Attribution Processes in Parent-Adolescent Conflict in Families with Adolescents with and without ADHD

by

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This study examined parent-adolescent conflict and the attributions for conflict. Adolescent participants (29 ADHD; 22 Comparison) aged 13-17 and their mothers and fathers completed questionnaires. Adolescents with ADHD have conflicts over more issues with their parents according to self and parent report. Adolescents who believed that the conflict occurred in many contexts and that their parents were responsible for that conflict reported that they had conflict over more issues. Attributions were not predictive of conflict according to mother report. ADHD status moderated attributions in predicting father reported conflict. Among fathers who believed that conflicts were their son or daughter's responsibility, fathers of youth with ADHD were less likely to report more issues involving conflicts than fathers of youth without ADHD. Conversely, among fathers who believed conflict was pervasive across contexts and time, having a son or daughter with ADHD was associated with more issues involving conflict.

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1. Introduction

A limited amount of parent-adolescent conflict is regarded as adaptive as it reflects adolescents' desire for independence from parents (Conger et al., 2002). Intense conflicts, however, are maladaptive and are associated with poor adolescent (American Psychiatric Association, 2000) and parent (Silverberg & Steinberg, 1987) adjustment. Families with an adolescent with Attention Deficit Hyperactive Disorder (ADHD) have high levels of conflict according to adolescents' (Barkley, Anastopoulos, Guevremont, & Fletcher, 1992; Fletcher, Fischer, Barkley, & Smallish, 1996) and mothers' reports (Barkley et al., 1992; Barkley, Fischer, Edelbrock, & Smallish, 1991; Edwards, Barkley, Laneri, Fletcher, & Metevia, 2001; Fletcher et al., 1996; Robin, 1990; Weiss & Hechtman, 1986). It is unclear, however, as to why adolescents with ADHD and their mothers report high levels of conflicts and whether fathers in the family share this view in respect to female youth, as only one study (Edwards et al, 2001) explored father-youth conflict with male adolescents only. Attribution theory (Weiner, 1985) may be helpful in understanding the increased level of conflict perceived by these families. Attribution theory assumes that individuals try to interpret why people do what they do. Specifically, attributions are inferences individuals make about the causes of events, their own and others' behaviour. Misattributions among family members promote conflict (Foster & Robin, 1997). The overall purpose of this study was to investigate parent-adolescent conflict and the attributions for that conflict in families with and without adolescents with ADHD as reported by adolescents, mothers, and fathers.

1.1 Parent-Adolescent Conflict

Although adolescents spend increasing amounts of time with peers, the family environment retains its influence. Barber and colleagues (2001) found that family harmony and adult-child synchrony predicted all measures of adolescent adjustment. They concluded that positive parenting is not something adults do to children, but a quality of the parent-child relationship characterized by family harmony and parental empathy. Negative family relations seem to be more reliably associated with adolescent psychopathology, such as depressive symptomatology, than are peer relations (Stice, Ragan, & Randall, 2004).

Discussions during which parents and adolescents are able to engage openly and constructively in disagreements can promote positive adaptations such as the development of social skills that facilitate conflict resolution outside the family unit (Reisch et al. 2000). In contrast, intense parent-adolescent conflicts are significant predictors of concurrent and later adolescent psychological well-being (Shek, 1998; Shek & Ma, 2001). For example, in a longitudinal study, Shek and Ma (2001) found that parent-adolescent conflict at time 1 was generally predictive of adolescent (aged 12-17) antisocial behaviour at time 2. Furthermore, the influence of father-adolescent conflict on adolescent social behaviour was more pervasive than that of mother-adolescent conflict. Similarly, intensive parent-adolescent conflicts are associated with parents', particularly mothers' sense of well-being (Silverberg & Steinberg, 1987).

Even though parent-child difficulties are particularly prominent among families of children with ADHD (for review see Johnston & Mash, 2001), there have been only a few studies examining conflict between adolescents with ADHD and their parents. Mothers of adolescents with ADHD

are concerned about their adolescents' greater degree of behaviour management problems, rebelliousness, conduct problems, and family conflicts compared with adolescents without ADHD (Barkley, et al., 1992; Barkley et al., 1991; Edwards et al., 2001; Fletcher et al., 1996; Robin, 1990; Weiss & Hechtman, 1986). These mothers report many conflict issues in their relationships with their adolescents, indicate that they experience more anger during discussions, and have more negative communication patterns than do parents of comparison adolescents (Barkley, et al., 1992; Barkley et al., 1991; Fletcher, et al., 1996). Like mothers, fathers of male adolescents with ADHD and comorbid Oppositional Defiant Disorder (ODD) also report more conflict issues, more anger during discussions, and poorer communication patterns than fathers of comparison youth (Edwards et al., 2001).

Taken together, these findings suggest that the presence of ADHD in an adolescent is associated with a more angry and conflicted pattern of family communications at this age than that encountered in normative families.

1.2 Attributions for Parent-Adolescent Conflict

Attribution theory (Weiner, 1985) may be helpful in understanding the increased level of conflict perceived by adolescents with ADHD and their parents. Attributions are the causal perceptions, or explanations of why a behaviour or event has occurred (Weiner, 1985). According to Weiner's attribution taxonomy there are four attribution dimensions: globality (pervasiveness across contexts), stability (pervasiveness across time), locus of causality (whether its cause is internal, in the self, or external in the environment or family members), and controllability (whether its cause is intentional or accidental). Other researchers (Cheung, 1996; Davey, Fincham, Beach, & Brody, 2001; Fincham & Bradbury, 1991; Townsley, Beach, Fincham, & O'Leary, 1991; Scott,

2008) categorize attributions according to the degree of perceived responsibility. Responsibility attributions are those that imply blame, intention, and selfish motives. Appraisal of responsibility refers to whether an individual is believed to have intended his or her behaviour and whether this individual is aware of the behaviour's effects. (e.g., Fincham & Bradbury, 1987; Grace, Kelley, & McCain, 1993).

To my knowledge, there are no previous published studies explicitly linking parent-adolescent conflict and attributions in families of adolescents with ADHD. This link is plausible, however, due to findings from studies with samples of normative adolescents, adolescents with externalizing disorders, and younger children with ADHD. In normative populations of adolescents, both observational (Mas, Alexander, & Turner, 1991) and self-report (Grace, Kelley, & McCain, 1993; Heatherington, McDonald, Tolejko, & Funk, 2007; López, Chaves, González & Ruiz, 2009) studies showed that increased mother-adolescent conflict was associated with responsibility and/or global attributions about the other's behaviour. Adolescents with externalizing disorders, age 12 to 17, hold more rigid beliefs about parental unfairness, autonomy, and ruination (the belief that catastrophic consequences will result from a minor transgression) than non-referred adolescents (Roehling & Robin, 1986). Their fathers have more beliefs concerning ruination, obedience, perfectionism, and malicious intent than fathers of comparison adolescents. No differences were found for mothers. Children with ADHD (age 7 to 12) indicate that their parents engage in more power-assertive discipline (e.g., yelling and spanking) than comparison children (Gerdes et al., 2007), and parents of boys with ADHD have more negative perceptions of the parent-child relationship than parents of comparison boys (Gerdes et al., 2003). Parents of children with ADHD see misbehaviours symptomatic of ADHD (i.e., inattention) and oppositional misbehaviours as more internally caused, global and stable.

These parents also hold a more pessimistic view of positive child behaviours, seeing these as less dispositional and durable (Johnston & Freeman 1997; Johnston & Patenaude 1994; Johnston, Reynolds, Freeman, & Geller, 1998). Together these studies show that the attributional pattern in families of adolescents with externalizing disorders and children with ADHD is similar to those of families of adolescents with high levels of conflict.

Research on attributions for peer relations also supports the notion that attributions for conflict may be associated with number of conflicts. Boys with ADHD who are also aggressive are more likely than other children to attribute hostile (i.e., responsibility) intentions to peers, and are more likely to expect that the peer would continue to behave in a hostile manner in other situations (i.e., global attribution) (Milich, & Dodge, 1984). Up to 70% of children with ADHD suffer from comorbid affective or behavioural impairments (Szatmari, Offord, & Boyle, 1989), the most common conditions involving aggressive symptomatology such as Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD), which are present in 50–70% of children with ADHD (Newcorn, & Halperin, 2000). Given that the attributions individuals make about one another impact the nature of their interactions (e.g., Azar, 1991; Dix & Grusec, 1985; Weiner, 1985), it is possible that this hostile attribution bias is also present in parent-adolescent relationships and therefore is associated with higher levels of parent-adolescent conflict.

Taken together, these findings suggest that adolescents with ADHD and their parents might make global and responsibility attributions about each other's behaviour more frequently than adolescents without ADHD and their parents. These global and responsibility attributions may, in turn, predict higher conflict levels in families with adolescents with ADHD.

1.3 Objectives of the Present Study

This study was guided by three main objectives. 1. To compare the number of parent-adolescent conflicts in families with an adolescent with ADHD and families with an adolescent without ADHD according to adolescent, mother, and father report. It was hypothesized that in comparison to families without adolescents with ADHD, families with adolescents with ADHD would report more parent-adolescent conflict. 2. To determine whether the pattern of conflict attributions of adolescents with ADHD and their mothers and fathers differed from the conflict attributions of adolescents without ADHD and their mothers and fathers. It was hypothesized that adolescents with ADHD and their parents would make more global (pervasive across contexts) and responsibility (intentional, blameworthy and selfishly motivated) attributions than adolescents without ADHD and their parents. 3. To investigate the relationship between adolescents' and parents' attributions for conflict and number of reported conflicts in families with an adolescent with and without ADHD. It was hypothesized that global and responsibility attributions for conflict will be associated with the numbers of conflict reported by adolescents, mothers, and fathers.

Additionally, it was hypothesized that the presence of ADHD symptoms in the adolescent would moderate the relationship between the number of conflicts and the global and responsibility attributions for that conflict as reported by adolescents, mothers, and fathers.

A secondary research question pertains to whether there are reporter differences in number of conflicts and attributions. Due to insufficient previous research, no hypotheses were developed in terms of possible differences in number of conflicts or attributions as reported by the youth themselves, their mothers and fathers, and in terms of the number of conflicts and attributions as reported by youth in relation to their mothers versus fathers. It is also unclear as to whether reporter differences would vary by ADHD status.

2. Methods

2.1 Participants

The sample consisted of 51 adolescents, ranging in age from 13 to 18 years ($M = 15.58$, $SD = 1.59$) and their parents. Twenty-nine adolescents had a previous diagnosis of ADHD (12 females and 17 males), and twenty-two (10 females and 12 males) adolescents with no identified behavioural or academic difficulties served as a comparison group. There were no differences in the proportions of females and males in the groups, $\chi^2(1, N = 51) = .08$, $p = .77$. Within the ADHD group, 19 of the 29 adolescents (65.51%) regularly took medication for their ADHD symptoms, but were not medicated on the day of data collection. Ninety-six parents of adolescents participated in the study. The parent sample was composed of 51 mothers and 43 fathers. There was a smaller father sample size because two mothers in the study were single, two were divorced and had no contact with the adolescents' fathers, one father passed away, and three fathers did not return the questionnaires. Mothers ranged in age from 34 to 65 years ($M = 47.33$, $SD = 6.15$), and fathers ranged in age from 39 to 64 years ($M = 49.38$, $SD = 5.61$). Participants were recruited through advertisements and flyers placed in community-based newspapers, local mental health agencies, and schools in the Toronto area. A small number of the participants previously took part in studies in the ADHD Laboratory at the Ontario Institute for Studies in Education of the University of Toronto (OISE/UT) and agreed to be contacted for future research studies. Participants and their parents received an educational assessment report and they were given the option to additionally receive CAD\$30 or credit towards community service hours.

