

1994

## Raising school-age children with Attention Deficit Disorder (ADHD): Effects on mothers

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**EDITH COWAN UNIVERSITY  
PSYCHOLOGY DEPARTMENT  
FACULTY OF HEALTH AND HUMAN SCIENCES**

**RAISING SCHOOL-AGE CHILDREN WITH ATTENTION**

**DEFICIT DISORDER (ADHD): EFFECTS ON MOTHERS**

**PEARL PROUD**

**BA(PSYCHOLOGY) HONOURS**

**1994**

## USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

**RAISING SCHOOL-AGE CHILDREN WITH ATTENTION DEFICIT  
DISORDER (ADHD): EFFECTS ON MOTHERS**

**BY**

**Pearl Proud**

**Thesis Submitted in Partial Fulfilment of the  
Requirements for the Award of**

**Bachelor of Arts (Psychology) Honours**

**at the Faculty of Health and Human Sciences, Edith Cowan University**

**Date of Submission: 9 December, 1994**

### Abstract

The study used mothers of children with Attention Deficit Disorder (ADHD) Type I and Type II or a combination of both to investigate whether support group membership was beneficial to the mothers in terms of stress, self-efficacy and perceived social support. A accidental and purposive sample of 143 subject with an age range of 21 to 50 participated in the study. The participants completed a questionnaire which comprised a stress measure, the General Health Questionnaire (GHQ), the General Self-efficacy Scale (GSES), and the Parental Support Scale (PSS) which has the Satisfaction with Perceived Social Support and the Network Size sub-scale. The questionnaire also solicited demographic and situational data. Participants were allocated to three groups according to support group membership status: OLD-MEMBERS (> 6 months), NEW MEMBERS (< 6 months) and NON-MEMBERS, Groups 1, 2 and three respectively. One-way ANOVAs were carried out on the demographic and situational variables found to be, or likely to be, predictors of significant differences between the groups; none were statistically significant at the .0004 adjusted alpha level. The number of DVs therefore remained at four: Stress, Self-efficacy, Satisfaction with Perceived Social Support, and Network Size. The main hypotheses collectively predicted that Group 1 would have the lowest levels of Stress than Group 2 and Group 3; and that Group 2 Stress levels would be lower than Group 3 Stress levels. Also that Group 1 would have the highest levels of Self-efficacy and Perceived Social Support than both Groups 2 and 3; and that Group 2's Self-efficacy and Perceived Social Support levels would be higher than those of Group 3. A MANOVA which

used the four DVs and Group as the IV found no significant differences between the groups [ $F(8,143) = .256, p > .05$ ]. ANCOVAs using AGE as a covariate did not result in significant adjustments in the dependent variables: Stress [ $F(2,143) = 1.93, p > .0125$ ]; Efficacy [ $F(2,143) = .13, p > .0125$ ]; Satisfaction with Perceived Social Support [ $F(2,143) = 1.26, p > .0125$ ]; and Network Size [ $F(2,143) = .62, p > .0125$ ]. The hypotheses were therefore not supported. The hypothesis that a significant number of mothers in this sample would have clinically significant levels of Stress (GHQ > 3); and that their Stress levels would be significantly higher than those of the Perth general population were supported. 60.4% of mothers had clinically significant levels of Stress, which was significantly higher than the 18% in the general population; a Z-score of 7.574 with a critical value of 1.645 was significant at .05. The hypothesis that a significant number of mothers in this sample were primary care-givers; 99% were primary care-givers. While, the differences between the groups were not statistically significant; the results indicate that support group does play a role in reducing Stress levels and increasing Perceived Social Support in mothers of children with ADHD. It was concluded that support groups could have the potential to provide valuable social support and enhance self-efficacy in their members.

### **Declaration**

**I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any institution of higher education; and that to the best of my knowledge and belief it does not contain any material previously published or written by any other person except where due reference is made in the text**

**Signature: \_**

**Date: 9th December, 1994**



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## CHAPTER 1

### INTRODUCTION

#### Overview

##### Stress in parenting children with disabilities

Research on families with a disabled child have found that mothers tend to be the primary care-givers (McConachie, 1983). Studies investigating factors involved in raising children with disabilities have tended to focus on mothers. Exel (1990) who studied Perth mothers of children with a variety of physical and mental disabilities found that these mothers had higher levels of stress than the general population. These results confirm previous research findings which highlighted the higher levels of stress suffered by mothers of children with disabilities or disorders (Beckman, 1983; Wolf, Noh, Fisman & Speechley, 1989).

It is interesting to note that Wing (1975) found that not all mothers of children with disabilities suffer high levels of stress. According to Exel (1990) this pointed to the fact that research investigating cognitive processes in mothers, especially those with low stress, was needed.

##### Self Efficacy

Self-efficacy is a cognitive process that involves an appraisal of one's own competence. This concept, proposed by Albert Bandura, and sometimes referred to as self-perceived competence, is based on theory that an individual's past experience with success and failure in a variety of situations should result in a general set of expectations that the individual carries into new situations. These generalised expectancies should influence the individual's expectations of mastery in the new situations. Therefore, self-



efficacy involves a belief in one's competence and effectiveness when faced with a stressor. This study, therefore, investigated the role of self-efficacy in relation to stress as suggested by Exel (1990). In particular it investigated whether self-efficacy was inversely correlated to stress, that is, whether high levels of self-efficacy were related to lower levels of stress.

### **Social Support and Support Groups**

It is well documented that support groups offer social support which acts as buffer against stress (Katz, Hendrick, Isenberg, Thompson, Goodrich & Huster, 1992). Some studies have looked at the effects of support/self-help groups on stress during stressful events such as new parenting (Kagey, Vivace & Lutz, 1981); parenting someone with a disability (Potaszniak & Nelson, 1984); and parents dealing with bereavement (Videka-Sherman, 1982). All the studies found support groups to be an excellent source of social support which moderates stress in these situations. Social support has also been linked to self-efficacy. Self-efficacy has been found to be a predictor of how effective mothers who receive social support perceive that support to be. It was expected, therefore, that self-efficacy would be positively related to perceived social support in this study, that is, high levels self-efficacy would be correlated with high levels of perceived social support and vice versa.

### **Background and Identification of the Issue**

#### **Attention Deficit Disorder (ADHD)**

ADHD, previously referred to, among other things, as hyperactivity, is a neurochemical condition, with a minor biological component, which can also be

situational and diet-related (Kaplan & Sadock, 1990). In America ADHD affects an estimated 3% to 10% of children, mainly boys (Barkley, 1990) with 50-60% of the children carrying the symptoms to adulthood (Weiss, Hetchman, Milroy & Perlman, 1985). According to Dr Golic of the Western Australian Health Department (Personal communication, June, 1994) it is difficult to establish exactly how many ADHD cases are since the disorder comes under the term Kinaesthetic which includes other related disorders, and also due to the fact that data is based on limited sources. Australian prevalence is therefore based on American estimates. However, it is interesting to note that the incidence of ADHD is estimated at 1% in British largely due to the reluctance by the professionals, especially the paediatricians, to reach the ADHD diagnosis. This discrepancy seems to indicate that rigorous epidemiology is necessary in Australia so that we can have more reliable estimates which will mean a better understanding of the prevalence and therefore of the problem.

There are two types of ADHD; type I and Type II. The core symptoms for Type I ADHD include inattentiveness, impulsiveness and hyperactivity that is sometimes accompanied by aggressive behaviour. Type II ADHD has similar symptoms, excluding hyperactivity, and is characterised by withdrawn, shy behaviour. While some children exhibit symptoms that fit both categories, most are distinctly Type I or Type II.

According to Barkley Type I, which includes hyperactivity, is also likely to be more stressful than Type II ADHD which does not have hyperactivity. He points out that the disorder itself and the issues surrounding ADHD result in enormous stress for parents and families. The stress is also likely to be heightened by the controversy surrounding

the treatment of ADHD (Varley, 1984). According to Kaplan and Sadock treatment for ADHD is primarily drug therapy which largely comprises of Methylphenidate (Ritalin), which is amphetamine-based. In spite of the assurances by professionals (eg. Barkley) that the drugs are safe, the community seems suspicious of medication they understand to be related to a street drug 'speed'. It is interesting to note a shift in the conceptualisation of the disorder and, therefore its treatment, over the last few decades. This disorder used to be discussed in behavioural terms and was therefore treated mainly psychologically; whereas today it is understood to be a neuro-chemically based and therefore treated medically. The diagnosis of ADHD is another controversial issue in that the instruments used, such as the questionnaires and the neurometrics test, are seen as simplistic and less than rigorous, and therefore having a potential to lead to the disorder being over-diagnosed. The symptoms, medication and controversy surrounding ADHD seem potent ingredients for a stressful situation for families dealing with the disorder.

#### **ADHD Research Involving Families**

Research investigating parents in relation to raising a child with ADHD has mainly encompassed three areas: firstly, parent-child interactions; secondly, setting up intervention/educational programmes and then measuring their effects on the parents; and thirdly, the dynamics in the families that include a child with ADHD (Barkley, 1990). Research which investigates stress in mothers of children with ADHD has not

been carried out as far as it can be discerned. Moreover, research which incorporates investigation of the effects of support systems and the role of cognitive factors does not seem to exist. For more references on ADHD, consult the bibliography.

### **Self-efficacy**

Self-efficacy has been investigated in a wide variety of contexts. However, it has not been investigated in studies involving mothers of children with a disability, such as mothers raising children with ADHD. Self-efficacy is important as it applies to everyday tasks, such as parenting; and especially because research suggests that it is translated to behaviour (Bandura, Adams & Beyer, 1977). A mother who perceives herself to be competent is therefore likely to be competent in her parenting and other tasks. Arguably this sense of competence would be increased if she learnt from the experiences of other women in a similar situation as hers and received encouragement from them. A study investigating the impact of support group membership in relation to self-efficacy, such as this one, could provide new and illuminating information.

### **Need for the Study**

There is clearly a need for research of this nature to be carried out. It will provide information about a population previously not researched in this context, that is, mothers who are raising children with ADHD. The study is also conducted in Australia where research on families dealing with ADHD on an everyday level is particularly lacking. The study incorporates the concept of self-efficacy which has not

been studied in this context previously, and thereby provides a chance to assess the possible relationship between this cognitive process and stress, as recommended by Exel (1990).

One of the study's primary aims is to investigate the effects that support groups have on levels of stress; levels of self-efficacy, thereby testing Bandura's theory; and levels of perceived social support. This study is therefore unique in its potential to provide information on all these variables with a group of people previously not studied in this context.

### **Questions Arising**

1. Are stress levels of mothers who are raising children with ADHD similar to mothers raising higher than those of the general population? This would indicate whether they are similar in their stress levels to mothers of children with other disabilities, such as autism.
  2. Do mothers of children with ADHD who are in support groups report less stress, higher self-efficacy and higher perceived social support compared to mothers of children with ADHD who are not in support groups.
- The results will give some indication as to the likely benefits of ADHD support groups membership in relation to their members' stress levels, sense of competence, and the level of social support they feel they receive. However, this study's correlation design means that it cannot establish whether support groups directly cause the differences between members of support groups and non-members.

3. Do the factors of level of stress, type of ADHD the child has, the ADHD child's age, family income level, mother's marital status, mother's age, total number of children the mother is raising, and whether the child is on medication or not predict differences between the mothers of children with ADHD in a support group for a short time (< 6 months), mothers who have been in a support groups for a long time (> 6 Months), and those who are not in a support group?

### **Significance of the Study**

The study adds to the literature on stress and parenting children with disabilities, by investigating mothers of children with ADHD. It provides a broader perspective on the factors affecting stress in these mothers in that it incorporates the measures of self-efficacy and perceived social support. The study also investigates the likely benefits of support groups; and thus can provide useful information to mothers who are under stress about the usefulness of support gained from being a support group member. The study tests Bandura's self-efficacy theory within the context of parenting children with a disorder and support groups. The study's findings will be disseminated to mothers of children with ADHD and their families; ADHD support groups in Perth and around Australia; the professionals involved in treating ADHD in Perth; the general community; and to the field of psychology.

