The treatment of adults with Attention-Deficit/Hyperactivity Disorder (ADHD): The impact on marital relationships and family functioning

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ABSTRACT

This mixed method pilot study examined whether the treatment of adults with Attention-Deficit/Hyperactivity Disorder (ADHD) would have an impact on marital relationships and family functioning. Eight patients receiving treatment from an adult ADHD Research Program and their spouses completed two questionnaires measuring marital adjustment and family functioning prior to and following 12 weeks of treatment. Follow-up semi-structured qualitative interviews were conducted with five of the couples. Quantitative results indicated that adults with ADHD observed an improvement in marital relationships following treatment. However, spouses did not observe a significant change. Neither adults with ADHD, nor their spouses reported family functioning changing as a result of treatment. The qualitative interviews suggested that adults with ADHD were more likely to describe their relationships as improving, whereas spouses were more cautious in their interpretation of their relationships following treatment. Neither adults with ADHD, nor their spouses reported changes in family functioning following treatment. In general, both adults with ADHD and their spouses supported the use of multimodal treatment for the treatment of ADHD.

RESUME

Cette étude pilote utilise une méthode mixte pour examiner si le traitement d'un partenaire ayant le trouble de déficit de l'attention avec ou sans hyperactivité (TDAH) avait un effet sur les relations conjugales et fonctionnement de la famille. Huit patients qui ont reçu le traitement du programme de recherche du TDAH et leurs conjoints ont terminé deux questionnaires, qui mesurent l'état de leur relation conjugale et le fonctionnement de la famille, avant et après 12 semaines du traitement. Des entretiens semi-structurés ont été complétés avec cinq couples. Le résultat quantitatif suggère que les adultes avec le TDAH montrent des améliorations à leurs relations conjugales. Mais, leurs conjoints n'avaient pas observé cette amélioration. Ni les adultes avec le TDAH et ni leurs conjoints ont observé un changement dans le fonctionnement de la famille. Les entretiens qualitatifs suggèrent que les adultes avec le TDAH étaient plus susceptibles de décrire que leurs relations améliorent, mais les conjoints étaient plus prudents avec leurs interprétations de leurs relations après le traitement. Ni les adultes avec le TDAH et ni leurs conjoints ont observé un changement dans le fonctionnement de la famille après le traitement. En général, les adultes avec le TDAH et leurs conjoints soutenues utilisé un traitement multimodale pour le traitement du TDAH.

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INTRODUCTION

Researchers have demonstrated the negative impact that Attention-Deficit / Hyperactivity Disorder (ADHD) can have on family functioning and on marital and parent-child relationships (Minde et al., 2002; Eakin et al., 2004; Chronis-Tuscano et al., 2008; Chronis-Tuscano et al., 2008a; Young, Gray, & Bramham, 2009). Specifically, studies have shown that couples with an ADHD partner report lower marital adjustment and family functioning than couples without an ADHD partner. Furthermore, mothers with ADHD tend to use more negative and inconsistent discipline with their children, resulting in poorer parent-child relationships and family functioning. Additionally, research has established that families with at least one family member having ADHD are at a higher risk for child conduct disorders, maternal depression, marital discord, child self-esteem problems, and anxiety disorders (Minde et al., 2002; Biederman, Faraone, & Monuteaux, 2002; Gerdes, Hoza, Arnold, Hinshaw, & Wells, 2007; Gustafsson, Hasson, Eidevall, Thernlund, & Svedin, 2008; Chronis-Tuscano et al., 2008a). Evidence suggests that effective treatment of the ADHD symptoms in children can improve family relations and overall family functioning (Hinshaw et al., 2000; Gustafsson et al., 2008). However, research exploring the impact of treating an adult with ADHD on family members, relationships, and overall family functioning is sparse. The purpose of this mixed methods investigation is to examine whether effective treatment of ADHD has an impact on marital relationships and family functioning, followed by a deeper examination of how ADHD in adults affects marital relationships and family functioning from the perspective of both the person with the disorder and their significant other. Additionally,

the question of whether effective treatment of the disorder can affect the relationship and family functioning will be examined.

LITERATURE REVIEW

1.1 Epidemiological Review of Attention-Deficit/Hyperactivity Disorder

Attention-Deficit / Hyperactivity Disorder (ADHD) is a psychiatric disorder that is characterized by developmentally inappropriate degrees of inattention, over-activity, and impulsivity (Barkley, 1990). It is estimated that ADHD occurs in 3% to 7% of the child population (Antshel & Barkley, 2009). However, it is well established that this disorder is not limited to childhood. Weiss and Hechtman (1993) found that ADHD symptoms persist into adulthood in 50% to 60% of cases. Additionally, in a large epidemiological study involving 3198 participants conducted in the United States, a 4.2% incidence rate of ADHD among adults was reported (Kessler et al., 2005). Researchers have found that adults with ADHD have significant social, academic, occupational, and emotional impairments (Eakin et al., 2004; Kessler et al., 2005; Murray & Johnston, 2006; Rasmussen & Levander, 2009).

1.2 Attention-Deficit/Hyperactivity Disorder Diagnosis

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000) diagnostic criteria, ADHD is subdivided into three subtypes: predominately inattentive; predominately hyperactive-impulsive; and the combined subtype. An individual must have at least six of the nine listed DSM-IV-TR symptoms in at least one of the diagnostic subtypes, and these symptoms must have persisted for a minimum six month period. Additionally, diagnostic criteria require 1) clear clinical evidence that the symptoms cause significant impairment in social, academic or occupational functioning; 2) the symptoms that caused impairment

must be present before the age of 7 years; 3) be maladaptive and inconsistent with the developmental level; 4) the impairment must be present in two or more settings (e.g. at work [or school] and at home); and 5) the symptoms are not due to any other condition.

1.3 Attention-Deficit/Hyperactivity Disorder, Relationships, and Functioning

Empirical research (Weiss, Hechtman, & Weiss, 2000; Eakin et al., 2004; Barkley, Murphy, & Fischer, 2007) has established that ADHD can have a negative impact on marital relationships. Adults with the disorder tend to have attention problems, are impulsive in their decision-making, have poor listening skills, have a tendency to interrupt others and have affective lability, all of which can lead to difficulties in their social relationships (Weiss et al., 2000; Goodman, 2007). Furthermore, adults with ADHD often have strained or unstable relationships with significant others and have poorer perceptions of their ability to provide emotional support to others (Adler & Cohen, 2004). Research has indicated that adults with ADHD report less marital satisfaction than non-ADHD controls (Kelley & Conley, 1987; Eakin et al., 2004). This may be linked to the finding that adults with ADHD are more likely to have extramarital affairs (Barkley, Murphy, & Fischer, 2007). Consistent with these findings, adults with ADHD have more marital breakdowns than adults who do not have the disorder (Biederman, et al., 1993; Murphy & Barkley, 1996; Able, Johnston, Adler, & Swindle, 2007) and get married more frequently than adults without the disorder (Murphy & Barkley, 1996).

A study conducted by Eakin and colleagues (2004) compared the marital relationships and family functioning of families of adults with ADHD (n = 33) to families without the disorder (n = 26). Marital relationships were assessed using the Dyadic

Adjustment Scale (DAS; Spanier, 1989). This scale measures dyadic satisfaction, dyadic consensus, affectional expression, and dyadic cohesion. All of these subscales are used to calculate an overall adjustment score. When compared to non-ADHD control participants, adults with ADHD reported poorer overall marital adjustment than adults without the disorder. The authors noted that the poorer ratings were found in all areas of marital life, including satisfaction, consensus, affectional expression, and cohesion. Conversely, the spouses of adults with ADHD and spouses in the control group did not significantly differ on the ratings of marital adjustment. The only exception found was on perception of marital satisfaction, as spouses of adults with ADHD reported less marital satisfaction than spouses in the control group. Nonetheless, a greater proportion of marital adjustment scores for the adults with ADHD and their spouses fell within the maladjustment range than couples not affected by the disorder.

The authors of the aforementioned study (Eakin et al., 2004) also examined the family functioning of adults with ADHD and their spouses. Family functioning was assessed using the Family Assessment Device (FAD; Epstein, Baldwin, Bishop, 1983) This measure assesses family functioning in areas such as problem solving, behaviour control, communication, roles, affective responsiveness, affective involvement, and general functioning. Adults with ADHD reported significantly poorer general family functioning than adults without ADHD. Areas such as affective involvement, roles, communication, and problem solving were the specific areas rated more negatively. Although spouses of the ADHD and comparison groups did not differ significantly in their perception of family functioning, spouses of adults with ADHD reported that their partners' behavior interfered with their functioning in one or more domains, such as

general household organization and/or time management, child rearing, and communication and/or marital relationship. This additional information was provided via questions asked during the psychological assessment. However, only spouses of adults with ADHD were asked to discuss whether the ADHD symptoms affected them and whether they compensate for their partner's difficulties. It may have been beneficial to ask the adults with ADHD whether they themselves thought that their ADHD symptoms affected their spouses and whether they believed that their spouses had to compensate for them in any way. Furthermore, it may have been interesting to assess whether spouses of the non-ADHD group compensated for their partners in any way. Individuals enter relationships with strengths and weaknesses; it could be par for the course that eventually one will need to compensate for their partner.

Essentially, it would seem that adults with ADHD tend to view their marital relationships and family functioning through a more negative lens than adults without the disorder. Additionally, spouses observe that areas of family functioning are affected specifically by their partner's symptoms of ADHD. Whether treatment can remove the negative lens and ameliorate the negatively affected domains of family life is still questionable, and therefore the focus that the current study seeks to explore.

1.4 Treatment Options

The following section provides a brief overview of the main interventions used in the treatment for ADHD; categorized as pharmacological, psychosocial, and combined treatment approaches.

1.4.1 Pharmacological Interventions

Research has demonstrated that pharmacological interventions have been effective in the treatment of ADHD. Medications typically fall into two categories: stimulant and non-stimulant. Stimulant medications include methylphenidate compounds such as Ritalin, Concerta and Biphentin, and amphetamine compounds such as Adderall XR and Vyvanse. Non-stimulant medications include: Atomoxetine, Buproprion, and Clonidine. Stimulant medications have been reported to be the most effective type of medication for the treatment of ADHD, with responsiveness rates in the 70%-80% range (Cumyn, Kolar, Keller, & Hechtman, 2007; Kolar et al., 2008).

Research has examined the effectiveness of stimulant medication for the past 50 years and numerous double-blind randomized placebo-controlled studies have been conducted which indicate that stimulants result in a reduction of ADHD symptoms and are significantly more effective than placebo (Barkley, 1990; Biederman et al., 2005; Spencer et al., 2005; Jain et al., 2007, Kolar et al., 2008). Jain et al. (2007) reported in a randomized, multi-center, double-blind, placebo-controlled crossover study on the use of biphasic multilayer-release (MLR) methylphenidate (Biphentin) to treat ADHD symptoms in adults (n = 39). The effectiveness of the treatment was assessed using the Clinical Global Impressions (CGI) scale and ADHD symptoms were assessed using both self-report and observer versions of the Conner's Adult ADHD Rating Scale (CAARS). Additional outcome measures included: the Hamilton Rating Scale for Anxiety (HAM-A); the Hamilton Rating Scale for Depression (HAM-D); the Longitudinal Interval Follow-up Evaluation (LIFE) which assesses depressive symptoms, anxiety, and quality of life, as well as the Patient Satisfaction Survey (PSS). The researchers found that MLR

methylphenidate produced significant improvement in the ADHD symptoms as rated by patients, with a prolonged duration of effect and minimal side effects. However, there was no difference found between the placebo and the MLR methylphenidate on measures of anxiety, depression, or quality of life. Observers did not report a significant difference on ADHD symptoms between the MLR methylphenidate and the placebo. However, the authors report that the observer forms were completed later on during the day, when the medication may have begun to wear off.

Biederman et al. (2005) reported in a double-blind, placebo-controlled, parallel-group, forced-dose-escalation study on the use of mixed amphetamine salts extended release (MAS XR; Adderall XR) in the treatment of adults (n = 223) with combined subtype ADHD. The efficacy of the treatment was assessed at monthly visits using the ADHD Rating Scale IV (ADHD-RS-IV) during 24 months. The authors report that Adderall XR was found to significantly reduce ADHD symptoms in all of the patients. Although an extensive review of the pharmacological literature is beyond the scope of the present research, a clear consensus in the literature (Barkley, 1990; Biederman et al., 2005; Jain et al., 2007; Kolar et al., 2008) supports the benefits of medication treatment for ADHD.

1.4.2 Psychosocial Interventions

Psychosocial interventions include, among many others, the use of cognitive behavioural therapy (CBT). The content of CBT as a treatment for ADHD varies from study to study but typically entails teaching patients coping strategies, as well as helping them learn how to identify and modify maladaptive patterns of thinking that could

interfere with effective coping (Safren, Sprich, Chulvick, & Otto, 2004; Knouse & Safren, 2010; Solanto, Marks, Wasserstein, 2011).

Evidence regarding the efficacy of CBT in adults with ADHD is growing. Stevenson and colleagues (2002) developed a group cognitive remediation program (CRP) for adults with ADHD. The program focused on attention problems, poor motivation, poor organizational, impulsivity, reduced anger control, and low self-esteem. The program consisted of 8 weekly therapist-led group sessions, support people who acted as coaches, and a participant exercise workbook. This was a first attempt to assess the use of psychosocial treatment on ADHD symptoms. The participants were randomized to either attend the program (n = 22) or to a waiting list control group (n=21). The outcome measures assessed were ADHD symptoms (rated using the DSM-IIIR ADHD Checklist); organization skills (rated using the Adult Organization Scale); self-esteem (measured using the Davidson and Lang Self-Esteem Measure); and anger management (measured using the State-Trait Anger Expression Inventory – STAXI). The authors report that participants in the CRP group reported reduced ADHD symptomatology, improved organizational skills, improved self-esteem, and reduced levels of anger when compared to the control group. The reduction of ADHD symptoms and improvement in organizational skills of the CRP group were maintained one year after the intervention. Although this program resulted in long-lasting improvements on most of the outcome measures, eight weeks of treatment intervention is a relatively short period of time.

Virta and colleagues (2008) developed a group psychological rehabilitation program for adults with ADHD, based on cognitive behavioural therapy and skills

training from a neuropsychological perspective. The aim of the study was to assess the effectiveness of the rehabilitation program on symptoms of ADHD (measured by an ADHD checklist and the Brown Attention Deficit Disorder Scale – adult version), as well as comorbid psychiatric disorders (measured by the Beck Depression Inventory and the Symptom Check List). Patients (n = 29) attended 11 weeks of the rehabilitation program and along with an observer completed the measures at three time points: three months prior to treatment, at the beginning of treatment, and at the end of treatment. The authors report that self-reported ADHD symptoms were reduced following the treatment, and although not significantly different there was a reduction in depression scores. The authors report that the observers did not observe any significant difference in any of the outcome measures used. However, only a small subsample of observers (n = 7) lived with the participants, thus the majority of observer ratings were based on informants who did not witness the patients on a daily basis, this may have altered the authors findings substantially.

Bramham et al. (2009) also reported on the effectiveness of their brief CBT program. The program was presented in a series of three group workshops held one day per month for three months. Fifty-nine of the 61 patients attending the CBT workshops were also prescribed medication for their ADHD symptoms. This CBT/medication group was compared to a medication-only control group who were on a wait list to attend the CBT program. The participants were asked to complete an evaluation questionnaire; a knowledge questionnaire; and psychological symptoms were assessed using the anxiety and depression subscale scores of the Hospital Anxiety and Depression Scale (HADS), the total self-esteem score from the Culture Free Self-Esteem Inventory, and the total

score from the General Self-Efficacy Scale. Attending the CBT workshops improved patient knowledge of ADHD, and increased self-esteem as well as self-efficacy compared to the medication-only group. Arguably, there would be a lot of information offered during these individual workshops in such a short period of time, given once per month, it is hard to imagine that there would be long term benefits maintained from this type of treatment delivery. Despite the limitations of these studies, results are emerging that provide support for CBT as an effective treatment method for improving ADHD symptoms.

1.4.3 Pharmacological and Psychosocial Combined Interventions

Despite the evidence for single treatment approaches and their effectiveness in the treatment of ADHD, researchers are suggesting that a combined treatment approach may be more effective (Cumyn et al., 2007; Kolar et al., 2008).

Among adults with ADHD, Safren et al. (2005) assessed the potential efficacy, patient acceptability, and feasibility of CBT for adults with ADHD who were optimally medicated, but continued to show clinically significant ADHD symptoms. Thirty-one participants were randomly assigned to one of two treatment groups: cognitive behavioural therapy plus continued use of their already prescribed medication or continued use of prescribed medication-only. The individualized program consisted of three core modules including: organization and planning; coping with distractibility; and cognitive restructuring. Participants were also offered three optional modules based on their needs, including: procrastination; anger management; and communication skills. The outcome measures were rated by the participant, as well as an independent evaluator

and included ADHD symptom severity (using the ADHD Rating Scale and Clinical Global Impression), depression (using the observer Hamilton Depression Scale and the self-report Beck Depression Inventory), and anxiety (using the observer Hamilton Anxiety Scale and the self-report Beck Anxiety Inventory). The authors found that self-reported and independent evaluator-reported ADHD symptoms were reduced following the use of CBT in combination with medication, along with a reduction in anxiety and depressive symptoms compared to patients in the medication-only group.

Similarly, Rostain and Ramsey (2006) reported on the use of a combined treatment approach that consisted of both medication and CBT. Patients (n = 43) were prescribed Adderall and attended sixteen 50-minute individual CBT sessions over the course of six months. The aim of this study was to assess the effectiveness of the combined treatment approach on ADHD symptoms, as well as on comorbid anxiety and depression symptoms. They found that at post-treatment patients showed a significant reduction in their clinician-rated ADHD symptoms, as well as significant reductions in self-reported comorbid anxiety and depression symptoms. However, these results were based solely on self-reports and did not include independent observer data.

In a multimodal treatment study of children with ADHD (MTA Cooperative Group, 2004), researchers examined the effects of medication alone, psychosocial treatment alone, and the combination of both treatments and routine community care. The psychosocial treatment consisted of parent management training, 8-week summer treatment, and school based treatment (Richters et al., 1995). It was found that medication alone was significantly more effective than psychosocial treatment alone for ADHD symptoms. As well, the combined treatment was not found to have additional

benefits over medication alone on the ADHD symptoms. However, for other outcome measures, such as academic and social functioning, as well as parent-child relationships, the combined treatment was found to be superior.

In summary, empirical evidence supports the use of pharmacological, psychosocial, and combined treatment approaches to treat ADHD. These treatments have been found to significantly reduce ADHD symptoms and possible secondary effects of the disorder, such as comorbid anxiety and depression.

1.5. Effective Treatment of Attention-Deficit/Hyperactivity Disorder and Effects on the Family

Attention-Deficit/Hyperactivity Disorder (ADHD) clearly has a negative impact on family relationships. Although limited, emerging evidence supports the hypothesis that treatment can improve family relationships.

