of the possibility that the researcher may not be aware that such alternatives existed. The final set of questions had to do with special techniques used that the respondents found effective for specific cases but which could be useful for improving the science of determining the effectiveness of inclusion. These responses are summarised in the Appendix.

### Methods of Data Analysis

The data collected was analysed according to the researcher's best knowledge, "whatever the nature of the data, the task of interpretation falls squarely on the shoulders of the researcher" (Moser, 1971 cited in Chisnall, 2001, p. 421). The data sets were subjected to consistent forms of data analysis to assess the validity of the findings and find answers to the research questions asked in this study. The findings are tabulated in **Tables 1 to 3** corresponding to the responses for Q.A to Q.C with the results of basic statistical analysis to determine the degree of confidence for the survey and its findings. The next section contains a discussion of the data.

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Appendix A: Questionnaire A (Q.A) for TEACHERS

Q.A Part One: Please check the appropriate box that best reflects your answer. Some questions may have more than one answer.

1. What grade level(s) are you currently teaching?  
6  7  8  9  10  11  12
2. How many students do you serve in a week (or what is the total number of students on your caseload)?  
1-14  15-19  20-24  25-29  30+
3. How many years of full-time teaching experience have you had?  
1-3  4-6  7-10  11-14  15+
4. Have you attended any of the following regarding ADHD?  
 Classes or Lectures \_\_\_\_\_ number of hours  
 Workshops or Seminars \_\_\_\_\_ number of hours  
 Others (Conferences, meetings, etc.) \_\_\_\_\_ number of hours
5. How many years have you been teaching in a class with students diagnosed with ADHD?  
1-3  4-6  7-10  11-14  15+
6. How does your school classify your position?  
 Special Education Teacher  Specialised Subject Teacher  
 General Education Teacher  Other (Pls. specify) \_\_\_\_\_
7. Given your training and past work experience, how would you classify your position?  
 Special Education Teacher  Specialised Subject Teacher  
 General Education Teacher  Other (Pls. specify) \_\_\_\_\_
8. Since you started working as a teacher, would you say that the number of students with special education needs (SEN) has:  
 Gone up?  Stayed the same?  Gone down?
9. Since you started working as a teacher, would you say that the number of students with ADHD as a proportion of students with SEN has:  
 Gone up?  Stayed the same?  Gone down?
10. Of the following symptoms that characterise students with ADHD, which of these based on your experience do you find most common in a child with ADHD? (Check three.)  
 Blurts out answers to questions before they have been completed  
 Easily distracted by extraneous stimuli  
 Failure to finish chores  
 Difficulty remaining seated when required to do so  
 Difficulty sustaining attention in tasks or play activities  
 Fidgets with hands or feet or squirms in the seat

**End of Q.A Part One**

Q.A Part Two: Please check the appropriate box that best reflects your answer. Some questions may have more than one answer.

11. How would you rate the practice of inclusion in your school?

1                   2                   3                   4                   5   
Poor                  Below Average                  Average                  Above Average                  Excellent

12. How would you rate the support for inclusion by your school's administration?

1                   2                   3                   4                   5   
Poor                  Below Average                  Average                  Above Average                  Excellent

13. How would you rate the support for inclusion from *all* parents in your school?

1                   2                   3                   4                   5   
Poor                  Below Average                  Average                  Above Average                  Excellent

14. How would you rate the support for inclusion from parents of students with ADHD?

1                   2                   3                   4                   5   
Poor                  Below Average                  Average                  Above Average                  Excellent

15. In comparison with students without disabilities, how would you rate the performance of students with special education needs (SEN) in your school?

1                   2                   3                   4                   5   
Poor                  Below Average                  Average                  Above Average                  Excellent

16. In comparison with students with SEN in other schools, how would you rate the performance of your students with SEN?

1                   2                   3                   4                   5   
Poor                  Below Average                  Average                  Above Average                  Excellent

17. How would you rate the level of preparation of *all* teachers in your school in handling students with SEN?

1                   2                   3                   4                   5   
Poor                  Below Average                  Average                  Above Average                  Excellent

18. Based on your personal experience, is inclusion the best option for students with ADHD?

Yes                   No

Please explain your answer (use back page if necessary):

19. If you were to identify better alternatives to inclusion and mainstreaming in educating students with ADHD, what would it be? Check all that apply.
- Nothing; I think ADHD is not that serious a disorder.
  - Medication
  - Behavioural modification training with psychiatric care
  - Stricter disciplinary measures
  - Others (Please write in the box below)
20. Are new teachers orientated on ADHD?  Yes  No
21. Are teachers updated or upgraded on their SEN teaching skills?  Yes  No
22. Would you say that the funds provided for teaching students with ADHD are well-spent?  
 Yes  No
23. If you answer No to Question 22, where would you suggest the funds be spent?
24. Would you say that the funds provided for teaching students with SEN are well-spent?  
 Yes  No
25. If you answered No to Question 24, where would you suggest the funds be spent?
26. Please write down below any comments you may have on the issue of inclusion in the education of students with ADHD:

Thank You for your cooperation!