## **Definitions of Key Terms**

### **Psychological Stress**

Stress is notoriously difficult concept to define, and various fields define stress differently. A definition offered by Lazarus and Folkman (1984) seems to highlight how stress is conceptualised in psychology. According to these authors psychological stress is the result of an exchange between the person and the environment, in which the person believes that the situation strains or overwhelms his or her resources and endangering his or her well-being. It seems that stress is dependent on one's perception of their situation and not just the situation itself, one situation may be stressful for one person, but not stressful for another. In this study the General Health Questionnaire is measuring stress.

### **Support Group and Support Group Member**

A distinction is generally made between self-help groups and support groups; the former seen as member-controlled and comprising of voluntary participants, and the latter as led by a professional person who serves as leader (Borkman, 1991). In this study, however, support group was conceptualised as self-help group even though it was conceded that members who have been in the support group for a long time could, and probably do, function as group facilitators. According to Wendy Manders, the Clinical Psychologist at the Learning and Attentional Disorders Society of WA (Personal communication, 1994), ADHD support groups in Perth tend to function as self-help groups and therefore can be broadly defined as such. Within the context of this study,

support group member refers to an active, attending member of a support group who engages in the interactions and meetings of the support group.

### **Social Support**

According to Sarason and Sarason (1985) a distinction needs to be made between actual/real social support and perceived social support in studies investigating social support. Actual social support is an objective measure of social support. Perceived social support, on the other hand, is a subjective measure of the respondents' perceptions of the support they receive. Crnic, Greenberg, Ragozin, Robinson & Basham (1983) found that perceived support is often more important to parental functioning than is received or actual support. This study measured perceived social support.

### **Self-efficacy**

This study conceptualises self-efficacy as the individual's own perception of his/her general sense of competence.

### **Recent Major Life Events**

Major life events, such as the death of a spouse, have been increasingly considered in investigations of stress because they are regarded as stressors that tend to have a significant impact on levels of stress. According to Dohrenwend and Dohrenwend (1974), it is not whether the event is positive or negative, it is the change it induces that is of primary concern. Studies have shown that people from different populations tend to give similar intensity ratings to life crisis events (Miller, Bentz, Aponte & Brogan, 1974). In this study, the event is regarded as recent if it occurred in the last year.



### **Thesis Outline**

The overview of issues surrounding the parenting of children with disabilities has been the subject of Chapter 1. In Chapter 2 the literature on parenting children with disabilities; the effects of perceived social support on stress and links between social support and self-efficacy is reviewed. The findings on which the present study is based are also outlined. In Chapter 3 the methodology of this study is outlined. In Chapter 4 the results are presented. In Chapter 5 the findings of the study, and their implications, are discussed. Conclusions and recommendations, which take into account the study's limitations, are also presented in this last chapter.

## CHAPTER 2

### LITERATURE REVIEW

Parenting a child with disabilities can be highly stressful (Hammer & Turner, 1990). Parents of children with disabilities have been found to have higher levels of stress than the general population, as well as high levels of depression (Beckman, 1983). The research into stress experienced by parents of children with disabilities suggests that the parents experience significant psychological disturbance as a group compared to parents of non-handicapped children (Cummings, 1976; Byrne & Cunningham, 1985). A Perth study (Exel, 1990) found that mothers of children with disabilities have significantly higher levels of stress than women in the general population.

A review of the literature indicates that there is a potential for complex problems in families with a disabled child (Bentovin, 1972; Faerstein, 1981; Gallagher, Beckman, & Cross, 1983). The problems include additional financial and employment problems (Chetwynd, 1985; Holroyd, Brown, Winkler, and Simons, 1975), social difficulties such as isolation (Blacher, 1984), extra and prolonged child rearing tasks (Gallagher, 1982); and behavioural difficulties (Quine and Pahl, 1985). There are additional emotional and material resources that may burden the family (Breslau, Staruch, & Mortimer, 1982; Gallagher, Beckman, & Cross, 1983). All of which can contribute to increasing levels of stress. Parenting a child with Attention Deficit Disorder (ADHD) can have added stresses because of the controversy surrounding the means and extent of diagnosis (Varley, 1984), as well as the amphetamine component in the primary treatment measures (Barkley, 1990).

Parents of children with disabilities/disorders, such as ADHD, are likely to use existing support networks and establish new networks with professionals and parents in similar circumstances to help them cope with the chronic stress induced by their situation (Gallagher, et al, 1983; Schilling & Schinke, 1984). The availability of social support influences how well parents can cope with the demands of raising a disabled child (Affleck, Tennen, Rowe, Roscher, & Walker, 1989). Perceived social support has been found to be a moderator of stress (Dean & Lin, 1977), especially for parents of adolescents with severe intellectual disabilities (Rimmerman, 1985). The positive effects of social are also indicated by the fact that social support can act as a buffer against depression (Oatley & Bolton, 1985) and has been linked to general physical and mental well-being (Friedman & DiMatteo, 1990).

The literature indicates that there are two types of support networks that can offer the needed support. Informal networks consist of relationships perceived as personal in nature, such as family and friends, and formal networks are largely composed of impersonal relationships, such as with professionals or organisations (Unger & Powell, 1980). There are indications that parents are reluctant to use formal networks which are largely composed of impersonal relationships with a professionals and institutions. Leaf, Bruce, Tischler, & Holzer (1987) found that 83% of their respondents, especially low socio-economic individuals, viewed formal networks with suspicion. On the other hand, informal networks, consisting of personal relationships such as with family and friends, have been found to provide valuable and welcome social support (Gottlieb, 1981). While support groups have largely been ignored in support network research (Felton &

Berry, 1992), they are increasingly being recognised as an important source of emotional, informational, and practical social support (Friedman & DiMatteo, 1990).

The impact of support groups seems to be centred around the fact that members share a common concern (Borkman, 1992), and thus there is an availability of more people providing emotional and instrumental support for each other (Unger & Powell, 1980). Members are able to share educational information about the disease and its treatment (Wasow, 1986), as well as encourage one another (Hendrick, Isenberg, & Martini, 1992). This support can be particularly beneficial in light of the findings by Schwarzer, Dunkel-Schetter, Weiner and Woo (1992) that a prolonged complaint, because of its potential to overtax the immediate social support system such as family and friends, can result in reduced support for those dealing with that complaint.

Parents raising children with disabilities, in particular ADHD where symptoms can last up to adulthood (Barkley, 1990), are often faced with a prolonged stressor which lasts for years. Support groups have been found to offer stable and long-term support (Young, 1992) which is important in dealing with a chronic stressor such as raising a child with a disorder. The demands made upon a parent raising a child with a disability may also challenge the parent's self-perceived competence, often referred to as self-efficacy (Affleck, Tennen, Rowe, Roscher, & Walker, 1989), where the parent may start to doubt their skills at various tasks including parenting.

According to Bandura (1977) self-efficacy is derived from four principal sources: one's own performance and accomplishments; vicarious learning from the experiences of

others, that is, modelling their behaviour/approach; verbal persuasion or encouragement from others; and finally from physiological states such as stress. Bandura, Adams, & Beyer (1977) found self-efficacy to be a powerful predictor of how one performs on tasks and deals with threats regardless of what its source is. Self-efficacy correlates highly with self-esteem; and high levels of perceived self-efficacy have been linked with a lack of fearful, avoidant behaviour and seem to influence performance by enhancing intensity and persistence of effort (Bandura, Adams, & Beyer, 1977).

Seybold, Fritz, and McPhee (1991) found that self-efficacy is a predictor of how effective the recipients perceived the social support offered by support groups to be. There are other main factors that have also been identified as predictors of satisfaction with perceived social support. Type of disability/disorder involved (Goldberg, Marcovitch, MacGregor, & Lojkasek, 1986) and severity of the disability/disorder (Seybold, et al, 1991) have also been found to be related to satisfaction with perceived social support. Seybol et al found that mothers of more severely disabled children were less satisfied with the support they received and had smaller support networks, in particular fewer friends and family, they could rely on. A few studies have also found the severity of the child's disorder to be related to the level of stress reported by their mothers. That is, mothers of children with a more severe disability reported more stress than parents of less disabled children (Wishart, Bidder & Gray, 1981; Minnes, 1988). Some contrary findings have also been reported. In a Perth study, Exel (1990) found no significant difference between the stress scores of mothers of children with low ability and mothers of children with high ability.

Major life events and level of stress were found by Dohrenwend, B. S., Dohrenwend, B. P., Dodson, & Shrout (1984) to predict how effective social support was perceived to be. The link between major life events and stress has been long established in the literature, with a high number of recent major events predicting higher levels of stress (Dohrenwend and Dohrenwend, 1974 ). However, it is not often that studies on social support include recent major life events as a variable.

Telleen, Herzog, and Kilbane (1989) identified the age of the respondent and the number of children the respondent had as major predictors in their 1989 study. Other variables often found to be predictors of satisfaction with perceived social support is judged to be are income/socio-economic status (Felton & Shinn, 1991) and marital status (Glickman, Tanaka, & Chan, 1991).

Mothers of children with disabilities, perhaps due to their primary care-giver role, (McConachie, 1983; Hammer & Turner, 1990) have been found to have higher levels of stress than their partners. Wing (1975) carried out standardised interviews on 100 families of severely intellectually disabled children and found that 57% of mothers and 20% of fathers had had some form of psychiatric symptom since the birth of their disabled child. Telleen et al (1989) tested mothers involved in a family support programme; the first group a mothers' support group (N=16), the second a mothers' parent education group (N=22), and tested a control group (N=23) using the Parenting Social Support Index (PSSI) to investigate their effects of group membership on social support and parenting stress. The groups were retested three months later. ANCOVA analyses showed that mothers in both the support group and the educational group

reported significantly less social isolation and parenting stress than mothers in the control group.

A recent follow-on correlational study by Seybold, Fritz, and MacPhee (1991) investigated the relationship between the type and function of support and the self-perceptions of 63 mothers of developmentally delayed children. The study used the Parental Support Scale, which was adapted from the Parenting Social Support Index (Telleen, 1985), and the Parental Self-Perception scale. The study found that satisfaction with perceived social support was related to the mother's sense of her parental competence/efficacy. It was also found that mothers of severely disabled children were less satisfied with the support received and had fewer friends or family upon whom they relied. Socio-economic status seemed to contribute to the variance in that mothers with more family resources, such as a high family income, indicated that they were using more formal supports such as professionals clinics which, arguably, they could afford.

### Summary

The review of the literature indicates that:

- parenting children with disabilities is highly stressful, and parenting children with ADHD seems to have the same effects
- mothers of children with disabilities are more stressed than fathers, perhaps due to their primary care-giving role

- some factors, including recent major life events, can contribute to raising levels of stress of levels
- social support can help reduce levels of stress
- social support has the potential to enhance self-efficacy
- support groups are an excellent source of social support and can play a crucial role in providing or supplementing the support that families may be unable to give.

This study specifically aims to investigate whether any significant differences exist between mothers of ADHD children who are members of a support group and those mothers of ADHD children who are not members of a support group. The study also aims to establish whether being in a support group for a longer period of time results in significant differences amongst the mothers who are support group members. This study, therefore, intends to investigate the role of social support in the lives of Perth mothers raising children with ADHD.

The study will extend the knowledge gained from the Telleen et al (1989) study which found that social support can lead to reduced isolation and stress; as well as from Seybold et al (1991) who found that perceived social support was linked to self-efficacy for mothers raising children with a disability; and that the more severe the disability, the less satisfied the mother is with perceived social support. Both studies used the Parental Support Scale (PSS) in their investigations of the effects of social support groups. In this study the PSS is used to investigate whether levels of perceived social support significantly vary as a function of support group membership. The findings will provide



useful information on a population whose stress levels, ways of coping, and sources of social support have not been previously investigated.