Research has documented that the effective pharmacological treatment of ADHD symptoms in both children and adults improves parent-child relations and overall functioning (Hinshaw et al., 2000; Gustafsson et al., 2008). Gustafsson and colleagues (2008) reported on the short-term effects of amphetamine treatment of children on family interaction. This study consisted of two components. First, families of children with ADHD were compared to families of children without ADHD on three different measures – ADHD symptoms (using the Conner's parent and teacher rating scale), parental psychiatric well-being (using the Symptom Check List), and family functioning (using the Family Relationship Scale). Additionally, the families were videotaped performing various family tasks such as doing homework, completing a puzzle, solving a conflict

situation, and planning a shared activity. These videotapes were rated using the Beavers's Family Competence Scale and the Dyadic Family Interaction Scale. The authors report that the children with ADHD had significantly more ADHD symptoms than the non-ADHD controls; the mothers and fathers of children with ADHD did not differ significantly from the controls on the measure of psychiatric well-being; and mothers and fathers of the children with ADHD reported worse family functioning than did non-ADHD controls. It was also observed that the families of children with ADHD were more dysfunctional than the control families.

The second component consisted of treating the children with ADHD (n = 43) with amphetamine for three months and then the questionnaires were completed once again. Following 3-months of the children being treated with amphetamine, the researchers found that the children's ADHD symptoms as reported by parents and teachers significantly improved. They also found that symptoms of anxiety and depression in both mothers and fathers significantly improved. Furthermore, the authors found that family functioning as reported by both mothers and fathers had significantly improved following treatment. However, this study did not assess the parents for ADHD themselves; it was not among the psychiatric conditions examined using the Symptom Check List. It could have been that the parents of the children in the ADHD group also had the disorder and that played a factor in the poorer family functioning rating.

Research has also suggested that medication treatment of parental ADHD can have a positive impact on children's behaviour. In a case study, Daly and Fritsch (1995) described how a mother's ADHD symptoms (inattention and impulsivity) resulted in her two-month old infant developing failure to thrive (FTT). Failure to thrive consists of

impaired growth and development, which is associated with malnutrition. The mother was videotaped during feedings and was found to be constantly fidgeting, inattentive to her child, and extremely distracted. Following a psychiatric interview, the mother was diagnosed with ADHD. Once the mother began methylphenidate treatment for her ADHD symptoms, doctors' witnessed significant improvement in the infant's feeding, subsequent weight gain, and observed improved mother-child interaction. The authors argue that when an infant is diagnosed with FTT, it would be extremely beneficial to assess the mother for symptoms of ADHD. Given that this is a case study, which has merit in its own right, it would be beneficial to replicate this study with a larger sample.

A double-blind, placebo controlled case study conducted by Evans, Vallano, and Pelham (1994) reported on a mother-child dyad in which the mother's ADHD symptoms affected her ability to consistently and effectively use the parent training that was part of the treatment plan for her child's own ADHD symptoms. Once the mother began psychostimulant (methylphenidate) treatment for her own ADHD symptoms, her parenting behaviours improved and she observed improvements in her child's behaviour, even though the child was never treated pharmacologically for ADHD. However, this study only used the mother's self-reports, thus it is unclear if the improvement she reported actually occurred. It may have been useful to include observer reports in the data collection. This would have added an outsider's view of the mother-son relationship and the behavioural changes that occurred.

Chronis-Tuscano et al. (2008a) conducted a 5-week double-blind titration to an optimal dose of Osmotic-Release Oral System (OROS) methylphenidate on 23 mothers. The study's main goal was to assess the efficacy of treatment on ADHD symptoms and

parenting behaviours. The ADHD symptoms were measured using both self-report and current collateral forms of the Conner's Adult ADHD Rating Scale (CAARS) and parenting was assessed weekly using both self-report and informant report versions of the Alabama Parenting Questionnaire. The authors report that OROS methylphenidate reduced ADHD symptoms, as well as resulted in the reduction of inconsistent discipline and use of corporal punishment by the mothers, consequently affecting and improving the parent-child relationship. However, this study used a small sample size and was very short in duration.

These studies provide evidence that pharmacological treatment does improve parent-child relationships and presumably family functioning; however whether this improvement can be transmitted to other relationships, for example marital relationships, is still relatively unknown. Currently, there are two studies that have examined the effect of medication treatment of adults with ADHD on their marital relationships (Young, Gray, & Bramham, 2009; Wender, Reimherr, Marchant, Sanford, Czajkowski, et al., 2011). Young, Gray, and Bramham (2009) used a phenomenological approach to examine the impact of receiving a diagnosis and treatment of ADHD in adulthood from their partner's perspective. From the partner's perspective (n = 8), following treatment they observed a general improvement in the patients' functioning at both a personal level and interpersonally. Conversely, the partners also found that once the medication wore off symptoms rapidly returned. Partners also reported that certain problems remained, such as poor time management, procrastination, and motivational problems, despite the medication. Furthermore, partners noted that low self-esteem and poor self-efficacy remained present and persistent following medication treatment. Partners believed that

their spouses would benefit from additional support from health professionals and non-pharmacological therapy. A limitation of this study was that the period of time between the patient receiving a diagnosis of ADHD and treatment and the interview conducted with the partner ranged between one month and six years. During the interview, partners were asked to give a retrospective account of how life was prior to the diagnosis and whether it had changed since the patient received the diagnosis. In some cases, this may have resulted in recall bias.

Recently, Wender et al. (2011) assessed social functioning in adults with ADHD (n = 116) who were receiving medication treatment over the course of one year. The measure that they used, the Weissman Social Adjustment Scale, evaluates functioning in six areas: economic functioning, work, social and leisure activity, extended family, marital, and parental relationships. The authors found that following long-term medication treatment patients reported marked improvement in all areas of social functioning. However, it is unclear whether the partners of adults with ADHD were also asked to complete the social functioning questionnaire and thus get two perspectives of the ADHD patient's functioning.

1.6 Summary of Literature Review

In sum, research has demonstrated that Attention-Deficit/Hyperactivity Disorder (ADHD) not only impacts the patient with the disorder, but also other family members, relationships, and family functioning.

Research shows that pharmacological and psychosocial interventions do result in improvements in ADHD symptoms, as well as improvements in parent-child

relationships, and in family functioning. However, research exploring how the effective treatment of ADHD symptoms in adults affects marital relationships, family functioning and other aspects of daily life is limited.

RESEARCH QUESTIONS

2.1 Aims and Objectives

The aim of this pilot study is to explore how treatment of adults with Attention-Deficit/Hyperactivity Disorder (ADHD) impacts marital relationships and overall family functioning. An explanatory mixed methods design is used. This method uses a two step process: quantitative data collection followed by a qualitative data collection. The qualitative data is used to explain or elaborate on the findings of the quantitative data collected. The quantitative phase of the study includes the collection of pre-and post-treatment questionnaire data from the patients and their spouses or common law partners at the Montreal Children's Hospital ADHD Research Program. The qualitative phase of the study includes in-depth interviews with the same patients and their spouses. The use of both modalities is important because the first phase of data collection, quantitative, aims to demonstrate whether effective treatment of ADHD in adults impacts marital relationships and family functioning. The second, qualitative phase aims to allow participants to voice how the disorder affected them and their relationship and whether effective treatment changed their personal lives.

2.2 Quantitative Hypotheses

The hypotheses that will be tested via the quantitative data collection and analysis are:

H1: Effective treatment of adults with Attention-Deficit/Hyperactivity Disorder will improve marital relationships

And

H2: Effective treatment of adults with Attention-Deficit/Hyperactivity Disorder will improve family functioning

2.3 Qualitative Research Questions

The research questions that guide the qualitative data collection and analysis are:

1) How did the Attention-Deficit/Hyperactivity Disorder – related symptoms affect the relationship with your spouse and your family functioning?

And

2) How did the treatment received for the Attention-Deficit/Hyperactivity Disorder-related symptoms change the relationship with your spouse and your family functioning?

METHODS

This pilot study used a sequential explanatory follow-up mixed method design. This method consists of two separate phases: a quantitative followed by a qualitative phase (Creswell & Plano Clark, 2007). In this design, quantitative (numeric) data is collected and analyzed. This is followed by the collection and analyses of the qualitative (text) data. The qualitative data is used to help explain or elaborate on the quantitative results obtained in the first phase. The rationale for this approach is that the quantitative data and their subsequent analysis provide a general understanding of the research problem. The qualitative data and their analysis refine and explain those statistical results by exploring participants' views in more depth (Creswell & Plano Clark, 2007)

3.1 Ethical Review

Prior to data collection, ethical approval (See Appendix A) was obtained from the Montreal Children's Hospital Research Ethics Board (REB). The Montreal Children's Hospital is part of the McGill University Health Center. The REB provided approval for both the research protocol, as well as the English and French versions of the consent forms (See Appendix B).

3.2 Sample Recruitment

The participants of this study were recruited from an ongoing study being conducted at the Montreal Children's Hospital ADHD Research Program. The adult ADHD Research Program receives referrals from university mental health clinics,

community health clinics, other physicians, psychiatrists, and psychologists from the Greater Montreal Area. These referrals are specifically for ADHD assessments.

3.3 Assessment and Recruitment Process

The assessment process for the research program entails a number of steps, which will be briefly described here. Patients contact the ADHD Research Program and complete a brief telephone interview. This screening process consists of asking patients qualifying questions in order to ascertain the inclusion and exclusionary criteria. The initial exclusionary criteria include: recreational drug use; pregnancy or currently breast feeding; history of head injury, brain tumors, strokes, seizures, or loss of consciousness; current psychiatric comorbidity that is severe enough to require the use of pharmacological treatment; any medical conditions that preclude the use of stimulant medication, such as hypertension, cardiac disease, Tourette's etc. Additionally, potential patients are explicitly told that the ADHD Research Program conducts research and does not solely perform assessments; so all participants need to be willing to participate in research. If they do meet criteria for ADHD, they will be asked to participate in the treatment study which may involve taking medication and/or participating in twelve weeks of cognitive behavioural therapy (CBT). If the patient does meet one of the exclusionary criteria or does not wish to participate in the study, they are referred to other services in the community.

If subjects are eligible and wish to participate in the larger study, upon receipt of a referral from a medical doctor, a package of questionnaires is sent to the patient. This package contains self-report and observer questionnaires pertaining to childhood ADHD

symptoms (Wender Utah Scale – Self-report (WUS-S) & Observer-report (WUS-O), Ward, Wender, & Reimherr, 1993; and Child ADHD Symptoms Scale – Self-Report and Second Raters Report, Adler et al., 2005) and current ADHD symptoms (Conners Adults ADHD Rating Scale – CAARS, Conners, 1997; and ADHD Symptoms Scale – Self-Reported and Second Raters Report, Adler et al., 2005). Once returned, the questionnaires are scored and verified and if they support a possible ADHD diagnosis an assessment date is scheduled with the patient.

The assessment is conducted with a trained psychologist. The full assessment consists of an ADHD diagnosis assessment, a cognitive and memory assessment which offers an estimated Intelligence Quotient (I.Q.), and a psychiatric assessment, which explores the range of Axis I and Axis II diagnoses.

3.3.1 Attention-Deficit Hyperactivity Disorder Diagnosis Assessment

In addition to the questionnaires patients and their observers complete regarding their possible ADHD symptoms in childhood and adulthood, they also complete the Conners Adult ADHD Diagnostic Interview using DSM-IV criteria section I and II (CAARD-D; Conners, 1999).

3.3.2 Cognitive and Memory Assessment

The cognitive and memory assessment consists of: Wide Range Achievement Test – Fourth revision (WRAT –IV; Wilkinson & Robertson, 2005) – subscales: Reading and Arithmetic; Wechsler Adult Intelligence Scale—Third Edition (WAIS-III; Wechsler, 1997) – subscales: Information, Similarities, Picture Completion, Block Design, Digit

Symbol Coding, Digit Span, Arithmetic, Letter/Number Sequencing; Wechsler Memory Scales – Third Edition (Wechsler, 1998).

3.3.3 Psychiatric Assessment

The patients psychiatric diagnoses are made via the Structured Clinical Interview for DSM-IV-TR Axis I Disorders, Patient Edition with Psychotic Screen (SCID-I/P w/ PSY Screen; First, Spitzer, Gibbon, & Williams, 2002); and the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II; First, Gibbon, Williams & Benjamin, 1997).

Following the assessment the psychologist and the study psychiatrist review all the findings and then diagnoses and recommendations are made. The patient is given this information during a feedback session. A written report outlining results and recommendations is also given to the patient.

The final criteria required to participate in the larger study include: a diagnosis of ADHD; no other current Axis I diagnosis which requires immediate treatment; and an estimated IQ of eighty-five and above as assessed on the WAIS-III subtests. As indicated in Figure 1, a total of 87 patients were assessed for ADHD at the Research Program from May 2009 until February 2011. Of those 87 patients, 34 were eligible to participate in the larger study. The remaining 53 were either diagnosed with a comorbid SCID I diagnosis severe enough to require treatment or did not meet the diagnostic criteria for ADHD.

3.3.4 Marital Relationships and Family Functioning Assessment

The marital relationships and family functioning were measured using questionnaires. Marital relationships were assessed using the Dyadic Adjustment Scale (DAS; Spanier, 1989), which is a 32-item inventory, using a 5-point Likert scale, which is used to assess marital adjustment and distress. There is a global measure of overall adjustment, as well as four subscales: dyadic consensus (13 items), dyadic satisfaction (10 items), affectional expression (4 items), and dyadic cohesion (5 items). Dyadic consensus assesses the extent of agreement between partners on matters deemed important to the relationship, such as money and household tasks. Dyadic satisfaction refers to the amount of tension in the relationship as well as the extent to which the individual has considered ending the relationship. Affectional expression assesses the individual's satisfaction with the expression of affection and sex in the relationship. Dyadic cohesion measures the common interests and activities shared by the couple (Spanier, 1989). The total score ranges from 0 to 151. Higher scores indicate better marital adjustment. The DAS has been validated for married and cohabiting couples. Reliability for the subscales and the overall adjustment are as follows: consensus – 0.90; satisfaction – 0.94; cohesion – 0.86; affectional expression – 0.73; and dyadic adjustment – 0.96 (Spanier, 1989). The DAS has been found to have high convergent validity with other, previously used marital adjustment scales, such as the Locke-Wallace Marital Adjustment Scale. A correlation of 0.86 was found between the DAS and the Locke-Wallace Marital Adjustment Scale (Spanier, 1989).

Family functioning was assessed using the Family Assessment Device (FAD; Epstein, Baldwin, Bishop, 1983). The FAD consists of 60-items rated with a 4-point

Likert response format. In addition to a general functioning score (12 items), the FAD identifies six dimensions of family functioning: problem solving (6 items), communication (9 items), roles (11 items), affective responsiveness (6 items), affective involvement (7 items), and behaviour control (9 items). Problem solving refers to the family's ability to resolve internal and external problems at a level that maintains effective family functioning. Communication refers to whether communication within the family is clear and direct or indirect and vague. Roles assess the extent to which the family have established patterns of behaviour for handling family tasks. Affective responsiveness assesses the ability of individual family members to respond to a range of situations with appropriate quality and quantity of emotion. Affective involvement assesses the degree to which family members are involved and interested in the activities of other family members. Behaviour control refers to the "rules" of the family (Miller, Epstein, Bishop, & Keitner, 1985). Lower scores on the FAD indicate healthier family functioning. The reliability for the subscales are as follows: problem solving – 0.74; communication – 0.75; roles – 0.72; affective responsiveness – 0.83; affective involvement – 0.78; behavioural control – 0.72; and general functioning – 0.92 (Epstein, Baldwin, Bishop, 1983). The concurrent validity of the FAD was assessed with FACES-II and the Family Unit Inventory, two well-known self-report family assessment measures. Correlations between the subscales of the three measures ranged from 0.27 to 0.75. The DAS and FAD questionnaire measures were completed prior to treatment in order to ascertain a baseline measure and at twelve weeks follow-up.

3.4 Treatment Groups

Following a diagnosis of ADHD, patients were block randomized into one of three treatment groups: medication, cognitive behavioural therapy (CBT), or combined medication and CBT. During the recruitment period for the current study, there was one medication-only group, one cognitive behavioural therapy group, and one combined treatment group.

3.4.1 Medication Treatment

Patients randomized to the medication group met with the study psychiatrist and were medicated in accordance with the established clinical guidelines (CADDRA, 2011). The initial meeting consisted of taking the patient's blood pressure, pulse, and weight. A review of the patient's medical history, including cardio-vascular problems and family history of cardiovascular disease was completed. This was followed by a discussion of the pharmacological treatment options available. The advantages and limitations of each were explained. Given the greater efficacy of stimulant medication and the advantages of the long lasting stimulants, patients were typically started on one of the long lasting stimulants.

Patients were started with a long-lasting stimulant, e.g. Biphentin 10 mg/day. Depending on effects and side effects, the dosage was increased gradually each week by 10 mg/day. The patient met the psychiatrist weekly until an optimal dosage was obtained, to assess the side effects and discuss the effects of the dosage on symptoms. Once the patient no longer received additional benefit from higher doses, they were returned to the dose that provided the most relief of symptoms and the fewest side effects; this was the

patient's optimal dose. Previous experience has shown that the typical optimal dose for patients on Biphentin range from 40 -60 mg/day. If the patient could not tolerate Biphentin, they were switched to a long-lasting amphetamine product such as Adderall XR or Vyvanse and the same strategy to achieve optimal dose was used. The titration schedule for Adderall XR is as follows: the patient will initially receive 10 mg/day. The dosage is gradually increased each week by 10 mg/day. Previous experience has shown that the typical optimal dose for patients on Adderall XR ranges from 25-30 mg/day.

3.4.2 Cognitive Behavioural Therapy (CBT)

Once optimal dosage is achieved it is maintained for 12-weeks. During this period, those patients who are in the combined group will participate in weekly 1.5-hour group CBT sessions. Patients in the CBT only group will also participate in weekly 1.5-hour group CBT sessions for twelve weeks. The CBT group will consist of a maximum of 10 participants. The content of the CBT program was developed by a research group from the ADHD Research Program with experience in both CBT and ADHD (Galina, Cousins, Looper, & Hechtman, non-published).

This CBT program has 12 modules which include the following topics: psychoeducation (ADHD symptoms, the neurobiology of ADHD and pharmacological treatment), organizational skills training, time management, anger management, stress inoculation training, cognitive reframing, self-control, and relationship management. Each session begins with a review of homework assignments, and a discussion of obstacles in completing the assignments and how to overcome these obstacles. The new topic or module is presented and the homework for this module is then discussed. Each

session is accompanied by handouts presenting the module's information. Additionally, each patient attending CBT is assigned a coach. This coach contacts the patient three times per week (once in person before or after the sessions, which the coaches attend and the other two times by phone) and encourages the patient to create realistic goals and use the strategies that are taught during the course. Additionally, the coach's role is to motivate and provide support and suggestions as to how to deal with various situations that might arise relating to the topics covered in the CBT. After the 12-weeks of CBT are completed each group receives monthly booster sessions for three months to help maintain treatment gains. Coaching continues on a weekly basis during this period.