Adolescents were classified as ADHD if they had a previous diagnosis of ADHD and their symptoms were current as measured by the Conners-Third Edition rating scales (Conners, 2008). These measures are often used in research to differentiate children and adolescents with a DSM-IV diagnosis of ADHD from non-clinical groups. Adolescents who scored in the clinically significant range ($T \geq 70$) on any of the two DSM-IV ADHD subscales (i.e., DSM-IV Inattentive and DSM-IV Hyperactive-Impulsive) on either the parent or teacher form, and received a score in the borderline or clinical range ($T \geq 60$) on the other form were classified as ADHD. Adolescents whose scores fell in the average range (i.e., $T < 60$ on one of the parent or teacher forms and in the average or borderline range ($T < 64$ on the other form) on the two DSM-IV subscales were classified as non-ADHD (i.e., comparison group). Adolescents with severe mental health problems (i.e., Pervasive Developmental Disorders, Psychotic Disorders, Bipolar Disorder, Tourette's Disorder) and those with an IQ of 80 or less were excluded from the sample due to the possibility that these disorders may have independent effects on adolescents' attributions. However, due to high comorbidity rates, adolescents with ADHD who had a co-occurring learning disability (LD), Oppositional Defiant Disorder (ODD), anxiety, or depression were included in the sample. Within the ADHD group, 27 (of the 29) families reported whether adolescents had a comorbid diagnosis. Fourteen (48.3%) had one comorbid diagnosis and 5 (17.2%) had two comorbid diagnoses. Specifically, 17 adolescents (58.6%) were diagnosed with a comorbid LD, 5 (17.2%) with comorbid anxiety disorders, 2 (6.8%) with co-occurring ODD, and 1 (3.4%) with depression.

Adolescents with and without ADHD did not differ with respect to age. The Vocabulary and Matrix Reasoning subtests of the Wechsler Abbreviated Scale of Intelligence (WASI) were administered to obtain an estimate of adolescents' cognitive functioning. As shown in Table 1,

adolescents in the comparison group had a higher Full Scale IQ than adolescents with ADHD. Adolescents with ADHD had lower Vocabulary subtest scores but obtained similar scores on the Matrix Reasoning subtest. Out of the forty-four families who provided information regarding the language spoken at home, 93.2% (41; 17 in the comparison and 24 in the ADHD group) spoke English at home, and the only other languages reported were Chinese and Persian. There were no differences in terms of language spoken at home between the families of adolescents with and without ADHD, $\chi^2(2, N = 44) = 1.40, p = .45$.

With respect to the characteristics of the parent participants, fathers of adolescents with and without ADHD did not differ in terms of their age $t(43) = 1.23, p = .22$. However, mothers of adolescents with ADHD were younger ($M = 45.93, SD = 7.22$) than mothers of comparison adolescents ($M = 49.19, SD = 3.74$), $t(42) = -2.05, p = .046$. Parents of adolescents with ADHD were as likely to be married as parents of comparison adolescents, $\chi^2(2, N = 50) = .21, p = .34$. Thirty-seven parents were married or common-law, 11 were separated or divorced, 2 were single mothers, and 1 mother did not provide this information. Mothers ($t(42) = -1.57, p = .123$) and fathers ($t(41) = -1.06, p = .230$) of adolescents with and without ADHD did not differ in terms of their education level. Mother and fathers in the whole sample also did not differ from each other in education level, $t(41) = 1.23, p = .226$. Within the comparison group, 2 fathers (or 9.1%) suspected they had ADHD but did not have a formal diagnosis. Within the ADHD group, 3 mothers and 3 fathers had a diagnosis of ADHD, and 4 mothers (or 13.8%) and 16 fathers (or 55.2%) suspected they might have ADHD, but did not have a formal diagnosis. Youth with ADHD were more likely to have one parent with a formal diagnosis or who suspected he or she might have ADHD ($\chi^2(1, N = 51) = 20.26, p < .001$) than youth in the comparison youth.

2.2 Measures

The *Conner's Rating Scales-Third Edition* (Conners, 2008; Parent- Conners 3-P, and Teacher- Conners 3-T forms) are paper and pencil norm-referenced rating scales that are commonly used to screen for ADHD in children and adolescents. Parents and teachers completed the parallel parent and teacher forms of these scales by making ratings on a 4-point scale from 0 (*Not at all/Seldom, Never*) to 3 (*Very Much True/Very Often, Very Frequent*) to evaluate symptoms of inattention and hyperactivity. The long form of the parent and teacher scales, containing 110 and 115 items respectively were used in the present study to verify adolescent participant ADHD symptoms. The two DSM-IV ADHD subscales (DSM-IV Inattentive, DSM-IV Hyperactive-Impulsive) demonstrate high internal consistency (Parent: .93, .92; Teacher: .94, .95) and adequate to high test-retest reliability (Parent: .84, .89; Teacher: .85, .84). In the case of adolescents who regularly took medication for their ADHD, parents and teachers were asked to think of the adolescents' behaviours when they were not on medication.

The *Wechsler Abbreviated Scale of Intelligence* (WASI; Wechsler, 1999) is a standardized abbreviated test of intelligence, with good internal consistency (.93) and test-retest reliability (ranging from .88 to .93) across IQ scales. The Vocabulary and Matrix Reasoning subtests were administered in the present investigation to obtain an estimate of adolescents' cognitive functioning.

The *Issues Checklist abridged version* (IC; Robin, 1975; Prinz, Foster, Kent, & O'Leary, 1979) was used to assess essential issues that might lead to arguments between parents and adolescents and consequently to conflict. The IC is a 44-item list of issues that may be areas of disagreement between parents and adolescents such as choice of friends, curfew, and use of the telephone. This

measure was modified to include an item on “Internet/Computer use” and some vocabulary was changed to make the measure more current in terms of technological terminology (e.g., on item #18 “playing stereo or radio too loudly”, “music” was substituted for “stereo or radio”). Within each family, adolescents completed one IC for both parents and both mothers and fathers filled out an IC for their son or daughter. In single-parent families, only mothers completed the IC. Participants reported whether they had discussed a certain issue in the checklist in the past four weeks (yes/no) and the intensity of the discussion for topics endorsed. The intensity rating was based on a five-point Likert scale (1–5) in which “1” meant they felt “calm”, “2” meant that they felt “a little angry”, “3” and “4” meant that they felt “angry” and 5 meant that they felt “very angry”. The IC (abridged) produces two composite scores, a quantity of conflicts score and an intensity score (how angry participants feel during discussions). The quantity of conflicts score is the sum of the number of topics endorsed (“yes, it was discussed during the past four weeks”) out of the 45 issues on the list. The intensity score is a mean of the anger intensity ratings of the endorsed topics. The IC is meant primarily as a clinical tool for discussion. However, it has successfully discriminated between distressed families (i.e., those referred for treatment) and non-distressed families (i.e., those with no history of treatment and/or self-reports of satisfactory relationships) (see Robin & Foster, 1989). It has good reliability and has been used before in studies of behaviour in adolescents (e.g., Barkley et al., 1991; Edwards et al., 2001; Prinz et al., 1979). In the current study, internal consistency reliability was supported with Cronbach’s alpha values of 0.86 for adolescents, 0.87 for mothers and 0.87 for fathers.

Parent and adolescent attributions were measured using the *Parent Adolescent Attribution Questionnaire* (PAAQ; see Appendix A), developed by the author of the present study. The PAAQ was modeled after the Mother Adolescent Questionnaire (Grace et al., 1993). The PAAQ

was administered together with the IC and participants indicated their attributions for each of the conflicts they identified. For an issue to be considered a conflict on the IC, the respondents had to indicate that they felt at least a little angry (score of 2 or more in the IC) during this discussion. The PAAQ reflects seven attribution dimensions for the causes of the conflict: external locus (due to something about him/her), internal locus (something about me), stability (we are likely to continue to have this for a long time), globality (affects other areas of our relationship), intentional (s/he does this on purpose), selfishly motivated (s/he thinks only on her/his own needs), and blameworthy (is his/her responsibility). This measure also assesses the respondent's perception of the frequency (happens often) of their experience with the conflict situation. Similar to the IC, adolescent and parent versions of the PAAQ were developed regarding the conflicts they discussed with each other in the past four weeks. Each parent/guardian filled out one form, but in this case, each adolescent completed two forms, one for each parent. Adolescents completed attributions for conflicts for mothers and fathers separately. Thus, for example, if a particular issue involved conflict only with their mothers, the adolescent attributions for fathers with respect to that conflict remained blank. The participants were asked the extent to which they agreed with the eight statements reflecting the possible cause and frequency of the conflict. Each statement was answered on a scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (4). With the exception of internal attributions, the higher the score on each dimension (external locus, global, selfishly motivated, etc), the more negative or hostile are the attributions. Conventional methods of establishing reliability of the PAAQ were not appropriate due to the manner in which the questionnaire was structured. It was not possible to establish test-retest reliability as participants only received the questionnaire on one occasion. Internal consistency in this case was conceptualized as the extent to which participants agreed or disagreed with each of the

seven attributions and frequency of conflict across conflicts. Thus, reliability of the PAAQ was established by calculating percentage agreement across attributions within participants.

Approximately ten percent of the sample (7 participants) was randomly chosen. Acceptable percentage agreement was obtained for the attribution dimensions (range = 44.4% to 100% for adolescent reports about their mothers; range = 53.3% to 100% for adolescent reports about their fathers; range = 47% to 100% for mother reports about their adolescents; and range = 54.5% to 100% for father reports about their adolescents).

2.3 Procedure

This research was approved by the Education Research Ethics Board of the University of Toronto. Individual testing sessions with adolescents were conducted in a private room at the university by either the author or four other trained graduate students in school and clinical child psychology. Each testing session began with the tester obtaining parent consent and adolescent assent (Appendix B). As this study was part of a larger research project, each testing session lasted approximately 5 to 6 hours, during which the participants also completed measures for other studies. The adolescents were given frequent breaks.

Prior to the testing session, parents (usually mothers) of adolescents completed the Conners-3rd edition parent scale (Conners, 2008). If adolescents met participation criteria, parents of adolescents were mailed a testing package. The package contained: an adolescent assent letter, a parental consent letter, a parent consent form explaining the purpose and procedures of the study and the benefits and potential harms associated with participation (Appendix B), and the study measures. The study measures of interest that were mailed to the parents were: The Conners-3rd edition teacher questionnaire (Conners 3-T; Conners, 2008) to pass on to the adolescents' teacher

along with a self-addressed stamped envelope; two IC and two PAAQ questionnaires (one for each parent to complete) with two self-addressed stamped envelopes.