This study also uses the General Health Questionnaire (GHQ), a questionnaire widely used in studies in the health field, to measure stress. The questionnaire also incorporates a measure of self-efficacy, the General Self-efficacy. The Self-efficacy Scale will be used in order to investigate whether support groups can increase self-efficacy due to verbal persuasion and encouragement from fellow support group members, as well as the modelling of their approaches to raising an ADHD child. Bandura's theory of self-efficacy seems to point to the possibility that the mothers' general sense of competence/ self-efficacy can be enhanced by their being in a support group. The mothers' perceived social support is also investigated; the Parental Support Scale is used to measure the mothers' level of satisfaction with social support they feel they receive as well as the size of their social support network. Other demographic and situational variables, such as income and recent major event, which are raised in the literature on stress and social support are also investigated. The main question is whether there are significant differences between the mothers raising children with ADHD who are in support groups and those who are not in support groups?

### **Hypotheses**

The study aimed to test the following hypotheses:

1. That mothers who have been in a support group for longer than 6 months (Group 1) have significantly lower STRESS scores than mothers who have been in a support group for less than 6 months (Group 2) and mothers who are not in a support

care-givers.

### Arising Questions

a) that there would be a significant negative correlation between

Stress (GHQ) and Self-efficacy (General Self-Efficacy Scale)

Stress and Perceived Social Support ( PSS - Parental Support Scale)

Stress and Partner Support Regarding ADHD (situational variable

PARTSUPP)

Stress and Family & Friend Support Regarding ADHD (situational variable

FAMSUPP)

Efficacy and Recent Major Life Event (situational variable MAJEVENT)

Perceived Social Support and Recent Major Life Event

b) whether there would be a significant positive correlation between

Stress and Recent Major Life Event

Self-efficacy and Perceived Social Support

Self-efficacy and Partner Support Regarding ADHD

Self-efficacy and Family and Friend Support Regarding ADHD

Perceived Social Support and Partner Support Regarding ADHD

Perceived Social Support and Family and Friend Support Regarding ADHD

c) whether there would be a significant correlation between support group

membership status and medication use. Specifically, whether there would a higher

percentage of medication use among those mothers who are support group

members (both Group 1 and Group 2)

d) whether there is a correlation between income and support group membership.

Specifically, whether mothers with higher family incomes tend not to be members of a support group; preferring to use more formal networks, such as clinics, as found by Seybold et al (1991).

### CHAPTER 3

#### THE PRESENT STUDY

This chapter reports the method used to conduct the study. Firstly, the results of informal discussions held with people working in the area of ADHD as well as mothers of children with ADHD are presented. The chapter then provides information on the sample including its selection and demographic data; the method, which covers group design, the questionnaire, and confidentiality; the procedure which gives details on how the data was collected, ethical considerations, the response rate, and the criteria used to select data for analysis; and finally, data coding and analysis, as well as the results.

#### Method

##### Informal Discussions

Informal discussions were held with ten mothers of children with ADHD, including two mothers who were conveners of ADHD support groups, and professionals working in the area of ADHD. A meeting at which mothers and professionals were present was also attended. The aim of the discussions was for the author to gain an understanding of the real-life issues that mothers and professionals in this area were dealing with, and if necessary include the important factors in the questionnaire. Mothers raised mainly five issues:

- i) the isolation, stress and loss of confidence in parenting competence that most mothers experienced over a long period in dealing with their ADHD child before a receiving a formal diagnosis and attending meetings about ADHD and support

groups.

- ii) the lack of support from partners regarding the issue of ADHD. Most mothers stated that they mainly dealt with the issue on their own. Those who had support from their partners generally stated that it took a lot of effort to convince their partners that their child had ADHD, and that their partners took a while to adjust to the notion of ADHD even after a formal diagnosis had been made by a doctor or psychologist.
- iii) a lack of support from family and friends regarding ADHD. Most mothers stated that the general community attitude regarding ADHD was that the child was being a child, and that ADHD did not exist and the mothers were abdicating their responsibilities in giving their children medication for childhood behaviour. The few mothers who had family and friend support stated that they had to provide information first to those who gave them support.
- iv) being misunderstood and blamed by professionals, in particular school professionals and psychologists, who often did not have adequate understanding of ADHD and were therefore unsympathetic to the issues the mothers were dealing with; and being judged by the general community in which the whole issue of ADHD, especially the diagnosis and treatment, is controversial.

The mothers felt that these issues were major factors in their general well-being. One mother also noted, however, that when her son is 'doing well' she generally copes well with other aspects of her life, whereas when her son is 'having a bad patch', everything becomes much more stressful.

The professionals that were consulted, including a clinical psychologist and a paediatrician, concurred with the mothers in their awareness of the stress that most of their clients experience before seeing them and obtaining a formal diagnosis. The clinical psychologist mentioned that a few first-time clients (the parents) have reservations about giving their ADHD children medication because of the amphetamine component of the medication.

At the meeting of mothers and professionals it was apparent that more parents than not attended a support group. Those who were members of a support group remarked on how the support they gained from meeting other parents of children with ADHD, and receiving support and understanding helped them cope much better. They felt more competent and less isolated in their dealings with their children with ADHD. The author noted that mothers who were in a support group seemed favourable to the use of medication. All the professionals consulted reported that they believed in the positive effects of support groups, views which are consistent with the literature on social support, and therefore always actively encouraged their clients to join one.

As a result of these discussion the situational variables of Support from Partner Regarding ADHD and Support from Family and Friends Regarding ADHD were included in the questionnaire. Participants in the main study were asked to rate their level of satisfaction on each variable. They were also asked whether their child was on medication or not, in order to obtain the percentages as well as to investigate whether a high correlation between medication and with support group membership status.

## **The Main Study**

### **Sample**

The study was on mothers raising children with Attention Deficit Disorder. The sample was convenient and purposive. 134 females with the ages ranging from 21 to 50 participated in the study. All participants were Perth residents. The participants were obtained through ADHD support groups, paediatricians, and child development centres.

### **Demographic Data**

Most participants were married (75%), with divorced and separated participants accounting for 14% and 8% of the sample respectively. Two participants were single, and only one was legally divorced. Most of the participants (63%) had a family income between 20,000 and 80,000, with 11% having family incomes above 80,000 and only 7% with incomes below 10,000. 55% of the participants were raising up to two children in total.

Most of the participants (83%) had only one child with ADHD. Of the total number of ADHD children being raised by the participants, most had Type I ADHD (53%), with Type II accounting for 42.5%. Children who had a combination of Type I and Type II accounted for the remaining 4.5%. The majority of the ADHD children being raised by the participants (70%) were 10 years old or younger. Most of the ADHD children (79%) were on medication, with dexamphetamine and Ritalin being the drugs most used, 42% and 22% respectively. 13% of the ADHD children used a combination of drugs which always featured Ritalin. Just under half (49%) of the participants had had a

recent major life event, such as a death in the family, a divorce or a new job, in the previous year. Most of the participants (67%) were members of a support group.

### **Group Design and Group Demographic Data**

The participants were first divided into two groups; those who were members of a support group and those who were not. Using the rationale that duration of membership in a support group was likely to make a difference; participants were allocated into one of three groups. Group 1 comprised of participants who were old members of a support group (more than six months). Group 2 comprised of participants who were new members of support group (less than 6 months). Table 1 provides a summary of the demographic data of each group:



Table 1

Demographic Data of the Group

DEMOGRAPHIC VARIABLE	GROUP 1 OLD MEMBERS (N=54)	GROUP 2 NEW MEMBERS (N=36)	GROUP 3 NON-MEMBERS (N=44)
Age	21-30 $\underline{n} = 3$	21-30 $\underline{n} = 1$	21-30 $\underline{n} = 3$
	31-35 $\underline{n} = 6$	31-35 $\underline{n} = 13$	31-35 $\underline{n} = 7$
	36-40 $\underline{n} = 20$	36-40 $\underline{n} = 10$	36-40 $\underline{n} = 11$
	41+ $\underline{n} = 25$	41+ $\underline{n} = 12$	41+ $\underline{n} = 23$
Marital Status	Widowed $\underline{n} = 0$	Widowed $\underline{n} = 0$	Widowed $\underline{n} = 1$
	Divorced $\underline{n} = 9$	Divorced $\underline{n} = 6$	Divorced $\underline{n} = 4$
	Separated $\underline{n} = 5$	Separated $\underline{n} = 1$	Separated $\underline{n} = 5$
	Single $\underline{n} = 0$	Single $\underline{n} = 0$	Single $\underline{n} = 2$
	Married $\underline{n} = 40$	Married $\underline{n} = 29$	Married $\underline{n} = 32$
Income	0-10,000 $\underline{n} = 6$	0-10,000 $\underline{n} = 2$	0-10,000 $\underline{n} = 1$
	10,001-20,000 $\underline{n} = 7$	10-20,000 $\underline{n} = 7$	10-20,000 $\underline{n} = 11$
	20,001-40,000 $\underline{n} = 20$	20-40,000 $\underline{n} = 12$	20-40,000 $\underline{n} = 11$
	40,0001-80,000 $\underline{n} = 14$	40-80,000 $\underline{n} = 10$	40-80,000 $\underline{n} = 18$
	80,000+ $\underline{n} = 7$	80,000+ $\underline{n} = 5$	80,000+ $\underline{n} = 3$
Total Children	1-2 (LO) $\underline{n} = 30$	LO $\underline{n} = 16$	LO $\underline{n} = 28$
	3+ (HI) $\underline{n} = 24$	HI $\underline{n} = 20$	HI $\underline{n} = 16$
ADHD Children	1 (LO) $\underline{n} = 45$	LO $\underline{n} = 30$	LO $\underline{n} = 37$
	2+ (HI) $\underline{n} = 9$	HI $\underline{n} = 6$	HI $\underline{n} = 7$

Table 1, continued

DEMOGRAPHIC VARIABLE	GROUP 1 OLD MEMBERS (N=54)		GROUP 2 NEW MEMBERS (N=36)		GROUP 3 NON-MEMBERS (N=44)	
Type of ADHD	Type I	n = 25	Type I	n = 19	Type I	n = 27
	Type II	n = 27	Type II	n = 16	Type II	n = 14
	Comb.	n = 2	Comb.	n = 1	Comb.	n = 3
Medication	Yes	n = 43	Yes	n = 33	Yes	n = 30
	No	n = 11	No	n = 3	No	n = 14
Age of ADHD						
Child	10.4 ( <u>M</u> )		9.1 ( <u>M</u> )		9.8 ( <u>M</u> )	

**Situational Data**

The participants were asked to rate their satisfaction with support regarding ADHD they received from their partners and support regarding ADHD from their family and friends. As stated previously, these items were included after discussions with mothers of children with ADHD and professionals. Another variable which the author thought was important in the context of this study was the occurrence of a recent major life event in the participants' lives. The argument is that if the participant has had a stressful event occurring in her life, it is likely to influence her level of stress and self-efficacy and perceived social support. Table 2 presents the findings:

Table 2

Means and Standard Deviations for Partner Support Regarding ADHD, Family and Friend Support Regarding ADHD, and Recent Major Life Event Variables

SITUATIONAL VARIABLE	GROUP 1		GROUP 2		GROUP 3	
	(Old-Members)		(New-Members)		(Non-Members)	
	(N=54)		(N=36)		(N=44)	
	<u>M</u>	SD	<u>M</u>	SD	<u>M</u>	SD
PARTSUPP	3.36	1.26	3.36	1.48	3.25	1.37
FAMSUPP	3.12	1.29	3.28	1.23	3.35	1.26
MAJEVENT	2.79	3.41	2.85	3.54	2.43	3.02

The above table indicates that the means for Partner Support Regarding ADHD range between 3.25 and 3.36, with Group 2 (NEW-MEMBERS) showing the most variation in scores (1.48). Interestingly Group 1 (OLD-MEMBERS) and Group 2 have the same means (3.36). While Group 3 (NON-MEMBERS) has the lowest mean (3.25) of all the groups, the difference is small. Means for Family and Friend Support Regarding ADHD indicates that NON-MEMBERS had the highest mean (3.35) compared to means of 3.12 and 3.28 for OLD-MEMBERS and NEW-MEMBERS respectively. Standard deviations for FAMSUPP indicate that the distributions of scores for all groups was similar. Of those participants who had major life events 52% in Group 1, 47% in Group 2, and 48% in Group 3, there was not a large variation in scores; standard deviations range between 3.02 and 3.41.