3.5 The Current Study

To summarize, participants for the current pilot study were recruited from a larger study being conducted at the Montreal Children's Hospital ADHD Research Program. In order to be eligible for the current study participants must have had a diagnosis of ADHD, be married or living with a common-law partner, and have undergone twelve weeks of treatment received at the ADHD Research Program. As this is a mixed method explanatory design study, the quantitative phase of data collection will be explained first, followed by the explanation of the qualitative data phase.

3.5.1 Phase 1 – Quantitative Data Collection

The quantitative phase included 16 participants, 8 male patients and 8 female spouses or common-law partners (from this point on participants refers to both the patients who received treatment as well as their spouses or common-law partners). Of the

patients, treatment obtained from the ADHD Research Program was as follows: 2 patients in the combined treatment group, 2 patients in the CBT-only group, and 4 patients in the medication-only group.

The graduate student conducting the present study was introduced to the eligible patients during the feedback portion of the ADHD Research Program. The details of this study, as well as what their participation would entail were explained to the patient. Essentially, it was explained that each member of the marital dyad would be asked to complete two questionnaires, the Dyadic Adjustment Scale (DAS; Spanier, 1989) and the Family Assessment Device (FAD; Epstein et al., 1983). Patients were given unsigned consent forms to bring home and discuss participation with their spouses or common-law partners and were asked to contact the graduate student if they had any questions. The graduate student contacted the patient at an agreed upon time to discuss their participation. If participants were willing to participate, a package consisting of the consent forms, a medication log[1], a demographics form and the two questionnaires were sent with the request that they be returned to the ADHD Research Program. Following the completion of the assigned treatment, patients and their spouses (or common-law partners) were asked to complete the DAS and the FAD once again. Specifically, in the case of participants in the combined treatment group, the baseline measures were completed prior to starting their medication treatment. Those in the CBT-only group completed baseline measures prior to beginning CBT. Those in the medication-only group completed baseline measures prior to starting medication. Their outcome measures were completed after 12-weeks of treatment.

[1] Note. Although these medication logs were given to the patients, they were not completed. Thus, there is no data collected on compliance of medication protocol.

3.5.2 Phase 2 – Qualitative Data Collection

The participants from the quantitative phase were contacted and asked if they would be willing to participate in a follow-up open-ended retrospective interview in order to attain improved understanding of the results obtained from the first phase. The qualitative phase consisted of 10 participants (5 male patients and 5 female spouses or common-law partners). Of the five patient participants, 1 was in the combined group and 4 in the medication-only group. Of those that did not wish to participate, the reason given was that they were too busy to participate in the follow-up component.

The qualitative portion of the research was characterized by an individual semi-structured interview conducted by the graduated student. The interviews were conducted in English. Participants whose maternal language was French were fluently bilingual in English. The interview required approximately 60 minutes[2] to complete and individuals were compensated for any expenses they incurred as a result of their participation, such as parking or babysitting. The graduate student contacted each couple and scheduled separate individual appointments with the patient and their spouse or partner to conduct the interviews. Prior to conducting the interviews participants were reminded of their rights as stipulated in the consent form. Additionally, they were informed that they could refrain from answering any questions that they were uncomfortable with and that they could stop the interview at any time. Participants were also told that the interview would be audio recorded, and that once the recordings were transcribed, the recordings would be destroyed. Furthermore, any names or identifying information would be removed from

[2] Please note that the REB approved consent forms state that the interview would take approximately 20 minutes to conduct. This however proved to be a great under-estimation of the length of time it would take. Participants were informed of this discrepancy and were aware of this modification prior to the interview.

the final transcriptions and not used in any publications. The participants were asked if they had any additional questions; the interview then began.

The semi-structured interviews (See Appendix C) used an open-ended, retrospective question format giving the participants the ability to discuss at length any of the topics that were covered. Participants and spouse interviews were conducted separately, but consisted of the same questions. Participants were also encouraged to bring up any additional aspects of daily life that they felt were pertinent to the discussion. Participants were asked to explain in their own words, how ADHD-related problems or difficulties affected various areas of daily life and the relationships within those contexts, prior to receiving treatment. Furthermore, they were asked to explain whether the treatment received changed or affected any of these areas or relationships. Although the information collected from this interview was quite broad, the focus of the current research, consistent with the research questions, is quite narrow. As such, the following topics from the interview were focused on: what problems or difficulties led the patient to come to the ADHD Research Program; how did the problems or difficulties that they described affect their partner, their marital relationship, and overall family functioning prior to treatment; and whether treatment changed or affected any of these areas, and if so in what way.

RESULTS

4.1 Quantitative Demographics

Patient participants were male; their spouses or partners were female. The sample consisted of a bimodal distribution. Specifically, the ages of participants fell into two distinct categories: under 37 years old and over 49 years old. The age range for patients was from 26 to 62 years old, with a mean of 37.50 years. There were six patients under the age of 36 years and two over the age of 50 years. The age range of partners was from 25 to 50 years old, with a mean age of 37.13 years. There were six partners under the age of 37 years and two over the age of 49 years. Six of the eight patients were diagnosed with predominantly inattentive subtype of ADHD and two were diagnosed with predominantly combined subtype of ADHD. Four of the eight patients met the diagnostic criteria for a coexisting personality disorder. Four of the couples were married and four of the couples were living in a common law relationship. The length of the relationships ranged from 1.5 years to 32 years long, with an average relationship length of 9 years and 4 months. Six of the eight couples had been married or living in a common law relationship for less than seven years and two couples had been married or living in a common law relationship for over 18 years. Four of the eight couples had children. Participant characteristics are displayed in Table 1.

4.2 Quantitative Analysis

The first hypothesis stated that treatment of adults with ADHD would improve marital and family functioning. Data collected using the Dyadic Adjustment Scale (DAS) and the Family Assessment Device (FAD) were used to test this hypothesis. The data

were entered into and analyzed using the Statistical Program for Social Sciences (SPSS), version 17. Due to the multiple subscales in each measure, parametric omnibus tests were used to analyse the data. Four repeated measures of analysis of variance (ANOVA) were conducted: patient dyadic adjustment; spouse dyadic adjustment; patient family functioning assessment, spouse family functioning assessment. All ANOVA's were assessed for sphericity using Mauchly's test for sphericity.

4.2.1 Marital Relationship

A 2-way repeated measures ANOVA was conducted on the Dyadic Adjustment Scale (DAS) subscale t-scores. The within-subjects factors were time-point (baseline and follow-up) and subscale (dyadic consensus; dyadic satisfaction; affectional expression; dyadic cohesion; and dyadic adjustment). Table 2 displays the means and standard deviations of the marital adjustment t-scores for each subscale for both patients and their spouses as measured by the DAS for both time-points.

Patient Data

For patient marital adjustment scores, the Mauchly's test for sphericity indicated that the data violated the assumption of sphericity ($\chi^2(9) = 18.10, p < 0.05$), therefore the degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\varepsilon = 0.55$). The results indicate that there was a significant main effect of time-point, $F_{(1, 7)} = 7.08, p = 0.03$, which indicate an improvement in scores. The results also indicate a significant main effect of subscale, $F_{(2.19, 15.34)} = 5.45, p = 0.02$, which indicate that the individual subscales significantly differed from each other, but the improvement due to treatment did not vary as a function of subscale. There was no significant interaction

between time-point and subscale found, $F_{(2.13, 14.92)} = 1.74$, $p = 0.21$. These results suggest that patients observed a significant improvement in their marital relationships following treatment.

Figure 2 displays patient DAS mean t-scores and standard errors for each subscale at baseline and at follow-up. As shown, improvements can be observed in each subscale with the exception of dyadic satisfaction, which decreases at follow-up.

Spousal Data

For spousal marital adjustment scores, the Mauchly's test for sphericity indicated that the assumption of sphericity was not violated ($\chi^2(9) = 16.49$, $p > 0.05$), therefore the degrees of freedom did not need to be corrected. The results show that there was a significant main effect of subscale, $F_{(4, 28)} = 5.14$, $p = 0.003$, indicating that the subscales significantly differed from each other but the improvement due to treatment did not vary as a function of subscale. However, there was no significant effect of time-point on dyadic adjustment, $F_{(1, 7)} = 1.08$, $p = 0.33$. Nor was there a significant main interaction between time and subscale found, $F_{(4, 28)} = 0.21$, $p = 0.93$. These results suggest that spouses did not observe an improvement in their marital relationships following treatment.

Although the statistical analyses revealed no significant difference from baseline to outcome measure for spouses, Figure 3 depicts spouse DAS mean t-scores and standard errors for each subscale at baseline and at follow-up. As shown, improvements can be observed in each subscale with the exception of dyadic satisfaction, which remains unchanged. Figures 4 and 5 depict the comparison between patient and spouse DAS mean t-scores and standard errors. These graphs reveal that spouses initially report their

relationships as better than the patients. However the follow-up graph depicts a reversal, patients report a better relationship than their spouses following treatment.

4.2.2 Family Functioning

A 2-way repeated measures ANOVA was conducted on the Family Adjustment Device (FAD) subscale means. The within-subjects factors were time-point (baseline and follow-up) and subscale (problem solving; communication; roles; affective responsiveness; affective involvement; behavior control; and general functioning). Table 3 displays the means and standard deviations of the family functioning scores for each subscale for both patients and their spouses as measured by the FAD at both time-points.

Patient Data

For patient family functioning scores, the Mauchly's test for sphericity indicated that the assumption of sphericity was not violated (χ^2 (20) = 30.02, $p > 0.05$). The results indicate that there was a significant main effect of subscale, $F_{(6, 42)} = 2.65$, $p = 0.03$, indicating that the subscales significantly differed from each other. However, there was no significant effect of time-point on family functioning, $F_{(1, 7)} = 0.29$, $p = 0.61$, nor was there a significant interaction between time point and subscale, $F_{(6, 42)} = 0.37$, $p = 0.89$. These results suggest that patients did not observe an improvement in their family functioning following treatment. Furthermore, as depicted in the graph reporting the means and standard errors of the patient FAD (See Figure 6), the data reveal that patients observe an improvement in only three of the seven subscales following treatment: roles, communication, and behavioural control.

Spousal Data

For spousal family functioning, the Mauchly's test for sphericity indicated that sphericity was met (χ^2 (20) = 30.05, $p > 0.05$). The results indicate that there was a significant main effect of subscale, $F_{(6, 42)} = 4.89$, $p = 0.001$, indicating that there was a significant difference between the subscales. However, there was no significant effect of time-point, $F_{(1, 7)} = 0.29$, $p = 0.61$, nor was there a significant interaction between time-point and subscale found, $F_{(6, 42)} = 0.37$, $p = 0.89$. These results suggest that spouses did not observe an improvement in their family functioning following treatment. Figure 7 depicts the means and standard errors of the spousal FAD, despite the non-significant results reported in the statistical analysis, spouses report an improvement in each of the subscales, except for problem solving. Figures 8 and 9 depict the comparison between patient and spouse means and standard errors of the FAD at baseline and follow-up. As can be observed, patients and spouses report clear differences on each of the subscales at each time point.

The discrepancy between patients reporting improvements in their marital relationships following treatment and spouses observing no significant change was possibly a function of the small sample size. However, to further clarify this issue, it was proposed that follow-up interviews with each couple be conducted to obtain a better understanding of how they experienced the symptoms of ADHD in their relationship and whether the treatment that was received changed their experience. Additionally, since many aspects of family functioning directly affect marital relationships, such as roles and communication, this area was also further examined to obtain a better understanding of the lack of significant change observed in the analysis of the quantitative data.

4.3 Qualitative Demographics

There were five couples from the original eight who agreed to participate in the qualitative interview. The five male patients included two predominantly-combined subtypes and three predominantly-inattentive subtypes. The patients ranged in age between 26 and 50 years, with a mean age of 33.60 years old. There were four patients under the age of 32 years and one patient was 50 years old. The partners ranged in age between 26 and 49 years, with a mean age of 33.00 years old. There were four partners under the age of 33 years and one partner was 49 years old. Of the five participants, three met diagnostic criteria for comorbid personality disorders. Three of the couples were married and two were living in common law relationships. The length of the relationships ranged from 1.5 years to 31 years, with a mean length of 8 years and 6 months. There were four couples who were married or living in a common law relationship for four years or less and one couple had been married for 31 years. Table 4 displays the demographic information regarding the five couples that agreed to participate in the qualitative interview.

4.4 Qualitative Analysis

The qualitative interviews were transcribed verbatim and verified. Thematic analysis (Bruan & Clarke, 2006) was used as the approach for the analysis. Thematic analysis begins by a thorough reading of the transcripts and the analyst becomes "immersed" in the data, taking notes and developing initial codes. Codes refer to the most basic segment of the raw data or information that can be assessed in a meaningful way

concerning the topic under study (Bruan & Clark, 2006). These codes are then grouped together into themes.

4.5 Qualitative Results

Seven main themes were found when analyzing the data. Common themes were found across patients and spouses; however, the explanations offered were at times contradictory within and across the groups. Table 5 displays the main themes that emerged following the analysis of the transcripts.

4.5.1 Research Question 1

The first research question that guided the qualitative component of the study was: "How did the Attention-Deficit/Hyperactivity Disorder – related symptoms affect the relationship with your spouse and your family functioning?" There were three main themes that emerged: ADHD symptoms lead to a number of problems in the relationships and family functioning; there was a need to accommodate, compensate, and modify expectations; and questions regarding whether ADHD was the sole contributing explanation for the behaviour. Each theme will be discussed.

Theme 1: Symptoms of Attention-Deficit /Hyperactivity Disorder led to numerous problems

All of the participants stated that the symptoms of ADHD led to numerous problems with varying degrees of severity within their relationship and their family functioning. These included problems with intimacy, affective lability, impulsive

decision-making, trouble with follow-through and inconsistency. These problems had secondary consequences on each member of the dyad, the relationship, and overall family functioning. The most common and problematic issue discussed by both partners was communication. The following excerpts reflect some of the communication problems that arose within couples.

> Interviewer: How did your symptoms impact your ability to communicate with your wife?
> Patient: …I don't say what I think and I (*Pause*) don't process things immediately. And then I walk away from it and I say, "Oh man, I should have said this... I should have said that. How come I froze? Why did you freeze? You should have said all this. What's wrong with you?" That's not healthy and that causes a lot of other problems to come. Because you bottle things in and you get angry and under your breath you're walking around going (*muttering obscenities*) and, you're angry and then you take it out in places that are not healthy, because now you're not dealing with your anger anymore, you're expressing it, and there is nothing there that you should be expressing with but you're expressing it over there…So you're wounding people because you're not communicating. (Patient 01)

> Interviewer: Can you tell me how your symptoms affected your relationship with your partner?
> Patient: prior to treatment I think that my irritation level and my annoyance with things was really great. Like I mean, partly it was due to the distraction and the forgetfulness and all that. But I mean, I was kind of moody and I can see that now. Just stuff that really shouldn't be things that I should get irritated about I would, you know. And I find that I wouldn't blow up. I don't have a temper, in terms of like I explode and get "rageal" (*sic*) but I would shut down and just like,

I'm going to like retreat. Not good for the relationship (*Laughs*) and it didn't help me deal with the actual problem, you know? (Patient 05)

Interviewer: Can you tell me how his symptoms affected your relationship?
Spouse: Sometimes we do have a bit of trouble because he talks a lot, like he really talks a lot and I'm not a huge talker, you know? Sometimes our conversations are quite balanced, but other times he just, he really just talks too much and I just completely misunderstand what he's saying and then I get upset with him, because I'm thinking that he is saying one thing, but he's saying something completely different. I feel like if he said it in 5 words I wouldn't be confused, you know? He's giving me this long soliloquy about something (*Laughs*) and then I'm completely misunderstanding it. (Spouse D)

Interviewer: What were the problems or difficulties that you saw that lead (Patient's name) to come to the clinic?
Spouse: … like he's very sweet, but if anytime, you ask him a direct question, he freezes…As for relationships, especially if there's a problem: "like yeah, you're getting on my nerves". I possibly get on his nerves but he doesn't tell me this, right? Which I'd rather he do, so that we can talk about it and get over it but he doesn't and it's like you know you really can't do that. Why are you doing that? (Spouse B)

Theme 2: Compensate, accommodate and modify expectations

A second common theme was that of compensation, accommodation and modification of expectations. Spouses would compensate or were expected to compensate and accommodate for their partners ADHD symptoms and the resulting behaviors.

Interviewer: how do you think the ADHD-related problems have affected your wife?

Patient: It's the fact that she can't sit and snuggle with me. And that in talking with me I need to fidget and do something else, so she feels that I'm not giving her the full attention and, you know, her inability to realize, you know, what aspect of something is an unwanted behavior and what aspect of it is the ADHD and thus give a certain amount of leniency, you know? (Patient 02)

Interviewer: how do you think your ADHD-related problems have affected (Spouse's name)?

Patient: she has to compensate for me in many ways, she has to repeat herself a lot, she has to, a lot of the times, assume I'm going to forget and that she needs to take care of something because she knows I won't do it. She brings things up repeatedly, like remember Saturday night at my mom's, she knows like that she has to be that way with me, that's one way it's affected her. It sort of gives her, it's going to give her, not a huge burden, but a little bit she has to assume. (Patient 03)

Interestingly, spouses viewed the act of compensating for their ADHD partners either as a self-preservation technique, or as an integral part of being in a relationship.

Interviewer: You mentioned it affected your relationship, but can you give me a bit more detail on how his symptoms affected your relationship?

Spouse: I guess when the kids were young; I was busy with the kids. I wouldn't ask him to do much, because he wasn't reliable, he would forget and stuff. Although he's a good father, but as far as, you know helping out and stuff, he wasn't negligent, but he wasn't present, as present mind present, like his body present. So I would do, so I wouldn't

get disappointed, I would take more things on my shoulders. So our relationship wasn't negative all the time. (Spouse E)

Spouse: Like I said I did before and I still do that now…whenever I know we have something to do together, instead of just telling him, he won't necessarily always remember to put it in his calendar. So, I put it in his calendar in his phone. I'm continuing to do that. If that helps him. I don't feel like, some people would maybe ask me "well don't you feel like you're motherly or that's mothering to him?" No. I mean we're in a couple. We're there to help each other out. That's how I see it. (Spouse C)

Another topic discussed by the spouses interviewed was that of expectations. Spouses spoke about how they had to modify: (a) what they expected out of life for themselves; (b) the expectations that they had for their partners; (c) and the expectations of what they wanted from the relationship.

Spouse: …But there were those moments where I was like "oh my gosh. He's really pushing me over the edge" and you know he's over there happily sleeping (*pretends to snore*) and I'm so mad because of how I spent my day cleaning up his mess. I am so mad. What did I do? What did I do? (*using an upset tone*) But its okay, it's not really that bad. It's really not that bad, if you dial back your expectations and don't think you're going to rule the world. (Spouse B)

Interviewer: How would you say his symptoms specifically affected your relationship or did they?