2.4 Statistical Analyses

All statistical analyses were computed using SPSS version 17.0. The data was checked for outliers by examining descriptive statistics and by computing scatterplots of the variables of interest. There were only two moderate outliers in mother reported number of conflicts with their youth, which were not adjusted because these were not significantly affecting the variable range. There was 10 or less % of missing data in all the variables of interest. The numbers in adolescents', mothers' and fathers' sample size in the statistical analyses in this study vary because they completed the PAAQ only when they indicated having conflicts on the IC. Given that adolescents in the comparison group had higher Full Scale IQ than adolescents with ADHD ($t(49) = -4.2, p < .001$), Pearson product-moment correlations were run between IQ and all the dependent variables (number and frequency of conflict, and attributions). Results showed a correlation of $-.53, p = .001$ between IQ and adolescent reported frequency of conflicts with fathers. Thus, there was a need to control for IQ when examining adolescent reported frequency of conflicts with fathers. The assumption of homogeneity of regression slopes by interaction terms for IQ and ADHD status was not significant ($F(1, 35) = 1.01, p = .322, \eta^2 = .032$), but the interaction term between IQ and adolescent Gender was significant ($F(1, 35) = 4.64, p = .039, \eta^2 = .130$). Consequently, adolescent gender was removed from the analyses involving adolescent reported frequency of conflict with father.

The data were examined to determine whether composite scores could be created from the 7 attribution scores on the PAAQ in order to have an adequate subject-to-variable ratio in the

regression analyses used to detect moderator effects. As attributions of intent, blame, and selfish motives conceptually pertain to responsibility for a behaviour and in previous studies have been shown to load on the same factor, (e.g., Bradbury & Fincham, 1990; Cheung, 1996; Davey et al., 2001; Fincham & Bradbury, 1991; Townsley et al., 1991) correlations between these attributions were calculated for the present study. Results showed moderate to large correlations (Cohen, 1988) between intent, blame, and selfish motivated adolescent attributions for mothers (range of .54 to .69) and adolescent attributions for fathers (range of .48 to .83), and mother attributions (range of .53 to .67) and father attributions (range of .38 to .47) for their youth. Thus, responsibility attributions composites were calculated by adding the attributions for intent, blame, and selfish motives. Similarly, global attributions (i.e., pervasive across contexts) and stable (i.e., pervasive over time) have been grouped together and referred to as pervasive attributions in previous studies (e.g., Foster, 2009; Kaidar, Wiener, & Tannock, 2003). In this sample, global and stable attributions correlated with number of conflicts as reported by fathers (Table 4). Thus, correlations among the global and stable attributions were calculated to determine whether a pervasive composite score could be created to reduce the number of variables in order to have an adequate subject-to-variable ratio in the regression analyses. Given that the correlation between fathers' stable and global attributions in the total sample was large ($r = .52, p < .01$) (Cohen, 1988), a pervasiveness composite was created for fathers' attribution for conflict. However, the correlations for adolescents' and mothers' stable attributions for conflict and conflict were too small (ranging from -.06 to .25) to justify the creation of composites for these reporters, as only global attributions were used in subsequent analyses.

3. Results

3.1 Number and Frequency of Conflict

The first objective of the study was to compare the number of parent-adolescent conflicts in families with an adolescent with ADHD and families with an adolescent without ADHD according to adolescent, mother, and father report. It was hypothesized that in families where there was adolescent with ADHD, parents and youth would report that they had conflict over more issues and more frequently than in families that did not have an adolescent with ADHD. Nine 2 x 2 (ADHD status by adolescent gender) analyses of variance and one analysis of covariance (ANCOVA; ADHD status controlling for IQ for father reported frequency of conflict) were computed. There were no adolescent gender or adolescent gender by ADHD status effects in any of these analyses.

As shown in Table 2, adolescents with ADHD reported a higher number of conflicts with both parents combined than adolescents without ADHD, but they did not report a higher number of conflicts with each parent. Both mothers and fathers of adolescents with ADHD reported a higher number of conflicts with their youth than did parents of adolescents without ADHD. There were no differences between families of adolescents with ADHD in terms of frequency of conflict (how often the conflict occurs).

Two Paired-Samples *t*-tests were conducted to compare adolescent reported conflict for mothers versus fathers. Among adolescents with ADHD there were no differences in the number of conflicts they reported with mothers ($M = 9.00$, $SD = 7.30$) versus fathers ($M = 6.36$, $SD = 5.63$), ($t(1, 27) = 1.80$, $p = .085$). Adolescents without ADHD, however, reported more conflict with

their mothers ($M = 5.95$, $SD = 5.74$) than with their fathers ($M = 3.95$, $SD = 4.60$), ($t(1, 21) = 2.90$, $p = .009$).

In an exploratory analysis, for each of the 45 issues on the IC, a Chi-squares test was calculated to determine the type of issues that were more frequently endorsed by adolescents with ADHD and their parents. Due to the large number of Chi-squares tests and the greater probability of Type 1 error, the alpha level was set at $p \leq .01$. As Table 3 indicates (only significant results were reported), adolescents with ADHD were more likely to report having conflicts over coming home on time and how money is spent than their non-ADHD peers. Mothers of adolescents with ADHD were more likely to report conflicts over adolescents making too much noise at home, allowance, lying, getting up in the morning, getting to school on time, getting low grades and getting in trouble at school than mothers in the comparison group. Fathers of adolescents with ADHD were more likely to report having conflicts over adolescents coming home on time, getting up in the morning, getting to school on time, getting in trouble at school, and talking back to parents than fathers in the comparison group.

3.2 Attributions for Conflict

The second objective of the study was to examine whether the pattern of attributions for conflict of adolescents with ADHD and their mothers and fathers differed from the attributions for conflict of adolescents without ADHD and their mothers and fathers. It was hypothesized that adolescents with ADHD and their parents would make more global and responsibility (composite of: intentional, blameworthy and selfishly motivated) attributions than adolescents without ADHD and their parents. Five 2×2 (ADHD status by gender) multivariate analyses of variance were computed, three to determine the effect of group and gender on adolescents' internal, external, stable, global, responsibility composite, and pervasiveness composite (only for fathers) attributions

for conflict with their mothers, fathers, and both parents combined, and two for mothers' and fathers' internal, external, stable, global, and responsibility composite attributions for conflict with their youth yielding Fs based on Wilks's lambda¹. Results showed that adolescents with and without ADHD did not differ in their attributions for conflict with their mothers ($F(1, 44) = .51, p = .763, \eta^2 = .06$), fathers ($F(5, 36) = 2.05, p = .101, \eta^2 = .27$), or both parents combined ($F(5, 35) = 0.95, p = .464, \eta^2 = .15$). Appendix C contains the means and standard deviations on the dependent variables of the two groups. No significant adolescent gender differences were found within the ADHD or the comparison group in adolescents' attributions for conflict with their mothers or for both parents combined. However, female adolescents made more internal ($M = 2.85, SD = 0.72$), stable ($M = 2.60, SD = 0.68$), global ($M = 2.18, SD = 0.98$), and responsibility ($M = 6.14, SD = 2.34$) attributions for their fathers than male adolescents ($M = 2.00, SD = 0.82$; $M = 2.29, SD = 0.69$; $M = 1.47, SD = 0.59$; and $M = 4.73, SD = 1.59$, respectively). Male adolescents made more external ($M = 2.80, SD = 0.65$) attributions for their fathers in comparison to female adolescents ($M = 2.41, SD = 0.47$), ($F(5, 36) = 2.91, p = .031, \eta^2 = .34$). Similarly, the attributions of mothers ($F(5, 42) = 0.95, p = .462, \eta^2 = .12$), and fathers ($F(5, 37) = 1.07, p = .395, \eta^2 = .16$) of youth with ADHD did not differ from the attributions of comparison mothers and fathers. No significant parent gender differences were found within the ADHD or the comparison group.

¹ Note: To control for Type I error across the multiple ANOVAs, p value was set at .01 (.05 divided by the number of ANOVAs conducted).

3.3 Predicting Number of Conflicts from Attributions

The third objective of this study involved determining whether adolescents' and parents' attributions for conflict predicted number of conflicts reported in families with adolescents with and without ADHD. Pearson product-moment correlations were calculated for the whole sample, in the ADHD group and in the comparison group to explore the relations among adolescent, mother, and father reported number of conflicts and the attributions for that conflict (7 attributions: internal, external, stable, global, selfish, intent, blame, and two attribution composites: responsibility and pervasive – the latter one was only calculated for fathers). As seen in Table 4, in the whole sample, adolescent reported number of conflicts with their mothers was positively correlated with global, selfishly motivated, blameworthy, and responsibility attributions. There were no significant correlations between adolescent reported conflict and the attributions for that conflict with fathers and both parents in the whole sample. Mother reported conflict with adolescents was positively correlated with global attributions and father reported conflict was positively correlated with external, stable, global, selfishly motivated, responsibility, and pervasive attributions for their youth. Whenever the number of conflicts was correlated with the attributions within the ADHD sample, there was also a significant correlation in the whole sample. However, as seen in Table 4, within the comparison group, correlation results showed that adolescent reported conflict with fathers was associated with global attributions for that conflict and that adolescent reported conflict with both parents was correlated with external, stable, and responsibility attributions. Therefore, these attribution variables were employed in the corresponding regression analyses predicting adolescent conflict with fathers and with both parents, respectively.

In order to test moderator effects, five hierarchical multiple regression analyses were run in the whole sample to determine whether ADHD status moderates attributions in predicting numbers of conflict as reported by adolescents for mothers, fathers, and both parents combined, and for the conflict reported by mothers and fathers, respectively (see Appendices D to H). The hierarchical multiple regressions were run by entering the specific attributions that correlated with number of conflicts in step 1, ADHD status in step 2, and by entering the interaction terms between ADHD status and the attributions (from step 1) in step 3.

To predict adolescent reported number of conflicts with mothers, global and responsibility attributions were entered in step 1, ADHD status was entered in the step 2, and the interactions (ADHD status x global attributions, and ADHD status x responsibility attributions) in step 3 of a hierarchical multiple regression analysis. Results indicated that neither global ($\beta = 1.45, p = .419$) nor responsibility ($\beta = 1.15, p = .115$) attributions were significant on their own. However, the combination of global and responsibility attributions together predicted a 17.1% of the variance in adolescent number of conflicts with mothers ($R^2 = .171, F(2, 44) = 34.34, p = .019$). ADHD status did not predict a significant amount of variance in adolescent reported number of conflicts with mothers ($\beta = 1.80, R^2 \text{ change} = .018, p = .345$). Thus, the entire model (ADHD and attributions) predicted 18.9% of the variance in the number of conflicts with mothers ($R^2 = .189, F(3, 44) = 3.20, p = .033$). When the interaction terms ADHD status x global attributions ($\beta = 5.11, p = .174$), and ADHD status x responsibility attributions ($\beta = -1.71, p = .249$) were added, the overall model predicted 23% of the variance in adolescent reported number of conflicts with mothers; however, the added percentage of explained variance predicted by the interaction was not significant ($R^2 \text{ change} = .041, p = .366$), ($R^2 = .230, F(5, 44) = 2.33, p = .060$).