### **Research Design**

The study used a correlational natural groups design. It is important to point out that a test-retest design was considered ideal for this study. Due to time constraints, however, the current design, of which the author is well aware is problematic, was settled upon. The study took a theoretical path in that, while it was driven by variables that affect people's lives at a daily level and was field-based, the literature was first consulted before the variables were settled upon. There was one IV: Mothers of children with Attention Deficit Disorder, with three levels: Group 1 (support group members > 6 months), Group 2 (support group members < 6 months) and Group 3 (non-members). The DVs were the group scores on the General Health Questionnaire, the General Self-efficacy Scale; the Parental Support Scale which has two sub-scales: Satisfaction with Perceived Scale and Network Size. A further eleven demographic/situational variables were included in the analysis so that their effects on the DVs could be investigated.

### **The Questionnaire**

The questionnaire used in the study was designed specifically for the study. It consisted of six pages (see Appendix A) and was made up of three instruments: the General Health Questionnaire (items 1-12), the Self-efficacy Scale (items 13-29), and the Perceived Social Support Scale (items 30-35) which made up sections A, B, and C respectively which measured the main concepts being investigated by the study.

### **The General Health Questionnaire (GHQ)**

The GHQ was developed as a self-rated questionnaire to screen for minor psychiatric morbidity in community and medical settings (Goldberg, 1972). The original 60 item

GHQ has been revised to provide shorter versions including the 12-item GHQ which was used for this study (see Appendix A). The GHQ, which is often used as a measure as stress within communities, is "quite possibly the best instrument of its kind" according to Goodchild and Duncan-Jones(1985, p. 59). The GHQ has positive and negative items, and is scored on a four-point Likert-type scale with differing values for positive and negative items. The minimum possible score is 0, and the maximum possible score is 12. This is due to the scoring system which allocates scores of 0 or 1 to each response (see Banks, Clegg, Jackson, Kemp, Stafford, & Wall, 1980). Low GHQ scores indicate high psychiatric well-ness. High GHQ scores on the other hand indicate low psychiatric well-ness, or as is the case in this study, high levels of general stress.

For the 12-item GHQ, scores greater than 3 are considered clinically significant. According to Goldberg (1972) scores above 3 indicate a presence of psychiatric/ psychological stress. The incidence of clinically significant scores among the general population is expected to be less than 20% when a disproportionate distribution of zero scores, if one exists, is accounted for (van Schoubroeck, 1981).

Three studies by Banks, Clegg, Jackson, Kemp, Stafford and Wall (1980) found the 12-item GHQ to have high internal consistency with Chronbach Alpha coefficients ranging from .82 to .90. The GHQ's construct validity has been extensively investigated and consistently found to be a valid measure (van Schoubroeck, 1981). However, Goldberg and Williams (1988) suggest that the factor structure of the GHQ be examined before it can be meaningfully applied to samples other than the one it was developed on.

The GHQ was selected as a general measure of stress for this study because it had been used to measure stress on mothers of children with disabilities elsewhere, and because there were GHQ norms established on the Perth population (Findlay-Jones & Burvill, 1977) which could be used for comparisons.

### **The Self-efficacy Scale (SES)**

The Self-efficacy Scale was developed by Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, and Rogers (1982) and it measures generalised self-efficacy expectations dependent on past experiences and on tendencies to attribute success to skill as opposed to chance. The General Self-efficacy (GSES) is a 17-item sub-scale of the SES which measures general self-efficacy and accounts for 26% of the total variance with reliability of .86 as measured by the Chronbach's alpha. The rest of the items measure social self-efficacy (SSES). Sherer et al found the SES has acceptable construct and criterion validity. Only the GSES was extracted for use in this study because its items measure self-efficacy in a more global sense and as such were deemed better than those of the SSES which measures self-efficacy as it relates specifically to social situations. Specific items would be useful only if they pertained to raising children with ADHD.

### **The Parental Support Scale (PSS)**

The 22-item PSS was developed by Telleen (1985) and measures both the network size and the satisfaction with support. The Resource Size sub-scale allows participants to identify an unlimited number of individuals who provide support in any number of function areas. In their study on mothers of children with disabilities, Seybold, Fritz, and MacPhee (1991) used seven. The number of the individuals may be summed across all

categories; the higher the number, the higher the resource size. Satisfaction with each function is measured on a Likert scale ranging from *very dissatisfied* to *very satisfied*. High scores on the sub-scales indicate high levels of perceived social support. Telleen, Herzog, & Kilbane (1989) report that internal (alpha) reliability coefficients are high for both Network Size ( $r = .92$ ) and Satisfaction ( $r = .86$ ); although the two sub-scales covary ( $r = .42$ ).

According to Seybold, et al (1991) the validity of the PSS has been demonstrated through correlations with other measures of social support and its sensitivity to an intervention programme designed to decrease mothers' social isolation. For this study both Satisfaction with Perceived Support and Network Size were measured on six functions: positive feedback, social participation (emotional functions); and material assistance, child-rearing advice, child-care, and physical assistance with household tasks (instrumental functions) using a 5-point Likert-type scale. Section D of the questionnaire asked for demographic variables with choices presented in a Likert-type fashion. The end of the questionnaire measured general support and support regarding ADHD from partners, and support regarding ADHD from family and friends. The final variable measured was recent major life events; the respondents were asked to list the events. The questionnaires took approximately 15 minutes to complete.

#### **Overall Reliability and Validity of the Questionnaire**

The Chronbach alpha was used to measure the internal consistency of the three instruments for this sample. For the Self-efficacy items the reliability coefficient was .91 indicating a very high level of internal consistency. The Parental Support Scale's sub-

scales showed moderate to high levels of internal consistency when separate calculations were carried out; Resource Size at .68 and Satisfaction with Support at .79. However there was a low correlation between the two sub-scales,  $r = .3$ . The sub-scales were, therefore, considered separately in this study, increasing the number of DVs from three to four: Stress, Self-efficacy, Satisfaction with Perceived Support and Network Size.

Validity for the Self-efficacy, Resource Size and Satisfaction with Support scales was hard to establish within the context of this study. Therefore, the study had to rely on the reported validity of these instruments. The validity of the GHQ has been well established both in the psychiatric and psychological fields. The GHQ has been previously used as a measure of stress by Exel (1991) in his Perth study on mothers raising children with disabilities.

### **Confidentiality**

Questionnaires were self-administered with information regarding the study provided on the cover letter attached to each questionnaire (for an example of the cover letter, see Appendix B). Information on the participants' names and addresses were not requested. Participants, however, had to sign the back of the questionnaire to indicate that they participated in the study voluntarily. Participants were assured of confidentiality on the cover letter. Some participants, however, felt that they could be traced from a combination of the signature and the postcode, and only provided initials rather than signatures. In order to deal with this issue, the signatures were deleted once the questionnaires had been processed. Utmost care was also taken in ensuring the safety of



the data, with no one seeing the data except for the colleague who helped with the coding and data entry.

### **Procedure**

#### **Learning and Attentional Disorders Society (L.A.D.S.) WA.**

Assistance reaching the target population, that is, families raising a child with ADHD, was solicited from the Learning and Attentional Deficit Disorders Society L.A.D.S. (WA). Background material and a list with contact persons for all ADHD support groups in Western Australia was obtained from L.A.D.S.

#### **Support Groups**

A request for assistance in distributing the questionnaires was solicited from the contact persons in the Perth metropolitan support groups. The letter states the general aim of the study (for a typical letter, see Appendix C). Further details regarding the study were given to the contact persons, either by telephone or in person, by the author whenever she was asked. Batches of questionnaires and stamped, self-addressed envelopes were then delivered or mailed to the six participating ADHD support groups. The locations of the support groups were distributed across the North, South, East and West sections of the metropolitan area. The number of members in the support groups ranged between 10 to 70; with one group having approximately 130 families with an ADHD member on its mailing list.

Each batch of questionnaires was distinguished by the name of the contact person, who was mentioned on the covering letter as a person to return completed questionnaires to. The questionnaires and stamped, self-addressed envelopes were either handed to the

prospective participants by a contact person or mailed to the target population by the contact person with the help of the author. Financial costs were covered by the author.

Mothers who obtained their questionnaire via the support groups had the option of leaving the completed questionnaire with a nominated contact person or posting the completed questionnaires back to the author. Unused questionnaires were returned to the author by the contact persons. Telephone calls thanking each contact person for their support were made after approximately 60% of completed questionnaires from his/her batch had been returned or upon receipt of the unused questionnaires from the contact person. All contact persons were telephoned and thanked for their support in distributing and collecting the questionnaires.

#### **Paediatricians and the Child Development Centres**

Letters were sent to three professionals working in the field of ADHD and two professional centres where ADHD is diagnosed and treated (for a typical letter, see Appendix D) for assistance with the distribution of questionnaires. Support was obtained from three paediatricians who specialise in ADHD, and the Hamilton Hill Child Development Centre. These professionals and centres allowed for access to mothers of ADHD children who were not support group members. Questionnaires were handed out by staff at these venues to mothers of children with ADHD when they attended for treatment. The covering letter to the questionnaires that were distributed through the paediatricians and the Development Centre gave the participating mothers two options. Mothers could complete the questionnaire while at the venue and place it in a box; or, if they preferred having more time, take the questionnaire home and post it to the author in

a stamped, self-addressed envelope. Most participants returned the completed questionnaires in the mail.

### **Ethical Considerations**

The covering letter (see Appendix B) briefly stated the aims of the research in order to give prospective participants an idea of what the questionnaire contained. The covering letter also stated that the study had the support of L.A.D.S., the organisation which looks after the interests of those affected by ADHD in the Western Australia, in an attempt to make prospective participants feel more at ease about participating. The name of the author and that of the institution the author is affiliated with were also indicated on the covering letter in order to provide a contact person and place for participants to direct their inquiries and discuss any emotions that could arise as a result of completing the questionnaire. It was also clearly stated that the participants were not obliged to complete the questionnaire and that they could stop whenever they wished.

The author signed a declaration on the last page of the questionnaire to keep collected data confidential. The participants were also invited to sign a consent form indicating that they willingly participated in the study (See Appendix E). 99% of the participants signed the declaration; the one participant who did not sign, provided an initial. It can thus be discerned that no coercion was used to obtain data. Courtesy was extended to the participants in the form of an offer to provide results to those participants who wanted them. The participants were asked to fill in a slip which was attached to the questionnaire (see Appendix F) and send it separately to the author to request the results to the study. 95% of participants sent the request slips back to the

author. Results, including a more detailed outline of the aims of the study, were sent to all those who requested them.

### **Response Rate**

280 questionnaires were sent to support groups, paediatricians' consulting rooms, and the Child Development Clinic. A total of 63 unused questionnaires were returned to the author. Of the 217 obtained by prospective participants, 151 completed questionnaires were received by the author, representing a response rate of 70%. This indicates a very good response in light of the fact that a typical response rate for the first mail out is 30% (Shauneghnessy and Zeichmester, 1990).

### **Conditions For Inclusion in the Study**

The conditions for inclusion into the study were:-

- i) the questionnaires had to be completed by mothers of children with ADHD (indicated by the variable GENDER)
  - ii) the children being raised by the mothers had to be diagnosed with ADHD and be of school-age and attending school (indicated by the variables TYPE OF ADHD and child's AGE and YEAR AT SCHOOL). ADHD had to have been formally diagnosed.
  - iii) support group membership status, either member or non-member, had to be indicated including the duration of membership for those mothers who were members.
- Only 16 questionnaires out of 151 were rejected for not meeting the above conditions.

### **Data Coding and Preparation**

The author selected the demographic variables to be included for analysis. The data was coded by the author (see Appendix G for coding information; and Appendix H for

names and ranges of all the variables). The collated data was then entered into the computer with the aid of a colleague who entered the scores that the author read into the computer. The colleague was familiar with the coding instructions and competent with the SPSS programme. The data was examined for errors; the colleague read the values on the questionnaires while the author checked the corresponding values on the computer. The identified errors were corrected.