> Spouse: I would say that they did. You know, I think that (*Pause*), it's just sort of a source of conflict when somebody doesn't meet your expectations; I mean that sounds kind of bad. I have pretty standard expectations, right? … It was just frustrating for me and it did create a bit of conflict. I couldn't figure out why he wasn't sort of meeting the expectations. Meeting his (*emphasis*) expectations, really. They were his expectations too. (Spouse D)

> Spouse: I feel like really at some point I need to know how you feel about certain things and he really gets stuck on that. And that was why I was like this is an emotional need of mine that he's not going to be able to fill, so I have to get over that… The biggest thing that I have to get over is not being able to get closure on issues. I just got to move on, cause it's not going to happen. (Spouse B)

Theme 3: Attention-Deficit/Hyperactivity Disorder the sole explanation?

Both patients and spouses questioned whether some behavior could solely be attributed to Attention-Deficit/Hyperactivity Disorder and reasoned that some of the behaviors could be due to learned behavior, comorbid behavior, or to personality.

> Spouse: I don't know, because also we were younger (*Pause*) he didn't do much chores. (*Pause*) But I think I don't know if it's a symptoms or just the way he was raised, because his mom did everything (emphasis), so maybe when we moved together he was expecting me to do everything… So I don't know if it's a symptom or it's that, just a learned behaviour. (Spouse A)

Spouse: … it's financial and job related and fitting in and being accepted. And there was a period where being accepted for his status, how much money you have. So that affected us, I mean you could imagine, that it affected us unbelievably but he's a good person inside. He has a good heart. He loves me… but that's why I wonder if it's more than ADHD sometimes. (Spouse E)

Patient: And part of my character and personality is that I have a flare for extravagance and I don't discount that as ADHD exclusively. I think its part of who I am now. So I'm not going to change that, but I think combined with the ADHD, it makes it unpleasant for (Spouse's name) and for other people around me. (Patient 01)

Spouse: I didn't really get bothered by it all that much. So I didn't think it affected our relationship. Like we didn't fight about those things. The only things we fought about were like chores; because he would sometimes, like half do them. I don't know if that's related to ADHD. (*Laughs*) I would get really annoyed with that. So that's the extent of it. (Spouse C)

4.5.2 Research Question 2

The second research question guiding the investigation was as follows: "How did the treatment received for the Attention-Deficit/Hyperactivity Disorder-related symptoms change the relationship with your spouse and your family functioning?" Themes that emerged were: there has been improvement, but it's still a struggle; treatment is a process, not a cure; self-imposed individualized treatment plans; and uncertainty as to whether

improvements were a result of the treatment received from the program or due to outside help.

Theme 1: Improvement? Yes. Still a struggle? Definitely.

Although all patients stated that treatment definitely reduced their ADHD symptoms, thus resulting in better communication and improving their relationship, when asked what aspects of daily life were still a "problem" or a "struggle", most admitted that communication would still be considered troubled, especially once the medication wore off.

> Patient: I think my communication is getting better and better. I got to be careful to listen. It's easier to jump in and think that you know what somebody is saying. You finish people's sentences. It's still a bad habit, but it's less than it used to be. And people notice that (*Pause*) I do listen much closer. (Patient 01)

> Patient: so in general when the medication is working I notice a huge difference, I'm able to sit still, I'm much more able to snuggle, clearer in my communications, I don't get distracted in terms of when I've been given three things to do, I don't forget all three of them. I can manage to hold on to them, you know do this, get distracted by the phone and then come back to number 2. So it helps immensely with all of that. I don't get as frustrated… I've noticed a huge increase (*Pause*) improvement, sorry, in my relationship with my wife. It's just unfortunate that the pills aren't 24 hours a day, 7 days a week. (Patient 02)

> Interviewer: what about communication, has your communication improved or changed in any way since medication?

Patient: maybe improved a little bit, a little bit. Its easier to communicate when you, you know, you're aware that you have this tendency not to pay attention, but most of my medication is in effect, during I don't even take it in the weekend, so its more during the work hours and so when I'm with my family really I'm sort of, well, I'm not under the effect of the medication, so its really more of a marginal difference. (Patient 03)

Spouse: When on medicine he is able to communicate and express himself better. At this moment a lot of the other stuff is being worked out. The biggest thing that I have to get over is not being able to get closure on issues. I just got to move on, cause it's not going to happen. No matter how or what I say. No matter how frustrated I get, he is just going to be like… (*Pause*)
Interviewer: you have to be (*sic*) accept him?
Spouse: yeah, even on medicine. He's barely able, especially when you ask him direct questions, he cannot formulate a sentence. He just can't. (Spouse B)

Theme 2: Treatment is an ongoing process, not a cure

Many patients and spouses discussed that treatment should be considered a process, and that symptoms don't completely disappear. It was suggested that aspects of the relationship and family functioning were improving, however, very slowly.

Patient: (Spouse's name) looks at me and says and she told you, I know she told you. The medication doesn't work, he's just like he was before and yadda, yadda, yadda. Cause she tells me that to my face. So and but I know its working, I know what's happening inside of me, but it's not a miracle drug. It's not like all of a sudden, you know, I couldn't see all my life and you gave me a pair of glasses and now I can read. I got to learn how to read. that's going to take me a while, it's

a whole…and I'm still me and I still have all those tendencies, all of those routines and behaviours things that I've grown up with. (Patient 01)

Interviewer: So did the treatment help you in the aspects you were expecting? Patient: yeah, yeah, I would say yes, it did help me in those aspects. Like I said in a slight way but they did help me in the aspects that I hoped they would help me in. I'm not fully there yet, but I know where to go and I know how to get there, you know? So it did. (Patient 05)

Interviewer: So has your relationship with him changed since he began treatment? Spouse: well, you know what I think that, I don't know it's hard to say with the treatment. Like he's very inconsistent with taking his medication, like exceptionally so. (*Pause*) So it's really hard to say. I think that (*Pause*) things are getting better (*Pause*), but there is sort of a larger gap between (*Pause*) like things are (*Pause*) I don't know how to describe it, its like things are slowly, slowly getting better, but then its almost like it seems worse when he regresses back to his (*Pause*) old behaviour sometimes. Just because he's gotten slowly, slowly, slowly better. So when he is really inconsistent and he goes back to being (*Pause*) you know really (*Pause*) sort of distracted, (*Pause*) or sort of fidgety or upset, or whatever. It just seems so much worse, because things are getting better. (Spouse D)

Theme 3: Self-imposed individualized treatment plans

An important theme that emerged from the interviews was that patients individualized their medication use for their own circumstances and needs. In all of the couples interviewed, either the patient or their spouse admitted that the treatment protocol as prescribed was not being completely followed. In order for the medication to work

effectively, it should be taken as prescribed, typically once daily with a long-lasting stimulant. However, patients admitted that they did not take their medication on week-ends or on days off from work. They explained that they did not feel it was necessary for them to take the medication on days off. Another patient admitted that he was currently not on his medication at the time of the interview and had not been taking it for the past couple of weeks. The explanation offered was that due to scheduling conflicts he was not able to get a new prescription for his medication. It was also shared that patients would take "drug holidays" for weeks at a time. Explanations offered for the "drug holidays" were due to health concerns regarding the long-term effects of the medication on the body. Finally, it was shared that one patient would be inconsistent in taking his medication and would typically only take them on an "as needs" basis, for example when he needed to focus for an extended period of time. The self imposed individualized treatment plans resulted in patients not taking their medication during the evenings and weekends, times where they were most likely to interact with their spouse, which may have significantly impacted the study results.

Theme 4: Was it the treatment, or additional help?

Two of the couples interviewed sought additional treatment for the ADHD symptoms in the form of life coaches and implementing coping strategies. As such, when asked whether the treatment received from the program changed their relationship in any way spouses openly discussed their uncertainty as to whether that specific treatment alone resulted in the changes they witnessed in their relationship and family functioning.

Interviewer: have any of them (areas of family functioning) changed since treatment?
Spouse: no honestly, I think that there has been some improvement, but I don't think that I can attribute it to the medication. It's the life coach, its other things that have been going on. I don't think it has anything to do with the medication, yeah. (Spouse D)

Interviewer: so, since treatment, has anything changed?
Spouse: yeah, but it's both my coaching and the medicine.
Interviewer: okay
Spouse: The medicine, because he's so happy go lucky, clueless. Just the medicine alone wouldn't have done it. (Spouse B)

4.6 Summary

Overall, patients and spouses stated that the symptoms of ADHD negatively affected their relationships and family functioning to varying degrees, from mildly affected to severely affected. However, in one case, a couple indicated that the symptoms of ADHD in no way affected their relationship and treatment did not change this view. As such, couples depicting their relationships and functioning as more severely affected were more likely to describe them as slowly improving. Patients were more likely to describe their relationship as significantly improving, whereas spouses were more cautious in their interpretation of their relationships following treatment.

DISCUSSION

This pilot study examined whether the treatment of adults with Attention-Deficit/Hyperactivity Disorder (ADHD) would have an effect on marital relationships and family functioning. Currently, there is very limited research examining this aspect of treatment of ADHD in adults. Overall, the findings were consistent with those found in the literature, which suggests that treatment does improve symptoms and general functioning at a personal level; however symptoms and problems return once the medication has worn off (Young, et al., 2009).

The explanatory sequential mixed method approach allowed for a broader investigation to be conducted. Not only were quantitative data collected, but the results found could be further examined using a qualitative interview which gave the participants an ability to describe their experiences. However, the findings should be interpreted very cautiously as this pilot study consisted of a very small sample size. Moreover, the qualitative component did not have enough subjects to see ongoing repetition of particular themes (i.e. thematic saturation).

The first hypothesis addressed was that effective treatment of adults with Attention-Deficit/Hyperactivity Disorder (ADHD) will improve marital relationships. This hypothesis was partially supported as patients reported an improvement in dyadic adjustment scores following treatment. Conversely, their spouses reported no significant difference following the treatment. Although a significant difference was not found statistically, the graph depicting baseline and outcome measures for spousal dyadic adjustment scores (See Figure 3) does show that spouses observed an improvement in the various subscales.

During the qualitative interview both patients and spouses were asked to describe how they believed the ADHD-related problems or difficulties affected their relationship and whether the treatment that was received from the research program changed it in any way. Patients were once again more likely to state that treatment improved their relationship with their spouses, although spouses would cautiously state that there had been improvement. However, they also stated that by the evening the medication had usually "worn off" and so did not affect the relationship, a finding similar to Young et al. (2009).

The improvement reported by adults with ADHD in their marital relationships following treatment may be a manifestation of positive illusory bias. Positive illusory bias is defined as a disparity between self-report of competence and actual competence such that self-reported competence is substantially higher than actual competence (Owens, Goldfine, Evangelista, Hoza, & Kaiser, 2007). A wide array of childhood ADHD literature reports that children with ADHD self-perceptions do not correspond with objective measures of performance or with observer ratings of competence. Thus, it could be that the patients interviewed were over-estimating the improvement they saw in their relationships, based on the fact that their symptoms were much improved and therefore they believe that this improvement had also translated to their relationships.

Additionally, most of the patients revealed that it was difficult for them to observe how their ADHD-related symptoms affected their relationship with their non-ADHD partners, because they were "just being themselves". Frequently, the patients were informed by their partners that certain behaviours were creating problems for the relationship, such as the need to pace back and forth while having serious conversations.

The confessions that some behaviours were unwanted, irksome, or irritating led to frequent arguments, eventually resulting in compromises that both parties could agree to.

The second hypothesis addressed was that effective treatment of adults with Attention-Deficit/Hyperactivity Disorder (ADHD) will improve family functioning. This hypothesis was not supported by the quantitative data. Although there were no significant differences found following treatment for either patients or spouses, the graphs depicting baseline and outcome measures for family functioning (See Figures 6-7) show that both patients and spouses report improvements in their family functioning from the baseline measures. The qualitative interviews revealed that areas of family functioning, such as finances and housekeeping had not changed following treatment. Participants acknowledged that if any changes had occurred, it would be difficult to attribute them solely to the medication. Most of the couples had conducted extensive research on ADHD themselves and had created or implemented various strategies to help with day-to-day tasks, such as calendars or checklists. Some couples had also enlisted the aid of ADHD coaches to train the adult with ADHD with various coping skills and techniques that could be used to improve deficits in this area.

Our findings are consistent with other studies. Eakin et al. (2004) found that spouses reported that ADHD behaviours often interfered with areas of family functioning, such as communication and housekeeping. Similar to Young et al. (2009) spouses reported that symptoms and residual problems often returned once the medication wore off. Furthermore, both patients and spouses actively voiced a desire for a multi-modal treatment approach, arguing that medication alone would not suffice.

The current study assessed marital relationships and family functioning using the same two measures as Eakin and colleagues used in their research. In fact, participants for the Eakin et al. (2004) study were recruited from the Montreal Children's Hospital ADHD Research Program. It is important to note that Eakin et al. (2004) only measured marital relationships and family functioning of families of adults with ADHD prior to treatment, whereas the current study examined the baseline measures, as well as the treatment effect on marital relationships and family functioning. A comparison of the quantitative results between those presented in the Eakin et al. (2004) paper and the baseline measures of the current study is quite interesting. Eakin et al. (2004) presented the dyadic adjustment scale results using the DAS means, whereas we used the mean t-scores. In order to conduct a comparison, we used the mean scores of our data and found that the participants in our study rated their baseline marital relationships as better than the participants of the 2004 study in all areas except for dyadic cohesion. A possible explanation for this discrepancy is that our participants are younger and have been married or living in common-law relationships for a shorter period of time than those presented in Eakin et al. (2004). Conversely, our participants rated their family functioning on the Family Assessment Device as worse than the participants presented in Eakin et al. (2004). This may also be attributed to the age of our sample. They may still be having trouble adjusting to living with a partner and performing the various duties that are required to function as a well adjusted family.

5.1 Practical and clinical implications of the study

Interviews with the women revealed that they appreciated the opportunity to discuss their relationships with someone who had knowledge of how ADHD could affect a relationship. Often they would turn to friends or family for advice or simply to vent and would feel completely misunderstood. Therefore, it may be useful for spouses of ADHD partners to attend counselling sessions with an expert in ADHD to discuss how ADHD has affected the relationship, as well as their own personal well being. It may also be useful to create a support program for spouses of adults with ADHD, so that they can openly discuss with others who have had similar experiences and share different coping skills that they have developed, similar to the Al-Anon program developed for spouses of alcoholics.

Along similar lines, the couples discussed how their ability to communicate with each other, although improved, was still problematic. It may be useful for these couples, in addition to treatment, to receive couple's therapy. The couple's therapy could focus on teaching them how to communicate in a constructive manner and improve the overall quality of their relationship.

As indicated, patients would often individualize their treatment plan as they saw fit. They would not take the medication on week-ends, would have "drug holidays", or would take their medication when they believed it was necessary. As such, treating physicians should discuss with their patients the feasibility and the possible side effects of these individualized treatment plans. The patients should also be encouraged to take medication in the evenings and on the weekends in order for the treatment to have an impact on spousal relationships and family functioning. Furthermore, the patients in this

study were asked to complete a medication log, in order to ascertain treatment adherence and any modifications in the type of medication taken. However, in all cases patients either claimed that they had lost the form, brought back an empty form or completely forgot about completing the form. The fact that symptoms of the disorder, i.e. forgetfulness, disorganization, inattention, will play a significant role when dealing with adults with ADHD is an issue that needs to be taken into consideration in either a therapeutic or research context.

5.2 Research Implications

When conducting research concerning medication treatment and its impact on any outcome measure, researchers should have a clear picture of whether the patients are following the treatment protocol or if they have decided to individualize their treatment. All deviations should be noted and taken into account in the analysis. As indicated previously, an attempt was made to collect compliance data with this sample. However, this proved to be futile, as patients did not complete them. Perhaps, researchers could make weekly phone calls to patients and ask them about their medication intake and whether there were any modifications made regarding the type and the dose used.

When conducting research involving couples, we would suggest that the dyad not be interviewed back-to-back. It would be preferable to schedule their interviews on different days. By scheduling the interviews on separate occasions it offers the interviewer the opportunity to look at the relationship from a fresh perspective. A further recommendation would be to have two similarly trained interviewers conduct the interviews with each member of the dyad. The use of two interviewers would also be

beneficial in the transcription and analysis process, thereby increasing the reliability of the analyses.

5.3 Strengths of the study

The use of a mixed method design yielded insights into the relationships that a quantitative only study would not have. It gave our participants the ability to voice how they experienced ADHD and describe how it affected their relationship and family functioning, as well as describe whether the treatment received changed them.

An additional strength of this study is it used data from both the patients and from significant others. When examining relationships, it is crucial to get both sides of the story. Otherwise, one often ends up with a biased picture. Furthermore, interviews were conducted individually, allowing participants to discuss more openly with the interviewer how they felt with regards to their relationship. It is strongly believed that this openness would never have occurred had the interviews been conducted with their spouse's present.

5.4 Limitations of the study

The study would have benefited from two qualitative interviews, one at baseline and the other following treatment. However, the desire to do qualitative interviews arose after sample recruitment and patients had already been treated and so only retrospective data could be obtained about baseline. The use of a single interview requesting participants to discuss how their lives were prior to treatment may have lead to retrospective or recall bias.

Additionally, it was made clear from the interviews that patients tended to individualize their medication use for their own particular circumstances and needs. These decisions often did not cover evening and weekend times and therefore did not impact significantly on spousal relationships, which may need to be specifically targeted.

Along similar lines, the current study did not collect data on treatment compliance, despite an attempt to do so. Having to complete a daily medication log may be a challenge for some adults with ADHD who have a tendency to be disorganized and frequently misplace key items or forget to complete tasks. Nonetheless, this is a limitation that requires careful consideration.

Another distinct limitation, which may have changed the analysis of the qualitative data, was that the semi-structured interview used led participants to focus solely on the negative aspects of having ADHD, and not on the positive attributes, this may have led to a negative bias in the results.

5.5 Future Research

It is clear that Attention-Deficit/Hyperactivity Disorder in adults has on impact on marital relationships and family functioning. In order to improve both marital relationships and family functioning relying solely on medication may not suffice, as it may not provide complete coverage. Additional psychosocial treatment and encouraging spousal involvement in the treatment process may be needed to improve relationships and functioning. Replicating the pilot study is suggested, with modifications to reflect the limitations noted. The study requires a larger sample with baseline and after treatment

interviews. Additionally, treatment adherence should be monitored (specifically, which medication is taken, the dose, and the frequency), as well as what other treatments are being received by the patient above and beyond the assigned treatment plan. Moreover, the qualitative interviews should also include questions regarding the positive attributes that the ADHD partner brings to the dyad.

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Appendix A

Ethical Approval Certificate from the Montreal Children's Hospital Research Ethics Board

L'Hôpital de Montréal pour enfants
The Montreal Children's Hospital

Centre universitaire de santé McGill
McGill University Health Centre

Feb 7, 2011

Dr. L. Hechtman
Psychiatry
MUHC - Montreal Children's Hospital
Room # K-118

Re: 09-090-PED **The Treatment of Adults with Attention Deficit/Hyperactivity Disorder (ADHD): The Impact on Family Members, Relationships, & Family Functioning**

Dear Dr. Hechtman,

We have received an Application for Continuing Review of the Montreal Children's Hospital Research Ethics Board for the research study referenced above and the report was found to be acceptable for ongoing conduct at the McGill University Health Centre. At the MUHC, sponsored research activities that require US federal assurance are conducted under Federal Wide Assurance (FWA) 00000840.