Appendix B: Questionnaire B (Q.B) for PARENTS

Q.B Part One: Please check the appropriate box that best reflects your answer. Some questions may have more than one answer.

1. Are you the  Mother  Father of a child with ADHD?
2. At what age was your child diagnosed with ADHD? \_\_\_\_\_
3. Is your child with ADHD a:  Boy  Girl
4. How was your child diagnosed as having ADHD?  
 Doctor told us  Teacher told us  Others \_\_\_\_\_
5. Given your knowledge of ADHD now, would you say that this condition is caused by (Check all that apply):  
 Genetics  Environment  Others \_\_\_\_\_
6. To what school grade level does your child with ADHD currently belong?  
6  7  8  9  10  11  12
7. Have you attended any of the following regarding ADHD?  
 Classes or Lectures \_\_\_\_\_ number of hours  
 Workshops or Seminars \_\_\_\_\_ number of hours  
 Others (Conferences, meetings, etc.) \_\_\_\_\_ number of hours
8. How many years have you been aware of inclusion or mainstreaming for students diagnosed with ADHD? \_\_\_\_\_
9. Since you became aware that your child had ADHD, would you say that the number of children with ADHD in the school where your child attends has:  
 Gone up?  Stayed the same?  Gone down?
10. Of the following symptoms that characterise children with ADHD, which of these based on your experience did you find in your child with ADHD? (Check all that apply.)  
 Blurts out answers to questions before they are completed  
 Easily distracted  
 Does not finish chores  
 Difficulty remaining seated when required to do so  
 Difficulty sustaining attention in tasks or play activities  
 Fidgets with hands or feet or squirms in the seat

**End of Q.B Part One**

Q.B Part Two: Please check the appropriate box that best reflects your answer. Some questions may have more than one answer.

11. How would you rate the practice of inclusion in your child's school?

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1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Poor	Below Average	Average	Above Average	Excellent

12. How would you rate the support for inclusion by the school's administration?

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1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Poor	Below Average	Average	Above Average	Excellent

13. How would you rate the support for inclusion from *all* parents in your school?

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1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Poor	Below Average	Average	Above Average	Excellent

14. How would you rate the support for inclusion from parents (like yourself) of students with ADHD?

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1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Poor	Below Average	Average	Above Average	Excellent

15. In comparison with students without disabilities studying in the same school as your child, how would you rate your child's performance?

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1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Very Poor	Worse	Equal	Better	Much Better

16. ~~In comparison~~ with *your* other children without ADHD, how would you rate the **academic** performance of your child with ADHD?

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1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Very Poor	Worse	Equal	Better	Much Better

17. In comparison with *your* other children without ADHD, how would you rate the **social** performance of your child with ADHD?

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1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Very Poor	Worse	Equal	Better	Much Better

18. How would you rate the level of preparation of *all* teachers in the school in handling students with ADHD?

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1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Poor	Below Average	Average	Above Average	Excellent

19. Based on your personal experience, is inclusion the best option for children with ADHD?

- Yes  No

Please explain your answer (use back page if necessary):

20. If you were to identify better alternatives to inclusion and mainstreaming in educating students with ADHD, what would it be? Check all that apply.

- Nothing; Inclusion is achieving good results
- Medication
- Behavioural modification training with psychiatric care
- Stricter disciplinary measures
- Others (Please write in the box below)

21. Are parents properly orientated on ADHD?  Yes  No

22. Are parents updated or upgraded on inclusion and ADHD?  Yes  No

23. Would you say that the funds provided for teaching students with SEN are well-spent?

- Yes  No

24. If you answer No to Question 24, where would you suggest the funds be spent?

25. Please write down below any comments you may have on the issue of inclusion in the education of children with ADHD:

Thank You for your cooperation!

Appendix C: Questionnaire C (Q.C)

Directions: You have been chosen for this survey because of your leadership position in the class. This social science survey is a leadership test to verify your qualities.

1. Based on how well you know the following students in your class, please assign a grade to each by following a 5-point scale:

1	2	3	4	5
Poor	Below Average	Average	Above Average	Excellent

Student	Academic	Social	Sports
Name 1			
Name 2			
Name 3			
Name 4 – this will be a student with ADHD			
Name 5			

2. For those to whom you gave a score of 4 to 5, what could be the reason(s) they are doing well?

- They are smart and intelligent
- They study and work hard
- The school supports them because they need it
- We have good teachers
- Others (Please write in the box below)

3. For those to whom you gave a score of 3 or below, what could be the reason(s) they are not doing well?

- They are not as mentally quick as the others
- Family problems
- Teachers do not know how to deal with them
- Adjustment problems
- Others (Please write in the box below)

4. If you could do something to help those with a score of 3 or below, what would you do?

5. Could you suggest anything the school should do to help these students?

Thank You for your cooperation!