Most of the missing values identified were on the Perceived Social Support Scale; with most of those values missing from the Resource Size subscale. Group means were calculated on the variables with missing values. The respective means were inserted into the data as recommended by Tabachnik and Fidell(1989). For example the mean of each item of the Resource Size subscale was calculated and inserted before a total score for this subscale was calculated.

## CHAPTER 4

### Results

#### Data Screening

The data was screened in order to ensure that the assumptions of the statistics to be used were met. Cell sizes were sufficiently large, and while unequal at 54, 36 and 44, did not exceed the ratio of 1:1.5. The stem and leaf plots as well as the Shapiro Wilks statistic were used to identify univariate outliers. The assumption of normality was met after the adjustment of five outliers by changing them to the next extreme score + or - 1 as recommended by Tabachnik and Fidell (1989), and the uncharacteristic scores of one participant were removed from the data. Mahalanobis distance was used to identify multivariate outliers using degrees of freedom and the alpha level of .001 (Tabachnik & Fidell, 1989). There were no values above the critical value of 18.467. The scatterplots indicated that the assumption of linearity was met.

The homogeneity of regression  $F(7,134) = 1.143, p > .05$ . The univariate homogeneity of variance assumption Bartlett's-Box  $F(2,134) = .061, p > .05$  (STRESS),  $F(2,134) = .330, p > .05$  (EFFICACY),  $F(2,134) = 1.02, p > .05$  (SUPSATIS), and  $F(2,134) = .069, p > .05$  (SUPPSIZE) was met. The multivariate homogeneity of variance-covariance Box  $M [F(20,134) = 12.768, p > .001]$  was met and the Log Determinant ( $> -.9.2103$ ) indicated that multicollinearity was not a problem. All assumptions for ANOVA, MANOVA and ANCOVA were therefore met. Regarding the reliability of covariates assumption for ANCOVA, it was assumed that the covariate AGE was reliable since it was highly unlikely that mothers would incorrectly report their

ages in a study of this nature. Assumptions for Factor Analysis of the GHQ, including internal consistency (alpha .75), were also met.

### **Data Analysis**

The SPSS programme was used to analyse the data. Guidelines by Tabachnick and Fidell (1989) were followed regarding issues such as significance levels. Basic frequencies on the data were requested. Chronbach's alpha was used to assess whether the items within the GHQ, SES, PSS were adequately uniform in what they measure. Factor analysis was applied to the GHQ data in order to investigate the number and type of factors arising from the GHQ data of this particular sample. The factor analysis would also facilitate comparisons between the factor structure of this sample and those found by Goldberg and Williams (1988) and Findlay-Jones & Burvill (1977).

Correlations among all the variables were requested. ANOVA analyses were carried out to investigate whether demographic and situational variables (IVs) significantly accounted for significant differences between the groups (DV). The alpha level was adjusted accordingly:  $.05 / 11 = .005$ . MANOVA analysis was carried out with GROUP as the IV and STRESS, EFFICACY, SUPSATIS and SUPPSIZE as the DVs. Due to a significant correlation between SUPSATIS and AGE, single ANCOVAs were carried out on all dependent variables using AGE as a covariate. AGE was isolated as a covariate because it was the only demographic variable which was significantly correlated with a dependent variable and not significantly correlated to any other demographic/situational variable, as recommended by Tabachnick and Fidell (1989).

### **Findings**

Reliability, using Chronbach's Alpha, was calculated for the items of the GHQ, GSES, SS, and NS. The reliability coefficient for the GHQ items was .75, indicating high internal consistency, that is, that the 12 GHQ items measure the same concept. Reliability for the GSES items was .91; reliability for the Support Satisfaction (SS) sub-scale of the PSS was .68; and reliability for the Network Size sub-scale of the PSS was .79. All the coefficients indicate these instruments have internal consistency. The reliability coefficient for the combined items of the PSS sub-scales was .70 indicating that the two sub-scales measure highly related concepts.

Factor analysis, with orthogonal rotation, on the 12-item GHQ, with only factor loadings of .3 and above considered, derived three main factors which accounted for 56% of the variance. The first two factors explained most of the variance, 27% and 20% respectively. The third factor explained only 9% of the variance. Factor 1 seemed to measure a general factor of psychological distress because it contained items dealing with decision-making, concentration and facing problems. It can be noted that Factor 1 was made up of all the positively worded items of the GHQ. Factor 2 seemed to measure depression because it was made up of items relating to depression, strain, and worthlessness. Factor 3 seemed to be measuring agitation and apathy. Items 5 (felt constantly under strain) and 12 (been feeling reasonably happy, all things considered) loaded on 2 factors. The former loaded on factors 2 and 3, and the latter loaded on factors 1 and 2. It was seemed logical that item 5 would load on both factors 2 and 3



because 'constantly feeling under strain' is related to both depression and agitation. It was also understandable that item 12 would load on both factors 1 and 2, since it is a positively worded item which at the same time implies the presence of psychological distress.

A correlation matrix was obtained for all the variables investigated. Amongst DVs, only two significant correlations were obtained: a negative yet very weak correlation between STRESS and EFFICACY as predicted ( $-.17, p = .046$ ), that is, when stress levels are high, self-efficacy is low and vice versa; and a positive yet weak correlation was obtained between SUPSATIS and SUPPSIZE as predicted ( $.25, p = .003$ ), that is, when satisfaction with perceived social support is high, the size of support network is high, and when the former is low, the latter is also low.

The significant correlations between DVs and demographic and situational variables are presented on Table 3:

Table 3

Significant Correlations Between DVs, Demographic/Situational Variables

VARIABLE	PARTSUPP	MAJEVENT	FAMSUPP	AGE
EFFICACY	.22 ( $p=.010$ )			
SUPPSIZE	.19 ( $p=.025$ )			
EFFICACY		-.26 ( $p=.003$ )		
SUPPSIZE			.29 ( $p=.001$ )	
SUPSATIS			.24 ( $p=.006$ )	.19( $p=.032$ )

Note alpha = .05 N = 134

As Table 3 indicates that Self-efficacy has a significant negative association with Recent Major Life Event (-.26), that is, when mothers reported high levels Self-efficacy they also reported low levels or no Recent Major Life Events, and when the Recent Major Life Event score was high, the Self-efficacy score was low. However, the relationship between Self-efficacy and Partner Support Regarding ADHD is a positive one (.22), which means that when Support From Partner is high, the levels of Self-efficacy are also high, and that when self-efficacy levels are high, mothers perceived the Support Regarding ADHD to be high as well. The magnitude of the correlation for both correlations is relatively low however, -.26 and .22 respectively, indicating that these factors are only moderately related.

A significant weak positive correlation between Satisfaction with Perceived Social Support and Family and Friend Support Regarding ADHD (.24) indicates that high levels of support from family and friends is accompanied by high levels of general satisfaction with perceived social support, and low levels of support from family and friends is related to low levels of general satisfaction with perceived social support. It seems that Network Size is perceived to be smaller by younger mothers, and higher by older mothers. SUPPSIZE is correlated to AGE (.19), even though this relationship is very weak.. SUPPSIZE is also very weakly correlated to both Partner Support Regarding ADHD (.19); and weakly correlated to Family and Friend Support Regarding ADHD (.29) which indicates that when support from mothers' partners and family and friends regarding ADHD was high, they perceived the size of their support network to be larger. While both these correlations are significant, they are however quite low.

The correlations between GROUP (IV) and INCOME , and between GROUP and MEDICATION were not significant;  $p = .699$  and  $p = .207$  respectively.

There were significant correlations amongst demographic and situational variables, as presented on Table 4:

Table 4

Significant Correlations Amongst Demographic/Situational Variables

VARIABLE	PARTSUPP	MEDICATION
FAMSUPP	.33 ( $p=.000$ )	
MARISTAT	.31 ( $p=.000$ )	
MAJEVENT	-.24 ( $p=.006$ )	
INCOME	.22 ( $p=.011$ )	
ADHDTYPE		.21 ( $p=.016$ )
<u>Note: Alpha = .05</u>		

It can be noted from Table 4 that Partner Support Regarding ADHD is the demographic variable that has the most significant correlations with other Demographic and Situational variables. PARTSUPP is moderately correlated to FAMSUPP (.33), indicating the mothers who reported high partner support regarding ADHD also tended to report high levels of support from family and friends; and to MARISTAT (.31), indicating that married mothers tended to report the highest level of partner support regarding ADHD. PARTSUPP is also weakly correlated to INCOME (.22) indicating that the higher the family income, the higher the levels of support from partners the mothers reported; and to MAJEVENT (-.24), a negative correlation indicating that mothers tended to report high scores on Recent Major Life Events when they reported

low levels of Partner Support Regarding ADHD. Finally, it can be noted from the Table 4 that there is a weak association between the Type of ADHD and Medication use (.21), which indicates that among the children who have Type I there was a high proportion who used medication; whereas among those with Type II ADHD or a combination of Type I and Type II ADHD the proportion was low.

Univariate analyses were performed to investigate whether any of the demographic/situational variables significantly predicted differences between the three groups. There were no significant effects found on the series of ANOVAs performed on Group (DV) using eleven demographic and situational variables as the IVs. Total *N* was 134 for all eleven ANOVAs.

The results are presented on Table 5:

Table 5

Results of the ANOVA Analyses

VARIABLE	F	(DF)	p
ADHDTYPE (Type of ADHD)	2.907	1	.091**
MAJEVENT (Recent Major Life Event)	.688	11	.744
MARISTAT (Marital Status)	1.457	4	.219*
INCOME	2.122	4	.082**
PARTSUPP (Partner support regarding ADHD)	.476	4	.752
FAMSUPP (Family & Friend support re ADHD)	.257	4	.905
MEDICATI (Use of Medication)	1.607	1	.207
AGE (Mothers' Age)	.603	3	.614*
ADHDKIDS (No. of Children with ADHD)	.009	1	.923
CHILDREN (Total No. of Children)	.510	1	.476*
KIDAGE (Age of the ADHD Child)	1.014	13	.442

Note: Adjusted Alpha  $p < .0004$

As indicated by Table 5 there are no values below the .004. Therefore none of the variables significantly predicted differences between the groups, including those demographic variables \* and \*\* that were identified by the literature as predictors of significant differences between groups in past research. It can be noted, however, that the ADHDTYPE and INCOME variables \*\* had the lowest  $F$  values. A variable with a significant effect would have been considered for inclusion as an IV.

A between subject multivariate analysis of variance (MANOVA) was performed on four DVs: STRESS, EFFICACY, SUPSATIS and SUPPSIZE. The IV was GROUP with three levels: OLD MEMBERS, NEW MEMBERS and NON-MEMBERS. With the use of the Wilks' criterion, the combined dependent variables were not significantly affected by GROUP  $F(8,256) = .872, p > .05$ .

Due to the high correlation between the DV SUPSATIS and the demographic variable AGE, a series of ANCOVA analyses were carried out on the four DVs: SUPSATIS, STRESS, EFFICACY and SUPPSIZE, with GROUP as the IV, and AGE as the covariate to investigate the power of the AGE to adjust the DVs. Alpha level was adjusted to .0125 to minimise the effects of familywise error. After adjustment by AGE, no significant effects on any of the DVs were found:

$F(2,134) = 1.26, p > .0125$  (SUPSATIS);  $F(2,134) = 1.93, p > .0125$  (STRESS);

$F(2,134) = .13, p > .0125$  (EFFICACY); and  $F(2,134) = .62, p > .0125$  (SUPPSIZE).

Some differences between the three groups did exist, although they were not statistically significant. The means and standard deviations of all three groups on the four DVs which allow for the differences to be discerned are presented on Table 6:

Table 6

Means and Standard Deviation for the Stress, Self-efficacy, Support Satisfaction and Network Size Variables

VARIABLE	GROUP 1	GROUP 2	GROUP 3
	(Old members) (N=54)	(New members) (N=36)	(Non-members) (N=44)
	<u>M</u> (SD)	<u>M</u> (SD)	<u>M</u> (SD)
STRESS	2.54(2.61)	3.14(2.51)	3.57(2.66)
EFFICACY	59.07(11.32)	57.94(9.97)	59.50(10.88)
SUPSATIS	19.46(3.36)	20.50(3.27)	19.85(4.30)
SUPPSIZE	13.06(6.27)	13.56(5.93)	14.44(6.22)

Note: Variable names and range of scores on Appendix H.