The re-approval for the study protocol, consent form, & assent (English & French version Oct. 15, 2010) was provided via expedited review of the Chair on Feb. 4, 2011 will be reported to the Research Ethics Board (REB) at its meeting of February 14, 2011, and will be entered accordingly into the minutes.

All research involving human subjects requires review at a recurring interval and the current study approval is in effect until Feb. 3, 2012. **It is the responsibility of the principal investigator to submit an Application for Continuing Review to the REB prior to the expiration of approval to comply with the regulation for continuing review of "at least once per year".**

However, should the research conclude for any reason prior to the next required review, you are required to submit a Termination Report to the Committee once the data analysis is complete to give an account of the study findings and publication status.

Should any revision to the study, or other unanticipated development occur prior to the next required review, you must advise the REB without delay. Regulation does not permit initiation of a proposed study modification prior to REB approval for the amendment.

Sincerely,

Elizabeth Craven
Coordinator, Research Ethics Board

Appendix B

Patient and Spouse Consent Forms: English and French version

Consent Form

The Treatment of Adults with Attention-Deficit/Hyperactivity Disorder (ADHD): The Impact on Family Members, Relationships, and Family Functioning

This Study is supported by The Montreal Children's Hospital Foundation via Shire Endowment Fund

Principal Investigator: Lily Hechtman, M.D.

Purpose of the Study

You are being asked to voluntarily take part in a research study for adults with Attention Deficit/Hyperactivity Disorder (ADHD). This disorder usually begins in childhood and continues into adolescence and adulthood. The symptoms of ADHD include: poor attention span, unusual levels of activity, distractibility, and impulsivity. Studies have shown that these symptoms may interfere with learning, working, and personal relationships.

There is limited data on the impact on family members when a parent has ADHD. The purpose of this study is to examine the effect of treatment on marital relationships, parent-child relationships, and overall family functioning. The treatment will involve stimulant medication and cognitive behavioural therapy (CBT).Cognitive behavioural therapy is a type of treatment that teaches you coping skills in different areas of life, from organizational skills and time management to anger and stress management.

The study aims to recruit 15 people who are 18 to 60 years of age who have been diagnosed with ADHD and have a spouse (partner) OR a spouse (partner) and child (ren) over the age of 7 years old.

Study Procedures

1. You and your spouse and any child (ren) you may have will be asked to complete 5 questionnaires that will take no more than 30 -45 minutes to complete. After you finish treatment you and your spouse/partner will also be given an interview which will take no more than 20 minutes to complete. The interview will be done with a graduate student working under the supervision of Dr. Lily Hechtman.

The questionnaires include:

(a) A questionnaire which will ask common questions about you – such as age, ethnic background, marital history, etc (about 5 minutes to complete)

(b) A questionnaire which measures emotional states (about 15-20 minutes to complete)

(c) A questionnaire about spousal/partner relationships (about 10 minutes to complete)

(d) A questionnaire that looks at parent-child relationships (about 10 minutes to complete)

(e) A questionnaire about family functioning (about 10 minutes to complete)

The interview will ask you and your spouse/partner questions about how the problems or difficulties you had because of your ADHD symptoms affected different areas of your life and if these areas of your life have changed since you began treatment. These interviews will be done individually with a research assistant and be audio recorded. (audio or video recording?).
Please note that what you say to the research assistant will be kept confidential.

2. You will be put into one of three groups randomly (50/50 chance) either:
   a. a medication only group
   b. a cognitive behaviour therapy (CBT) group
   c. a medication and the CBT group

3. Depending on the group you are in, you will be given a prescription for stimulant medication to treat the ADHD symptoms; you will meet with the psychiatrist to discuss the different stimulant medication options. The possible benefits, limitations, and side effects of the medication will be reviewed and explained.

   The type of stimulant medication, format, and dose will be optimally individualized to your needs. You will meet with Dr. Hechtman on a 1-2 week basis and the dose will be adjusted, depending on any symptoms and side effect that you may experience. You are responsible for the cost of the prescription.

   Your optimal dose is the dose where further increases do not result in greater improvement before side effects are troublesome. It may take several weeks to achieve your optimal stable dose. If you do not show significant improvement on one type of stimulant medication or have significant side effects, another type will be tried.

   Once you are at your optimal stable dose, you will be maintained on that dose.

4. You will continue the medication for 12 weeks. During this time you will be asked to fill out a daily medication log. The medication log will let us know on what days you took your prescribed medication and if the dose changed, during your participation in the study. It should take about 3 minutes to complete.

5. If you are put into the CBT only group or the medication and CBT group you will go to weekly CBT meetings for 12 weeks. This will be followed by three booster sessions that will happen once a month. The booster group meetings are to give you extra support and make sure that the skills that you learnt are helping you in your daily lives. The CBT and booster group meetings will last about 1 ½ hours long each.

6. At the end of the 12-week period you and your family will return to the clinic and will be interviewed and asked to fill out the same questionnaires that you did at the first visit.

Cognitive Behavioural Therapy (CBT) Group

The CBT Group will consist of attending weekly group sessions lasting 1-1/2 hours (from 6:30 PM to 8:00 PM) for twelve weeks. Each session will be lead by a psychologist who has experience with CBT for adults with ADHD. There will be 10 participants with ADHD in the group. You will be assigned a coach who will sit in on all of the sessions and will become familiar with the strategies presented in the group therapy sessions. Your coach will call you on the telephone two times per week at pre-arranged times to encourage you to complete any homework assignments and to use the strategies you have learned outside the sessions. You will be provided with light refreshments during the sessions. At times there may be psychiatrists and psychologists from this clinic attending the group to present on various topics, such as the current research on ADHD and medication treatment. These sessions are not recorded.

After the 12 weeks of CBT meetings, and your spouse (partner) and /or child (ren) will be asked to return to the clinic in order to complete the same interview and questionnaires as you did prior to receiving treatment.

At the completion of the study, you will be informed of the relevant findings of the study. If the answers you and your family provide to the questionnaires indicate any psychological or familial problems, you will be referred to the appropriate resources.

Potential Risks

The potential risks include feeling mildly uncomfortable answering questions regarding your emotions and relationships with your spouse (partner) and child. Completing the questionnaires may give rise to temporary anxiety or embarrassment. However, if you find a question too embarrassing, you may choose not to answer that question and continue with the questionnaire.

Additionally, there may be the added inconvenience of scheduling a meeting with you and your family to visit the ADHD Research Clinic. However, we will do our best to accommodate your schedule and make it as convenient as possible.

Potential Benefits

The benefits would be that you are helping us gain knowledge about the impact of treatment on family relationships and functioning, an area where knowledge is very limited. Additionally, if personal or family difficulties, such as psychological problems or abuse are detected, you and /or your family will be referred to outside sources.

Cognitive Behavioural Therapy

The group therapy is conducted by experienced clinicians who will ensure that the group process remains positive, and no individual member is subject to criticism or ostracism. Individuals may benefit from the CBT sessions because they provide them with valuable coping-strategies, which may improve their academic, work, and social functioning in many domains.

Voluntary participation

Your participation is voluntary and you should not feel any obligation. You may agree now and are free to withdraw from this study at any time. If you discontinue your participation, please contact Dr. Hechtman at 514-412-4449.

During the course of the study you will be informed of any new findings, which may affect your willingness to continue participation in this study.

Confidentiality

All information obtained during the study will be kept confidential as required or permitted by law and will be kept for 5 years. Your personal identity will remain confidential, as you will only be identified by a subject identification number. The interview will be transcribed and then the audio tape will be destroyed. The transcribed interview will be given your subject identification number and be placed with the rest of the information obtained during the study. If direct quotes are used in future publications your name and any other identifying information will not be used to assure confidentiality. What happens to tapes? Will direct quotes be used in publication? If so, confidentiality cannot be guaranteed.)

Your name and other personal identifying information will not be used in any reports, presentations or publications.

If the results of this study are published, you will not be identified in any way. Your personal information will be kept strictly confidential except as required or permitted by

law. As required by Health Canada, and representatives of the McGill University Health Centre Research Ethics Office Quality Assurance, may have access to your records as it pertains to this study.

Compensation

You will receive $50 for participating in 2 family visits to reimburse you for the inconvenience, parking, travel, etc.

Contact person

For any information concerning this study please contact Dr. Hechtman at (514) 412-4449 or the study coordinator, Tara Errington (514) 412-4400 ext. 23317.

For additional information regarding your rights as a research subject, you may contact the hospital's Patient Representative (ombudsman), Patricia Boyer (514) 412-4400 ext. 22223, who is independent of the investigator, and works to protect patients' rights.

Consent

I have read this information and consent form and have had the opportunity to ask questions which have been answered to my satisfaction before signing my name. I acknowledge that I will receive a copy of the Information and Consent Form for future reference. I agree to (have my child) participate in the research study.

I understand the nature of the treatments outlined in this document, and I have had the opportunity to have all my questions answered. I also know that I continue to have this opportunity during the course of the project.

My identity will be kept confidential to the extent demanded by law.

I further understand that should I have any questions about my treatment or any other matter related to participation in this project, I may call Dr. Hechtman at 514-412-4449, and I will be given the opportunity to discuss in confidence any questions, which I may have.

At the completion of the study, I will be informed of relevant findings of the study.

Participant: _____ _____
(print) (sign)

Date: _____

Person who obtained consent: _____ _____
(print) (sign)

Date: _____

MONTREAL CHILDREN'S HOSPITAL
OF THE MUHC
RESEARCH ETHICS BOARD
APPROVED FOR 12 MONTHS
FROM: Feb. 4. 2011
SIGNED: _____
CHAIRPERSON

MONTREAL CHILDREN'S HOSPITAL
OF THE MUHC
RESEARCH ETHICS BOARD
PROTOCOL AMENDMENT EFFECTIVE
FROM: Oct. 21/2010
SIGNED: _____
CHAIRPERSON

Formulaire de consentement

Traitement des adultes atteints du trouble de déficit de l'attention avec hyperactivité (TDAH) : effets sur les membres de la famille et leurs relations ainsi que sur le fonctionnement familial

L'étude est financée par la Fondation de L'Hôpital de Montréal pour enfants par le fonds de dotation Shire

Chercheur principal : Dr Lily Hechtman

Objectif de l'étude

On vous invite à prendre part volontairement à un projet de recherche, destiné aux adultes, atteints de trouble de déficit de l'attention avec hyperactivité (TDAH). D'ordinaire, ce trouble débute à l'enfance. Parmi les symptômes du (TDAH), on rapporte une courte durée d'attention, un niveau d'activités inhabituel, de la distractivité et de l'impulsivité. Des études rapportent que ces symptômes nuisent à l'apprentissage, au travail et aux relations personnelles.

Les données relatives aux effets sur les membres de la famille d'un parent atteint de TDAH sont restreintes. Le but de la présente étude est d'examiner les effets du traitement sur la relation conjugale, la relation parent-enfant et sur le fonctionnement de la famille dans son ensemble. Le traitement comprendra la prise d'un stimulant et la thérapie cognitivo-comportementale (TCC). La TCC est un type de traitement qui vous apprendra à développer des habiletés d'adaptation dans différents domaines de la vie : du sens de l'organisation et de la gestion du temps à la maîtrise de la colère et à la gestion du stress.

On prévoit inviter 15 personnes âgées de 18 à 60 ans, qui ont eu un diagnostic de TDAH et qui ont un conjoint (partenaire) ou un conjoint (partenaire) et un enfant (des enfants) âgé(s) de plus de 7 ans.

Déroulement de l'étude

1. On vous invitera à vous, votre conjoint et tout enfant que vous auriez, à remplir 5 questionnaires qui ne prendront pas plus de 30 à 45 minutes de votre temps. A la fin de votre traitement, votre conjoint ou partenaire et vous, vous présenterez également à une entrevue qui ne prendra pas plus de 20 minutes. L'entrevue sera facilitée par un étudiant diplômé, étant sous la surveillance du docteur Lily Hechtman.

   Les questionnaires comprennent

   (a) un questionnaire renfermant des questions de base telles que âge, origine

ethnique, antécédents matrimoniaux, etc. (prend environ 5 minutes à remplir).

(b) un questionnaire a pour but d'évaluer les états émotifs (prend de 15 à 20 minutes à remplir)

(c) un questionnaire relatif à la relation avec un conjoint/partenaire (prend environ 10 minutes à remplir).

(d) un questionnaire sur la relation parent-enfant (prend environ 10 minutes à remplir).

(e) un questionnaire sur le fonctionnement de la famille (prend environ 10 minutes à remplir).

Durant l'entrevue, on vous posera à vous et à votre partenaire ou conjoint des questions sur la façon dont les problèmes ou difficultés causés par vos symptômes du TDAH, ont eu des répercussions sur différents aspects de votre vie et si ces aspects ont changé depuis l'amorce de votre traitement. Ces entrevues individuelles facilitées par un assistant de recherche seront enregistrées sur bande audio.
Veuillez noter que ce que vous direz à l'assistant de recherche sera traité de façon confidentielle.

2. On vous affectera de façon aléatoire (une chance égale) à l'un des trois groupes thérapeutiques suivants:

   1. groupe de thérapie médicamenteuse;
   2. groupe de thérapie cognitivo-comportementale de groupe (TCC);
   3. groupe de thérapie médicamenteuse et de thérapie cognitivo-comportementale de groupe (TCC).

3. Dépendent sur le groupe thérapeutique auquel vous appartenez, on vous prescrira un stimulant contre les symptômes du TDAH. Vous rencontrerez le psychiatre qui discutera avec vous des différents stimulants. Elle passera en revue et expliquera les avantages, les limites et les effets indésirables du médicament.

   Le type, le format et la dose du stimulant seront ajustés à vos besoins de façon optimale. Vous rencontrerez le docteur Hechtman sur une base hebdomadaire ou bimensuelle et le dosage sera ajusté selon tout symptôme que vous pourriez présenter et tout effet indésirable que vous pourriez ressentir. Vous devrez assumer les coûts du médicament.

   Votre dose optimale est la dose pour laquelle toute autre augmentation ne donnera pas de meilleur effet thérapeutique sans entraîner des effets indésirables gênants. Cela pourrait prendre plusieurs semaines avant d'atteindre une dose optimale stable. Si vous ne montrez pas des signes d'amélioration en prenant un certain type de stimulants ou si vous en ressentez des effets indésirables, on vous en prescrira un autre type à titre d'essai.

Une fois que vous atteignez votre dose optimale stable, vous continuerez à prendre cette même dose.

4. Vous continuerez à absorber le stimulant durant 12 semaines, période à laquelle on vous demandera de consigner votre prise de médicament dans un registre spécial à cet égard. Ce registre permettra de savoir quels sont les jours durant lesquels vous avez pris votre médicament et si la dose a été changée au cours de votre participation à l'étude. La consignation de cette information dans le registre devrait prendre environ 3 minutes de votre temps.

5. Si vous êtes dans le deuxième or troisième groupe, vous devrez assister hebdomadairement à une séance de TCC durant 12 semaines. Ceci sera suivi de trois séances de rappel qui auront lieu une fois par mois. Ces séances de groupe sont conçues afin d'apporter un soutien supplémentaire et d'assurer que les aptitudes acquises vous aident dans votre quotidien. Les séances de TCC et de rappel dureront environ 90 minutes chacune.

6. À la fin de la période de 12 semaines, votre famille et vous effectuerez une autre visite à la clinique où vous subirez l'entrevue et remplirez le même questionnaire que ceux de votre première visite.

Thérapie cognitivo-comportementale de groupe (TCC)

Si vous avez été nommé à la TCC, vous assisterez à des séances de groupe d'une heure et demie (de 18 h 30 à 20 h), sur une base hebdomadaire, durant douze semaines. Chaque séance sera présidée par un psychologue ayant de l'expérience en TCC pour adultes atteints de TDAH. Chaque groupe sera formé de 10 participants atteints de cette affection. On vous attribuera un accompagnateur qui assistera à toutes les séances et se familiarisera avec les stratégies employées durant celles-ci. Votre accompagnateur vous téléphonera deux fois par semaine à des horaires fixés d'avance et vous encouragera à faire vos exercices et à mettre à l'œuvre les stratégies apprises hors séances. Des rafraîchissements seront offerts durant celles-ci. Veuillez noter qu'il y aura parfois des psychiatres et des psychologues rattachés à cette clinique, qui assisteront aux séances afin de présenter des exposés sur divers sujets tels la présente étude sur le TDAH et les thérapies médicamenteuses. Ces séances ne seront pas enregistrées.

Après les 12 semaines de séances de TCC auxquelles vous avez pris part, on invitera votre conjoint (partenaire) et (ou) votre enfant (vos enfants) à effectuer une visite en clinique afin de subir à nouveau la même entrevue et de remplir les mêmes questionnaires que celles de la période précédant votre thérapie.

À la fin de l'étude, on vous informera de toute découverte pertinente faite dans le cadre de l'étude. Si vos réponses aux questionnaires ou bien celles de votre famille révèlent un quelconque problème d'ordre psychologique ou familial, on vous orientera vers des ressources appropriées.

Risques potentiels associés à l'étude

Les risques potentiels comprennent une légère gêne à répondre aux questions concernant vos émotions et votre relation avec votre conjoint (partenaire) et votre enfant.
Le fait de remplir des questionnaires pourrait entraîner une anxiété temporaire ou de l'embarras. Toutefois, si vous trouvez une question trop embarrassante, vous pouvez décider de la sauter et de passer à la suivante.

Il y aurait en plus le dérangement causé par l'organisation d'une rencontre durant laquelle votre famille et vous visiterez le centre de recherche du TDAH. Cependant, on déploiera tous les efforts afin de vous donner un rendez-vous qui soit le plus possible à votre convenance.

Avantages potentiels associés à l'étude

L'avantage serait de contribuer à l'enrichissement des connaissances relatives aux effets du traitement sur les relations et le fonctionnement de la famille; un domaine dans lequel les connaissances sont très restreintes. Si des difficultés d'ordre personnel ou familial tels des problèmes psychologiques ou d'abus étaient cernés, on vous orientera à vous et (ou) votre famille vers des ressources externes.

Thérapie cognitivo-comportementale

La thérapie de groupe est présidée par des cliniciens expérimentés qui s'assureront que le déroulement se fait dans un esprit positif et qu'aucun participant n'est sujet à la critique ou à l'ostracisme. Les sujets de recherche pourraient tirer avantage de leur participation aux séances de TCC, qui mettent au point de bonnes stratégies de prise en charge. Celles-ci pourraient améliorer leur fonctionnement pédagogique, professionnel et social dans divers domaines.

Participation volontaire

Votre participation à l'étude est volontaire et vous ne devez pas vous sentir forcé d'y participer. Vous pouvez donner votre consentement maintenant et le retirer à tout moment. Si vous mettez un terme à votre participation à l'étude, veuillez entrer en contact avec le Dr Hechtman, au 514-412-4449.

Au cours de l'étude, on vous informera de tout nouveau fait qui pourrait influer sur votre volonté de continuer à participer à la présente étude.