To predict adolescent reported conflict with fathers, global attributions were entered in step 1, ADHD status was entered in step 2, and the interaction (ADHD status x global attributions) was entered in step 3 of a hierarchical multiple regression analysis. Results showed that neither global attributions ($\beta = .542, p = .611$), ($R^2 = .007, F(1,36) = .263, p = .611$) nor ADHD status ($\beta = 1.86, p = .297$), ($R^2 \text{ change} = .032, p = .297$), ($R^2 = .039, F(2,36) = .693, p = .507$) were significant predictors of adolescent reported number of conflicts with fathers. However, when the interaction term ADHD status x global attributions ($\beta = -6.00, p = .024$) was added to the model, it predicted 17.8% of the variance in adolescent reported number of conflicts with father ($R^2 \text{ change} = .139, p = .024$), ($R^2 = .178, F(3,36) = 2.40, p = .087$). Although the moderator effect only approached conventional levels of significance, examination of the correlations (Table 4) showed that among adolescents who made global attributions (i.e., believe that it occurs across many contexts) for conflict with their fathers, adolescents without ADHD were at higher risk for reporting more issues over which they had conflict than adolescents with ADHD.

To predict adolescent reported number of conflicts with both parents, external, stable, and responsibility attributions were entered in step 1, ADHD status was entered in step 2, and the interactions (ADHD status x external attributions, ADHD status x stable attributions, and ADHD status x responsibility attributions) were entered in step 3 of a hierarchical multiple regression analysis. Results revealed that neither the attributions (external: $\beta = -.17, p = .812$; stable: $\beta = .06, p = .950$; responsibility: $\beta = .46, p = .183$), ($R^2 = .081, F(3, 34) = .906, p = .450$) nor ADHD status ($\beta = -.51, p = .790$), ($R^2 \text{ change} = .002, p = .790$), ($R^2 = .083, F(4,34) = 6.77, p = .613$) were significant predictors of adolescent reported number of conflicts with both parents. Similarly, their interaction terms (ADHD status x external: $\beta = -.33, p = .853$; ADHD status x stable: $\beta = -1.23, p = .564$, and ADHD status x responsibility: $\beta = -.86, p = .371$), ($R^2 \text{ change} =$

.167, $p = .138$), ($R^2 = .25$, $F(7, 34) = 1.30$, $p = .296$) were found not to be significant predictors of adolescent reported number of conflicts with both parents.

To investigate mother reported number of conflicts, a hierarchical multiple regression analysis was conducted in which global attributions were entered in step 1, ADHD status was entered in step 2, and the interaction (ADHD status x global attributions) was entered in step 3. Results showed that global attributions were not a significant predictor of mother reported number of conflicts with youth ($\beta = 3.42$, $p = .042$), ($R^2 = .099$, $F(1, 41) = 4.40$, $p = .042$). When ADHD status was added into the model, it predicted an additional 15.4% of the variance in mother reported number of conflicts with youth ($\beta = 5.82$, $p = .007$), (R^2 change = .154, $p = .007$), ($R^2 = .253$, $F(2, 41) = 6.60$, $p = .003$). While the interaction term (ADHD status x global attributions) was not a significant predictor of conflict ($\beta = 1.65$, $p = .645$), (R^2 change = .004, $p = .645$), the overall model predicted 25.7% of the variance in mother reported number of conflicts with youth ($R^2 = .257$, $F(3, 41) = 4.40$, $p = .010$).

To investigate father reported number of conflicts, a hierarchical multiple regression analysis was conducted in which external, pervasive, and responsibility attributions were entered in step 1, ADHD status was entered in step 2, and the interactions (ADHD status x external attributions, ADHD status x pervasive attributions, and ADHD status x responsibility attributions) were entered in step 3. Results showed that even though individually, external ($\beta = -2.30$, $p = .363$), pervasive ($\beta = 2.80$, $p = .074$), and responsibility ($\beta = 1.30$, $p = .300$), attributions were not significant predictors, together they predicted 29.9% of the variance in father reported number of conflicts with youth, ($R^2 = .299$, $F(3, 36) = 4.70$, $p = .008$). When ADHD status ($\beta = 7.60$, $p < .001$) was added into the model it predicted an additional 25.2% of the variance (R^2 change = .252, $p < .001$), and together with the attributions the entire model predicted 55.1% of the

variance ($R^2 = .551$, $F(4, 36) = 9.81$, $p < .001$). When the interaction terms were added into the model, ADHD status x pervasive attributions ($\beta = 8.82$, $p = .011$), ADHD status x responsibility attributions ($\beta = -6.66$, $p = .015$), and ADHD status x external attributions ($\beta = -2.230$, $p = .582$) together predicted an additional 10% of the variance in father reported number of conflicts that was borderline significant (R^2 change = .100, $p = .058$). The entire model predicted 65.1% of the variance in father reported number of conflicts with their youth ($R^2 = .651$, $F(7, 36) = 7.74$, $p < .001$). Examination of the correlations (Table 4) showed that among fathers who made pervasive attributions for conflict (i.e., believed the conflict was likely to occur in many contexts and be stable over time), fathers of adolescents with ADHD were at higher risk of reporting more issues over which they had conflict with their sons and daughters than fathers of adolescents without ADHD. Conversely, among fathers who believed that conflict was the responsibility of their sons and daughter (i.e., intentional, blameworthy and selfishly motivated), fathers of youth without ADHD were at higher risk for reporting more issues over which they had conflict than fathers of adolescents with ADHD.

4. Discussion

Results from this sample of families show that adolescents with ADHD have conflicts about more issues with their parents than adolescents without ADHD according to self-report and parent-report. There were no differences in frequency of each conflict. The types of issues that generate more conflicts in families of adolescents with ADHD than in those without ADHD include time and money management, school and achievement issues, lying, and defiance. There were no differences in the attributions for number of conflicts between families with and without an adolescent with ADHD.

The pattern of the relationships between attributions for conflict, ADHD status, and number of issues involving reported conflict differed depending on whether the reporter was the adolescent, the mother, or the father. Global and responsibility attributions predicted number of conflicts with mothers according to adolescent report. Among adolescents who make global attributions for conflict with fathers, only adolescents without ADHD have greater risk for having more issues about which they report conflict. Although ADHD status predicted number of conflicts according to mother report, there were no moderator effects. However, ADHD status moderated the relationships between pervasive and responsibility attributions in predicting number of conflicts reported by fathers. Among fathers who made pervasive attributions for conflict, fathers of adolescents with ADHD were at higher risk of reporting more issues over which they had conflict with their sons and daughters than fathers of adolescents without ADHD. Conversely, among fathers who believed that conflict was the responsibility of their sons and daughter, fathers of youth without ADHD were at higher risk for reporting more issues over which they had conflict than fathers of adolescents with ADHD.

4.1 Number of Conflicts

The first objective of this study was to compare the number of parent-adolescent conflicts in families with an adolescent with ADHD and families with an adolescent without ADHD according to adolescent, mother, and father report. In families where there was an adolescent with ADHD, parents and youths reported that they had conflict over more issues than in families that did not have an adolescent with ADHD. Adolescents with ADHD reported a higher number of conflicts with both parents than adolescents without ADHD, but they did not report a higher number of conflicts with each parent. In line with previous research (e.g., Barkley, et al., 1992;

Barkley et al., 1991; Edwards et al., 2001), mothers and fathers of adolescents with ADHD reported a higher number of conflicts with their sons and daughters than did mothers and fathers of adolescents without ADHD. The finding that fathers of adolescents with ADHD also reported higher conflict levels with their daughters than fathers of adolescents without ADHD has not been previously reported in the literature. No differences were found between families of adolescents with and without ADHD in terms of frequency of conflict.

Consistent with previous research in community samples (Montemayor, 1982; Montemayor & Brownlee, 1987; Smith & Forehand, 1986), adolescents without ADHD reported more conflict with their mothers than with their fathers. Because mothers are the primary caregivers, they may spend more time with their sons and daughters than fathers do, thereby increasing the likelihood of discussions that might become conflicts. The finding that among adolescents with ADHD there were no differences in the number of conflicts between mothers versus fathers is not likely due to fathers of youth with ADHD spending more time with their sons or daughters. Research shows that fathers of children with ADHD are more avoidant and less involved in childcare than mothers (Arnold, O'Leary, & Edwards, 1997; Lifford, Harold, & Thapar, 2008). Results of the present study, however, showed that fathers of adolescents with ADHD were more likely to report having conflicts about adolescents coming home on time, and talking back to parents than fathers in the comparison group. There were no differences on these issues with mothers. This is consistent with the findings of Roehling and Robin (1986), who reported that fathers of adolescents with externalizing disorders tended to have higher expectations in terms of obedience and perfectionism than fathers of comparison adolescents. Perhaps conflict over these issues contributes to the relatively equal number of conflicts with their sons and daughters with ADHD among mothers and fathers.

4.2 Attributions for Conflict

The second objective of this study was to examine whether the pattern of attributions for conflict of adolescents with ADHD and their mothers and fathers differed from the attributions for conflict of adolescents without ADHD and their mothers and fathers. Contrary to expectations, adolescents', mothers', and fathers' attributions did not differ by group, and specifically, adolescents and parents of adolescents with ADHD did not make more global or responsibility attributions for conflict. There may be an effect of impression management that is operating in these adolescent and parent ratings. Perhaps participants feel compelled to endorse fewer attributions and to indicate that the reason behind conflicts is not "anyone's fault". Future studies could examine this question using other methods of assessment of adolescents' and parents' attributions, such as real-time thinking aloud tasks as employed by Johnston, Chen, and Ohan (2006) or other in-vivo measurement such the video-mediated recall procedure in which family attributions about conflict are induced on the spot (e.g., Johnston & Freeman, 1997; Sheeber et al., 2009).

4.3 Attributional Predictors of Conflict

The third objective of this study was to investigate the relationship between adolescents and parents' global and responsibility attributions for conflict and number of reported conflicts in families with an adolescent with and without ADHD. It was hypothesized that the presence of ADHD symptoms in the adolescent would moderate the relationship between number of conflicts and global and responsibility attributions for that conflict as reported by adolescents, mothers, and fathers. Correlational analyses showed that attributions predicted number of conflicts in the way that has been reported in previous research (e.g., Grace et al., 1993) in the

sample as a whole. Global and responsibility attributions were the only attributions associated with conflict in the total sample. The pattern of these relationships, and whether there were moderator effects differed by reporter.