It can be noted from Table 6 that Group 3 (NON-MEMBERS) had the highest levels of stress of all three groups ( $\bar{M} = 3.57$ ); and that Group 1 (MEMBERS > 6 MONTHS) as predicted had the lowest levels of stress. It also seems that duration of support group membership contributes to a difference in stress scores, Group 1 scoring lower than Group 2 (MEMBERS < 6 MONTHS) on stress, even though this difference is not statistically significant. The variations in scores were similar in all three groups, with standard deviations ranging from 2.51 to 2.66.

The efficacy scores for the three groups are similar; the means range between 57.94 and 59.50. However, NON-MEMBERS had the highest score of the three groups which was contrary to expectations. For SUPSATIS, NEW-MEMBERS had the highest mean ( $M = 20.50$ ), even though all the scores are high. SUPPSIZE scores indicate that NON-MEMBERS had the highest mean ( $M = 14.44$ ) which was also unexpected. The standard deviations on all variables indicate that the distribution of scores was similar for all groups on all the dependent variables.

As predicted mothers of children with support groups have higher scores than the general population with 60.4% of mothers in this study having clinically significant levels of stress, scores greater than 3 on the 12-item GHQ, compared to 18% in the general population, scores greater than 12 on the 60-item GHQ, (Findlay-Jones & Burvill, 1987). A comparison of proportions between the two populations indicates that the proportion with clinically significant stress levels in this study is significantly greater; the Z score of 7.574 for scores greater than 3 at a critical value of 1.645 was significant ( $< .05$ ).

## CHAPTER 5

### DISCUSSION

#### Introduction

The hypotheses (numbers 1 to 7 collectively) that predicted that the three groups would differ significantly on Stress, Self-efficacy and Perceived Social Support (sub-scales Satisfaction with Perceived Social Support and Network Size) were not supported. That is, MANOVA analysis revealed no significant effect for GROUP [ $F(8,256) = .872, p > .05$ ]. Controlling for the effects of AGE also did not produce main effects for GROUP on the dependent variables: Stress, Self-efficacy, Satisfaction with Perceived Social Support, and Network Size. It is interesting, however, to note that a significant number of mothers had clinically significant scores on Stress and the significant stress levels were significantly higher than those in the Perth general population, a Z-score of 7.574 with a critical value of 1.645 was significant at .05. This result indicates that the mothers of children with ADHD are similar to mothers raising children with other disabilities in that both these groups report significantly higher levels of stress than the general population in Perth. It was also found, as predicted, that the majority of mothers (99%) were primary-care-giver; which could partly explain why mothers raising children with ADHD tend to have high levels of stress, as indicated by the mothers in this sample.



### **Demographic and Situational Data**

ANOVA analyses revealed that none of the demographic and situational variables were significant predictors of differences between the three groups; none had a significant  $F$  value at the adjusted alpha of .004. However, there were findings on demographic and situational variables that are worth noting.

#### **Findings from Demographic Variables**

There seems to be support for the findings by Glickman, Tanaka and Chan (1991) that marital status is predictor of satisfaction with perceived social support; The correlation between Marital Status and satisfaction with Partner Support Regarding ADHD highlights the importance of a close permanent partner since mothers who were married seemed to suffer reduced levels of stress compared to their separated, divorced, single and widowed counterparts. The finding that income is a predictor of satisfaction with perceived social support by Felton & Shin (1991) was also supported in this study. Income was significantly, although weakly, correlated to satisfaction with Partner Support Regarding ADHD. It seems the mothers who have partners and who have high family incomes, and therefore less reduced financial concerns, perceive a high level of support from their partners.

#### **Findings from Situational Variables**

There were no significant differences between the three groups on Stress, Self-efficacy and Perceived Social Support. A closer look at the means of some situational variables may partly explain this phenomenon:

The mean of NON-MEMBERS for the PARTSUPP (support from partner regarding ADHD) variable ( $M = 3.25$ ) was quite close to the means for OLD-MEMBERS and NEW-MEMBERS (both  $M = 3.36$ ) which indicates that the three groups were similar in

their ratings of satisfaction with support received from a partner regarding Attention Deficit Disorder. Interestingly, NON-MEMBERS scored the highest on FAMSUPP (support from family and friends regarding ADHD) variable ( $M = 3.35$ ) compared to OLD-MEMBERS ( $M = 3.3.28$ ) and NEW-MEMBERS ( $M = 3.12$ ). These findings seem to suggest that NON-MEMBERS receive adequate support from partners regarding ADHD; and receive excellent support from family and friends regarding the issue of ADHD. Seemingly the mothers that are not in support groups do not feel the need to be in one since they already are receiving adequate support regarding their child(ren)'s disorder.

The findings on Partner Support Regarding ADHD and Family Support Regarding ADHD are congruent with those found on the Satisfaction with Perceived Social Support and Network Size; the levels of Satisfaction with Perceived Social Support for NON-MEMBERS were similar to those of OLD-MEMBERS and NEW-MEMBERS, and reported the largest Network Size of all three groups. Significant positive, yet weak, correlations were found between PARTSUPP and SUPPSIZE (.19); and between FAMSUPP and both SUPSATIS (.24) and SUPPSIZE (.29). It seems that NON-MEMBERS benefit adequately from their quite large Network Size such that they are not significantly different from those mothers who are members of support groups. It seems that the three groups differ on where they get their support from and not on how much support they feel they receive.

Recent major life events were found to predict the level of satisfaction with perceived support from partners regarding ADHD. There was a significant negative, although weak, correlation between MAJEVENT and PARTSUPP (-.24). This finding indicates that when mothers reported high levels of satisfaction with perceived support from their

partners reading ADHD they tended to report a low numbers of recent major life events. It is likely that mothers who felt they received adequate support from their partners about ADHD coped better with the major events in their lives and therefore tended not to report them. It is also understandable that mothers who did not feel adequately supported by their partners tended would perhaps feel the effects of major event more acutely and thus tended to report those events. This findings support the general consensus among the mothers spoken to during preliminary discussions that having support from their partners regarding ADHD was very important in terms of how they coped.

The Type of ADHD was positively related to Medication use (.21). While this correlation is weak it does indicate that children with Type I ADHD (with hyperactivity) tended to be on medication, whereas a low proportion of children with Type II and those with a combination of Type I and Type II were on medication. This finding is congruent with findings in the ADHD literature (eg Fletcher & Leewin, 1993). which indicates that children with hyperactivity are much more medicated than those ADHD children who are not. This is probably due to the fact that ADHD with hyperactivity has much more overt symptoms and because it is also more frequently diagnosed.

#### **Primary Care-Giver Status**

As hypothesised, a significant majority of mothers in this sample were primary care-givers; 99% of mothers classified themselves as primary care-givers to their child(ren) in the family. The fact that some mothers are widowed(1 mother), single 2 mothers), separated (8%) or divorced (14%) contributes to this figure, even though the fact that they are widowed, single, separated or divorced does not necessarily mean that they do not have a partner who could share in the caring of the child(ren).

This finding support the findings by McConachie (1983) that mothers tend to be the primary care-givers. They also support the decision to only use mothers as participants. The finding by McConachie that mothers of children with disabilities have higher levels of stress than their partners also influenced the decision to use mothers as it highlighted the need for investigations into the role that resources such as support groups which play in reducing the high levels of stress suffered by these mothers.

### Stress

Means and Standard Deviations reveal that while the differences between the three groups were not statistically significant on STRESS; the mothers who were not members of a support group (Group 3) reported the highest levels of stress ( $\bar{M} = 3.57$ ). Of the mothers who were members of a support group (Group 1 and Group 2), the mothers who had been in a group for longer than six months (OLD-MEMBERS) reported lower levels of stress ( $\bar{M} = 2.54$ ) than the mothers who had been members of a support group for less than six months (NEW-MEMBERS) who had a mean of 3.14. It seems that the longer the mothers were in a support group the better off they were in terms of stress. Overall, the findings on stress indicate that ADHD support group seem to be beneficial to their members, at least as far as stress is concerned.

The fact that 60.4% of mothers in this sample had statistically significant stress levels compared to 18.% in the general population points to the fact that mothers of children with Attention Deficit Disorder are similar to mothers of children with other disorders. This study confirms findings by other studies that there is a higher level of stress among mothers of children with disabilities (Wing, 1975; Beckman, 1983; Wolf, Noh, Fishman & Speechley, 1989; Exel, 1990). The Wing reported that over 60% of mothers of children with disabilities experiencing clinically significant levels of stress. In a Perth

study, Exel (1990) found that 65.8% of mothers of children with disorders such as autism had clinically significant levels of stress on the GHQ.

A further demonstration of differences between this sample and others is indicated by the differences in the GHQ factor structure. Goldberg (1972) found that the variance is accounted by mainly one factor of general psychiatric well-ness (45.6%) in the general population scores. There were two main factors which nearly equally (20 )accounted for variance in this sample; general psychiatric well-ness and depression. Depression seems to be an important factor in mothers of children with ADHD, a findings which supports a trend reported by Beckman, 1983). It can be concluded that the depression dimension of the GHQ plays a crucial role in accounting for variance in this sample and could perhaps be an important variable include in research of mothers of children with ADHD in the future.

Exel found, however, that not all mothers of children with disabilities report high levels of stress. While significant proportion of the mothers in their studies, and this one, do report high levels of stress, the number of mothers who did not is still large. Exel recommended that further studies could provide valuable information by incorporating cognitive factors which over time can be used to explore the cognitive processes in mothers of children with disabilities who are not highly stressed.

This study incorporated a cognitive factor, self-efficacy, in its investigations. It seems that self-efficacy is involve in the cognitive processes of mothers of children with disabilities. This study found that there was a very weak negative correlation between stress and self-efficacy (-.17); that is, when mothers of children with ADHD reported high levels of self-efficacy, they also reported lower stress; and when they reported high stress levels they reported low levels of self-efficacy.

### **Self-efficacy**

The significant correlation between self-efficacy suggests that self-efficacy a mediating factor for stress. Attempts to reduce stress should therefore ideally be accompanied by attempts to increase self-efficacy. It would seem that support groups have the potential to do both and therefore be highly beneficial to their members. The results of this study and other research (Borkman, 1992; Hendrick, Isenberg, Martini, 1992) indicate that support groups have positive effects and seem to buffer stress; and according to Bandura self-efficacy can be enhanced by encouragement from others, learning how others cope or behave through the process of modelling, and from your own trials. Mothers of ADHD children who were members of a support group indicated that they were encouraged and supported by their colleagues in the support groups and their sense of competence (self-esteem) was improved by seeing how others in their situation coped.

This study also supported for the finding by Seybold, Fritz and McPhee (1991) that self-efficacy is a predictor of perceived social support. This study found a significant positive correlation between Efficacy and satisfaction with Partner Support Regarding ADHD ( $p = .010$ ). Mothers who reported high levels of self-efficacy also reported high levels of satisfaction with the support they felt they received from their partners regarding the issue of ADHD; and the mothers who reported low levels of self-efficacy also reported low levels of satisfaction with support from their partners. These findings indicate that self-efficacy provides a useful means of understanding cognitive processes involved in coping with stress and much knowledge can be gained if studies on stress took the effects of self-efficacy into account.

### **Perceived Social Support**

Satisfaction with perceived social support was similar for all three groups ( $M = 19.46$ ;  $M = 20.50$ ;  $M = 19.85$ , for Groups 1, 2 and 3 respectively), even though Group 1 (NEW-MEMBERS) reported levels that were slightly higher than those of the other Groups (OLD-MEMBERS and NON-MEMBERS). An opposite finding was expected, that is, that mothers who had been in a support group would report the highest levels of satisfaction with perceived social support because they had been in the support group for a longer period. However, it is understandable that mothers who have been in a support group for a shorter duration can report higher levels of satisfaction with perceived social support for a variety of reasons including the fact new members may still be acutely aware of what their lives were like before they joined a support group. This may be particularly the case for mothers who had been members of a support group for a very short period.