Confidentialité

Tous les renseignements collectés, au cours de l'étude, seront traités de façon confidentielle tel que requis ou permis par la loi et ils seront conservés durant 5 ans. De même, votre identité sera traitée confidentiellement, car vous ne serez identifié que par un numéro d'identification de sujet. L'entrevue sera transcrite, ensuite la bande audio sera détruite. De même, l'entrevue transcrite portera le numéro d'identification de sujet et sera conservée avec le reste des données collectées au cours de l'étude. Si toutefois des citations sont rapportées dans des revues scientifiques, votre nom et tout élément signalétique ne seront pas indiqués. On ne peut toutefois vous assurer une confidentialité absolue.

On ne mentionnera ni votre nom ni tout autre renseignement signalétique personnel dans tout rapport, revue scientifique ou présentation.

Si les résultats de la présente étude sont annoncés, vous ne serez aucunement identifié. Vos renseignements personnels seront traités de façon strictement personnelle, excepté si requis ou permis par la loi. Tel que requis par Santé Canada, des représentants du programme de l'assurance-qualité du Bureau d'éthique de la recherche du Centre universitaire de santé McGill pourraient avoir accès aux données vous concernant et qui sont relatives à cette étude. L'équipe de recherche aura accès à vos dossiers hospitaliers.

Indemnité compensatoire

Vous recevrez 50 $ pour vos deux visites familiales. Ceci remboursera vos frais de stationnement et de transport et indemnisera tout inconvénient qui vous aurait été causé.

Personnes ressources

Pour tout renseignement relatif à la présente étude, veuillez communiquer avec le docteur Hechtman au 514-412-4449 ou avec Tara Errington, coordinatrice de l'étude, au 514-412-4400, poste 23317.

Pour de plus amples renseignements concernant vos droits, à titre de sujet de recherche, veuillez communiquer avec Patricia Boyer, commissaire à la qualité des services (représentante des patients/ombudsman), au 514-412-4400, poste 2223. Madame Boyer n'est pas associée au chercheur de l'étude et a le mandat de protéger les droits des patients.

Consentement

J'ai lu le présent formulaire de consentement et j'ai eu l'occasion de poser des questions auxquels j'ai reçu des réponses satisfaisantes avant l'apposition de ma signature sur le formulaire. Je comprends que je recevrai un exemplaire du formulaire de consentement et de renseignements, à des fins de consultation future. J'accepte de participer (que mon enfant participe) à l'étude.

Je comprends la nature des traitements décrits dans le présent document et j'ai eu l'occasion d'obtenir des réponses à toutes mes questions. Je sais aussi que l'on continuera à répondre à mes questions au cours de l'étude.

Je suis libre de me retirer du groupe thérapeutique à tout moment sans que cela ne porte préjudice à mon traitement ni à celui de ma famille à cet hôpital ou à tout autre.

Mon identité sera protégée contre toute divulgation dans les limites permises par la loi.

Je comprends également que si j'ai des questions à poser sur le traitement ou sur ma participation à la présente étude, je pourrai entrer en contact avec le docteur Lily Hechtman, au 514-412-4449. Ceci me permettra de poser des questions en toute confidentialité.

Je pourrai également entrer en contact avec la commissaire à la qualité des services (représentante des patients), madame Patricia Boyer, au 514-412-4400, poste 22223, afin de discuter avec elle de toute question relative aux droits des patients ou à des lésions subies.

À la fin de l'étude, on me rapportera tout fait significatif relatif au groupe dans son ensemble.

Participant : _____ _____
(En lettres moulées) Signature

Date :_____

Personne qui
obtient le consentement : _____ _____
(En lettres moulées) Signature

Date :_____

MONTREAL CHILDREN'S HOSPITAL
OF THE MUHC
RESEARCH ETHICS BOARD
APPROVED FOR 12 MONTHS
FROM: Feb. 4 2011
SIGNED: _____
CHAIRPERSON

MONTREAL CHILDREN'S HOSPITAL
OF THE MUHC
RESEARCH ETHICS BOARD
PROTOCOL AMENDMENT EFFECTIVE
FROM: Oct. 21. 2010
SIGNED: _____
CHAIRPERSON

L'Hôpital de Montréal pour enfants
The Montreal Children's Hospital

Centre universitaire de santé McGill
McGill University Health Centre

Consent Form (Spouse Form)

The Treatment of Adults with Attention-Deficit/Hyperactivity Disorder (ADHD): The Impact on Family Members, Relationships, and Family Functioning

This Study is supported by The Montreal Children's Hospital Foundation via Shire Endowment Fund

Principal Investigator: Lily Hechtman, M.D.

As you are aware your spouse (partner) has been diagnosed with Attention-Deficit/ Hyperactive Disorder (ADHD) in our research clinic and will be receiving treatment (medication and / or 12 weeks of group cognitive behaviour therapy). Cognitive behavioural therapy is a type of treatment that will teach your spouse (partner) coping skills in different areas of life, from organizational skills and time management to anger and stress management. We wish to evaluate the impact of this treatment on spouses, children, and family functioning.

You will be asked to complete questionnaires with the help of a research assistant that will evaluate these areas. The questionnaires include:

(a) A questionnaire which will ask common questions about you: age, ethnic background, marital history etc. (about 5 minutes to complete)

(b) A questionnaire which measures emotional states (about 15-20 minutes to complete)

(c) A questionnaire which measures spousal/partner relationships (about 10 minutes to complete)

(d) A questionnaire that looks at parent-child relationships (about 10 minutes to complete)

(e) A questionnaire about family functioning (about 10 minutes to complete)

We will ask you to complete these measures before your spouse / partner is treated and four months later. If you have a child /children over the age of seven (7) they will be asked to complete the child versions of the questionnaires. At the end of your spouse/partner's treatment you and your spouse/partner will be given a short interview. The interview will be done with a graduate student working under the supervision of Dr. Lily Hechtman. This interview will ask you about how different areas of your life have

been affected by your spouse/partner's problems or difficulties due to their ADHD symptoms and if these areas have changed since they began treatment. These interviews will be done individually with a research assistant and will be audio recorded. Please note that what you say to the research assistant will be kept confidential.

Potential Risks

The potential risks include feeling mildly uncomfortable answering questions regarding your emotions and relationships with your spouse (partner) and child. Completing the questionnaires and interview may give rise to temporary anxiety or embarrassment. However, if you find a question too embarrassing, you may choose not to answer that question and continue with the questionnaire.

Potential Benefits

The benefits would be that you are helping us gain knowledge about the impact of treatment on family relationships and functioning, an area of research that is very limited. Additionally, if personal or family difficulties, such as psychological problems or abuse, are detected, you and/or your family will be referred to the appropriate outside resources, such as social services or psychologists.

Voluntary participation

Your participation is voluntary and you should not feel any obligation. You may agree now and are free to withdraw from this study at any time. If you discontinue your participation, please contact Dr. Hechtman at 514-412-4449.

You are free to not participate or to withdraw from the study at any time without compromising your spouse's (partner) treatment or that of your family.

At the completion of the study, you will be informed of relevant findings of the study.

Confidentiality

All information obtained during the study will be kept confidential as required or permitted by law and will be kept for 5 years. Your personal identity will remain confidential, as you will only be identified by a subject identification number. The interview will be transcribed and the audio tape will be destroyed. The transcribed interview will be given your subject identification number and be placed with the rest of the information obtained during the study. If direct quotes are used in future publications your name and any other identifying information will not be used, however complete confidentiality cannot be guaranteed.

If issues of abuse are detected or revealed as a result of your participation in this study, you will be referred to the appropriate support services.

Your name and other personal identifying information will not be used in any reports, presentations or publications.

If the results of this study are published, you will not be identified in any way. Your personal information will be kept strictly confidential except as required or permitted by law. As required by Health Canada, and representatives of the McGill University Health

Centre's Research Ethics Office Quality Assurance, may have access to your records as it pertains to this study.

Contact person

If you have any questions about your participation in this project, you may call Dr. Hechtman at 514-412-4449, and you will be given the opportunity to discuss in confidence any questions, which you may have.

For additional information regarding your rights as a research subject, you may contact the hospital's Patient Representative (ombudsman), Patricia Boyer (514) 412-4400 ext. 22223, who is independent of the investigator, and works to protect patients' rights.

Consent

I have read the above information or it has been read to me. I have had the opportunity to discuss it and ask questions. By signing this form, I agree to participate in this research study. A copy of this consent form will be given to me when it is signed.

Participant: _____ _____
(print) (sign)

Date: _____

Person who obtained consent: _____ _____
(print) (sign)

Date: _____

MONTREAL CHILDREN'S HOSPITAL
OF THE MUHC
RESEARCH ETHICS BOARD
APPROVED FOR 12 MONTHS
FROM: Feb. 4. 2011
SIGNED: _____
CHAIRPERSON

MONTREAL CHILDREN'S HOSPITAL
OF THE MUHC
RESEARCH ETHICS BOARD
PROTOCOL AMENDMENT EFFECTIVE
FROM: Oct. 21, 2010
SIGNED: _____
CHAIRPERSON

L'Hôpital de Montréal pour enfants
The Montreal Children's Hospital

Centre universitaire de santé McGill
McGill University Health Centre

Formulaire de consentement (Formulaire destiné au conjoint)

Traitement des adultes atteints du trouble de déficit de l'attention avec hyperactivité (TDAH) : effets sur les membres de la famille et leurs relations ainsi que sur le fonctionnement familial

L'étude est financée par la Fondation de L'Hôpital de Montréal pour enfants par le fonds de dotation Shire

Chercheur principal : Dr Lily Hechtman

Comme vous le savez, votre conjoint (partenaire) a été diagnostiqué de trouble de déficit de l'attention avec hyperactivité (TDAH) à la clinique de recherche et suivra un traitement (thérapie médicamenteuse et (ou) 12 semaines de thérapie cognitivo-comportementale de groupe). La TCC est un type de traitement qui apprendra à votre conjoint (partenaire) à développer des habiletés d'adaptation dans différents domaines de la vie : du sens de l'organisation et de la gestion du temps à la maîtrise de la colère et à la gestion du stress. On aimerait étudier l'effet de ce traitement sur les conjoints et les enfants et sur le fonctionnement de la famille.

C'est pourquoi, on vous invite à remplir des questionnaires, qui porteront sur les domaines susmentionnés, avec l'aide d'un assistant de recherche. Les questionnaires auxquels vous devriez répondre sont les suivants :

a) Un questionnaire renfermant des questions de base telles que âge, origine ethnique, antécédents matrimoniaux, etc. (prend environ 5 minutes à remplir).

b) Un questionnaire a pour but d'évaluer les états émotifs (prend de 15 à 20 minutes à remplir)

c) Un questionnaire a pour but d'évaluer la relation du patient avec le conjoint ou le partenaire (prend environ 10 minutes à remplir)

d) Un questionnaire a pour but d'évaluer la relation parents-enfants (prend environ 10 minutes à remplir)

e) Un questionnaire a pour but d'examiner le fonctionnement de la famille (prend environ 10 minutes à remplir)

On vous demandera de remplir les questionnaires susmentionnés avant que votre conjoint ou partenaire ne soit soigné et quatre mois suivant son traitement. Si vous avez un enfant ou des enfants âgé (s) de plus de 7 ans, on l'(les) invitera à remplir une version des questionnaires pour enfant. À la fin du traitement de votre conjoint ou partenaire, vous et votre conjoint ou partenaire, vous présenterez pour une brève entrevue. L'entrevue sera facilitée par un étudiant diplômé, étant sous la surveillance du docteur Lily Hechtman. Durant l'entrevue, on vous posera des questions sur la façon dont les différents aspects de votre vie ont été affectés, par les problèmes ou difficultés causés par les symptômes du TDAH qu'aurait présentés votre conjoint ou partenaire et si ces aspects ont changé depuis l'amorce de son traitement. Ces entrevues individuelles facilitées par un assistant de recherche seront enregistrées sur bande audio. Veuillez noter que ce que vous direz à l'assistant de recherche sera traité de façon confidentielle.

Risques potentiels associés à l'étude

Les risques potentiels comprennent une légère gêne à devoir répondre à des questions relatives à vos émotions et à votre relation avec votre conjoint ou partenaire et avec votre enfant. Le fait de répondre aux questionnaires pourrait entraîner une anxiété temporaire ou de l'embarras. Cependant, si vous trouvez une question trop embarrassante, vous pourrez la sauter et passer à la prochaine.

Avantages potentiels associés à l'étude

Un des avantages de l'étude est que votre participation contribuera à l'approfondissement des connaissances relatives à l'effet du traitement sur les relations familiales et sur le fonctionnement de la famille; un domaine restreint en recherche. En outre, si des difficultés d'ordre personnel ou familial tels des problèmes psychologiques ou d'abus étaient cernés, votre famille et (ou) vous serez orientés vers des ressources externes telles des psychologues ou des travailleurs sociaux.

Participation volontaire

Votre participation à l'étude est volontaire et vous ne devez pas vous sentir forcé d'y participer. Vous pouvez donner votre consentement maintenant et le retirer à tout moment. Si vous mettez un terme à votre participation à l'étude, veuillez entrer en contact avec le Dr Hechtman, au 514-412-4449.

Vous êtes libre de ne pas participer à l'étude ou de vous en retirer à tout moment, sans que cela ne porte préjudice au traitement de votre conjoint ou partenaire ou bien à celui de votre famille.

À la fin de l'étude, on vous rapportera tout fait significatif relatif à l'étude.

Confidentialité

Tous les renseignements collectés, au cours de l'étude, seront traités de façon confidentielle tel que requis ou permis par la loi et ils seront conservés durant 5 ans. De même, votre identité sera préservée et traitée confidentiellement, par le fait même que vous ne serez identifié que par un numéro d'identification de sujet. L'entrevue sera transcrite, ensuite la bande audio sera détruite. De même, l'entrevue transcrite portera le numéro d'identification de sujet et sera conservée avec le reste des données collectées au cours de l'étude. Si toutefois des citations sont rapportées dans des revues scientifiques, votre nom et tout élément signalétique ne seront pas indiqués. On ne peut toutefois vous assurer une confidentialité absolue.

Si des cas d'abus sont cernés ou révélés comme conséquence de votre participation à la présente étude, on vous orientera vers des services de soutien appropriés.

On ne mentionnera ni votre nom ni tout autre renseignement signalétique personnel dans des rapports, revues scientifiques ou présentations.

Si les résultats de la présente étude sont annoncés, vous ne serez aucunement identifié. Vos renseignements personnels seront traités de façon strictement confidentielle, excepté si requis ou permis par la loi. Tel que requis par Santé Canada, des représentants du programme de l'assurance-qualité du Bureau d'éthique de la recherche du Centre universitaire de santé McGill pourraient avoir accès aux données de l'étude qui vous concernent.

Personnes ressources

Pour toute question concernant votre participation à la présente étude, vous pourrez entrer en contact avec le docteur Hechtman, au 514-412-4449. Ainsi, vous aurez la chance de discuter avec elle en toute confidence de n'importe quelle question.

Pour de plus amples renseignements concernant vos droits, à titre de sujet de recherche, veuillez communiquer avec Patricia Boyer, commissaire à la qualité des services (représentante des patients/ombudsman), au 514-412-4400, poste 2223. Madame Boyer n'est pas associée au chercheur de l'étude et a le mandat de protéger les droits des patients.

Consentement

J'ai lu le présent formulaire de consentement ou on me l'a lu. J'ai eu l'occasion de discuter du document et de poser des questions. En signant le formulaire de consentement, j'accepte de participer à la présente étude. On me remettra un exemplaire du formulaire de consentement dûment signé.

Participant : _____ _____
(en lettres moulées) Signature

Date :_____

Personne qui
obtient le consentement : _____ _____
(en lettres moulées) Signature

Date :_____

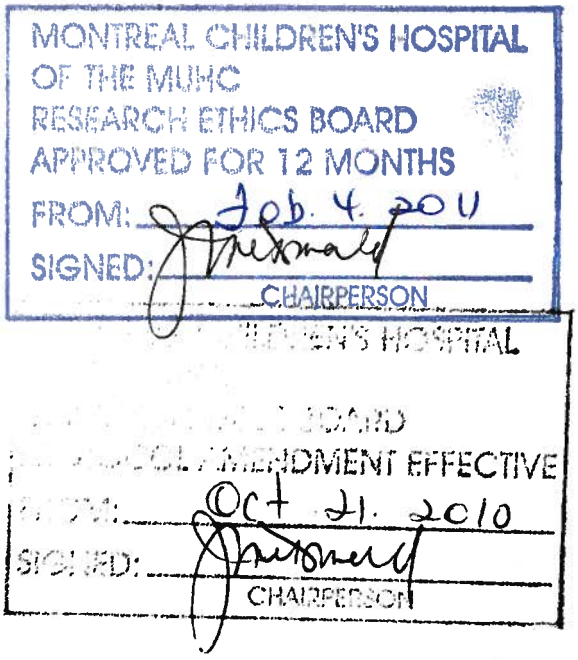
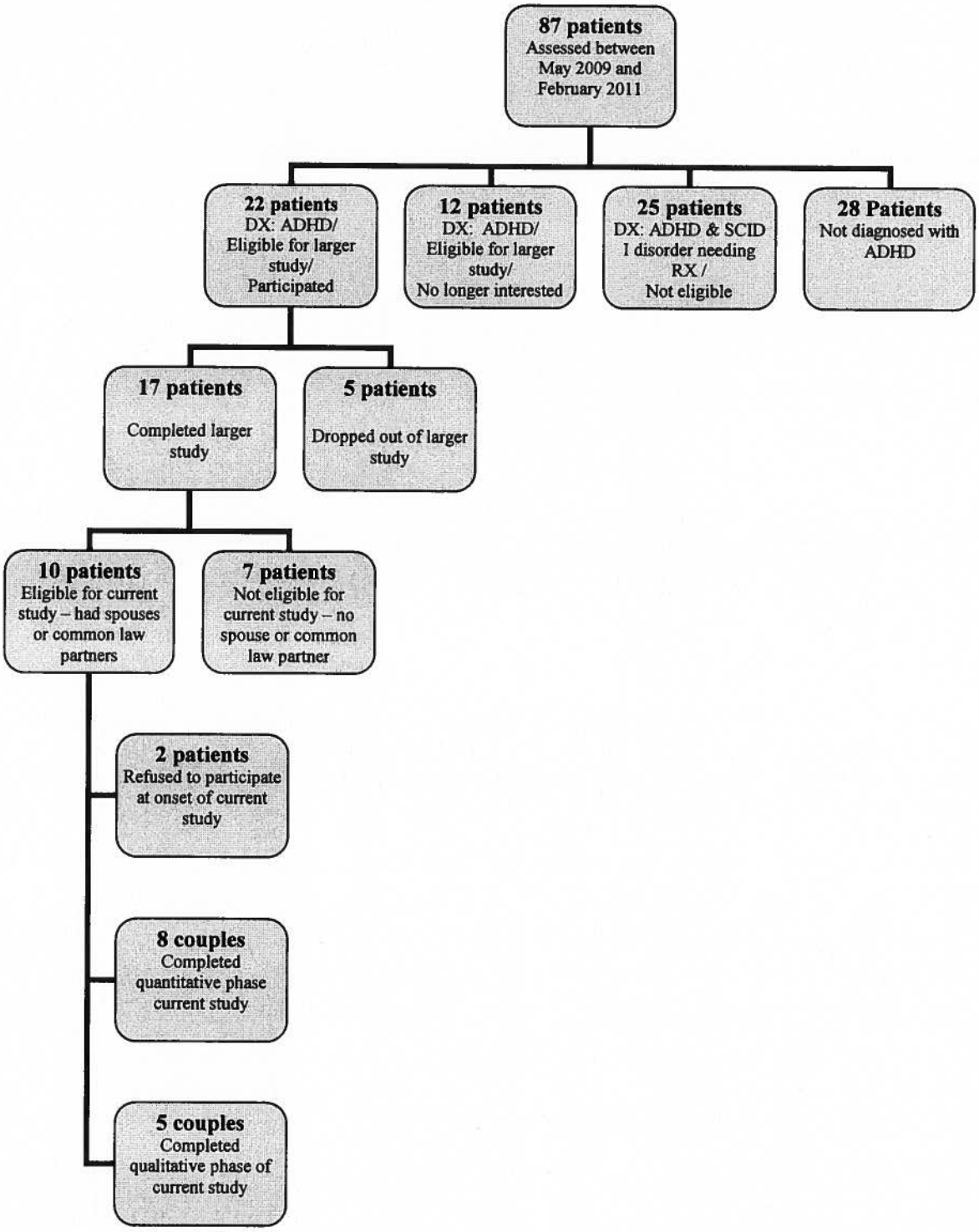


Figure 1

Adult ADHD Research Program Assessment and Participation Chart between May 2009 and February 2011



Appendix C

Qualitative Interview

ADHD Family Interview

Thank you (patient's name) for agreeing to come to this interview. This interview will ask you questions about ADHD, and how this has affected your relationships, as well as how the treatment you received here has affected these relationships.