Adolescent-Reported Attributions for Conflict with Mothers: Consistent with previous research (Grace et al., 1993; Heatherington, et al., 2007; Mas, et al., 1991), the combination of global and responsibility attributions for conflict with mothers predicted number of conflicts in the whole sample. In spite of previous research showing that adolescents with externalizing disorders have more rigid beliefs about parental unfairness and therefore suggesting that ADHD status might moderate the relationship between global and responsibility attributions and number of conflicts (Roehling & Robin, 1986), this was not the case in the current study. Differences in the nature of the two samples might explain this discrepancy. It is possible that the sample of the Roehling and Robin study had a higher proportion of youth with ODD and CD than the present sample. Family adversity and children's antisocial behaviour are more common in families of children with ADHD who have comorbid ODD or CD than in families of children with ADHD who do not have these co-occurring diagnoses with families of children with purely ADHD not differing from comparison groups of typically developing children (e.g., Anastopoulos, Guevremont, Shelton, & DuPaul, 1992; August, Stewart, & Holmes, 1983; Schachar & Wachsuth, 1990). Consistent with previous research on the hostile attribution bias with regard to peer relations of children with ADHD (Milich, & Dodge, 1984), the results of the present study taken together with previous research suggest that adolescents' global and responsibility (negative) attributions are more likely to be associated with the presence of oppositional-defiant behaviours than with ADHD symptoms.

Adolescent-Reported Attributions for Conflict with Fathers: The pattern of correlations between adolescent attributions for conflict with fathers and the number of conflicts they report is consistent with the literature for the comparison group of adolescents without ADHD; these adolescents' global attributions are correlated with number of issues over which they have conflict. Furthermore, when adolescents make global attributions for conflicts with their fathers, adolescents without ADHD are at greater risk for having conflict over more issues than adolescents without ADHD. The results are therefore clear that for adolescents with ADHD in this sample, attributions for conflict are not associated with number of conflicts. Interpreting this finding is challenging because there is scant previous research about father-child relationships in families where children have ADHD, and as noted by Johnston and Mash (2001), the little that is available is often assessed by maternal report. Results of the present study showed that adolescents with ADHD reported more conflict with both parents in spite of the fact that they seem to spend less time with fathers than with mothers (Arnold et al., 1997). Furthermore, fathers of children with ADHD are more avoidant and less involved in childcare than mothers (Lifford et al., 2008). Perhaps the attributions of adolescents with ADHD did not predict conflict with their fathers because adolescents may perceive that fathers do not know enough about their everyday issues and are not as involved and supportive as mothers. If youth with ADHD view fathers as not involved in their lives, then when they are given the choice between different attributions (intention, blame, etc.) to account for the reasons behind conflict with fathers, youth may endorse few attributions. This hypothesis would have to be explored through future research.

Mother-Reported Attributions for Conflict with Adolescents: In the present sample, ADHD status predicted mother-reported number of conflicts, but attributions were not predictors of conflict.

This is consistent with Roehling and Robin's (1986) findings that reported no differences in mothers' beliefs about the behaviour of adolescents with and without externalizing disorders. Mothers typically view ADHD as a biologically based disorder (i.e., not due to psychological causes) of a relatively global and stable (pervasive) nature and as a result, in accordance with Weiner's (1985) attribution theory, respond empathically towards their children (Chen, Seipp, & Johnston, 2008). Although mothers of youth with ADHD recognize that they have high levels of conflict with their sons and daughters, they may attribute this conflict to their sons' or daughters' disorder as opposed to them engaging in the behaviour intentionally or for selfish motives. Furthermore, the presence of ADHD in mothers of children with ADHD is associated with an increase in empathy and tolerance towards children's behaviour (Psychogiou, Daley, Thompson, & Sonuga-Barke, 2007).

Father-Reported Attributions for Conflict with Adolescents: ADHD status moderated the relationships between responsibility and pervasive (global and stable) attributions in predicting number of conflicts reported by fathers. Specifically, among fathers who believed that conflicts were their sons' or daughters' responsibility, fathers of youth with ADHD were less likely to report more issues involving conflicts than fathers of youth without ADHD. Conversely, among fathers who believed conflict was pervasive across contexts and time, having a son or daughter with ADHD was associated with more issues involving conflict. The moderator effect for responsibility attributions is in line with previous research (e.g., Grace et al., 1993) in normative adolescent populations that showed that when fathers blamed their sons and daughters for conflict and believed that the conflict was intentional on their part, they reported more conflict. The finding that having an adolescent with ADHD was associated with increased conflicts when fathers believed that each conflict was pervasive across contexts and time may be due to fathers

of younger children with ADHD viewing their problem behaviours as being due to controllable factors such as insufficient effort on their part and as being transient (Chen, Seipp, & Johnston, 2008). Perhaps when children with ADHD become adolescents, fathers realize that the ADHD behaviours they used to view as transient when their adolescent sons and daughters were children are still present years later. These behaviours were still present and were therefore viewed as global and stable.

Another plausible explanation for moderator effect of ADHD status for pervasiveness was that a high proportion of fathers of children with ADHD have high levels of ADHD symptoms themselves (Schachar, & Wachsmuth, 1990) our sample was typical in this regard in that two thirds of the fathers were diagnosed or suspected they had ADHD. Because fathers are likely to share some of the ADHD behavioural characteristics with their youth, such as being inattentive, disorganized, and having low tolerance for frustration, they may be less tolerant of their sons' or daughters' misbehaviour (Psychogiou, Daley, Thompson, & Sonuga-BArke, 2007).

Understanding the relative contribution of the fathers' own ADHD and the history of parent–adolescent interactions as potential mechanisms underlying the more pervasive attributions made by fathers of adolescents with ADHD is an important direction for future research.

4.4 Limitations and Future Research Directions

This study represents a first attempt at examining adolescents', mothers', and fathers' attributions for conflict in a sample of families with and without an adolescent with ADHD. The fact that this study targeted adolescents with ADHD is a considerable addition to the literature, given the underrepresentation of studies examining adolescents' with ADHD (as opposed to children's) perceptions of the parent-youth relationship. Similarly, this study adds to the

literature by having included both mother and father reports of conflicts and attributions, given that studies investigating the parent-adolescent relationship examined almost exclusively the adolescent-mother dyad (e.g., Grace et al., 1993). Nevertheless, several limitations should be noted.

The Issues Checklist has been used to measure parent-adolescent conflict for over thirty years; even though its terminology was modified to be current with today's trends, it is a well-used and known measure (e.g., Barkley et al., 1992). The Parent-Adolescent Attribution Questionnaire, however, was a researcher-developed experimental measure and a larger sample would be needed to establish construct validity through factor analyses. Although the sample size in this study was comparable to that of previous investigations (e.g., Chen et al., 2008; Roehling & Robin, 1986), this study had a large number of variables, which made it necessary to create attribution composites and to examine only the attributions variables that were correlated significantly with number of conflicts. This study's findings warrant replication with a larger sample size in which all attribution variables could be explored independently. The sample was also not large enough to explore whether aggression would have been a factor in terms of adolescents' attributions for conflict, nor was this the primary focus of the study. Future studies with samples of youth with ADHD, ODD and CD is needed to clarify the potential influence of aggressive symptomatology in youth's attributions. Moreover, the correlational nature of the present study does not allow for the determination of causality. Future work should attempt to address whether adolescents', mothers', and fathers' attributions predict conflict over time by employing a longitudinal design.

An important direction for future research is to understand the contribution of parental psychopathology and the overall history of parent-adolescent interactions as potential

mechanisms underlying parental attribution styles. As discussed above, parental ADHD symptomatology is an important issue to be considered. Furthermore, both mothers and fathers of adolescents who are depressed are more likely to make negative (more responsibility and pervasive) attributions for adolescent behaviour (e.g., Sheeber et al., 2009). It would therefore be important to examine whether parental psychopathology affects number of conflict issues and parental attributions for conflict. Although the study identified some attributional predictors of conflict, the mechanisms that lead to maladaptive levels of conflict in families of adolescents with ADHD are unclear. Some of the interpretations of data in relation to the father-youth and mother-youth relationships discussed above require additional research to confirm. Different methods of examining parent-youth conflict and attributions might be helpful including extensive one-on-one interviews, focus groups, and inducing conflict and attributions for conflicts in mother-youth and father-youth dyads in-vivo. Lastly, this study did not examine parent-youth conflict and attributions for conflict developmentally. Future studies with larger sample sizes could examine adolescents' attributions for conflict with their parents cross-sectionally or longitudinally to determine whether the parent-adolescent relationship changes as youth mature. Gender and gender by ADHD status interactions were examined. Due to the small sample, there may not have been sufficient power to detect small or moderate differences. However, with one exception (number of conflicts reported by mother), none of the effects were even marginally significant and the effect sizes were small. In the case of number of conflicts reported by mother, the gender by ADHD status interaction approached conventional levels of significance ($F(1, 46) = 3.16, p = .083, \eta^2 = .068$) and the effect size was moderate. These results suggest that the difference between youth with and without ADHD in terms of number of issues of conflict reported by mothers was greater for girls (ADHD: $M = 18.60, SD = 7.60$;

Comparison: $M = 6.3$, $SD = 5.14$) than boys (ADHD: $M = 12.53$, $SD = 7.40$; Comparison: $M = 7.20$, $SD = 5.24$).

4.5 Conclusions and Clinical Implications

This study confirmed the hypothesis that families of adolescents with ADHD would have more conflict than other families and both parents and adolescents reported this increased conflict.

Attribution theory was helpful in explaining some of the variance in number of issues over which parents and adolescents had conflicts according to adolescent and father report, with global and responsibility attributions predicting considerable variance in number of conflicts. Variance in number of conflicts reported by mothers was only explained by ADHD status.

These findings suggest that a shift is needed from parent management training programs, which are efficacious for children with ADHD (e.g., Danforth, Harvey, Ulaszek, & McKee, 2006; Fabiano 2009), to family therapy including youth, mothers, and fathers for adolescents with ADHD. The IC and the PAAQ might prove to be useful clinical tools in family therapy and serve to identify the issues that involve conflict and the attributions for that conflict within the family system. These measures may aid the clinician to quickly assess the level of conflict and each family member's view of the conflict, providing a starting point for family therapy. Clinical studies evaluating the efficacy of family therapy that addresses the family members' attributions for conflict and other aspects of their relationship would be an important future research direction.

Furthermore, these study's findings suggest that working with both mothers and fathers is important, as they may each hold different views of the nature of the parent-youth conflict and the attributions for those conflicts. When treating adolescents with ADHD, it is important for

clinicians to involve fathers in treatment, which unfortunately has proven to be a challenge (for review see Fabiano, 2007). For example, 87% of the studies on parent-management training for parents of children with ADHD reviewed by Fabiano did not include information on father-related outcomes. Increasing fathers' participation in treatment is crucial considering that reduction of maladaptive conflict might occur if the pervasive (global and stable) attributions of fathers of youth with ADHD are addressed. It is important to be clear that although families of youth with ADHD are more likely than other families to have maladaptive levels of conflict, high levels of conflict also occur in families of youth who do not have ADHD. Therefore, treatment should address the maladaptive responsibility and global attributions on the part of youth and fathers, irrespective of ADHD, when there is considerable family conflict.