A surprising finding was that NON-MEMBERS reported the largest support network size of all the group ( $M = 14.44$ ). The findings on perceptions of social support can perhaps explain why these mothers have not joined a support group; they are very satisfied with the social support they receive and they have a large enough network which provides them with support.

### **Summary of Results**

1. Contrary to expectations, there were no statistically significant differences were group between mothers of children with Attention Deficit Disorder (ADHD) who were members of a support group for longer than six months (Group 1 or OLD-MEMBERS), mothers of children with ADHD who were members of a

support group for less than six months (Group 2 or NEW-MEMBERS), and mother of children with ADHD who were not members of a support group (Group 3 or NON-MEMBERS).

- the groups were not statistically different in their levels of stress as measured by the GHQ12. However, as predicted, OLD-MEMBERS did have the lowest levels of stress compared to NEW-MEMBERS and NON-MEMBERS.
  - OLD-MEMBERS, NEW-MEMBERS and NON-MEMBERS were not statistically different in their self-efficacy levels. Contrary to expectation, mothers who were not members of a support group reported the highest levels of self-efficacy.
  - OLD-MEMBERS, NEW-MEMBERS and NON-MEMBERS were not statistically different in their levels of satisfaction with perceived social support. Interestingly, mothers who had been in a support group for the shorter period reported the highest levels of satisfaction with perceived social support.
  - The Size of the Support Network for OLD-MEMBERS, NEW-MEMBERS and NON-MEMBERS was not statistically different. Contrary to expectation, mothers who were not members of a support group reported the largest support network.
3. The hypothesis that mothers of children with ADHD would have significantly higher levels of stress than the general Perth population was supported.
- 60.4% of mothers in this study reported clinically significant levels of stress,



compared to only 18% in the general population.

4. Self-efficacy was found to be a predictor of stress; when self-efficacy levels were high, stress levels were low, and when stress levels were high self efficacy was low.
5. Members who were members of a support group for longer than six months reported the highest levels of satisfaction with the support they received from their partners regarding ADHD. However, while mothers who were not members of a support group did report the lowest levels of satisfaction from their partners, their scores were also high.
6. Contrary to expectation, mothers who were not members of a support group reported the highest levels of satisfaction with support received from family and friends regarding ADHD, even though the level of satisfaction with family and friend support was quite high for all groups. The fact that mothers of children with ADHD who were not members of a support group reported high levels of satisfaction with both partner support and family and friend support regarding ADHD, may explain why they have not felt they needed to join a support group.
7. Finally, it was found that the majority of mothers of children with Attention Deficit Disorder were the primary care-givers to their children.

### **Implications and Conclusions of the Present Study**

There are a few factors that could explain why the overall hypothesis that support group membership was a predictor of significant differences among mothers of children with ADHD was not supported. This sample may have much more homogeneous than expected. According to Barkley (1991) mothers of children with Attention Deficit Disorder are likely to be particularly highly stressed due to the nature of the disorder they are dealing with as well as the controversy surrounding the disorder. Perhaps due

to the uniqueness of their issue, mothers of children with ADHD have much more that makes them similar than that which makes them different within the context of raising their children.

The comparison of these mothers to the general population has also revealed that mothers of children with ADHD are significantly different to the average person in the community which makes them a unique group. Their uniqueness is shared by other mothers of children with disabilities as the study by Exel had shown. It is therefore plausible that distinctions such as support group membership do not, and perhaps cannot, be used as a means to highlight significant differences within this group.

As mentioned previously, mothers who were not in a support group reported the highest levels of self-efficacy and the largest network size; and seemed to have enough people they received support from in that they were very satisfied with the support they received from their partners, family and friends regarding ADHD. These findings suggest that support group membership is unlikely to be the best predictor of significant differences among this population, and therefore none were found.

The questionnaire was perhaps not sensitive enough. For example, the Parental Social Scale, (see section C of the questionnaire in Appendix A) does not ask specific questions in order to collect data on Perceived Social Support and Network Size, but uses categories/functions which may be too broad. Finally, it is highly likely there are potential confounding variables which may have contributed to the findings, but were not included in the study.

### **Limitations of the Study**

This study is correlational by design and the limitations of such studies, such as the plethora of confounding variables and the resulting inability to indicate cause and effect,

are well-known. An ideal design for a study of this nature would be a time-series design which would provide pre-test and post-test data and thereby more confidently conclude about the effects of the independent variable. While generalisability is a limitation in correlational studies including this one, the findings in this study are congruent with those of studies on mothers of children with other disabilities.

Another limitation of this study, due to its design, is that the stress, self-efficacy and perceived social support levels of mothers who are members of a support group before they joined the support group are unknown. Attempts were made to gauge the attrition rate in the support groups. The mothers who were not members of a support group were asked if they had once been a member of one. Only three mothers out of 44 had been a member of a support group previously. Measures were also taken to increase the homogeneity of the sample; mothers were asked to consult their doctor if they were not sure of their child's ADHD status. While serious attempts were made to either note control for potential confounding variables, the author is aware that other potential confounders exist.

The Parental Social Scale which had the Satisfaction with Perceived Social Support and Network Size sub-scales had highest number of missing values of all the scales could have been selected. The response rate to the PSS could perhaps been maximised if the categories/functions, eg. positive feedback, had been defined as some participants may have been unsure of what the terms meant. A pilot study would have provided highlighted potential problems such as this one. The time constraints provided a big limitation in terms of the scale of the study.

Overall, however, there was a very high response rate (70%) to the study and only 16 out of 151 questionnaires were rejected for not meeting the requirements for inclusion in the study.

### **Areas to Benefit from Research Findings**

The findings of this study provide the first step in Australian investigations involving mothers of children with Attention Deficit Disorder with much more research needed in this area. While the study did not find a statistically significant result, the information yielded by this study is likely to benefit mothers of children with ADHD in Western Australia. The information will be disseminated to the mothers directly to some mothers by the author, through the support groups, and through the Learning and Attentional Disorder Society of WA (L.A.D.S). L.A.D.S is affiliated to a national organisation and therefore the information can also benefit families affected by ADHD in other parts of Australia.

The trends indicated by the study is also likely to be of benefit to professionals, such as psychologists and paediatricians, who work or are likely to work with people affected by ADHD. The author will send the results to the venues through which the questionnaires were distributed. Other professionals as well as students can have access to the findings through the library.

### **Areas for Future Research**

More research into the effects of Attention Deficit Disorder on both the sufferers and the carers is needed. Research in this field needs to grow so that a pool of information is gathered which can benefit those affected by ADHD and those working with families affected by the disorder. This is particularly the case in Australia where local research on the psychological effects of ADHD does not exist. The understanding of Attention

Deficit Disorder and its effects seems to be needed in the psychology especially since there is a growing likelihood of many psychologists receiving referrals with an ADHD component. It is our duty as a field to be informed by findings and not by myth.

Future research could include a measure of depression in investigations involving mothers of children with ADHD. The factor structure of the GHQ for this sample indicated that depression was an important dimension in the well-ness of mothers of children with ADHD. The findings of studies measuring the depression levels of mothers with ADHD would be a valuable addition to the small pool of information that has been gathered so far on this population.

Future studies can also include self-efficacy in investigations involving those affected by Attention Deficit Disorder. The research on self-efficacy in other areas is growing and beginning to provide useful findings. Self-efficacy seems to be an important cognitive factor in coping with stress and thus provides a useful way of accessing cognitive processes in research. This study paves the way for further research which uses different instruments, in different parts of Australia, to be carried out. The generalisation of the findings in this study is limited to mothers of children with ADHD due to the non-probability of the sample. However, the findings can be cautiously applied to similar populations.

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## **APPENDICES**

## **APPENDIX A**

### **QUESTIONNAIRE OF THE STUDY**



I should like to know how your health has been in general over the past few weeks. Please circle O the answer which you think most nearly applies to you.

**OR**

**Have you recently (over the past few weeks):-**

- |                                                          |   |   |   |   |
|----------------------------------------------------------|---|---|---|---|
| 1. been able to concentrate on whatever you're doing?    | 1 | 2 | 3 | 4 |
| 2. lost much sleep over worry?                           | 1 | 2 | 3 | 4 |
| 3. felt that you are playing a useful part in things?    | 1 | 2 | 3 | 4 |
| 4. felt capable of making decisions about things?        | 1 | 2 | 3 | 4 |
| 5. felt constantly under strain?                         | 1 | 2 | 3 | 4 |
| 6. felt that you could not overcome your difficulties?   | 1 | 2 | 3 | 4 |
| <hr/>                                                    |   |   |   |   |
| 7. been able to enjoy your normal day-to-day activities? | 1 | 2 | 3 | 4 |
| 8. been able to face up to your problems?                | 1 | 2 | 3 | 4 |
| 9. been feeling unhappy and depressed?                   | 1 | 2 | 3 | 4 |
| 10. been losing confidence in yourself?                  | 1 | 2 | 3 | 4 |

11. been thinking of yourself as a worthless person?	1	2	3	4
12. been feeling reasonably happy, all things considered?	1	2	3	4

**SECTION B:**

<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

Generally speaking:-

13. When I make plans, I am certain I can make them work	1	2	3	4	5
14. One of my problems is that I cannot get down to work when I should	1	2	3	4	5
15. If I can't do a job the first time, I keep trying till I can	1	2	3	4	5
16. When I set important goals for myself, I rarely achieve them	1	2	3	4	5
17. I give up on things before completing them	1	2	3	4	5
18. I avoid facing difficulties	1	2	3	4	5
19. If something looks too complicated, I will not even bother to try it	1	2	3	4	5
20. When I have something unpleasant to do, I stick to it until I finish it	1	2	3	4	5
21. When I decide to do something, I go right to work on it	1	2	3	4	5

Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
22. When trying to learn something new, I soon give up if I am not initially successful		1	2	3 4 5
23. When unexpected problems occur, I don't handle them well		1	2	3 4 5
24. I avoid trying to learn new things when they look too difficult for me		1	2	3 4 5
25. Failure just makes me try harder		1	2	3 4 5
26. I feel insecure about my ability to do things		1	2	3 4 5
27. I am a self-reliant person		1	2	3 4 5
28. I give up easily		1	2	3 4 5
29. I do not seem capable of dealing with most problems that come up in life		1	2	3 4 5

### SECTION C:

Please write down the **number** of people /sources that provide you with support in the following categories (You may include the same person/source in more than one category). It may help to first think of all the people and ways from which you get support.

Also, indicate your level of **satisfaction** with the support in each category by circling a level in the scale provided:

Very Dissatisfied 1	Dissatisfied 2	Neutral 3	Satisfied 4	Very Satisfied 5
------------------------	-------------------	--------------	----------------	---------------------

People/Sources That Provide Me  
With Support By Way Of:-

Overall Level of Satisfaction With  
Support In This Area:-

30. positive feedback number: [    ]	1	2	3	4	5
-----------------------------------------	---	---	---	---	---

<b>Very Dissatisfied</b>	<b>Dissatisfied</b>	<b>Neutral</b>	<b>Satisfied</b>	<b>Very Satisfied</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

People/Sources That Provide Me  
With Support By way Of:-

Overall Level of Satisfaction With  
Support In This Area:

- |                                                                    |   |   |   |   |   |
|--------------------------------------------------------------------|---|---|---|---|---|
| 31. social participation<br>Number: [    ]                         | 1 | 2 | 3 | 4 | 5 |
| 32. material assistance<br>Number: [    ]                          | 1 | 2 | 3 | 4 | 5 |
| 33. child-rearing advice and<br>information.<br>Number: [    ]     | 1 | 2 | 3 | 4 | 5 |
| 34. child-care<br>Number: [    ]                                   | 1 | 2 | 3 | 4 | 5 |
| 35. physical assistance with household<br>tasks.<br>Number: [    ] | 1 | 2 | 3 | 4 | 5 |

**SECTION D:***Please circle your answer***SUPPORT GROUP MEMBERSHIP**(answer a, b, c, or d):

(a) CURRENT MEMBER      YES      NO  
                                          1      0

If YES, how long have you been a member for?