Patient:

1. What were the problems or difficulties that made you decide to come to the research clinic?

2. How severe were these problems or difficulties on a scale from 1 to 10, with 1 being not severe at all and 10 being very severe?

3. What do you believe caused these problems or difficulties?

Now we're going to talk about how the ADHD symptoms (problems or difficulties) have affected various areas of your life before and after treatment

4. You mentioned (name problems), can you tell me whether these difficulties affected your:

    a. **Home Life and Relationships:**
    How did these problems impact your:

        i. Your relationship with (name of spouse). Give me an example

        ii. Your relationship with your children. Give me an example

        iii. Your relationship with other family members (parents, siblings)

        iv. Your ability to communicate with these people

On a scale of 1 to 10 (with 1 not at all and 10 absolutely affected), how would you rate the problems you mentioned affecting your relationships with your spouse, children, other family members, ability to communicate with these people? Before treatment.

How do think these ADHD-related problems have affected your spouse and children?

Since your treatment (name specific treatment) have these relationships changed? If so, in what way? Can you give me an example?

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), to what degree would you rate these problems affecting these relationships now? Following treatment.

Let's more on to work and work-related relationships

    b. **Work and Relationships**:
    How did these problems impact your:

i. Work life, work productivity, work efficiency

ii. Relationships with co-workers

iii. Relationship with supervisor

iv. Your ability to communicate with these people

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), did the problems you mentioned affect your work and your work-related relationships?

Has the treatment (name specific treatment) changed your work and work relationships? If so, in what way? Can you give me an example?

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), to what degree would you rate these problems affecting your work and work-related relationships now?

Let's move on to various areas of family functioning

c. Family Functioning:
How did these problems impact your:

i. Financial situation

ii. Housekeeping

iii. Parenting

iv. Use of alcohol or other drugs?

v. Gambling use

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), did the problems you mentioned affect these aspects of family functioning?

Have these changed since beginning treatment? If so, in what way? Can you give me an example?

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), to what degree would you rate these problems affecting your family functioning now?

Let's move on to areas of social functioning

d. Social Functioning:
How did these problems impact your:

i. Relationship with friends?

ii. Hobbies?

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), did the problems you mentioned affect these aspects of social functioning?

Have these changed since beginning treatment? If so, in what way? Can you give me an example?

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), to what degree would you rate these problems affecting your social functioning now?

5. What were your hopes and expectations before starting treatment?

6. How did what actually happened compare with these initial hopes and expectations?

7. What do you think about the treatment you went through?

8. How would you have changed the treatment to make it more useful or effective? Do you feel something different could have been done?

9. What was the role of (name of partner or spouse) in the treatment? (What about their position, opinion, or perception of your treatment?)

10. Did the treatment help you and your family in the aspects you were expecting? Which aspects do you believe improved? Which aspects of life are still problematic? What aspects got worse, if any?

11. What other kind of help do you think could be useful for you and your family?

Thank you very much for your time.

Thank you (spouse's name) for agreeing to come to this interview. This interview will ask you questions about (name of patient) ADHD, and how this has affected his/her relationships, as well as how the treatment he/she received here has affected these relationships.

Spouse:

1. What problems or difficulties did you see that led (patient's name) to come to the research clinic?

2. How severe were these problems or difficulties on a scale of 1 to 10, with 1 being not severe at all to 10 being very severe?

3. What do you believe caused these problems or difficulties?

Now we're going to talk about the ADHD symptoms (problems or difficulties) that have affected various areas of (name of patient)'s life before and after treatment

4. You mentioned that (name of patient) had (name problems), can you tell me whether these affected:

    a. **Home life and Relationships**:
    How did (name of patient)'s (name problems) impact:

        i. Your relationship with (name of patient).

        ii. His/her relationship with your children

        iii. His/her relationship with other family members (parents, siblings)

        iv. His/her ability to communicate with these people

On a scale of 1 to 10 (with 1 not at all and 10 severely affected), how would you rate the problems you mentioned affecting (name of patient)'s relationships with you, your children, other family members, and their ability to communicate with these people?

How do you think these problems or difficulties have affected you and your children?

Since (patient's name) treatment, have these relationships changed? If so, in what way? Can you give me an example?

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), to what degree would you rate these problems affecting these relationships now?

Let's move on to work and work-related relationships

    b. **Work and Relationships**:
    How did (name of patient)'s (name problems) impact his/her:

        i. Work life, work efficiency, work productivity

ii. Relationships with co-workers

iii. Relationship with supervisor

iv. Their ability to communicate with these people

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), how would you rate the problems you mentioned affecting (patient name)'s work and their work-related relationships?

Has treatment (name specific treatment) changed their work and work relationships? If so, in what way? Can you give me an example?

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), to what degree would you rate these problems affecting (patient name)' work and work-related relationships now?

Let's move on to various areas of family functioning

c. **Family Functioning**:
How did (name of patient)'s (name of problems) impact your:

i. Financial situation

ii. Housekeeping

iii. Parenting

iv. Use of alcohol or other drugs?

v. Gambling use

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), how would you rate the problems you mentioned affecting these aspects of family functioning?

Have these changed since they began treatment? If so, in what way? Can you give me an example?

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), to what degree would you rate these problems affecting your family functioning now?

Let's move on to areas of social functioning

d. Social Functioning:
How did (name of patient)'s (name of problems) impact their:

i. Relationship with friends?

ii. Hobbies?

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), how would you rate the problems you mentioned affecting these aspects of social functioning?

Have these changed since they began treatment? If so, in what way? Can you give me an example?

On a scale of 1 to 10 (with 1 being not at all and 10 being severely affected), to what degree would you rate these problems affecting your social functioning now?

5. What were your hopes and expectations for (name of patient) before starting treatment?

6. How did what actually happened compare with these initial hopes and expectations?

7. What do you think about the treatment he/she went through?

8. How would you have changed the treatment to make it more useful or effective? Do you feel something different could have been done?

9. What was your role during the treatment, if any? What was your position, opinion, or perception of (name of patient) treatment?

10. Did the treatment help (name of patient) and your family in the aspects you were expecting? Which aspects do you believe improved? Which aspects of life are still problematic? Which aspect of life got worse, if any?

11. What other kind of help do you think could be useful for (name of patient) and your family?

Thank you for your time

Table 1

Participant Demographic Table — Quantitative

	Patients	Spouses
ADHD-Subtype		
Inattentive	6	---
Hyperactive	0	---
Combined	2	---
Treatment Type		
Medication-only	4	---
Cognitive Behavioural Therapy-only	2	---
Combined	2	---
Age (in years)		
20-29	1	2
30-39	5	4
40-49	0	1
50-59	1	1
60-69	1	0
Maternal Language		
French	3	2
English	5	4
Other	0	2
Education		
Trade School	0	1
CEGEP	5	2
Undergraduate Degree	2	4
Graduate Degree	1	1

Demographics Table – Quantitative cont.

	Couples
Current Marital Status	
Married	4
Common Law	4
Length of Relationship	
1-4 years	4
5-9 years	2
10-14 years	0
15-19 years	1
20 + years	1
Income	
$30,000-$39,000	3
$40,000-$49,000	1
$50,000-$75,000	0
$75,000-$99,000	1
$100,000-$150,000	1
Over $150,000	2
Number of Children	
Zero	4
One	1
Two	2
Three	0
Four	0
Five	1
Gender of Children	
Male	6
Female	2
Age of Children	
0-9 years	3
10-19 years	1
20-29 years	4

Table 2

Dyadic Adjustment T-Score at Baseline and Outcome for Patients and Spouses [M (SD)]

	Patients (N=8)		Spouses (N=8)	
	Baseline	Outcome	Baseline	Outcome
Dyadic Consensus	43.48 (7.78)	46.62 (4.92)	45.38 (7.42)	45.88 (8.29)
Dyadic Satisfaction	46.00 (8.89)	44.50 (7.95)	45.13 (9.99)	45.13 (9.39)
Dyadic Expression	47.38 (8.58)	53.63 (4.78)	50.13 (9.79)	52.13 (7.69)
Dyadic Cohesion	51.25 (5.60)	54.75 (9.18)	51.63 (11.67)	53.00 (9.33)
Dyadic Adjustment	45.13 (7.16)	47.75 (6.13)	46.25 (10.49)	48.00 (8.89)

Figure 2

Means and Standard Errors of Patient Dyadic Adjustment Scale T-Score

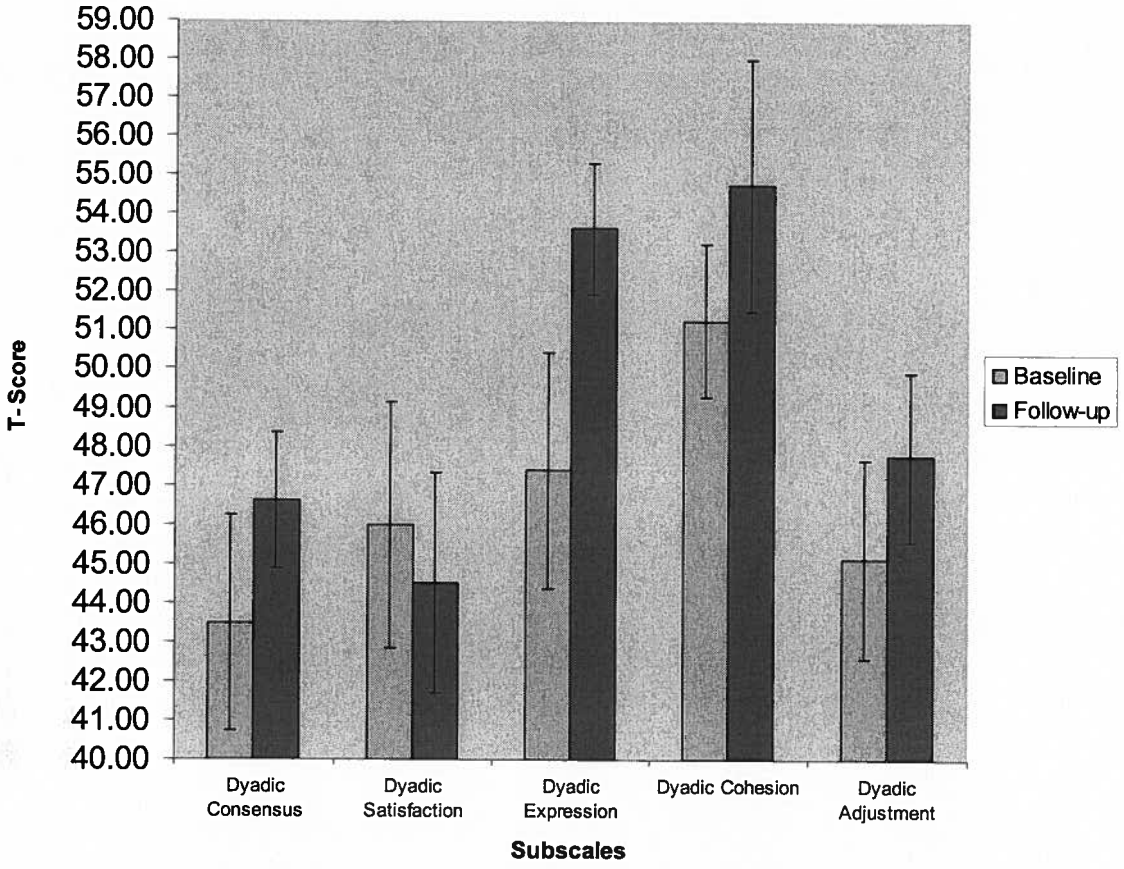


Figure 2. Patient Dyadic Adjustment Scale Mean T-Score (± SE) for each subscale (n = 8) at baseline and at follow-up.

Note. Higher scores indicate better relationships.

Figure 3

Means and Standard Errors of Spouse Dyadic Adjustment Scale T-Score

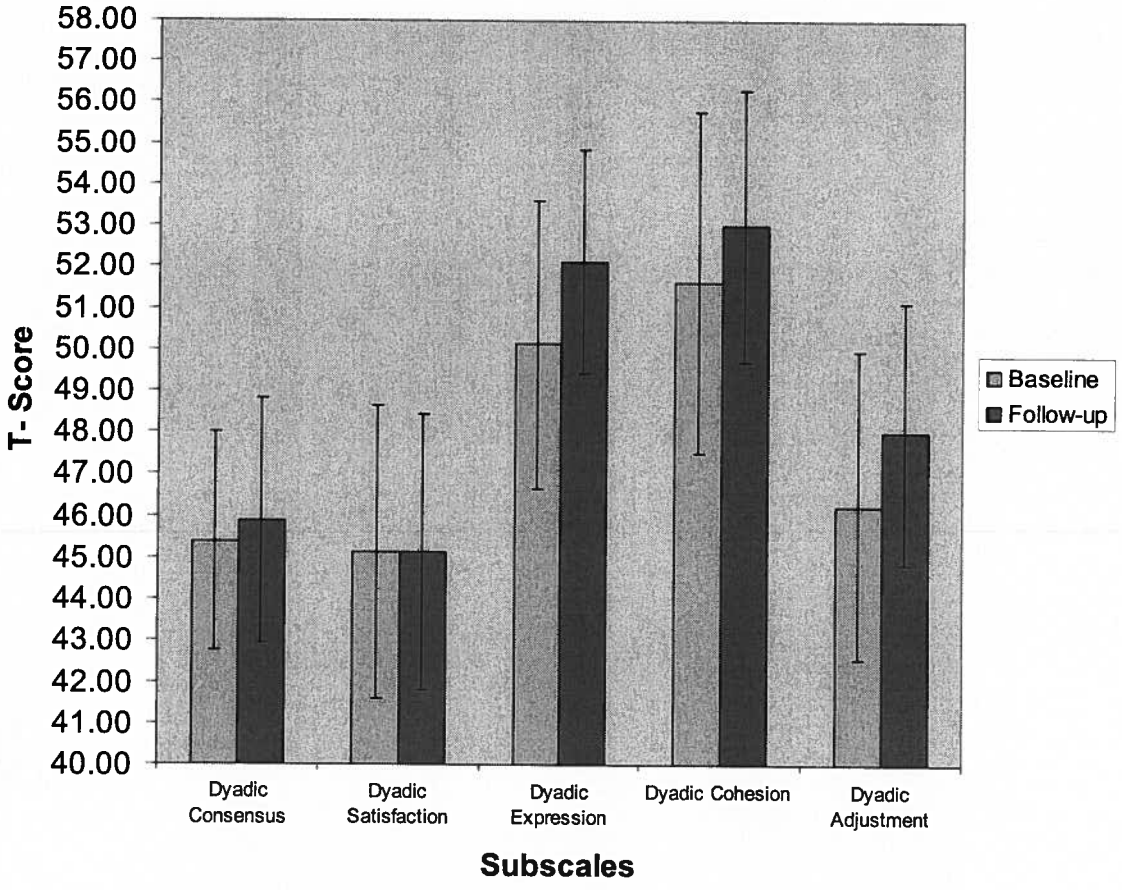


Figure 3. Spouse Dyadic Adjustment Scale Mean T-Score (± SE) for each subscale (n = 8) at baseline and at follow-up.

Note. Higher scores indicate better relationships.

Figure 4

Means and Standard Errors of Patients and Spouses Dyadic Adjustment Scale T-Scores at Baseline

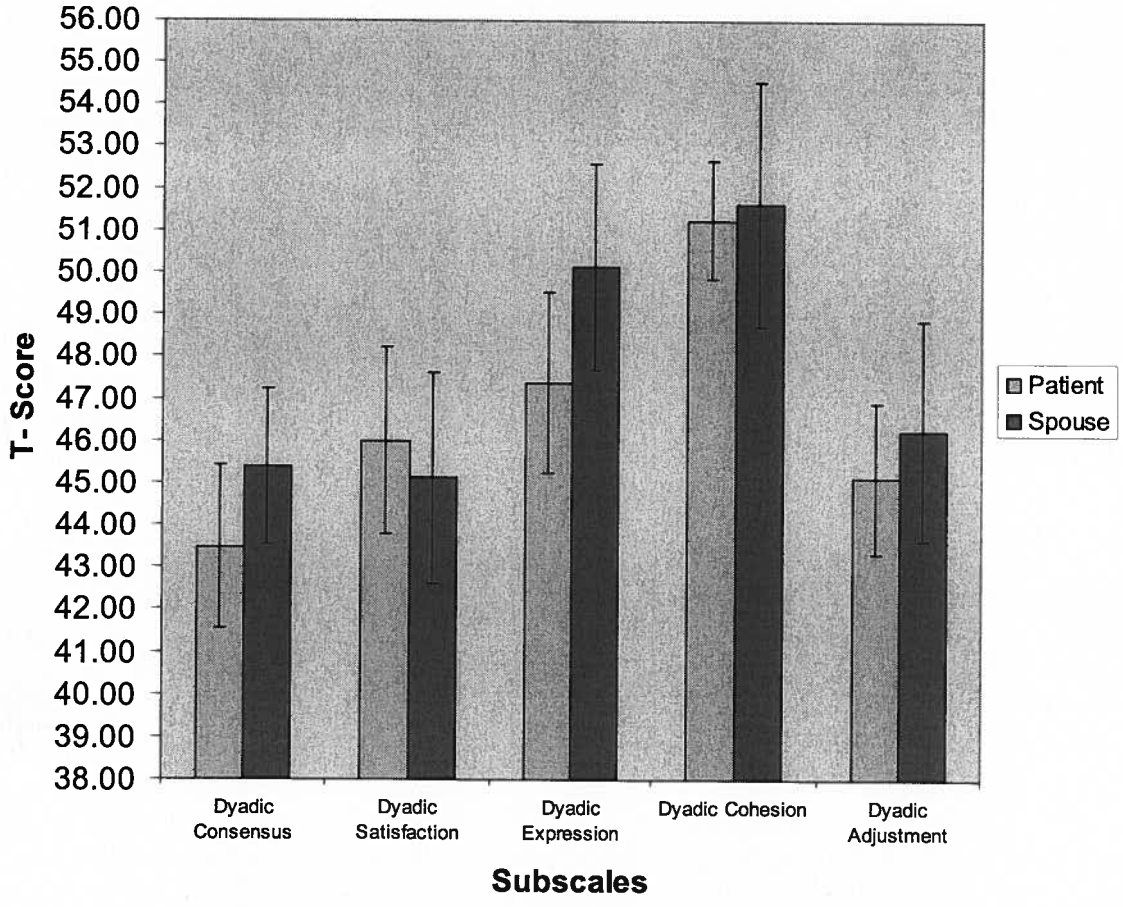


Figure 4. Comparing means (± SE) for patients and spouses Dyadic Adjustment Scale T-Score for each subscale (n = 16) at baseline.