Recent research examining adolescent conflict with peers reminds us of the profound effect that these attributions have on adolescents' behaviour (Scott, 2008). Namely, when adolescents perceive themselves as responsible for causing the conflict, they are more likely to use positive and constructive means of communication to resolve the conflict. In contrast, when adolescents believe others are solely responsible for causing the conflict (i.e., making responsibility attributions), they use more hurtful, attacking, and destructive communication. Clinicians need to create positive attributional contexts in ways that will lead to attributions that are more benign and will foster more productive communication sequences among family members.

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Tables

Table 1

Adolescents' Participant Demographics.

Variable	ADHD			Comparison			<i>df</i>	<i>t</i>	<i>p</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>			
Age	29	15.68	1.74	22	15.46	1.41	49	0.49	.627
Full Scale IQ	29	99.93	6.63	22	109.73	10.01	49	-4.20	.000
Vocabulary Subtest	29	47.03	7.50	22	56.77	8.62	49	-4.30	.000
Matrix Reasoning Subtest	29	53.07	8.20	22	54.44	7.00	49	-0.68	.500
Conners 3-P Subscales									
Inattentive	29	81.90	7.89	22	48.82	7.05	49	15.50	.000
Hyperactive-Impulsive	29	77.10	12.89	22	49.95	6.66	49	9.00 ^a	.000
Conners 3-T Subscales									
Inattentive	23	72.43	12.37	19	46.95	4.94	40	8.43	.000
Hyperactive-Impulsive	23	69.13	16.74	19	48.95	4.75	40	5.10 ^b	.000

^a Note. Conners 3-P and Conners 3-T are the parent and teacher versions of the Conners-Third Edition rating scales (Conners, 2008). Data are reported in *t* scores.

^b Since Levene's test for Equality of Variances was significant, the equal variances not assumed *t* was used.

Table 2

Number of Conflicts Reported by Adolescents, Mothers, and Fathers by ADHD Status.

Variable	ADHD			Comparison			<i>F</i>	<i>p</i>	η^2
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>			
Number of Conflicts									
Total Number of Conflicts with Both Parents (Adolescent Report)	29	9.80	6.90	22	6.14	5.81	5.24	.027*	.10
Number of Conflicts with Mothers (Adolescent Report)	29	9.00	7.14	22	5.95	5.74	3.62	.063	.07
Number of Conflicts with Fathers (Adolescent Report)	28	6.35	5.63	22	3.95	4.60	2.51	.120	.05
Number of Conflicts with Adolescent (Mother Report)	27	15.22	7.94	20	6.75	5.10	20.30	.000**	.32
Number of Conflicts with Adolescent (Father Report)	22	13.73	7.18	20	6.00	5.61	13.71	.001**	.26
Frequency of Conflicts									
Total Frequency of Conflicts with Both Parents (Adolescent Report)	21	4.40	1.46	13	4.01	1.18	0.27	.607	.01
Frequency of Conflicts with Mothers (Adolescent Report)	27	2.13	0.78	16	2.10	0.57	0.00	.996	.00
Frequency of Conflicts with Fathers (Adolescent Report)	21	2.23	0.89	14	1.93	0.65	1.04	.316	.03
Frequency of Conflicts with Adolescent (Mother Report)	25	2.50	0.71	17	2.01	.054	3.91	.055	.09
Frequency of Conflicts with Adolescent (Father Report)	20	2.35	0.46	17	2.10	0.50	3.38	.075	.09

* $p < .05$, ** $p < .01$

Note: The different *N* sizes are not solely due to missing data (which was 10 or less %), but to the characteristics of the measures used. Participants completed the IC and reported on the quantity of issues discussed with their youth or parents. If participants reported no conflicts, then they were not given the PAAQ and were not taken into account when analyzing conflicts and attributions for that conflict.

Table 3

Differences in the Type of Conflicts Reported by Adolescents, Mothers, and Fathers by ADHD Status.

Variable	ADHD		Comparison		χ^2	<i>p</i>
	<i>n</i>	%	<i>n</i>	%		
Type of Conflicts						
Coming home on time (Adolescent Report)	10/29	34.5	1/22	4.5	6.63	.010
How money is spent (Adolescent Report)	12/29	41.4	1/22	4.5	8.94	.003
Making too much noise at home (Mother Report)	10/27	37.0	1/20	5.0	6.60	.010
Allowance (Mother Report)	8/27	29.6	0/20	0.0	7.14	.008
Lying (Mother Report)	11/27	40.7	0/20	0.0	10.64	.001
Getting up in the morning (Mother Report)	17/27	63.0	5/20	25.0	6.65	.010
Getting to school on time (Mother Report)	18/27	66.7	1/20	5.0	18.14	.000
Getting low grades in school (Mother Report)	12/27	44.4	1/20	5.0	8.93	.003
Getting in trouble at school (Mother Report)	10/27	37.0	0/20	0.0	9.41	.002
Coming home on time (Father Report)	11/21	52.4	2/20	10.0	8.50	.004
Getting up in the morning (Father Report)	13/21	61.9	1/20	5.0	15.00	.000
Getting to school on time (Father Report)	11/21	52.4	2/20	10.0	8.50	.004
Getting in trouble at school (Father Report)	7/21	33.3	0/20	0.0	8.04	.005
Talking back to parents (Father Report)	15/21	71.4	4/20	20	11.00	.001

Table 4

Pearson Product-Moment Correlations between Participants' Reported Number of Conflicts and Attributions for Conflicts

Attributions	Adolescent Reported Number of Conflicts with Mother (Whole sample, ADHD, control)	Adolescent Reported Number of Conflicts with Father (Whole sample, ADHD, control)	Adolescent Reported Number of Conflicts with Both Parents (Whole sample, ADHD, control)	Mother Reported Number of Conflicts with Adolescent (Whole sample, ADHD, control)	Father Reported Number of Conflicts with Adolescent (Whole sample, ADHD, control)
Internal	.24	-.10	.23	-.14	.18
	.34	-.29	.32	-.25	-.28
	-.02	.28	.06	-.11	.43
External	.22	.07	.12	-.07	.36*
	.12	.13	-.21	.02	-.14
	.54*	-.01	.60*	-.15	.19
Stable	.25	-.06	.14	.15	.35*
	.13	-.31	-.21	.04	.55*
	.56*	.43	.64*	.35	.21
Global	.35*	.09	.13	.31*	.54**
	.42*	-.14	-.10	.29	.54*
	.17	.65*	.54	.15	.53*
Intentional	.16	.14	.21	.00	.43**
	.08	-.11	-.09	.06	.42
	.36	.66*	.76**	-.17	.44
Selfishly Motivated	.44**	.05	.25	-.02	.54**
	.58**	-.12	.07	-.05	.30
	.25	.44	.51	-.18	.65**
Blameworthy	.39**	-.07	.28	.05	.26
	.29	-.17	-.03	.00	.01
	.67**	.25	.71**	.00	.32
Responsibility Composite	.40**	.05	.28	.01	.47**
	.34	-.15	-.03	.00	.23
	.56*	.52	.73**	-.15	.58*

* $p < .05$, ** $p < .01$.

Note. Correlations between father pervasive attribution composite and father reported number of conflicts in the whole sample, ADHD group only, and comparison group only were respectively, $r = .51^{**}$, $r = .60^{**}$, and $r = .43$.

Appendices

Appendix A. The Parent Adolescent Attribution Questionnaire (PAAQ)

PART B - Father Version

Parent-adolescent conflict is common and regarded as adaptive as it reflects adolescents' desire for independence from parents. We want to find out more about these conflicts. Circle only the item numbers that you have answered a combination of "yes" and "2 and above" (a little angry to very angry) on PART A:

1	6	11	16	21	26	31	36	41
2	7	12	17	22	27	32	37	42
3	8	13	18	23	28	33	38	43
4	9	14	19	24	29	34	39	44
5	10	15	20	25	30	35	40	45

For the following items only answer the items corresponding to the circled items above. For each of the statements **a to h**, circle the number that shows how much you agree with the statement in relation to **your son/daughter**.

1. Discussing <u>Telephone calls</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
2. Discussing <u>Bedtime</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

1 Continues →

3. Discussing <u>Cleaning bedroom</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

4. Discussing <u>Doing homework</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

5. Discussing <u>Putting away clothes</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

2 Continues →

6. Discussing <u>Watching television</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
7. Discussing <u>Cleanliness (washing, showers, brushing teeth)</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
8. Discussing <u>Which clothes to wear</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

3 Continues →

9. Discussing <u>How neat clothes look</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
10. Discussing <u>Making too much noise at home</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
11. Discussing <u>Table manners</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

4 Continues

12. Discussing <u>Fighting with brothers and sisters</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

13. Discussing <u>Swearing</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

14. Discussing <u>How money is spent</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

5 Continues →

15. Discussing <u>Picking books or movies</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
16. Discussing <u>Allowance</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
17. Discussing <u>Going places without parents (shopping, movies, etc.)</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

6 Continues →

18. Discussing <u>Playing music too loudly</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
19. Discussing <u>Turning off lights in house</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
20. Discussing <u>Using drugs</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

7 Continues

21. Discussing Taking care of CDs, games, bikes, pets, and other things with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
22. Discussing Drinking beer or other alcoholic beverages	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
23. Discussing Buying CDs, games, clothes, and other things with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

8 Continues →

24. Discussing <u>Going on dates</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
25. Discussing <u>Who friends should be</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
26. Discussing <u>Selecting new clothes</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

9 Continues →

27. Discussing <u>Sex</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
28. Discussing <u>Coming home on time</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
29. Discussing <u>Getting to school on time</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

10 Continues →

30. Discussing <u>Getting low grades in school</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
31. Discussing <u>Getting in trouble at school</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
32. Discussing <u>Lying</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

11 Continues →

33 Discussing <u>Helping out around the house</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
34. Discussing <u>Talking back to parents</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
35. Discussing <u>Getting up in the morning</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

12 Continues

36. Discussing <u>Bothering parents when they want to be left alone with my son/daughter</u>	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
37. Discussing <u>Bothering adolescent when he/she wants to be left alone with my son/daughter</u>	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
38. Discussing <u>Putting feet on furniture with my son/daughter</u>	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

13 Continues →

39. Discussing <u>Messing up the house</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
40. Discussing <u>What time to have meals</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
41. Discussing <u>How to spend free time</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

14 Continues →

42. Discussing <u>Smoking tobacco</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
43. Discussing <u>Earning money away from the house</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4
44. Discussing <u>What adolescent eats</u> with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

15 Continues →

45. Discussing Computer/Internet use with my son/daughter	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Is due to something about him/her	1	2	3	4
b) Is due to something about me	1	2	3	4
c) We are likely to continue to have this conflict for a long time	1	2	3	4
d) Affects other areas of our relationship	1	2	3	4
e) S/he does this on purpose	1	2	3	4
f) S/he only thinks of his/her own needs	1	2	3	4
g) The fact that we argue about this is my son/daughter's responsibility	1	2	3	4
h) Arguing about this happens often	1	2	3	4

Appendix B. Adolescent and Parent Assent and Consent Forms and Letters

ADOLESCENT CONSENT LETTER

Dear _____ :

My name is Judith Wiener, and I am a professor at the Ontario Institute for Studies in Education of the University of Toronto (OISE/UT). My colleagues (Dr. Rosemary Tannock, Dr. Tom Humphries, Dr. Martinussen, and I) are doing a research project on teenagers with Attention-Deficit Hyperactivity Disorder (ADHD). We are writing to ask you if you would like to take part in this research. For this, we need the participation of a group of teenagers who have been previously diagnosed with ADHD and a group of teenagers without ADHD. We are asking you to take part in this research, because we believe that your feelings and opinions are valuable information.