Less than 1Mth	1 mth	2-6mths	6-mths-1yr	1-2yrs	2yrs+
1	2	3	4	5	6

how often do you attend support group meetings?

not at all	seldom	frequently	very frequently
1	2	3	4

(b) ONCE A MEMBER FOR

Less than 1mth	1Mth	2-6mths	6-mths-1yr	1-2yrs	2yrs+
1	2	3	4	5	6

(c) NEVER BEEN A MEMBER      YES

Reasons.....  
 .....

(d) INTEND BECOMING A MEMBER WITHIN A MONTH      YES      NO

**GENDER:** FEMALE      YES      (This research is on mothers only)

**ARE YOU THE PRIMARY CARE-GIVER?:**      YES      NO  
                                                                  1      2

**AGE:** 15-20      21-30      30-35      35-40      40+  
                  1      2      3      4      5

**EDUCATION LEVEL:**

NONE	PRIMARY SCHOOL	HIGH SCHOOL	COLLEGE	UNIVERSITY
1	2	3	4	5

**OCCUPATION:** none      labouring      para-professional      professional      homekeeper  
                          1      2      3      4      5

**FAMILY INCOME RANGE:**

0-10,000	10-20,000	20-40,000	40-80,000	80,000+
1	2	3	4	5

**POSTCODE:**      [      ]

**CHILDREN:**

TOTAL NUMBER OF CHILDREN

1      2      3      4      5      6      7      8      9      10

**CHILD(REN) DIAGNOSED ADD/ADHD**

NUMBER OF CHILDREN WITH ADD/ADHD?

1      2      3      4      5      6      7      8      9      10

TYPE OF ATTENTION DEFICIT DISORDER (If unsure, please ask your doctor)

TYPE I

TYPE II

OTHER (specify)

1

2

3

DURATION OF DISORDER

0-6MTHS

6MTHS-1YR

1-3YRS

3-5YRS

5YRS+

1

2

3

4

5

AGE [    ]    YEAR AT SCHOOL [    ]    MEDICATION.....

TYPE OF ATTENTION DEFICIT DISORDER (If unsure, please ask your doctor)

TYPE I

TYPE II

OTHER (specify)

1

2

3

DURATION OF DISORDER

0-6MTHS

6MTHS-1YR

1-3YRS

3-5YRS

5YRS+

1

2

3

4

5

AGE [    ]    YEAR AT SCHOOL [    ]    MEDICATION.....

**MARITAL STATUS:**

WIDOWED    DIVORCED    SEPARATED    SINGLE    MARRIED/DE-FACTO

1

2

3

4

5

IF (5) GENERAL SUPPORT FROM PARTNER:

VERY DISSATISFIED    DISSATISFIED    SATISFIED    VERY SATISFIED

1

2

3

4

**SUPPORT REGARDING ADD/ADHD:**

SUPPORT FROM PARTNER

VERY DISSATISFIED    DISSATISFIED    SATISFIED    VERY SATISFIED

1

2

3

4

SUPPORT FROM FAMILY AND FRIENDS

VERY DISSATISFIED    DISSATISFIED    SATISFIED    VERY SATISFIED

1

2

3

4

**RECENT MAJOR LIFE EVENTS**(eg divorce, death of partner, relocation). Please list. ....**THANK YOU FOR YOUR CO-OPERATION.**

## **APPENDIX B**

### **COVERING LETTER**

**PROUD RESEARCH****RAISING SCHOOL-AGE CHILDREN WITH ATTENTION DEFICIT DISORDER****(ADD/ADHD): EFFECTS ON MOTHERS**

*dear mother,*

*Much research has been conducted on the children with ADD/ADHD. Parents of children with ADD are often affected by their child's disorder. This survey is part of a research project which aims to document the effects of raising a child with ADD on Perth mothers.*

*Your support in this research effort would be greatly appreciated.*

*The questionnaire is totally anonymous; so no names and addresses are required.*

*This research is sanctioned by the Psychology Department at Edith Cowan University, and supported by L.A.D.S.*

*You are of course not obliged to fill in the questionnaire.*

*However, your co-operation in answering all questions will be appreciated.*

*The questionnaire will take about 15 minutes to complete.*

**Thank you for your co-operation.**

**PEARL PROUD**



## **APPENDIX C**

### **TYPICAL LETTER TO SUPPORT GROUP CONTACT PERSONS**



**PEARL PROUD**

77 Nicholson Road

SUBIACO WA 6008

May 1994

Glenda Batten

The Greenwood ADD Support Group

[REDACTED]

[REDACTED]

**RESEARCH INTO THE BENEFITS OF SUPPORT GROUPS FOR MOTHER  
OF CHILDREN WITH ATTENTION DEFICIT DISORDER**

Dear Glenda

My name is Pearl Proud and I am an Honours student in Psychology at Edith Cowan University. L.A.D.S. have kindly provided me with your name as the contact person for the Greenwood support group. I am seeking support from the

group in undertaking research which aims to document the possible benefits that mothers of children with ADD receive from support groups.

This research is important in that it is the first study in WA which is taking a close look at mothers of children with ADD. The local focus will mean that the findings are relevant and beneficial to local support groups. Previous research has found that mothers of children with disabilities have higher levels of stress than their partners; so I thought I'd focus on the mothers to begin with.

I am writing to ask for your support, which is very much needed. I would appreciate it if you made all the members of your support group aware of this research; and in particular asked the mothers if they could help by filling in a questionnaire. The questionnaire is not long and will be anonymous. The questionnaires will be ready to send to you late in June or early in July.

I will follow this letter up with a phone call so that I may answer any questions you and the other members might have. If you would like to contact me, please call me on [REDACTED]

Yours sincerely

Pearl Proud

## **APPENDIX D**

### **TYPICAL LETTER TO A PROFESSIONAL/CENTRE DEALING WITH ADHD**



**PEARL PROUD**

[REDACTED]  
[REDACTED]  
May 1994

**Dr Kenneth Whiting**  
[REDACTED]  
[REDACTED]

**RESEARCH INTO THE BENEFITS OF SUPPORT GROUPS FOR MOTHER  
OF CHILDREN WITH ATTENTION DEFICIT DISORDER**

**Dear Dr Whiting**

My name is Pearl Proud and I am an Honours student in Psychology at Edith Cowan University. L.A.D.S. have kindly provided me with your name as the WA expert paediatrician in the area of ADD. I am seeking your support with research I am undertaking which aims to document the possible benefits that mothers of children with ADD receive from support groups.

This research is important in that it is the first study in WA which is taking a close look at mothers of children with ADD. The findings should give us an insight into the psychological effects of dealing with this disorder. The fact that the study is Perth-based means that the findings will be more relevant and beneficial to local families, professionals and support groups encountering ADHD.

Previous research has found that mothers of children with disabilities have higher levels of stress than their partners; I think it is important to investigate, among other things, if this is the case with mothers of ADHD children.

I would appreciate it if you would allow me to leave questionnaires in your consulting in Fremantle and West Perth so that I can reach prospective participants. The questionnaires will be ready late in June or early in July. If you would like to contact me by phone, my number is [REDACTED]

I would like to thank you in advance in the case that you decide to offer your support. I look forward to your favourable response.

**Yours sincerely**

**Pearl Proud**

## **APPENDIX E**

### **DECLARATION AND CONSENT FORM**

I, Pearl Proud, promise you that I will treat the information herein contained with the utmost respect and confidentiality.

Yours sincerely, ..... Date.....

**The following indicates that you filled in the questionnaire willingly:**

I have willingly filled in this questionnaire. I was not coerced into filling in the questionnaire and could stop whenever I wished to. I understand that the information provided cannot be traced to me.

Participant's signature..... Date.....

## **APPENDIX F**

### **RESULT REQUEST SLIP**



## RESEARCH RESULTS

If you would like the results of the study sent to you, please fill in the following request slip and send it in a separate envelope:

I would like the results of the study to be sent to me when the study is completed in October.

Please send results to: Name.....

Address.....

.....

Please detach and send to: Proud Research, 77 Nicholson Road, Subiaco, 6008.

## **APPENDIX G**

### **DATA CODING INFORMATION**

**SECTION A:**

**General Health Questionnaire (1 to 12)**

**CODE**

**STRESS**

1-2 = LO Stress

3+ = HI stress

**SECTION B: General Self-efficacy Scale (13 to 29)**

**EFFICACY**

Coded as per questionnaire

**SECTION C: Parental Support Scale Sub-scales: (30 to 35)**

**Satisfaction With Perceived Support**

**SUPSATIS**

Coded as per questionnaire

**Network Size**

**SUPPSIZE**

Score: sum total

**SECTION D:**

**SUPPORT GROUP MEMBERSHIP**

YES, Current Member

Less than 1Mth	1 mth	2-6mths
1	2	3

**GROUP 1  
(OLD-MEMBER)**

6-mths-1yr	1-2yrs	2yrs+
4	5	6

**GROUP 2  
(NEW-MEMBER)**

NO, Not A Member

**GROUP 3  
(NON-MEMBER)**

**GENDER: FEMALE YES**

(A Condition for Inclusion in Study; response has to be YES)

**PRIMARY CARE-GIVER: YES = 1  
NO = 2**

**PRIMCARE**

**AGE: 15-20 21-30 30-35 35-40 40+  
1 2 3 4 5**

**AGE**

**FAMILY INCOME RANGE:**

0-10,000	10-20,000	20-40,000	40-80,000	80,000+	<b>INCOME</b>
1	2	3	4	5	
1 = 1	2 = 2	3 = 3	4 = 4	5 = 5	

**CHILDREN:**

TOTAL NUMBER OF CHILDREN

1	2	3	4	5	6	7	8	9	<b>KIDAGE</b>
1 and 2 = 1			3+ = 2						

**CHILD(REN) DIAGNOSED ADD/ADHD**

NUMBER OF CHILDREN WITH ADD/ADHD?

1	2	3	4	5	6	7	8	9	<b>ADHDKIDS</b>
1 = 1		2+ = 2							

**TYPE OF ATTENTION DEFICIT DISORDER**

TYPE I	TYPE II	OTHER (specify)	<b>ADHDTYPE</b>
1	2	3	
1 = 1	2 = 2	3 = 3	

AGE [ ] (A Condition for Inclusion in Study)

**KIDAGE**

YEAR AT SCHOOL [ ] (A Condition for Inclusion)

MEDICATION.....	YES = 1	NO = 2	<b>MEDICATI</b>
-----------------	---------	--------	-----------------

**MARITAL STATUS:****MARISTAT**

WIDOWED	= 1
DIVORCED	= 2
SEPARATED	= 3
SINGLE	= 4
MARRIED/DE-FACTO	= 5

**SUPPORT REGARDING ADD/ADHD:**

SUPPORT FROM PARTNER

**PARTSUPP**

SUPPORT FROM FAMILY AND FRIENDS

**FAMSUPP**

VERY DISSATISFIED = 1  
 DISSATISFIED = 2  
 NEUTRAL = 3  
 SATISFIED = 4  
 VERY SATISFIED = 5

**RECENT MAJOR LIFE EVENTS**

**MAJEVENT**

(eg divorce, death of partner, relocation). Please list.

.....  
 .....

VALUES ALLOCATED SCORES. SCORES DIVIDED BY 100.

## **APPENDIX H**

### **NAMES AND RANGES OF ALL VARIABLES**

**Variable Names and Ranges for All Variables****Dependent Variables:**

STRESS = stress 0-12

EFFICACY = self-efficacy 1- 85

SUPPSATIS = satisfaction with Perceived social support 6-30

SUPPSIZE = network size 0- 30

**Demographic/Situational variables:**

AGE = age of mother 1-5

INCOME = family income 1-5

MARISTAT = marital status 1-5

CHILDREN = total number of children 1-2

ADHDKIDS = number of ADHD 1-2

✓ KIDAGE = age of child with ADHD 1-18

ADHDTYPE = type of ADHD 1-3

MEDICATI = medication use 1-2

PARTSUPP = partner support with ADHD 1-5

FAMSUPP = family & friend support with ADHD 1-5

MAJEVENT = recent major life event 1-13