Note. Higher scores indicate better relationships.

Figure 5

Means and Standard Errors of Patients and Spouses Dyadic Adjustment Scale T-Scores at Follow-up

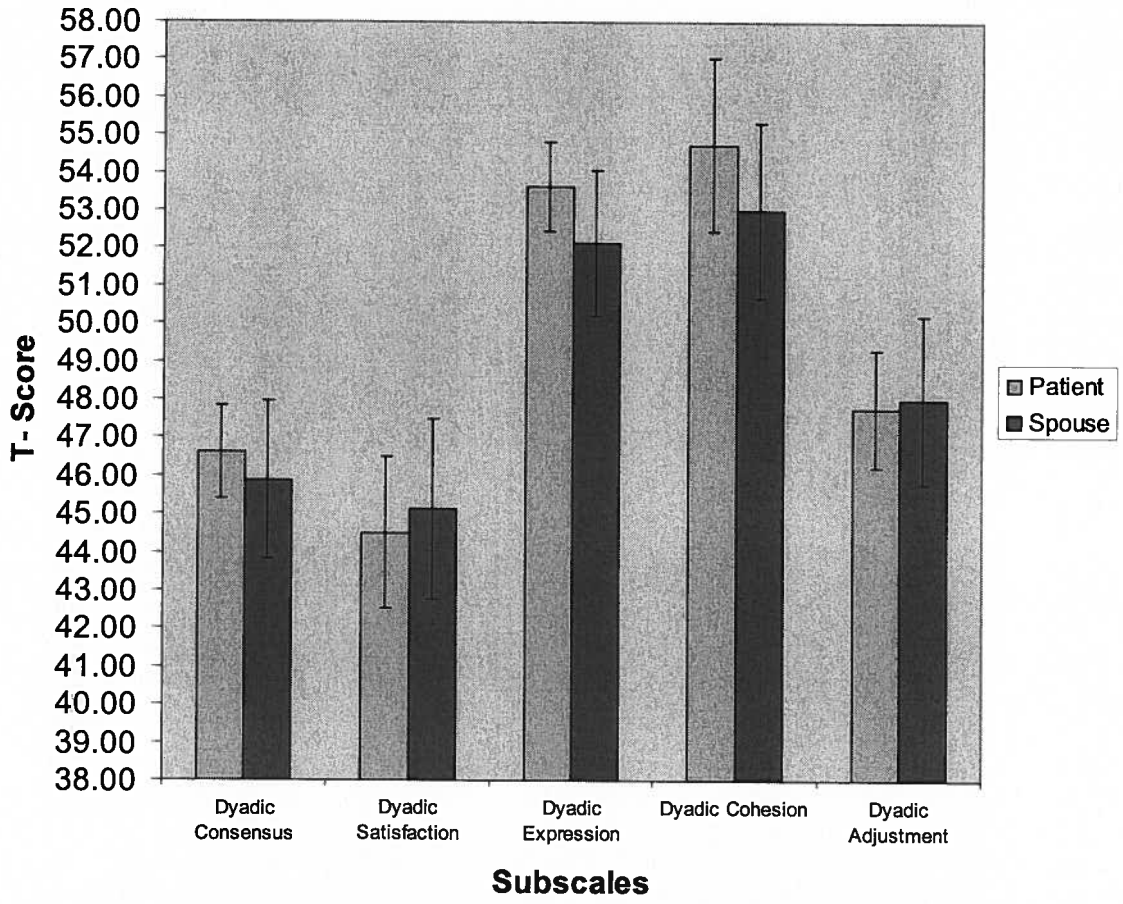


Figure 5. Comparing means (± SE) for patients and spouses Dyadic Adjustment Scale T-Score for each subscale (n = 16) at follow-up.

Note. Higher scores indicate better relationships.

Table 3

Family Functioning Scores at Baseline and Outcome for Patients and Spouses [M (SD)]

	Patients (N=8)		Spouses (N=8)	
	Baseline	Outcome	Baseline	Outcome
Problem Solving	1.98 (0.50)	2.08 (0.33)	2.18 (0.67)	2.18 (0.47)
Communication	2.17 (0.52)	2.12 (0.46)	2.15 (0.70)	2.06 (0.62)
Roles	2.28 (0.53)	2.27 (0.23)	2.40 (0.32)	2.21 (0.33)
Affective Responsiveness	1.94 (0.47)	1.95 (0.61)	1.71 (0.69)	1.66 (0.67)
Affective Involvement	1.78 (0.39)	1.91 (0.39)	1.91 (0.52)	1.84 (0.58)
Behaviour Control	1.99 (0.51)	1.95 (0.33)	1.73 (0.32)	1.69 (0.34)
General Functioning	1.83 (0.40)	1.88 (0.41)	1.87 (0.57)	1.81 (0.57)

Figure 6

Means and Standard Errors of Patient Family Assessment Device

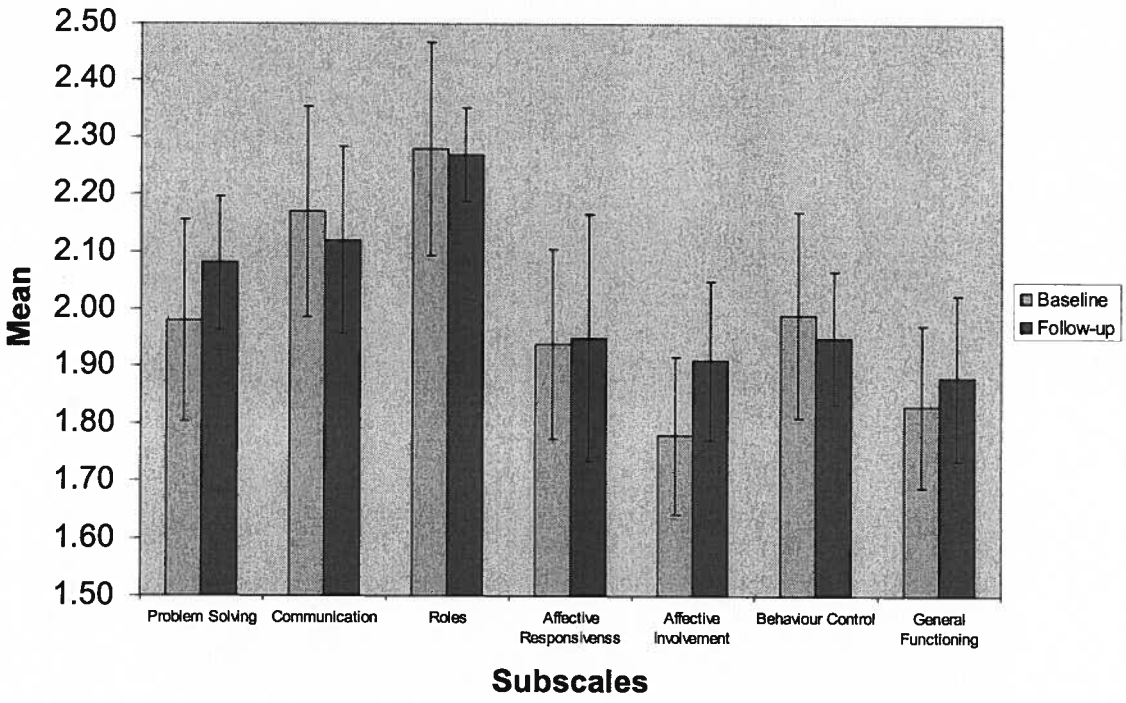


Figure 6. Patient Family Assessment Device mean (± SE) for each subscale (n = 8) at baseline and at follow-up.

Note. Lower scores indicate better functioning.

Figure 7

Means and Standard Errors of Spouse Family Assessment Device

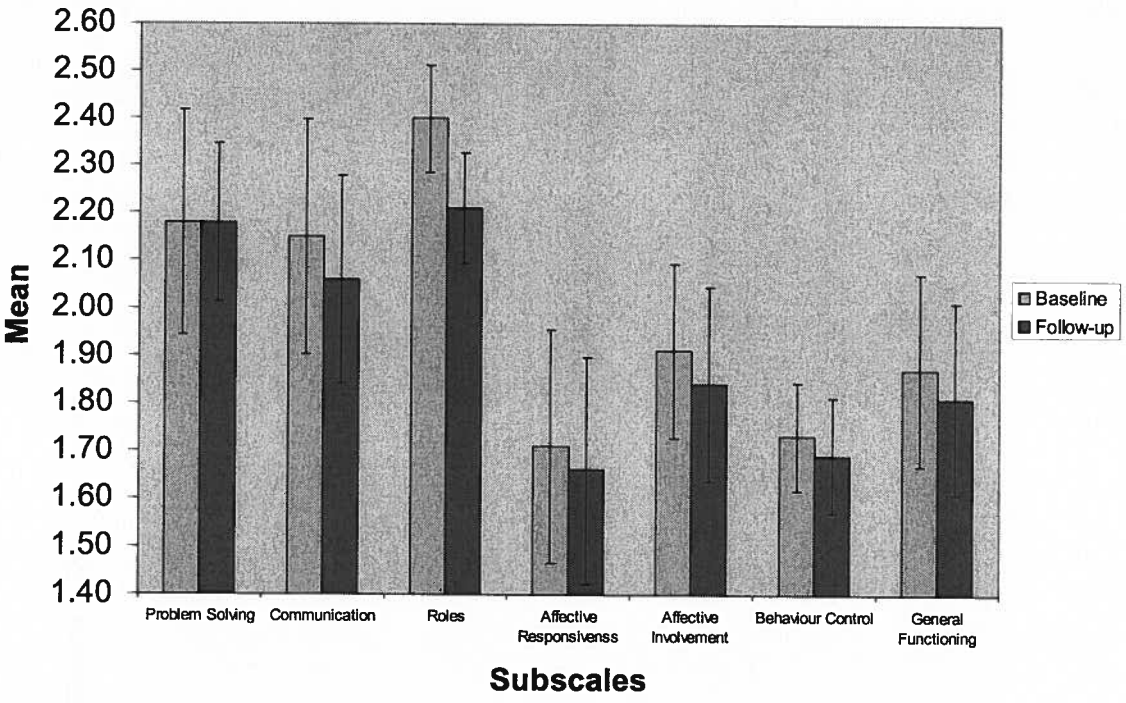


Figure 7. Spouse Family Assessment Device mean (± SE) for each subscale (n = 8) at baseline and at follow-up.

Note. Lower scores indicate better functioning.

Figure 8

Means and Standard Errors of Patients and Spouses Family Assessment Device at Baseline

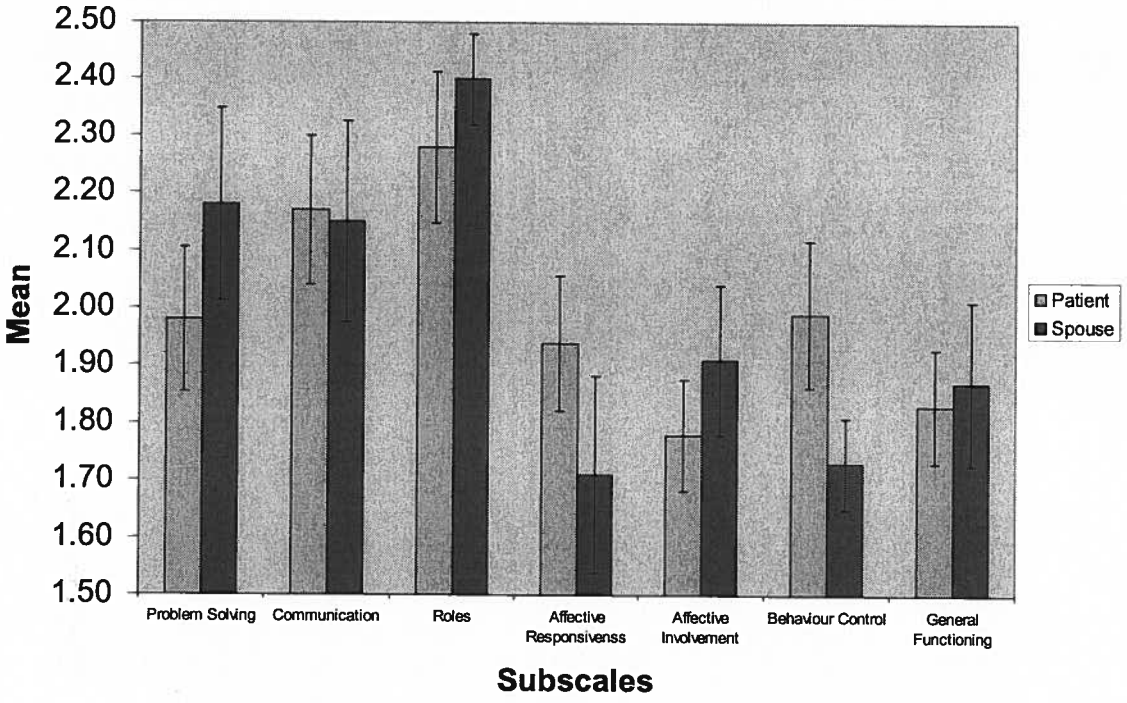


Figure 8. Comparing means (± SE) for patients and spouses Family Assessment Device for each subscale (n = 16) at baseline.

Note. Lower scores indicate better functioning.

Figure 9

Means and Standard Errors of Patients and Spouses Family Assessment Device at Follow-up

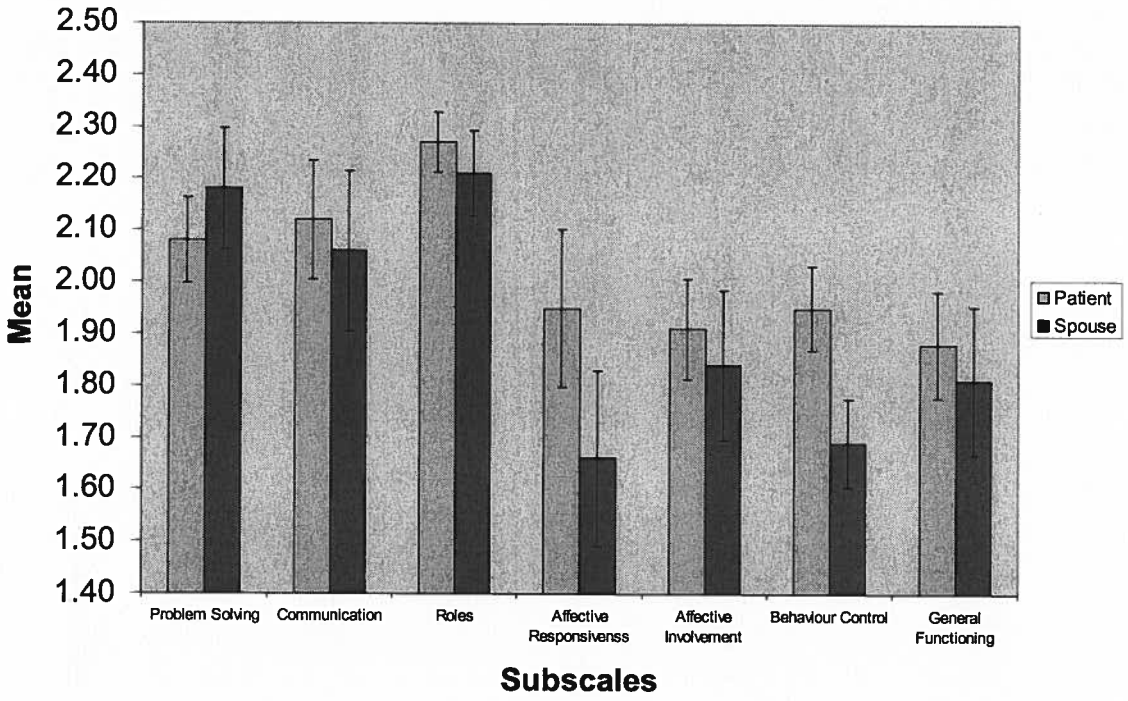


Figure 9. Comparing means (± SE) for patients and spouses Family Assessment Device for each subscale (n = 16) at follow-up.

Note. Lower scores indicate better functioning.

Table 4

Participant Demographic Table – Qualitative

	Patients	Spouses
ADHD-Subtype		
Inattentive	3	---
Hyperactive	0	---
Combined	2	---
Treatment Type		
Medication-only	4	---
Cognitive Behavioural Therapy-only	---	---
Combined	1	---
Age (in years)		
20-29	1	2
30-39	3	2
40-49	0	1
50-59	1	0
60-69	0	0
Maternal Language		
French	2	3
English	3	2
Other	0	0
Education		
Trade School	0	1
CEGEP	2	1
Undergraduate Degree	2	3
Graduate Degree	1	0

Demographics Table – Qualitative cont.

	Couples
Current Marital Status	
Married	3
Common Law	2
Length of Relationship	
1-4 years	4
5-9 years	0
10-14 years	0
15-19 years	0
20 + years	1
Income	
$30,000-$39,000	3
$40,000-$49,000	0
$50,000-$75,000	0
$75,000-$99,000	1
$100,000-$150,000	0
Over $150,000	1
Number of Children	
Zero	4
One	0
Two	0
Three	0
Four	0
Five	1
Gender of Children	
Male	4
Female	1
Age of Children	
0-9 years	0
10-19 years	1
20-29 years	4

Table 5

Emerging Themes

How does Attention-Deficit/ Hyperactivity Disorder (ADHD) affect relationships?
• Symptoms of ADHD lead to numerous problems.
• Accommodate, compensate, and modify expectations
• Attention-Deficit/Hyperactivity Disorder the sole explanation?
How did treatment for ADHD-related symptoms change the relationship?
• Improvement? Yes. Still a struggle? Definitely.
• Treatment is a process, not a cure
• Self-imposed individualized treatment plans
• Was it the treatment or additional help?