Purpose of the Research

We want to learn more about the beliefs that teenagers have about ADHD and about behaviors that commonly occur with ADHD, their views about themselves, and their social relationships. So far, there is little research on these areas of study. We believe that knowing how teenagers think about their behaviors and about their ADHD is important, so that people like teachers, parents, and other professionals can consider their beliefs when they try to help them. This research has been funded by the Social Sciences and Humanities Research Council.

Description of the Research

If you take part in this research study, the testing session will take approximately 5 to 6 hours. The session will take place in a quiet room at OISE/UT. During the session, my research assistant will ask you to answer some questions about yourself, such as what you think about your behaviors, and about ADHD. He or she will read the questions to you if you wish. Sometimes he or she will write the answers down for you and sometimes you will have to check off or circle an item on a form or a questionnaire. You will also fill out some rating scales that tell about how you view yourself, your behaviors, your self-esteem and your relationships with peers and others. You will also do some reading, writing, and math activities. We will ask you to look at some pictures with a teenager in them behaving in different ways and ask you to point out which of the pictures are like you. We will also interview you about your beliefs about your behaviour and ADHD. We will give you a few breaks, including a lunch break. We are also going to send a rating scale for your teacher to fill out in a teacher package.

Benefits

A benefit of this study is that it will help us learn more about adolescents with ADHD. We want to listen to what you say and think, and then use that information to help other teens with ADHD.

Another benefit about this study is that your answers to the questions from the reading, writing, and math activities and the questionnaires will let us know what your strengths are and what areas you need to work on a little bit more. After about one month after you take part in the study, we will mail a report to you and your family about these different areas, and about some ways that might help you do better in school. Knowing these types of things is important,

because they can help you, your parents and teachers understand how to help you do better in school and in life in general.

Potential Harms and Withdrawal

There are no harms associated with taking part in the study. The only thing that might happen is that you may feel a little uncomfortable talking about yourself and how you feel about some things. If you feel that you don't want to answer some of the questions, you can tell the research assistant, and talk about it. You may also say that you want to stop, skip a question, or that you need a break and want to continue some other time. Also, if you say that you will take part in the study and then change your mind, that is okay. You can decide at any time to stop taking part in the study.

Confidentiality

Everything you tell me in the session will stay between you, the research assistant, and Dr. Wiener. No information that reveals your identity will be released without consent unless required by law. The information that we collect from you, your parents, and teacher will be analyzed and stored in locked files in a locked office. The data will be kept at OISE/UT in locked files for 10 years. The questionnaires will not have your name on them. A number code will be used in place of your name. We will analyze the information, talk about it at meetings, and write about it, so that parents, teachers, and doctors can learn from what we have found. The results of the questionnaires and activities described above will be used for research purposes only. We would need your permission and signed consent if you want to send these scores to another professional.

Because we are working with many teenagers on this project, people hearing our presentations or reading what we write will not know which teenager said what. When we do this, or when we publish our research in academic journals/books, we will only present group information. We will not tell anyone your name or give any information that could help them know who you are.

We will not be able to provide you with your responses on some of the questionnaires and interviews, because they were developed for the purpose of the research. We will not tell your parents the specific answers that you gave to the questions, but we will write a report about how you did and mail it to them.

The only time that we would have to tell somebody something you have said is if you tell us that you will do serious harm to yourself or someone else, or someone is seriously harming you. In that case, as required by law, we would have to make sure you get help by contacting appropriate mental health, or law enforcement professionals. Otherwise, everything you tell me is kept confidential.

Compensation

Participation in research is voluntary. If you do decide to take part in the study, you can choose between getting \$30.00 for your participation, or, (for teenagers in high school), the time you spend taking part in the study can be counted towards your community service hours, which we will provide a certificate for.

Access to Results

The results of this research will be shared in the form of a summary report upon completion of the study. We are in the process of developing a website on which we will place all relevant information and will contact you about this when it is ready.

You may contact Dr. Judith Wiener, Clarisa Markel, or Daniella Biondic with any questions you may have about the study, and all of your inquiries will be addressed.

Sincerely,

Clarisa Markel, B.A.

M.A. Student

(416) 978-0933

Daniella Biondic

Lab Manager

(416) 978-0933

Judith Wiener, Ph. D

Program Chair

School and Clinical Child Psychology

(416) 978-0935

Department of Human Development and Applied Psychology

Ontario Institute for Studies in Education of the University of Toronto (OISE/UT)

Toronto, Ontario M5S 1V6

ADOLESCENT CONSENT FORM

“I acknowledge that the research procedures described above have been explained to me and that any questions that I have asked have been answered to my satisfaction. As well, the potential harms and discomforts have been explained to me and I also understand the benefits of participating in the research study. I know that I may ask now, or in the future, any questions that I have about the study. I have been assured that no information will be released or printed that would disclose my identity without my permission, unless required by law. I understand that I will receive a copy of this signed consent. I understand that participation is voluntary and I can withdraw at any time.”

I hereby consent to take part in this research.

Name of Teenager

Signature

Date

Name of person who obtained consent

Signature

The person who may be contacted
about this research is:

who may be contacted at:

(416) 978-0933

“I agree to be contacted in the future regarding other studies being conducted by the ADHD Laboratory at OISE/UT.”

Signature

“I agree that the information collected about me in this study can be used for future data analysis provided that all identifying is removed and that I cannot be identified.”

Signature

ASSENT SCRIPT

Why are we doing this study?

My Professor and I are doing a research project on teenagers with ADHD. We are interested in finding out about how teenagers who have been given a previous diagnosis of ADHD think about their behaviours. We also want to know about their self-esteem and their social relationships. We want to learn more about the beliefs that teenagers have about ADHD and about some of their behaviours that commonly occur with ADHD. We believe that knowing how teenagers think about their behaviours and about their ADHD is important, so that people like teachers, parents, and other professionals can consider their beliefs when they try to help them. I am asking you to participate in this research, because I believe that your feelings and opinions are valuable information.

What will happen during the study?

If you take part in this study today, it will take approximately 5 to 6 hours. I will ask you to answer some questions about yourself, such as what you think about your behaviours, and about ADHD. I will read the questions to you if you want. Sometimes I will write the answers down for you and sometimes you will have to check off or circle an item on a form. Your answers to these questions will help me understand how you think about your behaviours and about ADHD. I will also ask you to look at some pictures with a teenager in them behaving in different ways and ask you to tell me which of the pictures are like you. I will ask you about your beliefs about those behaviours. We will also do some reading, writing, and math activities. Since you are here for a few hours, we will take a few breaks including a lunch break.

Your mother/father filled out a rating scale before you came in. I am also going to send a rating scale for your teacher to fill out.

Who will know about what I did in the study?

Do you know what confidentiality is? It means that everything you tell me today will stay between you, myself, and Dr. Wiener, who is my Professor. My Professor and I will analyze it, talk about it at meetings, and write about it, so that parents, teachers, and doctors can learn from what we have found. The questionnaires will not have your name on them. A number code will be used in place of your name. Because I am working with many teenagers on this project, people hearing my presentations or reading what I write will not know which teenager said what. When I do this, I will not tell anyone your name or give any information that could help them know who you are.

For the reading, writing, and math activities and the other questionnaires, I will not tell your parents the specific answers that you gave to the questions. But I will write a report about how you did and mail it to them.

The only time that I would have to tell somebody something you have said is if you tell me that you will do serious harm to yourself or someone else, or someone is seriously harming you. In that case, I would have to tell your parents and make sure you get help. Otherwise, everything you tell me is kept confidential.

Participation in this study is your choice.

Before you came here, your mother/father signed a letter saying that she/he agrees for you to be in the study, but you don't have to participate if you don't want to. If you say you will take part and then change your mind, that is okay. You can decide at any time to stop taking part in the study.

If you do decide to take part in the study, you can choose between getting \$30.00 for your participation, or, (for participants in high school), the time you spend here can count towards your community service hours, which we will provide a certificate for.

Are there good things and bad things about the study?

There are no bad things about the study. The only thing that might happen is that you may feel uncomfortable talking about yourself and how you feel about some things. If you feel that you don't want to answer some of the questions, you can tell me, and we will talk about it. You may also tell me that you want to stop, skip the question, or that you need a break and want to continue some other time.

A good thing about this study is that it will help us learn more about adolescents with ADHD. We want to listen to what you say and think, and then use that information to help other teens with ADHD.

Finally, your answers to the questions from the reading, writing, and math activities and the questionnaires will help me know what your strengths are and what areas you need to work on a little bit more. Knowing these types of things is important, because they can help your parents and teachers understand how to help you do better in school and will help you figure out what you can do for yourself.

How do I find out the results of the study?

If you want information about the results of this research when it is completed, you can check the website we are making for the research. We will let your parents know when it is ready. Your name will not be in the report, but it will give you an idea of how other teenagers think and feel about their behaviours and about ADHD.

Do you have any questions?

Do you agree to participate in this research?

“I was present when _____ read this form and gave his/her verbal assent to participate in this study.”

Name of person who obtained assent:

Signature

Date

PARENTAL CONSENT LETTER

Dear Parent:

My name is Dr. Judith Wiener. I am a Professor in the Department of Human Development and Applied Psychology at the Ontario Institute for Studies in Education of the University of Toronto (OISE/UT). I am writing to ask your permission for your adolescent to participate in a research project that I am conducting with my colleagues (Dr. Rosemary Tannock, Dr. Tom Humphries, Dr. Molly Malone, and Dr. Martinussen) about adolescents with Attention Deficit/Hyperactivity Disorder (ADHD). For this, we need the participation of adolescents who have been previously been diagnosed with ADHD as well as normally functioning adolescents.

Purpose of the Research

The purpose of this research to enhance our understanding about the self-perceptions of adolescents' with ADHD including their self-esteem and self-concept, their beliefs regarding ADHD and about behaviours that commonly occur with ADHD, and their perceptions of their social relationships. Currently, little research exists on these areas of study. We believe that gaining a better understanding of the self-perceptions of adolescents with ADHD will help mental health professionals provide better services and develop appropriate interventions for them. This study is funded by the Social Sciences and Humanities Research Council of Canada.

Description of the Research

If you agree to allow your son/daughter to participate, my research assistants, who are graduate students in school and clinical child psychology, will work with him/her for a period of 5 to 6 **hours** in a quiet room at OISE/UT. He or she will complete a standardized educational test (Woodcock Johnson-Third Edition) that is recognized as being a valid measure of achievement in reading, writing and mathematics, and a brief cognitive measure (Wechsler Abbreviated Scale of Intelligence). He or she will also fill out several questionnaires designed to assess self-esteem, self-concept, peer relationships, social support, and problem behaviors that commonly occur with ADHD. He or she will also be asked to look at pictures with a teenager in them engaging in various behaviors characteristics of teens with ADHD and asked whether they are like the teenager in the picture. This will be followed up with an interview about his/her beliefs about why this behaviour is a problem, how controllable it is, how often it occurs, and whether it bothers other people. A similar interview will then be conducted about his or her beliefs about ADHD. The results of these measures will be used for research purposes only in the context of this study. We would need your permission and signed consent should you need to send these test scores to another professional involved in your case. With your permission we will also send the teacher who knows your son/daughter well a rating scale to complete. This rating scale assesses for symptoms of ADHD and other disorders.

The results of the educational and cognitive measures will be interpreted by a registered psychologist and be communicated to you in a written report. We will not be able to provide you with your adolescent's responses on some of the questionnaires and interviews, because they were developed for the purpose of the research and we will not know what individual adolescent's scores mean until the data are collected and analyzed from all of the participants.

Benefits

The direct benefit of this study is that you will receive a report on your son/daughter's educational and social-emotional functioning with specific recommendations for intervention.

We believe that the study may also indirectly benefit adolescents with ADHD. More specifically, enhanced knowledge about adolescents' self-perceptions and beliefs about ADHD and ADHD-related behaviors may provide important information for parents, teachers, and clinicians working with them.

Potential Harms and Withdrawal

There are no known harms associated with participation in the study. The only potential risk is that your son/daughter may feel some discomfort when talking about his/her behavior. We will clearly inform him/her that he/she may decline to participate and that if he/she decides to participate, he/she may skip any questions, request a break, or withdraw from the study at any time. Following the session, if you find the discomfort to be more than minor, please contact us so that we can discuss how to provide support for him/her. In addition, should we feel, during or after the session that he/she would benefit from referral to a mental health professional, we would inform you of that recommendation and would provide an appropriate referral.

Confidentiality

Confidentiality will be respected and no information that discloses the identity of the participants will be released without consent unless required by law. For your information, all research files will be stored in locked files at OISE/UT. The results of the tests described above will be used for research purposes only. We would need your permission and signed consent should you need to send these scores to another professional.

The data we collect will be analyzed and stored in locked files in a locked office. The data will be retained at OISE/UT in locked files for 10 years. Your name and that of your son/daughter will be deleted and replaced by a number when filed in order to assure anonymity. In these ways, the information provided by you, your son/daughter and his/her teacher will be kept confidential. The one exception to this is in the event that your adolescent indicates that he/she might do serious harm to him/herself or others, or that he/she is being harmed. If that were to happen, as required by law, we would inform you and appropriate mental health, child protection, or law enforcement professionals.

When the results of this research are published in the form of scholarly presentation and/or academic journal/books, only group data will be presented, ensuring that it will be impossible for anyone to identify you or your son/daughter.

Compensation

Participation in research is voluntary. If your son/daughter chooses to participate in this study, he/she will receive \$30 to defray expenses. If he/she is in high school, he/she may alternatively opt to count his/her participation in the study toward his/her community service hours; in this

case, a certificate attesting to his/her participation would be provided. As mentioned above, you will also receive a report of your adolescent's academic and social emotional competencies.

Access to Results

The results of this research will be shared in the form of a summary report upon completion of the study. We are in the process of developing a website on which we will place all relevant information and will contact you about this when it is ready.

You may contact Dr. Judith Wiener, Clarisa Markel, or Daniella Biondic with any questions you may have about the study, and all of your inquiries will be addressed.

Sincerely,

Clarisa Markel, B.A.

M.A. Student

(416) 978-0933

Daniella Biondic

Lab Manager

(416) 978-0933

Judith Wiener, Ph. D

Program Chair

(416) 978-0935

Department of Human Development and Applied Psychology

Ontario Institute for Studies in Education of the University of Toronto (OISE/UT)

Toronto, Ontario M5S 1V6

PARENTAL CONSENT FORM

“I acknowledge that the research procedures described above have been explained to me and that any questions that I have asked have been answered to my satisfaction. As well, the potential harms and discomforts have been explained to me and I also understand the benefits of participating in the research study. I know that I may ask now, or in the future, any questions that I have about the study. I have been assured that no information will be released or printed that would disclose the personal identity of my son/daughter without my permission, unless required by law. I understand that I will receive a copy of this signed consent. I understand that participation is voluntary and I can withdraw my adolescent at any time.”

I hereby consent for my son/daughter to participate.

Name of Parent

Signature

Date

Name of person who obtained consent

Signature

The person who may be contacted
about this research is:

who may be contacted at:

(416) 978-0933

“I agree to be contacted in the future regarding other studies being conducted by the ADHD Laboratory at OISE/UT.”

Signature of parent

“I agree that the information collected on my adolescent in this study can be used for future data analysis provided that all identifying is removed and my adolescent cannot be identified.”

Signature of parent

Appendix C. Adolescents', Mothers', and Fathers' Attributions for Conflict in families with adolescents with and without ADHD

Appendix C.

Adolescents', Mothers', and Fathers' Attributions for Conflict in families with adolescents with and without ADHD

Attributions	ADHD Group			Comparison Group		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Adolescent Reported for Mother						
Internal	28	2.76	0.73	16	2.71	0.60
External	28	2.00	0.79	16	2.27	0.76
Stable	28	2.35	0.68	16	2.35	0.69
Global	28	1.75	0.69	16	1.73	0.68
Responsibility Composite	28	5.00	1.63	16	5.16	1.85
Adolescent Reported for Father						
Internal	22	2.25	0.92	14	2.38	0.83
External	22	2.58	0.69	14	2.78	0.48
Stable	22	2.41	0.72	14	2.37	0.68
Global	22	1.84	0.92	14	1.56	0.60
Responsibility Composite	22	5.14	2.10	14	5.40	1.86
Adolescent Reported for Both Parents						
Internal	22	5.37	1.18	13	5.49	1.10
External	22	4.23	1.51	13	4.73	1.70
Stable	22	4.74	1.18	13	4.76	1.41
Global	22	3.38	1.23	13	3.17	1.20
Responsibility Composite	22	9.87	3.36	13	10.66	3.77
Mother Reported						
Internal	25	2.44	0.69	17	2.46	0.61
External	25	2.97	0.73	17	3.13	0.42
Stable	25	2.64	0.73	17	2.49	0.49
Global	25	2.11	0.73	17	1.84	0.52
Responsibility Composite	25	7.06	1.80	17	6.77	1.21
Father Reported						
Internal	20	2.32	0.53	17	2.15	0.64
External	20	3.07	0.41	17	2.76	0.59
Stable	20	2.42	0.56	17	2.37	0.69
Global	20	2.10	0.64	17	1.85	0.61
Responsibility Composite	20	7.32	1.14	17	6.68	1.49
Pervasiveness Composite	20	4.50	1.09	17	4.22	1.07

Note: To control for Type I error across the multiple ANOVAs, *p* value was set at .01 (.05 divided by the number of ANOVAs conducted).

Appendix D. Hierarchical Multiple Regression Predicting Youth Reported Number of Conflicts with Mother.

Appendix D.

Hierarchical Multiple Regression Predicting Youth Reported Number of Conflicts with Mother.

Predictors	R^2	ΔR^2	B	SE_B	β
Step 1	.17*	.17*			
Youth Global Attributions			.15	1.80	1.45
Youth Responsibility Attributions			.30	.71	1.15
Step 2	.19*	.02			
Youth ADHD Status			.13	1.90	1.80
Step 3	.23	.04			
Youth ADHD Status x Youth Global Attributions			.80	3.70	5.11
Youth ADHD Status x Youth Responsibility Attributions			-.73	1.46	-1.71

* $p < .05$. ** $p < .01$. *** $p < .001$.

Appendix E. Hierarchical Multiple Regression Predicting Youth Reported
Number of Conflicts with Fathers.

Appendix E

Hierarchical Multiple Regression Predicting Youth Reported Number of Conflicts with Fathers.

Predictors	R^2	ΔR^2	B	SE_B	β
Step 1	.01	.01			
Youth Global Attributions			.09	1.06	.54
Step 2	.04	.03			
Youth ADHD Status			.18	1.75	1.86
Step 3	.18	.14*			
Youth ADHD Status x Youth Global Attributions			-1.33	2.49	-6.00*

* $p < .05$. ** $p < .01$. *** $p < .001$.

Appendix F. Hierarchical Multiple Regression Predicting Youth Reported
Number of Conflicts with Both Parents.

Appendix F.

Hierarchical Multiple Regression Predicting Youth Reported Number of Conflicts with Both Parents.

Predictors	R^2	ΔR^2	B	SE_B	β
Step 1					
	.08	.08			
Youth External Attributions			-.05	.73	-.17
Youth Stable Attributions			.01	.90	.06
Youth Responsibility Attributions			.30	.33	.46
Step 2	.08	.00			
Youth ADHD Status			-.05	1.90	-.51
Step 3	.25	.17			
Youth ADHD Status x Youth External Attributions			-.15	1.75	-.33
Youth ADHD Status x Youth Stable Attributions			-.60	2.10	-1.23
Youth ADHD Status x Youth Responsibility Attributions			-.90	.94	-.86

* $p < .05$. ** $p < .01$. *** $p < .001$.

Appendix G. Hierarchical Multiple Regression Predicting Mother Reported
Number of Conflicts with Youth.

Appendix G.

Hierarchical Multiple Regression Predicting Mother Reported Number of Conflicts with Youth.

Predictors	R^2	ΔR^2	B	SE_B	β
Step 1	.09	.09			
Mother Global Attributions			.31	1.63	3.42*
Step 2	.25	.15*			
Youth ADHD Status			.40	2.05	5.82**
Step 3	.25**	.00			
Youth ADHD Status x Mother Global Attributions			.27	3.60	1.65

* $p < .05$. ** $p < .01$. *** $p < .001$.

Appendix H. Hierarchical Multiple Regression Predicting Father Reported Number of Conflicts with Youth.

Appendix H.

Hierarchical Multiple Regression Predicting Father Reported Number of Conflicts with Youth.

Predictors	R^2	ΔR^2	B	SE_B	β
Step 1	.29**	.29**			
Father External Attributions			-.16	2.45	-2.30
Father Pervasive Attributions			.42	1.51	2.80
Father Responsibility Attributions			.24	1.05	1.30
Step 2	.55***	.25***			
Youth ADHD Status			.53	1.80	7.60***
Step 3	.65***	.10			
Youth ADHD Status x Father External Attributions			-.50	4.10	-2.23
Youth ADHD Status x Father Pervasive Attributions			3.00	3.22	8.82*
Youth ADHD Status x Father Responsibility Attributions			-3.51	2.60	-6.66*

* $p < .05$. ** $p < .01$. *** $p < .001$.